



National Aeronautics and
Space Administration

CREW AND THERMAL SYSTEMS DIVISION

INTERNATIONAL SPACE STATION

CATALOGUE

OF

INTRAVEHICULAR ACTIVITY
(IVA)

GOVERNMENT FURNISHED EQUIPMENT
(GFE)

FLIGHT CREW EQUIPMENT
(FCE)

JSC 28533 Rev E

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
CREW AND THERMAL SYSTEMS DIVISION
LIFE SUPPORT AND HABITABILITY BRANCH
HOUSTON, TEXAS

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CHANGE / REVISION LOG

REV	DATE	CHANGE DESCRIPTION
A	7/2001	Update catalog with certified hardware
B	5/2002	Added CDRA/5MLE Mounting Plates Added Crew Notebook Added Electric Razor Added Electronic Keyboard Added Facial Wipes Added File Handles Added IVA Hand Toolbox Added Panavise Assy Added Personal Hygiene Kit Added Speaker Kit Assy Added Timex Ironman Watch Updated Bike Shorts Updated Vacuum Cleaner
C	11/2003	Added Battery Tester Added Chronographic, Space Aviation Watch Added Combination Wrench Assy Added Dial Torque Wrench Assy Added Educational Payload Added Index Section Added ISS VAC HEPA Filter Added Related Document Numbers (EIS, GCAR, Material Cert, etc) Added Small Gauge Crimp Tool Added Tempo Multi-use Dry Wipes Added TVIS Gyro Repair Tool Kit Added WOLF Camera Bracket Removed Make-up Removed Portable Emergency Equipment Separated Page Numbers by Sections

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D	5/2004	Added Arrid XX Deodorant/Antiperspirant
		Added Gillette Deodorant/Antiperspirant
		Added Hair Clipper Kit
		Added Lady Speed Stick Deodorant/Antiperspirant
		Added Makeup Base Soft Finish
		Added Makeup Base SuperFit
		Added Makeup Eye Solvent
		Added Makeup Quickliner for Eyes
		Added Right Guard Deodorant/Antiperspirant
		Added Secret Deodorant/Antiperspirant
		Added Sure Deodorant/Antiperspirant
		Added Vaseline Lotion
		Corrected P/N for TVIS Repair Tools
		Corrected Format of each section
		(Added header for each page except first of each sect.)
		Reduced font for Hand Tool Bag List
E	7/2007	Added -302 Huggies Wipes
		Added Third Party Hardware Section
		Added 20-Micron Condensate Filter
		Added ACTEX
		Added Ammonia Respirator Kit
		Added Binder Assembly
		Added CQMK
		Added CWC
		Added Disinfectant Wipes
		Added DTV Mux Tools
		Added Emesis Bag
		Added EMU Water Processing Kit
		Added Fanny Packs – Modified Lode
		Added Fanny Packs – Modified Wallet
		Added Fanny Packs – Unmodified Lode
		Added Fanny Packs – Unmodified Wallet
		Added Fiberscope
		Added Foam Applicator Assembly
		Added Inner Hatch Window Shield Kit
		Added IPOD
		Added ISS QD Trainer Assembly
		Added IVA Ammonia Detection Kit
		Added Large Gauge Pin Kit
		Added Makita Battery
		Added Moisture Removal Kit
		Added New Formula Shampoo
		Added New Formula Body Wash
		Added Non-Intrusive Flow Meter Kit
		Added OGS PWR
		Added Oxygen Sensor
		Added PWR
		Added Scopemeter Current Probe Kit
		Added Scopemeter Load and Connector Kit
		Added Scopemeter Kit
		Added Scopemeter Pressure Probe Kit
		Added Scopemeter Temperature Probe Kit

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Added Screw Extractor Master Kit
Added TAK 1
Added TAK 2
Added Treadmill Harness
Added ULD Audio Cable Assy
Added Velcro Cable Straps
Added Volume E Bag Assy
Added Wicket Safety Cap

Added Tap and Die Set
Added Trash Container
Added Vacuum Cleaner tool pouch assembly
Added TVIS Harness
Added TVIS Maintenance Tools Kit
Changed 'Shelf-Life' description to 'Limited Life' on all
hardware and format page
Corrected dimensions and weight for the ISS Vacuum
Cleaner Hepa Filter
Corrected weight and measurements for Aluminum
Clipboard Assembly

Moved Aluminum Clipboard Assembly from R&MA to
Crew Provisioning

Moved TVIS Gyro Repair Kit from Tools and Diagnostics
to new Third Party Hardware

Updated Pouch Assembly, No Rinse Body Bath to include
new formula Body Bath Concentrate


Added a separate Table of Contents for Retired Items
(where applicable)

Updated Catalog format to include five sections: FCE,
ECLSS, ATCS, WTS, and Other


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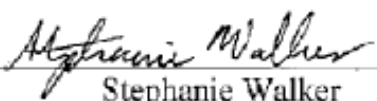
INTERNATIONAL SPACE STATION CATALOGUE OF IVA
GOVERNMENT FURNISHED EQUIPMENT (GFE) FLIGHT CREW
EQUIPMENT (FCE)

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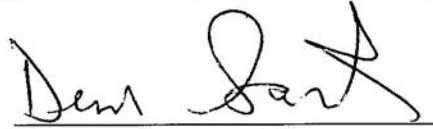
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Revision Signature Page

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Rev B:

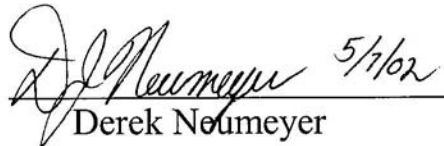
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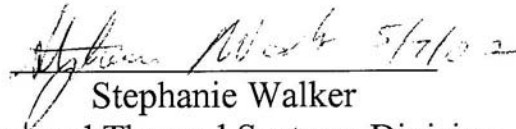
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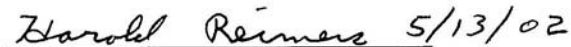
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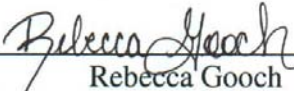
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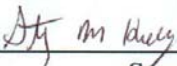
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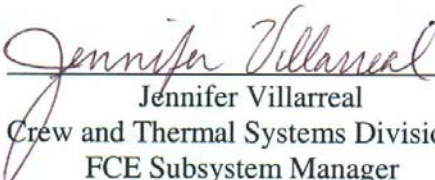


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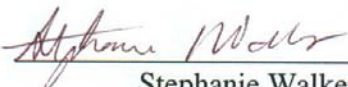
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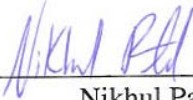
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Rev: E

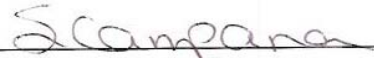
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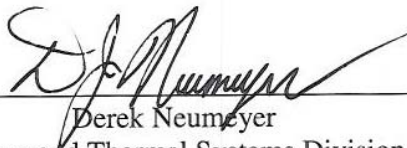
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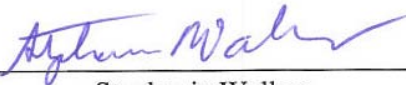
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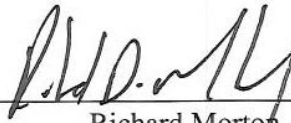
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INTRODUCTION

SCOPE and provisioning phases

Crew Thermal Systems Division (CTSD) provides Government Furnished Equipment (GFE) to maintain the hygiene, habitation, productivity, and general well being of the crew on the ISS. This document offers information regarding the equipment necessary to maintain these functions on-orbit.

FLIGHT CREW EQUIPMENT (FCE):

- **HOUSEKEEPING/TRASH MANAGEMENT:**
Equipment, softgoods, and consumables to support routine space station cleaning and trash collection.
- **CREW PROVISIONING:**
Equipment, softgoods, and consumables to support ISS personal and entertainment activities.
- **EXERCISE EQUIPMENT:**
Equipment, softgoods, and consumables to support ISS exercise and strength maintaining activities.
- **INVENTORY MANAGEMENT:**
Equipment to support tracking of consumables and loose equipment.
- **PORTABLE ILLUMINATION:**
Portable task lighting to support nominal work activities.
- **RESTRAINTS AND MOBILITY AIDS:**
Portable intravehicular activity (IVA) crew and equipment translation and restraint devices.
- **TOOLS AND DIAGNOSTIC EQUIPMENT:**
A Maintenance Work Area, tools, and maintenance test equipment to support routine maintenance, the identification of failed systems, isolation of failures, and replacement of defective devices.
- **STOWAGE EQUIPMENT:**
Provisions for transport of unconditioned, pressurized cargo to and from ISS in an MPLM
- **PAYLOAD EQUIPMENT RESTRAINT SYSTEMS:**
A modular system of equipment designed to aid the crew in transferring and restraining loose equipment

ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEM (ECLSS):

Hardware certified by EC3 but operationally supported by ECLSS.

ACTIVE THERMAL CONTROL SYSTEM (ATCS):

Hardware certified by EC3 but operationally supported by ATCS.

WATER TRANSFER SYSTEM (WTS):

Hardware certified by EC3 but operationally supported by WTS.

OTHER:

Hardware certified by EC3 but operationally supported by groups noted.

Personal and some Crew Provisioning Equipment are not included in this publication and can be found under separate cover, "Joint Crew Provisioning Catalog," SSP 50477.

Labels and Decals are not included in this publication and can be found under separate cover, "Decal Process Document and Catalog," JSC 27260C.

Inventory Management System Bar Code Labels are not included in this publication and can be found under separate cover, "IMS Label Specification Document," SSP 50007.

GENERAL INFORMATION

DESIGN AND DEVELOPMENT:

Design reviews and technical interchange meetings were conducted throughout the design and development of each End-Item. Participants included but were not limited to the Space Shuttle Program Office, ISS Program Office, Division Managers for ISS and Space Shuttle, representatives of Flight Crew Operations Directorate (FCOD), Materials and Processes (M&P), Missions Operations Directorate (MOD), and Safety, Reliability, and Quality Assurance (SR&QA).

HUMAN FACTORS:

FCE complies with the requirements SSP 50005, "Flight Crew Integration Standards," which provided data, principles, and practices of Human Factors and Ergonomics for the new design of equipment and systems or modification of commercially available off-the-shelf equipment.

CERTIFICATION:

Use of FCE for functions and in environments outside of the scope of current certification could require recertification by the user and should be negotiated with subsystem managers and the user's NASA SR&QA representatives.

DEFINITIONS AND FORMAT

SUBSYSTEM NAME

DEFINITION:

Brief Subsystem description.

END-ITEMS:

- Listing of the individual pieces of hardware that satisfy part of the function of the subsystem.

END-ITEM NAME ***PART NO.***

DESCRIPTION:

- Functions of the end-item are listed in this block: If the end-item has accessories that expand the function of the end-item, these accessories are listed with their functions described. (All end-items are designed to function at Nominal Operating Pressure of 14.7 +/- .2 psia and Nominal Operating Temperature of 72.5 +/- 7.5 °F)

Weight:

- Mass properties of the End-Item.

(Picture of end-item)

Volume or Measurements:

- Unstowed configuration of the End-Item.

Type:

- End-items are classified as one of two types as follows:
 - Consumable: An End-Item that is expended due to its use.
 - Outfitted: An End-Item that can be used repeatedly without detriment to its function.

Power:

- One set of Batteries (Rechargeable NiCad or Expendable Alkaline) is provided for battery powered end-items.
- End-Items utilizing the ISS provided 28 VDC or 120 VDC power are in accordance with SSP 30257:002, Space Station Program Utility Outlet Panel (UOP) Standard Interface Control Document and are provided with a DC power cord that interfaces with the UOP.

Fuse:

- All items interfacing the UOP and most battery-powered end-items will be fused.
- Fuse size is specified.

Restraint:

- FCE with Seat Track Interfaces are in accordance with SSP 41002, International Standard Payload Rack to NASA/ESA/NASDA Modules Interface Control Document.

- Hook and Pile fastener and tethers are typical restraint methods.

Stowage:

- FCE is designed to be transported to and from orbit, soft stowed with the following three exceptions: (The exceptions will be defined in the end-item's respective section.)
 - Restraints and Mobility Aids Panel Covers
 - MPLM Bungee Kit
 - RSP Rack

Limited Life:

- A specified time limit from delivery when the item becomes subject to replacement due to possible reduction in function.
- Limited life listed in this document must be evaluated prior to flight based upon the time that the item will remain on-orbit for use.

Lineage:

- Source of the end-item: Designs of existing Space Transportation System (STS) equipment were initially analyzed as design solutions for ISS specifications and requirements. If existing STS equipment or modified existing STS equipment did not fulfill the requirements of the ISS, a market survey ("make or buy" analysis) was performed to research commercially available (off-the-shelf) products that could fulfill the ISS requirements. If commercially available products were not available or could not be cost effectively modified for the ISS, new design and development activities were initiated.

Reference Documents:

- Numbers of documents specific to the hardware created in the certification process. Documents may include, but are not limited to: GCAR, EIS, Material Cert, Waivers, Safety Reports, Testing Reports, Requirements / Verification documents, etc.

Contact:

- Who to contact in case of hardware issue or malfunction.

1.1 HOUSEKEEPING/TRASH MANAGEMENT

DEFINITION:

Equipment, softgoods, and consumables used to support routine ISS cleaning and trash collection.

END-ITEMS:

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ZIPLOCK BAG, FLAME RETARDANT W/ VELCRO.....	15

RETIRED ITEMS:

H202 DISPOSABLE TOWELETTE.....	16
WIPES.....	18

DISINFECTANT WIPES ASSY PART NO. SEG33117799-301

DESCRIPTION:

- The Commercial Off-the-Shelf (COTS) disinfectant wipes replaced the previous GFE wipes SEG33107170-314 (GCAR G4083). These new disinfectant wipes are moist Polyester/Rayon towelettes saturated with cationic detergents.

Weight:

0.45lbs.

Volume or Measurements:

10" x 4.2" x 1"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Locker stowed

Limited Life:

Shelf Life: two years from date of manufacture

Lineage:

Commercial Off-the-shelf (COTS)

Vendor: USA Wipes

Vendor P/N: USAW1070NSDS

Reference Documents:

GCAR G5230

CR SSCN 008789

Materials MATL-05-133

Contact:

Patricia Barrett



EMESIS BAG PART NO. SED12100656-301

DESCRIPTION:

- The Emesis Bag is used for crew-sickness in the reduced gravity environment.
- The used bags will be placed in the wet trash container immediately following use.

Weight:

0.1 lb

Volume or Measurements:

Deployed: 24.00" x 8.875" x 3.250"

Stowed: 4.717" x 4.050" x 1.520"

Type:

Consumable

Power:

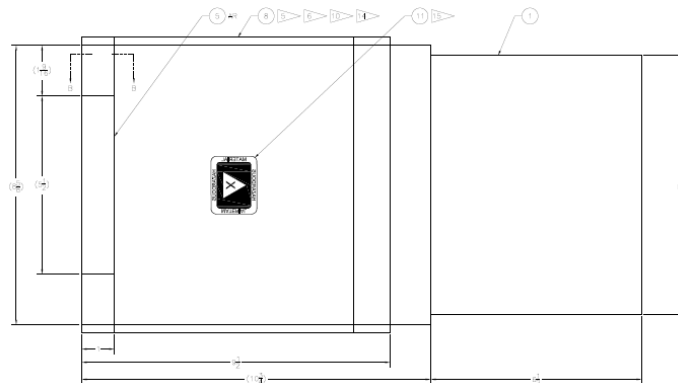
N/A

Fuse:

N/A

Restraint:

N/A



Stowage:

Locker stowed/Soft stowed, Crew worn

Limited Life:

N/A

Lineage:

CR G08856R2

Reference Documents:

GCAR	G5387
CR	G08856R2
Materials	MATL-06-027
ARM	JSC 62167
RAESR	JSC 62255
VM	JSC 62168

Contact:

Bum Jacinto

ISS VACUUM CLEANER HEPA FILTER
PART NO. SDG33115756-801 HEPA FILTER
PART NO. SDG33115755-001 HEPA FILTER RECEPTACLE

DESCRIPTION:

- Square corrugated paper filter in a molded rubber (receptacle)
- Added to ISS wet/dry vacuum cleaner to allow filtration of small particles. The filter is positioned behind the bag, before the outlet.
- Supports ECLSS HEPA filter cleaning operations
- Filter small particles down to 0.3 micron.
- Filter changed as needed. Vendor suggests every 6 months based on nominal housekeeping.

Weight:

Filter: .055 lb

Receptacle : .50 lb

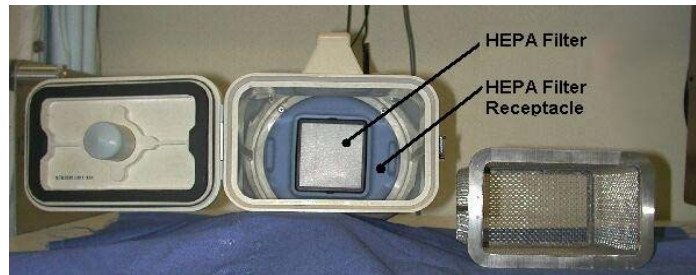
Volume or Measurements:

Filter: 3.48" x 3.04" x 0.60"

Receptacle: 6" Dia. x 1.65"

Type:

Consumable



Power:

N/A

Fuse:

N/A

Restraint:

Installed in Vacuum Cleaner

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

New Hardware development for ISS

Reference documents:

GCAR	G4675
ARM	JS60358
Materials	MATL-03-093

Contact:

Bum Jacinto

PORTABLE WET/DRY VACUUM CLEANER
PART NO. SEG39125637-301, -302
VACUUM CLEANER TOOL POUCH ASSEMBLY
PART NO. SEG39126290-301

DESCRIPTION:

- Removes liquids and wet and dry non-toxic debris from air, filters, mesh screens and other surfaces.
- The Tool Pouch Assembly consists of a Nomex Tool Pouch, P/N SEG39126291-301, which contains attachments, including a Crevice Tool, P/N SDG39125646-001, Brush Tool, P/N SEG39123368-301, Flexible Modular Cleaning Tool, P/N SEG39125404-302, and a Surface Tool, P/N SDG39125648-002. Accessories not stowed in the bag include a Hose Cleaning Tool, P/N SEG39125638-301, Suction Hose, P/N SEG39123305-301, Power Cable, P/N SEG39130245-303, 306, and a Vacuum Cleaner Bag, P/N SEG39123308-302.
- The Vacuum Cleaner Assy (VCA) is capable of containing both wet (up to 24 ounces) and dry non-toxic debris (up to 100 cubic inches) utilizing disposable bags.
- The ISS vacuum cleaner allows in-suit bag change out.
- Hose > 29" long and > 1" inner dia
- The VCA has an on/off switch to control power to the unit and a high/low switch for selecting the motor speed (approximately 10700 RPM on low and 11400 RPM on high).
- Lexan (polycarbonate) case
- 14 ft. removable power cable – connector is difficult to seat
- Diodes prevent reverse current to UOP
- Nominal operating life of 10,000 hours
- Bag rating (particle size): 6 microns – HEPA Filter can be added for smaller filtering, ref pg. 1-5
- Acceptable TOX level to be vacuumed up: TOX 0

Weight:

15 lbs (With tools)

Volume or Measurements:

1.43 cu ft (With tools)

Type:

Outfitted except for Vacuum Cleaner Bags

Power:

120 VDC, 0.75-2.27 Amps

Fuse:

5.0 amp



Restraint:

Vacuum Cleaner has a 1/2 in diameter tether ring on housing. Tether is not included with this assembly.

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3061B	Offgas/Flam	MATL-98-172 (Vacuum)
EIS	JSC 27095	Offgas/Flam	MATL-98-201(-301 Bag)
PMP	TTA 49	Offgas/Flam	MATL-98-202 (Hose)
SAR	JSC 28425	Offgas/Flam	MATL-98-203 (Tools)
Prog. Rqmts	JSC 27094	EMI	EMECBTIA#0049
Training man.	LMSMSS 32716	Stress	HDID-H-98-0282
		PDA Procedure	JSC 28462

Contact:

Bum Jacinto

SURFACTANT LIQUID (CLEANING AGENT POUCHES)

PART NO. SEG39123711-301

DESCRIPTION:

- A liquid detergent used to support the routine cleaning of soiled surfaces.
- The cleaning agent is provided as a concentrate in beverage pouches, which will be hydrated on orbit to contain 12 oz. of liquid cleaning fluid
- The dispenser has a septum adapter installed on the ground. On-orbit, the 4-inch Straw Assembly, part number SED48101596-301, is inserted into the cleaning agent dispenser. The straw can be configured to contain the liquid when not in use. The 4-inch Straw Assembly inventory is maintained on-orbit in sufficient quantity by the Food subsystem for this use. (The 5-inch Straw Assembly, part number SED48101596-302 is not a nominal item and must be manifested if required for use.)
Formula: Rewoteric AMB-14 (50%)

Weight:

1.44 oz

Volume or Measurements:

18.5 cu in

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Pouch has hook fastener

Stowage:

Standard stowage trays

Limited Life:

Shelf life is two (2) years from date of manufacture

Lineage:

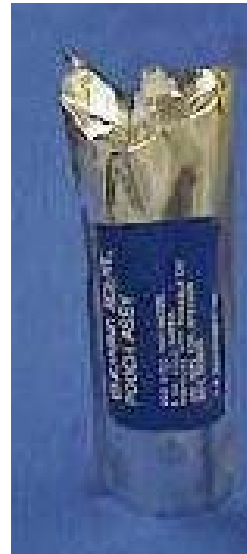
EIS No. JSC 27096, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3059	PDA Procedure JSC 28462
Materials	MATL-99-44	
	MATL-98-100	

Contact:

Patricia Barrett



TEMPO MULTI-PURPOSE DRY WIPES

PART NO. SEZ33114924-301

DESCRIPTION:

- COTS packages of 24ea. 4-ply dry paper wipes contained in a polyethylene package.

NOTE: This hardware is the recommended replacement for Durable Wipe (SEG33107170-305,-315) and Dry Wipe (SEG33107170-306,-316) once supply is exhausted.

Weight:

2oz.

Volume or Measurements:

8.25" x 4.5" x 0.5"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Cargo Transfer Bag or Locker

Limited Life:

N/A

Lineage:

EIS No. JSC 27096, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G4365
Materials	MATL-02-114

Contact:

Patricia Barrett



TRASH CONTAINER

PART NO. SED33117566-301

DESCRIPTION:

- The Trash Container is used during Space Shuttle and Space Station missions to store trash during launch, orbit, and landing.
- Trash Container was modified to strengthen its attachment to the Orbiter panels to allow for launch/land in-place (Old P/N 10104-20003-01)

Weight:

1.8 lbs.

Volume or Measurements:

28.8" x 7.8" x 4.5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Tie Wrap

P/N SDD13101649-303

Manufacturer: Thomas and Betts Corp.

Vendor P/N TYZ25M



Stowage:

N/A

Limited Life:

N/A

Lineage:

JSC CTSD

Reference Documents:

GCAR	G5143	Crew Procedures	Habitability Equipment and Procedures 91020 (DX33-CS-008)
CR	G08894R2	Stress Analysis	ESCG-6400-05-MEMO-0050
Materials	MATL-05-071		ESCG-4005-05-STRESS-0022
OCAD	670		

Contact:

Terry Wille

TRASH CONTAINER LINER ASSY

PART NO. SEZ33114033-301

DESCRIPTION:

- Designed to fit SpaceHab Trash Container for contingency use
- Serving as backup for Russian trash liners on ISS

Weight:

1.2 oz

Volume or Measurements:

18" x 8" x 6"



Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook (to be used in non-flammable trash container when in use)

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for SpaceHab

Adopted by the ISS program for use with SpaceHab trash containers

Reference Documents:

GCAR	G3770
Materials	MATL-01-040
MUA	LM/ISS-50
CR	G3327

Contact:

Terry Wille

WET-DRY VACUUM CLEANER BAGS

PART NO. SEG39123308-302

DESCRIPTION:

- Incorporates a new material, Zitex G-104, to replace the -301 bag material
- Bag housed in wire basket and interfaces the vacuum cleaner via a short tube
- Bags certified to contain Toxicity 0 material only

Weight:

2.24 oz

Measurements or Volume:

8" x 6.63" x 4.25"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Attached to Wet/Dry Vacuum Cleaner

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modification of previous wet/dry vacuum bags (SEG39123308-301)
[(Built for NASA by United Space Alliance / Flight Crew Equipment (USA/FCE)]

Reference Documents:

GCAR	G3631	PDA Procedure JSC 28462
RASEAR	JSC 29138	
Materials	MATL-00-156A	
Procedures	Habitability Equipment and Procedures Class #91020	
ARM	G05491R1	
CR	G05491R6	

Contact:

Bum Jacinto



WIPES

PART NO. (SEE BELOW)

DETERGENT WIPE

PART NO. SEG33107170-302, -312

DESCRIPTION:

- A white paper wipe with an aqueous solution used to support general cleaning.
- Decreasing surface tension between the dirt and surface loosens particulate matter on surface.
- Best wipe for soil removal.
- Wipe material is a 55/45 wood pulp/polyester.
- Formula contains:

Deionized water	99.8%
Rewoteric AMB-14	0.1%
Kathon CG/ ICP II	0.1%
- Packages contain 30 wipes with 190 ml of fluid per package.

DRY WIPE

PART NO. SEG33107170-306, -316

***NOTE: RECOMMENDED REPLACEMENT ONCE SUPPLY IS EXHAUSTED IS
TEMPO MULTI-PURPOSE DRY WIPES (SEZ33114924-301)***

DESCRIPTION:

- A white paper wipe used to support light cleaning.
- Absorbency is approximately 400% greater than the wipe's dry mass.
- Trap tear strength of .1 lbs.
- Cartridge contain 50 wipes.

DURABLE WIPE

PART NO. SEG33107170-305, -315

***NOTE: RECOMMENDED REPLACEMENT ONCE SUPPLY IS EXHAUSTED IS
TEMPO MULTI-PURPOSE DRY WIPES (SEZ33114924-301)***

DESCRIPTION:

- A white fabric wipe used to support moderate general cleaning.
- Absorbency is approximately 400% greater than the wipe's dry mass.
- Trap tear strength of 5.2 lbs.

UTENSIL DETERGENT WIPE PART NO. SEG33107170-301, -311

DESCRIPTION:

- Removes organic debris, grease and oils from three soiled utensils (knife, spoon and fork)
- Wipe material is 55/45 woodpulp/polyester
- Formula contains:

Deionized water	96.671%
Barlox 12	
(lauryl dimethyl amine oxide) 30%	0.528%
Steol CS-330	
(sodium lauryl ether 2.5 mole sulfate 28.5%)	1.205%
Stepanol WAC	
(sodium lauryl sulfate 30%)	1.420%
KATHON CG/ICP II	0.100%
MgCl ₂ -6H ₂ O	
HCl to pH 6-9	0.076%
- Packages contain 30 wipes with 190 ml fluid per package.

(Data below applies to all wipes except where otherwise noted)

Weight:

8 oz per package

Volume or Measurements:

33 cu in per package

Wipes Unfolded

-301 thru -305

9" x 7"

-306

17" x 7"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Wipe cartridges have a hook velcro tab.

Stowage:

Standard stowage trays



Limited Life:

Two (2) years from date of manufacture (wet wipes only)

Lineage:

EIS No. JSC 27096, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3017	PDA Procedure	JSC 28462
PTRS	JSC-27096	PMP	TTA 49
		SAR	JSC-28426
		Materials	MATL-98-137
			MATL-98-138
		Stress Analysis	HDID-SAS-98-0233
		Functional TPS	6M9820033
		Durable Wipe	
		Strength Test TPS	6M9820009
		Water Absorbancy	
		Test TPS	6N9720135

Contact:

Patricia Barrett

ZIPLOCK BAG, FLAME RETARDANT W/ VELCRO

PART NO. SEZ33113225	-301	12" x 12"
SEZ33113225	-303	13"x 18"
SEZ33113225	-305	23"x 24"

DESCRIPTION:

- Various sizes of flame retardant Ziploc bags for nominal crew use
- Teflon shell attached to polyethylene Ziploc

Weight:

1.63 oz

Volume or Measurements:

See Above

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Hardware Development for ISS

CR# G5602

Reference Documents:

GCAR G3623

Materials MATL-00-018

Contact:

Bum Jacinto



H2O2 DISPOSABLE TOWELETTE

P/N: SLD48100161-002

NOTE: THIS HARDWARE HAS BEEN RETIRED.

DESCRIPTION:

- The H2O2 Towelette was an item created in response to the alcohol ban.
- Alfa Nobel, LLC (manufacturer of the wipes) determined that the amount of hydrogen peroxide per towelette would be approximately 5-6 grams.
- Composition is 3 percent hydrogen peroxide, 97 percent de-ionized water.
- Expected usage rate on orbit is approximately three wipes per crewmember per day.
- In particular, they will be used for cleaning eating utensils and hands after meals on ISS.

Weight:

0.01 lbs

Volume or Measurements:

2.02" x 3.0" x 0.03"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Standard Stowage Trays

Limited Life:

Consumable

Stowage:

Locker stowed for launch and landing;
SSP and ISS operational location crew cabin

Lineage:

COTS hardware

Vendor: Alpha Nobel, LLD

Vendor P/N: 32560



Reference Documents:

FCE CCB	CR G08745
ISS Program	CR 006982
GCAR	G4764
Materials	MATL-03-122
Toxicology	HMST 11850

Contact: Patricia Barrett

WIPES

PART NO. (SEE BELOW)

DISINFECTANT WIPE

PART NO. SEG33107170-304, -314

NOTE: THE -314 HARDWARE HAS BEEN RETIRED. RECOMMENDED REPLACEMENT IS DISINFECTANT WIPES ASSEMBLY, SEG33117799-301.

DESCRIPTION:

- A white paper wipe with a low-level broad spectrum disinfectant used to inhibit microbiological growth.
- Best wipe for cleaning Waste Management Compartment surfaces
- Wipe material is 100% polyester.
- Packages contain 30 wipes with 190 ml of fluid per package
- Formula contains:

Deionized water	99.52%
Barquat 4250-Z	0.48%
2400 ppm active Barquat 4250-Z (50%) EPA reg. No. 6836-26	
N-alkyl (C12-18) -N, N-dimethyl -N- benzylammonium chloride and	
N-alkyl (C12-14) -N, N-dimethyl -N- ethylbenzyl ammonium chloride	

UTENSIL RINSE WIPE ASSEMBLY

PART NO. SEG33107170-303, -313

NOTE: THE -313 HARDWARE HAS BEEN RETIRED.

DESCRIPTION:

- Removes any detergent residue from utensils after use of utensil detergent wipe
 - Wipe material is 100% polyester
 - Formula contains:

Deionized water	99.9770%
Huntington JAQ	
EPA REG. NO. 47371-28 (N-ALKYL (C14, 95%, C12, 3%, C16, 2%) dimethyl benzyl ammonium	
chloride dihydrate 100%)	0.0220%
Methylene Blue	0.0010%
- Package contain 30 wipes with 190 ml of fluid per package.

(Data below applies to all wipes except where otherwise noted)

Weight:

8 oz per package

Volume or Measurements:

33 cu in per package

Wipes Unfolded

-301 thru -305

9" x 7"

-306

17" x 7"

Type:
Consumable

Power:
N/A

Fuse:
N/A

Restraint:
Wipe cartridges have a hook velcro tab.

Stowage:
Standard stowage trays



Limited Life:
Two (2) years from date of manufacture (wet wipes only)

Lineage:
EIS No. JSC 27096, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3017	PDA Procedure	JSC 28462
PTRS	JSC-27096	PMP	TTA 49
		SAR	JSC-28426
		Materials	MATL-98-137
			MATL-98-138
		Stress Analysis	HDID-SAS-98-0233
		Functional TPS	6M9820033
		Durable Wipe	
		Strength Test TPS	6M9820009
		Water Absorbancy	
		Test TPS	6N9720135

Contact:
Patricia Barrett

1.2 CREW PROVISIONING

DEFINITION:

Equipment, soft goods, and consumables used to support crew hygiene and various pre/post sleep, mealtime, and off duty activities.

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RETIRED ITEMS:

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3-HOLE PAPER PUNCH ASSY

PART NO. SEG33114110-301

DESCRIPTION:

- 3-hole punch for use on ISS
- Tape is applied to hole punch to retain punched paper holes.

Weight:

3.54 lb

Volume or Measurements:

12" x 9" x 3"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro Hook

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf

Vendor: ACCO USA Inc, Lincolnshire, IL

Vendor P/N Model 150

Reference Documents:

GCAR G3863

CR ISS GCB 4910

ARM JSC 40146

RAESR JSC 29297

Materials MATL-01-099

MUA S01

Contact:

Terry Wille



ALUMINUM CLIPBOARD ASSY PART NO. SEG33114111-301

DESCRIPTION:

- Used by crewmembers to secure documents for reading or note taking.

Weight:

1.0 lb

Volume or Measurements:

12.5" x 9.0" x 1.0"

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook fasteners

Stowage:

Standard stowage trays

Stowed when not in use.

Limited Life:

N/A

Lineage: JSC CTSD modified off-the-shelf for ISS

Vendor: Newell Office Products, Madison, WI

Vendor P/N: 50946

Reference Documents:

GCAR	G3802
CR	ISS GCB 4910
ARM	JSC 40147
RAESR	JSC 29298
Materials cert:	MATL-01-082

Contact:

Terry Wille

ANTIPERSPIRANT & DEODORANT PART NO. (SEE BELOW)

PART NO. 528-41759 -3	LADY SPEED STICK
-4	SECRET PLATINUM
-5	SURE ORIGINAL SOLID
-6	GILLETTE POWER STRIPE
-7	RIGHT GUARD
-8	ARRID XX

DESCRIPTION:

- Antiperspirant/deodorants have been certified for compliance with the alcohol ban.
- Expected usage rate on orbit- as needed.
- Crew pick should be fragrance-free.

Weight:

See below

Volume or Measurements:

See below

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Locker stowed for launch and landing;
SSP and ISS Operational location- crew cabin

Limited Life:

Consumable

Lineage: COTS hardware

Lady Speed Stick (528-41759-3)

Vendor: Colgate-Palmolive Co., Piscataway, NJ

Secret Platinum (528-41759-4), Sure Original Solid (528-41759-5)

Vendor: Proctor and Gamble, Cincinnati, OH

Gillette Power Stripe (528-41759-6), Right Guard (528-41759-7)

Vendor: The Gillette Company, Boston, MA

Arrid XX (528-41759-8)

Vendor: Church & Dwight Co., Inc., Princeton, NJ

Reference Documents:

FCE CCB CR G08745

ISS Program CR 006982

GCAR G4734

Materials-only certification

MATL-03-107, MATL-03-122

Contact:

Patricia Barrett

Lady Speed Stick 528-41759-3

Weight: 0.24 lb

Volume or Measurements:

2.0" x 5.1" x 1.0"

Toxicology Certification: HMST-11856



Secret Platinum 528-41759-4

Weight: 0.27 lb

Volume or Measurements:

2.3" x 5.1" x 2.1"

Toxicology Certification: HMST-11852



Sure Original Solid 528-41759-5

Weight: 0.26 lb

Volume or Measurements:

2.1" x 5.3" x 1.0"

Toxicology Certification: HMST-11854



Gillette Power Stripe 528-41759-6

Weight: 0.24 lb

Volume or Measurements:

2.5" x 4.5" x 1.6"

Toxicology Certification: HMST-11851



Right Guard 528-41759-7

Weight: 0.25 lb

Volume or Measurements:

2.5" x 4.5" x 1.0"

Toxicology Certification: HMST-11853



Arrid XX 528-41759-8

Weight: 0.27 lb

Volume or Measurements:

2.1" x 5.1" x 1.0"

Toxicology Certification: HMST-11855



AUDIO CABLE ASSY, 1/8" PLUG PART NO. SEZ33113217-301

DESCRIPTION:

- Interconnecting cable to the CD Player Assy, P/N SEZ33113218-301, and active noise reduction (ANR) headset battery box, P/N SEG16103504-801.
- Six (6) foot shielded electrical cable with 1/8 in. mini stereo plugs at each end
- Provides crew with capability to listen to compact disks when ANR headsets are worn.

Weight:

2.29 oz

Measurements:

0.157 " dia x 72 " long

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook & Loop Velcro Straps

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Radio Shack

Vendor P/N 420-2607



Reference Documents:

GCAR	G3586
CR	G05606
SAR	JSC 40024
Materials	MATL-00-128
MUA	S06

Contact:

Bum Jacinto

BIKE SHORTS

**PART NO. SLZ33114222 -001 MEN'S
-003 WOMEN'S
-005 MEN'S
-007 WOMEN'S**

DESCRIPTION:

- 90/10 Cotton / Lycra bike shorts (-001, -003, -007)
- 90/10 Nylon/ Spandex Men's Drylast shorts (-005)
- 3 pairs of -001 procured for evaluation purposes
- 100 pairs of -005 and -007
- This clothing will be available to use in conjunction with the nylon exercise shorts for ergometer use. The -001 and -003 configurations have padding in the stride for additional comfort while using a 1g bicycle. The -005 and -007 configurations do not have padding.
- **NOTE:** This hardware has been flown once and is currently not available for reflight.

Weight:

Varies

Volume or Measurements:

Varies

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Stowed Clothing Assy

Limited Life:

N/A



Lineage:

JSC CTSD Modified off-the-shelf for ISS

-001 Vendor: Canari Cyclewear

Vendor P/N 1001

-003 Vendor: Canari Cyclewear

Vendor P/N 3010

-005 Vendor: New Balance

Vendor P/N MSH108D

-007 Vendor: Danskin

Vendor P/N 8263

Reference Documents:

GCAR G3886 (-001,-003)

G4356 (-005,-007)

Materials MATL-01-123 (-001, -003)

Materials MATL-02-100 (-005, -007)

MUA LM/ISS-59

Cert. Req. JSC27301B

Contact:

Terry Wille

BINDER ASSY
PART NO. SEZ33118969-301

DESCRIPTION:

- Used by crew for storing uplinked messages.

Weight:

0.26 lbs.

Volume or Measurements:

12.0" x 1.3" x 1.5"

Type:

Outfitted

Power: N/A

Fuse: N/A

Restraint:

Hook Fastener

Stowage:

Crew locker stowed

Limited Life: N/A

Lineage:

Modified COTS hardware

Reference Documents:

GCAR G5255

CR G08991

Materials MATL-05-130

Contact:

Terry Wille



CD PLAYER ASSY PART NO. SEZ33113218-301

DESCRIPTION:

- Crew entertainment item
- Mechanical slide lock full open top cover for change out of a single compact disk
- Stored in CD Kit Assy, P/N SED33104183-305, which contains the stereo ear phones, CDs, and spare batteries.
- Capability of connecting to a flight certified ANR headset (SEG16103504-801) through the use of an Audio Cable Assembly, P/N SEZ33113217-301

Weight:

0.52 lb w/ batteries

Volume or Measurements:

1.03" x 5.06" x 5.10"

Type:

Outfitted

Power:

2 AA Alkaline Batteries

Fuse: N/A

Restraint:

Hook Fastener

Stowage:

Stowed Clothing Assy

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Panasonic

Vendor P/N SL-SX270



Reference Documents:

GCAR	G3630
CR	G05583
VM	JSC 40053
RAESR	JSC29078
Materials	MATL-00-192
Offgassing	JSC12048
	WSTF 00-35-363
MUA	S04

Contact:

Bum Jacinto

CHRONOGRAPH, SPACE AVIATION WATCH

P/N: 528-20991-2

DESCRIPTION:

- The new Space Aviation Chronograph is the updated Omega-33 Speedmaster professional watch with Kevlar Watchband.
- Watch functions include standard time, date, alarm, chronograph, and countdown timer. Additional functions include Mission Elapsed Time (MET), MET Alarm, Universal Time (GMT), Universal Time Alarm, and a battery End-of-Life indicator
- Teflon tape is placed over face of watch for compliance with fracture control.

Weight:

0.2 lbs

Volume or Measurements:

12.5" x 1.5" x .5"

(with band open)

Type: Outfitted

Power:

3V Lithium Ion Battery,
P/N CR2320



Fuse: N/A

Restraint:

Crew worn

Limited Life:

2 years battery replacement

Stowage:

Watch may be worn on the outside of the orange launch suit when wristband extender is used. This watch may also be soft stowed in crewmember's luggage, in a pocket, or in a mid-deck locker. It MAY NOT be worn inside/under the orange launch suit.

Lineage:

Updated model of 528-20991-1

Reference Documents:

GCAR #G3106 Rev B

GFE MUA # LM/IS-120

Material Cert #MATL-03-073

Contact:

Bum Jacinto

CREW NOTEBOOK ASSY PART NO. 7530-00-274-5494

DESCRIPTION:

- Black notebook with 80 pages of ruled white sulfite writing paper.

Weight:

0.35 lbs

Volume or Measurements:

9" x 5.63" x 0.50"

Type:

Consumable

Power: N/A

Fuse: N/A

Restraint:

Stowed when not in use

Stowage:

Stowed Clothing Assembly

Limited Life: N/A

Lineage:

Vendor: Government Stores Stock Catalog

Vendor P/N: 10108-10068

Reference Documents:

GCAR G4239

Contact:

Bum Jacinto



DVD PLAYER ASSY**PART NO. SEZ12100606****-301 TEFLON ON CABLE****-303 MIL SPEC WRAP (NO TEFLON)****DESCRIPTION:**

- Crew entertainment item
- Software modification to play DVD's with other country codes
- Addition of a battery power cable.
- 7" wide LCD viewing screen
- Built in speakers for playing DVD's, video CD's, or listening to audio CD's
- Capability of connecting to a flight-certified ANR headset (SEG16103504-801) through the use of an Audio Cable Assembly, P/N SEZ33113217-301.
- Portable crew speakers can be connected through the headphone jack.

Weight:

1.5 lb. Without CLIO Battery Pouch Assembly (SEG12100600-301)

Volume or Measurements:

7.5" x 5.38" x 1"

Type:

Outfitted

Power:

Flight certified camcorder battery, P/N SED33111486-301, or equivalent, as part of the 7.2V ISS CLIO Battery Pouch Assembly, P/N SEG12100600-301.

- A fully charged camcorder battery will allow approximately 100 minutes of play time when the LCD screen brightness is set to its lowest intensity. Play time can be extended when portable crew speakers or separately powered headphones are used instead of the built in speakers.
- When the portable speakers are powered by AA batteries, play time of the camcorder battery powering the DVD Player will be extended.

Fuse:

3.15A in DVD Player

4A in Battery

2A for 22 gauge external cable

Software:

Firmware for DVP-FX1 (Ver 1.2)

Son-Fx.bin (Ver 1221)

Restraint:

Hook Fastener

Stowage:

Standard Stowage Trays



Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

-301 Vendor: Sony

Vendor P/N DVD-SONFX1R

-303 Vendor: Sony

Vendor P/N ON-DVDFX1S

Reference Documents:

GCAR (-301) G3861

GCAR (-303) G4085

CR SSCN 4208, G05991,
G08181

ARM JSC 40054

VM JSC 40141

RAESR JSC 29251

Materials MATL-01-078,
MATL-01-220

MUA LM/ISS-55

Offgassing WSTF-00-35781

TIA EMECB TIA#0336

HA Doc JSC 29251

Contact:

Bum Jacinto

ELECTRIC RAZOR ASSEMBLY (PANASONIC) PART NO. SEZ12100621-301

DESCRIPTION:

- Battery operated electric shaver used for personal hygiene purposes.

Weight:

4.59 oz

Volume or Measurements:

3.9 " x 2.2" x 1.1"

Type:

Outfitted

Power:

2 AA alkaline batteries

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Personal Hygiene Kit

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD modified off-the-shelf for ISS and STS

Vendor: Panasonic

Vendor P/N: ES825

Reference Documents:

GCAR	G4164
CR	G08202
Materials	MATL-01-240
MUA	S04
ARM	JSC47667
VM	JSC47670
RAESR	JSC47671

Contact:

Bum Jacinto



ELECTRONIC KEYBOARD ASSEMBLY SEG33114632-301

DESCRIPTION:

- The Electronic Keyboard Assy consists of an Electronic Keyboard (P/N SEG33114632-501), a Sustain Foot Pedal (P/N SEG33114632-503), and Headphones (P/N SEG33114632-505). The Electronic Keyboard has 61 full-size touch response keys with options including 3 keyboard lessons, 256 voices, 100 demo songs in memory and a 6-track song recorder. The Sustain Foot Pedal provides added expression by allowing notes to be sustained. The Headphones allow the crewmember to use the Electronic Keyboard without disturbing the other crewmembers. This hardware is designed to function at Nominal Operating Pressure of 14.7 +/- .2 psi and Nominal Operating Temperature of 72.5 +/- 7.5 °F.

Weight:

12 lbs 7 oz

Volume or Measurements:

36.75" x 14.63" x 5.17"

Type:

Outfitted

Power:

- 6 Certified D-Cell Alkaline Batteries (P/N 528-41350-5)
- Batteries provided by United Space Alliance (USA/FEPC) and are non-rechargeable

Fuse:

1.85 A

Restraint:

N/A



Stowage:

Stored in the crewmembers sleep station when not in use

Limited Life:

D-Cell Alkaline Batteries: 3 years

Lineage:

JSC modified Commercial-Off-the-Shelf (COTS) for ISS

Vendor: Yamaha

Vendor P/N : PSR-282

Reference Documents:

CR	SSCN 5882
ARM	JSC 47732
VM	JSC 47734
Materials	MATL-01-253
MUA	LM/ISS-88
Stress	MSAD-00-0579
HA (Short)	JSC 29576
GCAR	G4143

Contact:

Bum Jacinto

FACIAL CLEANSING WIPES ASSY

PART NO. SEZ42104610-301

DESCRIPTION:

- Cleansing and Make-Up Remover towelettes
- 15 towelettes per package
- Allowable usage rate is based on 1 towelette per day (based on offgasing analysis).
- Must be stowed when not in use.

Weight:

N/A

Volume or Measurements:

6.5" x 3.25" x 1.0"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Crew PHK's.

Limited Life:

Vendor specified shelf life of 18 months from date of manufacture.

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: Chesebrough-Pond's, Greenwich, CT.

Vendor P/N: N/A

Reference Documents:

GCAR G4248

Materials MATL-02-051

CR SSCN6102

Contact:

Patricia Barrett



FANNY PACK LODE, MODIFIED PART NO. SED12100665-301

DESCRIPTION:

- COTS modified fanny pack (with self-adhesive Velcro, snap, and attached Nomex pouch to hold pens, pencils) (REI Lode).

Weight:
0.75lbs.

Volume or Measurements:
10" x 2" x 9.5"

Type:
Outfitted

Power: N/A

Fuse: N/A

Restraint:
Crew worn
Hook Fastener (inside pouch)

Stowage:
Standard Stowage Trays

Limited Life:
N/A

Lineage:
JSC CTSD Modified off-the-shelf
Manufacturer:
Recreational Equipment Inc. (REI).

Reference Documents:
GCAR G5042
CR G08846
Materials MATL-05-034

Contact:
Patricia Barrett



FANNY PACK LODE, UNMODIFIED PART NO. SED12100665-701

DESCRIPTION:

- COTS unmodified black nylon fanny pack (REI Lode).

Weight:

0.54 lbs.

Volume or Measurements:

10" x 2" x 9.5"

Type:

Outfitted

Power: N/A

Fuse: N/A

Restraint:

Crew worn

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Manufacturer:

Recreational Equipment Inc. (REI).

Reference Documents:

GCAR G5042

CR G08846

Materials MATL-05-034

Contact:

Patricia Barrett



FANNY PACK WALLET, MODIFIED

PART NO. SED12100665-302

DESCRIPTION:

- COTS modified fanny pack (with self-adhesive Velcro, snap, and attached Nomex pouch to hold pens, pencils) (REI Travel Wallet).

Weight:

0.88 lbs.

Volume or Measurements:

9.0" x 2" x 8.5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Crew worn

Hook Fastener

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf

Manufacturer:

Recreational Equipment Inc. (REI).

Reference Documents:

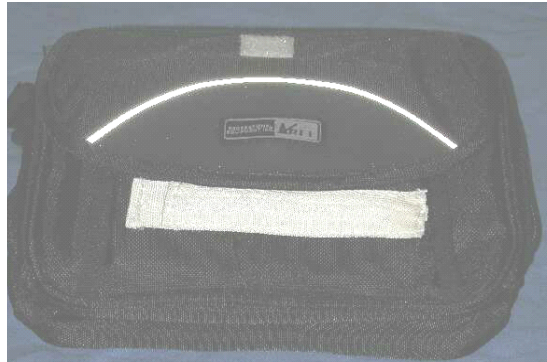
GCAR G5042

CR G08846

Materials MATL-05-034

Contact:

Patricia Barrett



FANNY PACK WALLET, UNMODIFIED PART NO. SED12100665-702

DESCRIPTION:

- COTS unmodified black nylon fanny pack (REI Wallet.)

Weight:

0.22 lbs.

Volume or Measurements:

9" x 2" x 8.5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Crew worn

Hook fastener

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Manufacturer:

Recreational Equipment Inc. (REI).

Reference Documents:

GCAR G5042

CR G08846

Materials MATL-05-034

Contact:

Patricia Barrett



GUITAR ASSY

PART NO. SLG12100618-301

DESCRIPTION:

- Includes a guitar, travel bag and a guitar tool
- Constructed of wood with water soluble glues, polyester and polyurethane coatings
- Case is nylon fabric with foam padding
- Guitar tool is chrome-plated steel

Weight:

5.39 lbs

Volume or Measurements:

39" x 14 ³/₄" x 5 ¹/₂"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Unknown

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

CR# 5291

Vendor: Jean Larrivee Guitars, Vancouver, BC, Canada

Reference Documents:

GCAR G3962

CR SSCN5291

Materials MATL-01-171

MUA LM/ISS-75

Offgassing WSTF #01-36181

Contact:

Bum Jacinto



HAIR CLIPPER KIT **PART NO. SJG33115164-302** **-303 (WITHOUT BATTERIES)**

DESCRIPTION:

- The Hair Clipper Kit is a Commercial Off-the-Shelf (COTS) cordless hair clipper that was modified by the vendor to operate on two (2) AA alkaline batteries for personal hygiene purposes. The vacuum attachment catches cut hair. Batteries last approximately 2 ½ haircuts; power on high to avoid clogging
- Kit Consists of:
 - Hair Clipper: 8789M1
 - Hose: SJG33115164-601
 - Cleaning Brush: SJG66448497-602
 - Small Guide Comb: SJG33115164-603
 - Large Guide Comb: SJG33115164-604
 - Blade Guard: SJG33115164-605
 - AA Battery: 528-41350-3

Weight:

Hair Clipper (w/out batteries)
0.7 lbs

Hose: 0.4 lbs.

Cleaning Brush: 0.004 lbs.

Small Guide Comb: 0.03 lbs

Large Guide Comb: 0.07 lbs

Blade Guard: 0.01 lbs.

AA Battery: 0.04 lb



Volume or Measurements:

Hair Clipper (w/out batteries)

8.3" x 5.5" x 2.5"

Hose Assy:

73" x 1.275" (diameter) in

Cleaning Brush:

3.1" x 0.6" x 0.3"

Small Guide Comb:

2.6" x 2.1" x 1.1"

Large Guide Comb:

1.6" x 3.6" x 2.1"

Type:

Outfitted

Power:

Two (2) AA Alkaline Batteries

Fuse:

N/A

Restraint:

Velcro hook fastener

Stowage:

Soft Stowage

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD modified off the shelf for ISS
and STS

Vendor: Wahl Clipper Corp.

Reference Documents:

GCAR:G4774

GFE MUA: SO4

Material Cert: MATL-04-007A

CR: 6598

ARM: JSC 47954

VM: JSC 60464

RAESR: JSC 60484

Contact:

Bum Jacinto

HUGGIES WIPES ASSY PART NO. SEG33115639-301 -302

DESCRIPTION:

- Soft, resealable COTS package of Huggies baby wipes.
- Huggies Wipes Assy, P/N SEG33115639-301, has a resealable pull back tab dispenser.
- Huggies Wipes Assy, P/N SEG33115639-302, has a flip top dispenser.
- NOTE: Replaces Hygiene, Wet Wash Dispenser Assy (V669-000704-009)

Weight:

1.0 lbs.

Volume or Measurements:

9.5" x 4" x 1.8"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Standard Stowage Trays

Limited Life:

2 years from date of manufacture

Lineage:

JSC CTSD Modified off-the-shelf

Manufacturer:

Kimberly Clark Corp.

Vendor P/N: 36000 18698 (the vendor part number is the same for both -301 and -302 configurations.)



Reference Documents:

GCAR	G4602
CR	SSCN 7547
Materials	MATL-03-079

Contact:

Patricia Barrett

HYGIENE DISPOSAL BAGS

PART NO. SEZ33113458

-301 Hygiene Disposal Bag, 6" x 6"

-303 Hygiene Disposal Bag, 12" x 12"

-001 Hygiene Disposal Bag, Hotel

DESCRIPTION:

- -001 Waxy paper material
- -301/-303 Gas impermeable for odor control
- Must be unstowed less than one hour per day

Weight: -001: 0.114 oz
 -301: 0.17 oz
 -303: 0.588 oz

Volume or Measurements:

See Heading

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener (-301, -303)

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS (except -001 which is COTS)

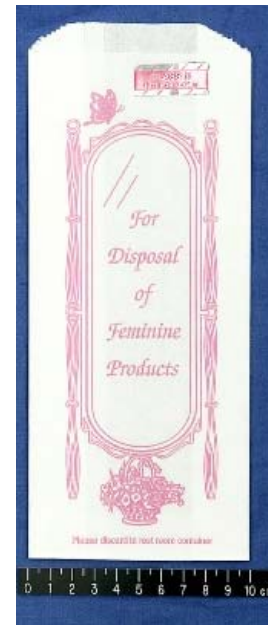
Vendor: Com-Pac International

P/N: -301 4742-S

 -303 4745-S

Vendor: KMK Supply Co.

P/N: -001 SBNL



Reference Documents:

GCAR G3670
Materials MATL-00-181

Contact:

Patricia Barrett

HYGIENE, WET WASH DISPENSER ASSY PART NO. V669-000704-009

NOTE: RECOMMENDED REPLACEMENT IS HUGGIES WIPES ASSY (SEG33115639-301) ONCE SUPPLY IS EXHAUSTED.

DESCRIPTION:

- Unscented, alcohol free wipes
- Cartridge contains 36 wipes
- Original Formula 1980's to 1994:
 - Purified water
 - Propylene Glycol
 - PEG-75 Lanolin
 - Disodium Cocoamphodiacetate
 - Cetyl Hydroxyethylcellulose
 - DMDM Hydantoin
 - Methylparaben
 - Malic Acid
- Second Formula 1994-2001 and 2001 to present
 - Purified Water
 - Potassium Laureth Phosphate
 - Glycerin
 - Polysorbate 20
 - Aloe Barbadensis Gel
 - Tetrasodium EDTA
 - DMDM Hydantoin
 - Malic Acid
 - Methylparaben
- Third Formula 2001 only
 - Water
 - Sunflower Seedamidopropyl Morpholine Lactate
 - Polysorbate 20
 - Sodium Hydroxymethylglycinate
 - Glycerin
 - Aloe Barbadensis Gel
 - Iodopropynyl
 - Tocopheryl Acetate



Weight:

.72 lb

Volume or Measurements:

6" x 4" x 1.5" (589.93 cu cm)

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Wall Dispenser

Stowage:

Standard stowage trays

Limited Life:

1 Year from date of manufacture

Lineage:

USA Hardware Grandfathered for ISS from STS program

Vendor: CFE from Boeing North America (BNA)

Reference Documents:

GCAR G4384

CR G05355

Cert. Req. JSC27301

Materials MATL-02-088

Contact:

Patricia Barrett

IPOD MP3 PLAYER ASSY PART NO. SEZ33117876-301

DESCRIPTION:

- Portable device with head phones for listening to music
- External Battery pack (internal battery removed)
- 20Gb internal memory
- Does not interface with any on-orbit hardware (power or data)

Weight:

1.05lbs.

Volume or Measurements:

5.0" x 2.75" x 1.75"

Type:

Outfitted

Power:

4 AA Alkaline Batteries

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Crew Locker Stowed

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD Modified off-the-shelf

Reference Documents:

GCAR	G5113
CR	G08840R2
Materials	MATL-05-034

Contact:

Bum Jacinto



ISS FOOD WARMER PART NO. SED39114053-309

DESCRIPTION:

- Heats wet pack or rehydrated soft pack crew meals on ISS.
- Certified to connect to Service Module outlet via DC Power Cable (P/N: SEG39135494-301) and PEEK / IMAX Cable (P/N SEZ39134173-301) and Russian Adapter Cable (P/N SEG33112678-301).
- Heats 6 wet pack, 6 re-hydratable packs between 145° F - 190°F.
- Operates up to 280 Watts.
- Will heat 12 packs in under 40 minutes
- Food packets are placed under the springs on both sides of the heater plate. The springs are only used to keep the food in place with the case open, so minor spring damage is not a functional problem. Total food pack capacity is 12 - 6 packs on top and 6 packs on the bottom. The Food Warmer is intended to be closed and latched during use.
- The Food Warmer has 5 indicator lights: one (1) that indicates power on/off, and four (4) that illuminate in sequence at 10, 20, 30, and 40 minutes after power on. These four indicator lights would flash if there was a problem detected by the circuit board that caused abnormal operation. When the Food Warmer is first powered on, only the red power light should be lit; the 4 green timer lights should be off.
- The Food Warmer has a manually re-settable 10A circuit breaker located next to the power connection.
- The Food Warmer has two independent thermometers for each of the four (4) heater elements. The thermometers cut off the heater at 197°F, and turn it back on at or below 175°F. The outside case temperature during normal operation is 101°F.
- The foam in the top and bottom of the Food Warmer is made of Melamine and is coated with Mosites for ease of cleaning. Tears in the foam are not a flammability concern.
- Empty and closed, the Food Warmer requires 1.25 hours from power off to cool to touch temperature at the heater plate. Empty and open, the Food Warmer requires 0.5 hours from power off to cool to touch temperature at the heater plate.



Weight:

13.0 lbs

Volume or Measurements:

19 1/4" x 13 7/8" x 6 1/2"

Type:

Outfitted

Power:

10 Amp (28-32 VDC) Power Source



Fuse:

5 x 20 Fast Acting Fuse (P/N H216.630, Little Fuse Corporation)

Restraint:

Velcro or Strap Assy (P/N SDD39114059-305)

Stowage:

Standard Stowage Tray

Limited Life:

N/A

Lineage:

JSC CTSD new development for ISS

Reference Documents:

GCAR	G3555A
Requirements	JSC 39343
SAR	JSC 39536
Materials	MATL-00-039
Stress	MSAD-00-0019
HRD	JSC39343A
Test Procedures	JSC39500
CR	G04106

Contact:

Bum Jacinto

LEATHERMAN TOOL ASSY PART NO. (SEE BELOW)

PART NO. SLZ33112269 -001	LEATHERMAN TOOL W/ SHEATH
-003	LEATHERMAN TOOL, ORIGINAL
-005	LEATHERMAN TOOL SHEATH, ORIGINAL
-007	LEATHERMAN TOOL, MICRA
-009	LEATHERMAN TOOL, WAVE
-011	LEATHERMAN TOOL SHEATH, FLASHLIGHT COMBO
-013	LEATHERMAN TOOL SHEATH, WAVE

DESCRIPTION:

- Multi-use tool with the following features:
- Wave
 - Pliers
 - Knife, straight
 - Knife, serrated
 - Wire Cutters
 - Scissors
 - File
 - File, diamond coated
 - Screwdrivers (large, medium, small, extra small)
 - Screwdriver, phillips
 - Container Opener
 - Saw
 - Wire Stripper
 - Locking Blades (4 of 11)
- Original
 - Pliers
 - Knife, straight
 - Wire Cutters
 - File
 - Screwdrivers (large, medium, extra small)
 - Screwdriver, phillips
 - Container Opener
 - Awl / Punch
 - Ruler
- Micra
 - Knife, Straight
 - Scissors
 - File
 - Screwdriver (medium, extra small)
 - Screwdriver, Phillips



-005



-009



-011



-001



-007

- Bottle Opener
- Tweezers
- Ruler

Weight:

Original: 5 oz
Wave: 8 oz
Micra: 1.75 oz
Sheath, Flashlight Combo: 2.0 oz
Wave Sheath: 1.0 oz

Volume or Measurements:

Original: 4" long	Sheath, Flashlight Combo: 5.25" x 3.625" x 1.125"
Wave: 4" x 1.125" x 0.75"	Wave Sheath: 1.375" x 2.125" x 4.625"
Micra: 2.5" x .365" x 0.75"	

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Belt Clip on Sheath

Stowage:

Standard Stowage Trays

Limited Life: N/A

Lineage:

JSC CTSD unmodified off-the-shelf for ISS
Vendor: Leatherman
Vendor P/N: Micra: Leatherman Micra
Wave: Leatherman Wave
Original: Leatherman PST

Reference Documents:

GCAR	G3376
Materials	MATL-00-031

Contact:

Bum Jacinto

LIQUID FERTILIZER CONTAINER ASSY

PART NO. SEZ46118520-301

DESCRIPTION:

- Bottle for fluid containment of certified fertilizer for astronaut herb garden
- Hazard level 0
- Top of bottle is threaded

Weight:

Unknown

Volume or Measurements:

3 oz

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Inside Hygiene Disposal Bag w/ Velcro

Stowage:

Standard stowage trays

Limited Life:

Manufacturer suggested 1-year shelf life

Lineage:

JSC CTSD New Hardware Development for ISS

Combined:

½ Strength Hoagland Nutrient Solution

Boston Round Bottle Assy (SED48101663-309)

Vendor – Nutrient Solution – Wisconsin Center for Space Automation and Robotics

Vendor – Boston Bottle – USA/FCE

Reference Documents:

GCAR G4045

CR SSCN 005578A

Materials MATL-01-196

Contact:

Patricia Barrett



MACH3 TURBO RAZOR ASSY
PART NO. SED33115495-301
MACH3 TURBO CARTRIDGE ASSY
PART NO. SED33115496-301

DESCRIPTION:

- Razor and replacement blades

Weight:

Razor Only: 0.05 lb (1 oz)

Razor and Cartridge: 0.15 lb (2 oz)

Volume or Measurements:

1.63" x 5.3" x 1.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Crew PHK

Limited Life:

N/A

Lineage:

JSC CTSD unmodified off-the-shelf

Reference Documents:

GCAR	G4601 (Turbo Razor)
	G4600 (Turbo Cartridge)
CR	G08677
Materials	MATL-03-082
MUA	S04

Contact:

Bum Jacinto



MAKEUP**PART NO. 528-43067**

-24	MAKEUP BASE, SOFT FINISH
-25	MAKEUP BASE, SUPERFIT
-26	MAKEUP SOLVENT
-27	QUICKLINER FOR EYES

DESCRIPTION:

These products were certified for compliance with the alcohol ban. Expected usage rate on orbit- as needed.

Weight:

See below

Volume or Measurements:

See below

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Locker stowed for launch and landing;
SSP and ISS operational location - crew cabin.

Limited Life: N/A

Lineage: COTS hardware

Vendor: Estee Lauder Co.,
Clinique Division

Reference Documents:

FCE CCB CR G08745
ISS Program CR 006982
GCAR G4733
Materials-only certification
MATL-03-107, MATL-03-122

Contact:

Patricia Barrett

Soft Finish Base 528-43067-24

Weight: 0.241 lb

Volume or Measurements:

1.5" x 3.4" x 1.0"

Toxicology certification: HMST-11846



SuperFit Base 528-43067-25

Weight: 0.10 lb

Volume or Measurements:

1.4" x 3.1" x 1.0"

Toxicology certification: HMST-11871

Eye Makeup Solvent 528-43067-26

Weight: 1.00 lb

Volume or Measurements:

1.0" x 5.3" x 1.0"

Toxicology certification: HMST-11848



Quickliner for Eyes 528-43067-27

Weight: 0.18 lb

Volume or Measurements:

0.3" x 5.6" x 0.3"

Toxicology certification: HMST-11847



NO RINSE BODY BATH POUCH ASSY PART NO. SED32103194-303

DESCRIPTION:

- No rinse body wash (packaged in beverage pouch at USA/FEPC)
- Pouch Beverage Pkg, P/N SDD48101683-001
- Septum Adapter Assy, P/N SED48101796-301
- Straw Assy, P/N SED48101596-302
- Composition:
 - -303:

H2O		90.19%
Tecsuds 642 (Surfactant Blend)		8.00%
Cocodiethanolamide		1.00%
Ordenone		0.50%
Diazolidinyl Urea		0.18%
Methylparaben		0.06%
Citric Acid		0.05%
Propylparaben		0.02%

Weight: 0.04 lbs

Volume or Measurements:

.25 oz as flown
6 oz hot water and 2 oz cold
water added prior to use

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Crew PHK

Limited Life:

4 years from date of manufacture



Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: No Rinse Laboratories, LLC, Springboro, OH

Vendor P/N: 00900-N (bath concentrate)

Vendor P/N: 00100-NS [new formula No Rinse Body Wash Assy, P/N SEZ33114283-302

(8 OZ), P/N SEZ33114283-312 (2 OZ)]

Reference Documents:

GCAR G4438

Cert. Req. JSC 27301D

Materials MATL-02-155

CR G08497

Contact:

Patricia Barrett

NO RINSE BODY WASH ASSY

PART NO. SEZ33114283 **-301 8 oz**
 -311 2 oz
 -302 8 oz
 -312 2 oz

DESCRIPTION:

- No rinse personal cleanser
- Similar to body bath, but does not require additional water
- -301 and -311 Composition:

H2O		93.19%
Tecsuds 642 (Surfactant Blend)		5.00%
Cocodiethonolamide		1.00%
Ordenone		0.50%
Diazolidinyl Urea		0.18%
Methylparaben		0.06%
Citric Acid		0.05%
Propylparaben		0.02%



-302 and -312 composition:

Water 90%
 Sulfochem B-NBB 10%
 Water
 PEG-80
 Sorbitan Laurate
 Cocamidopropyl betaine
 Sodium trideceth sulfate
 Glycerin
 Disodium lauroamphodiacetate
 PEG-150 distearate
 Sodium laureth-13 carboxylate
 Methyl Paraben
 Propyl paraben

**Weight:**

0.6 lbs (-301, -302)
 0.2 lbs (-311, -312)

Volume or Measurements:

8 oz or 2 oz

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook fastener

Stowage:

Crew PHK

Limited Life:

3 years from date of manufacture

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: No Rinse Laboratories, Springboro, OH

Vendor P/N: 00940-N [-301 (8 oz)]

Vendor P/N: 00930-N [-311 (2 oz)]

Vendor P/N: 00940-NS [-302 (8 oz)]

Vendor P/N: 00930-NS [-312 (2 oz)]

Reference Document:

GCAR G4392

CR SSCN 5289 RevA

Cert. Req. JSC27301D

Materials MATL-02-120

MUA S04

Contact:

Patricia Barrett

Processing responsibility for -301, -311, -302, and -312 transferred to USA/FCE

NO RINSE SHAMPOO

PART NO. SEZ33114865-301 8 OZ
-311 2 OZ
-302 8 OZ
-312 2 OZ

DESCRIPTION:

- Shampoo towels out of hair
- Composition:

-301 and -311

H2O		94.59%
Tecsuds 642 (Surfactant Blend)		4.60%
Ordenone		0.50%
Diazolidinyl Urea		0.18%
Methylparaben		0.06%
Citric Acid		0.05%
Propylparaben		0.02%



-302 and -312

NASA No-Rinse Shampoo new formulation:

Water	90%
Sulfochem B-NBB	10%
Water	
PEG-80	
Sorbitan Laurate	
Cocamidopropyl betaine	
Sodium trideceth sulfate	
Glycerin	
Disodium lauroamphodiacetate	
PEG-150 distearate	
Sodium laureth-13 carboxylate	
Methyl Paraben	
Propyl paraben	

Weight:

0.6 lbs

Volume or Measurements:

8 oz or 2oz

Type:

Consumable

Power:

N/A

Fuse:

N/A



Restraint:

Velcro hook fastener

Stowage:

Crew PHK

Limited Life:

3 years from date of manufacture

Lineage:

JSC CTSD Modified off-the-shelf for ISS

New items (-302 and -312) have modified formulas for compliance with ISS ECLSS requirements.

Vendor: No Rinse Laboratories, Springboro, OH

Vendor P/N: 00100-N [-301 (8 oz)]

Vendor P/N: 00120-N [-311 (2 oz)]

Vendor P/N: 00100-NS [-302 (8 oz)]

Vendor P/N: 00120-NS [-312 (2 oz)]

Reference Documents:

GCAR G4393

CR SSCN 5289

SSCN 5289 Rev A

Cert./Proj. Req. JSC27301D

Materials MATL-02-120

MATL-06-018

MUA S04

ESCG-005

Contact:

Patricia Barrett

Processing responsibility for -301, -311, -302, and -312 transferred to USA/FCE

PERSONAL HYGIENE KIT
PART NO. 10103-10003-05
PERSONAL HYGIENE CONTAINER
PART NO. SED12100619-301

DESCRIPTION:

Personal Hygiene Container (SED12100619-301)

- Made of flame retardant blue nomex with nylon velcro contained within container
- Various sized pouches are available to hold personal items.

Personal Hygiene Kit (PHK) (10103-10003-05)

- PHK is a crew-requested hardware, rolling dash number from -04 to -05. Kit contains new personal hygiene container plus previously certified personal hygiene items.

Weight:

Crewmember dependent

Volume or Measurements:

3" x 7.5" x 10"

Type:

Outfitted (Container)

Consumable (Hygiene Items)

Power:

N/A

Fuse:

N/A

Restraint:

Hook and pile fasteners

Stowage:

Standard stowage trays

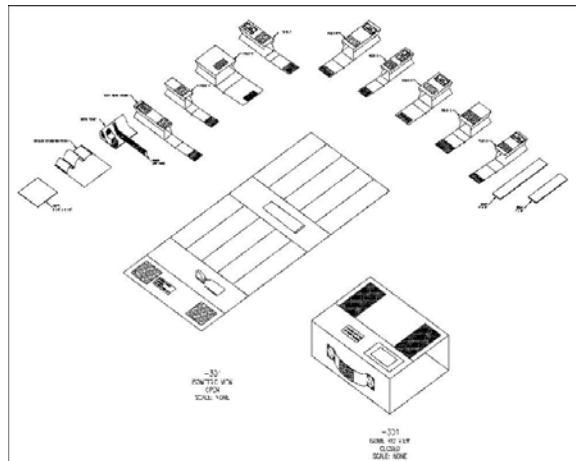
Limited Life:

The hardware is certified for 100 missions or 15 years.

Lineage:

A new container designed and developed for NASA by Lockheed Martin Space Operations Corp.

Note: Replaces prior Personal Hygiene Kit P/N 10101-10003-04



Reference Documents:

GCAR	G4264
CR	G3579
SAR	26

Contact:

Bum Jacinto

PERT PLUS FOR KIDS (PP4K) ASSY **PART NO. SEZ33114285-301** ---

DESCRIPTION:

- Rinse-out shampoo

Weight:

N/A

Volume or Measurements:

8 oz

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf product

Vendor: Proctor & Gamble, Cincinnati, OH

Vendor P/N: BCS295.016

Reference Documents:

GCAR G4391

CR SSCN 5289 RevA

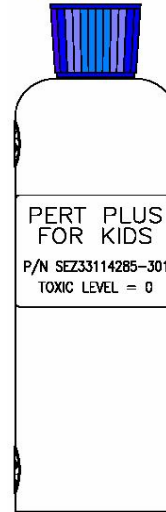
Cert./Proj Req. JSC27301D

Materials MATL-02-121

MUA S04

Contact:

Patricia Barrett



SLEEP HAT
PART NO. SLZ33113457

-001 SLEEP HAT, POLARTEC, MED
-003 SLEEP HAT, POLARTEC, LG
-005 SLEEP HAT, WIGWAM

DESCRIPTION:

- -005 Polyester sleeping cap
- -001, -003 Polartec[®] sleeping cap

Weight:

-001, -003
 .86 oz
 -005
 1.19 oz

Volume or Measurements:

-001, -003
 10 ¼" x 7 ½" x ½"
 -005
 9" x 8 ½" x ¾"



Type:

Outfitted

-001, -003

Power:

N/A

Fuse:

N/A

Restraint:

Hats will be stowed when not in use

Stowage:

Stowed Clothing Assy



Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf item for ISS

-001, -003

Vendor: Patagonia, Reno, NV

Vendor P/N 28953

-005

Vendor: REI, Sumner, WA

Vendor P/N WW614779

Reference Documents:

GCAR G3560
Materials MATL-00-142A

Contact:

Patricia Barrett

SPEAKER KIT ASSY. PART NO. SED33114461-301

DESCRIPTION:

- The portable crew speaker system consists of a commercial off the shelf Sony SRS-T77 and after configuring for flight will be designated as P/N SED33114461-301.
- This unit can be powered passively or with four (4) AA alkaline batteries.
- The stowed dimensions are 5.5" x 1" x 5".
- The portable crew speaker system will interface with any audio device with a 1/8" headphone jack, including the CD Player, DVD Player, cassette recorder, and laptop.

Weight:

0.65 lbs

Volume or Measurements:

8.75" x 1" x 5" (open)

5.5" x 1" x 5" (closed)

Type:

Outfitted

Power:

Four (4) AA Alkaline Batteries

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage tray

Limited Life:

Certified for 100 missions or 15 years

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD modified off-the-shelf hardware for ISS

Vendor: Sony, Inc

Vendor P/N: SRS-T77

Reference Documents:

GCAR G4264

Materials MATL-02-061

Contact:

Bum Jacinto



TIMEX IRONMAN TRIATHLON WATCH

PART NO. SEG12100476-803

DESCRIPTION:

- Data Link system, which allows it to be pre-programmed with the use of a computer (certified feature)
- 100-hour Chronograph with lap and split times
- 50-lap memory recall with best lap calculation
- 5 Multi-Mode Countdown Timers with 100-hour capacity
- 10 Alarms for Appointments, Anniversaries or Reminders
- Phone Number/Personal Information storage
- INDIGLO night-light with NIGHT-MODE.
- 2nd time zone with date
- Up to 38 phone numbers with 15-character messages
- Daily, monthly or yearly alarm settings with 15-character messages
- Chronograph label and lap storage requirements
- World-wide time zone settings and watch options
- Requires a Timex Notebook Adapter for compatibility with Windows
- Teflon on face of watch for compliance with fracture control

Weight:

1.3 oz.

Volume or Measurements:

Length (including strap) - 10"

Width - 1 3/4"

Thickness - 7/16"

Type:

Outfitted

Power:

3-volt watch battery (CR2025)

Fuse:

N/A

Restraint:

Wristband wraps around crewmembers' arm. A wristband extender, P/N SED33105589-701 (small), -703 (medium), -705 (large), or -707 (xlarge), is required if wearing the watch outside the wrist area of the orange launch suits.

Stowage:

Watch may be worn on the outside of the orange launch suit, when wristband extender is used. This watch may also be soft stowed in crewmember's luggage, in a pocket, or in a mid-deck locker. It MAY NOT be worn inside/under the orange launch suit.

Limited Life:

Battery has a life span of 2-3 years.



Lineage:

JSC CTSD modified off-the-shelf hardware for ISS

Vendor: Timex Corp

Vendor P/N: 78041

Reference Documents:

GCAR G4107 Rev.B

CR G08645

ARM JSC 47642

VM JSC 47654

RAESR JSC 47701

Materials MATL-01-212

MATL-03-0373

MUA LM/ISS-120

Contact:

Bum Jacinto

VASELINE INTENSIVE CARE LOTION (WATER RESISTANT) PART NO. 528-41042-3

DESCRIPTION:

- This product was certified for compliance with the alcohol ban.
- Vaseline Intensive Care Lotion (Water Resistant) is manufactured by Cheeseborough Ponds USA.
- Composition is water, glycerin, distearyldiammonium chloride, cetyl alcohol, methyl palmitate, caprylic/capric triglyceride, steareth-21, dimethicone, tocopheryl acetate, retinyl palmitate, sunflower (helianthus annus) oil, polyquaternium-7, butylenes glycol, BHT, fragrance, corn oil, sodium chloride, DMDM hydantoin, iodopropynyl butylcarbamate, and titanium dioxide.
- Expected usage rate on orbit- as needed.

Weight:

0.81 lb

Volume or Measurements:

3.3" x 7.5" x 1.5"

Type: Consumable

Power: N/A

Fuse: N/A

Restraint: N/A

Stowage: Locker stowed for launch and landing; SSP and ISS operational location- crew cabin

Limited Life: N/A

Lineage:

Commercial Off-the-Shelf (COTS) hardware

Vendor: Cheeseborough Ponds USA

Reference Documents:

FCE CCB CR G08745

ISS Program CR 006982

GCAR G4732

Material-only certification: MATL-03-107, MATL-03-122,

Toxicology certification: HMST 11849

Contact:

Patricia Barrett



X-STATIC CLOTHING

PART NO.	SLG33114899	-001 Socks, Gray Crew
		-003 Socks, Navy Crew
		-005 Socks, Gray Tube
		-007 Socks, Navy Tube
	SLG33114900	-001 T-Shirt, Women's Gray
		-003 T-Shirt, Women's Navy
		-005 T-Shirt, Men's Gray
		-007 T-Shirt, Men's Navy

DESCRIPTION:

- COTS clothing items that contain a silver fiber which reduces odor, static build-up and enhances thermal properties.

Weight:

Varies

Volume or Measurements:

Varies

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed in crew clothing when not in use.

Stowage:

Standard stowage trays or CTB

Limited Life:

N/A

Lineage:

Commercial Off-the-Shelf products



Reference Documents:

GCAR	G4508
CR	G08581R1
Materials	MATL-03-007
MUA	LM/ISS-08

Contact:

Patricia Barret

NO RINSE BODY BATH POUCH ASSY PART NO. SED32103194-302

NOTE: THE -302 HARDWARE IS RETIRED.

DESCRIPTION:

- No rinse body wash (packaged in beverage pouch at USA/FEPC)
- Pouch Beverage Pkg, P/N SDD48101683-001
- Septum Adapter Assy, P/N SED48101796-301
- Straw Assy, P/N SED48101596-302
- Composition:
 - -302:

H2O		84.43%
Triethanolamine Lauryl Sulfate		10.29%
Cocodiethanolamide		2.96%
Propylene Glycol		1.53%
Gaermaben II		0.50%
	Diazolidinyl Urea - 30%	
	Methylparaben - 11%	
	Propylparaben - 3%	
	Propylene Glycol - 56%	
Fragrance		0.30%
Citric Acid		0.05%

Weight: 0.04 lbs

Volume or Measurements:

.25 oz as flown

6 oz hot water and 2 oz cold water
added prior to use

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Crew PHK

Limited Life:

4 years from date of manufacture



Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: No Rinse Laboratories, LLC, Springboro, OH

Vendor P/N: 00900-N (bath concentrate)

Vendor P/N: 00100-NS [new formula No Rinse Body Wash Assy, P/N SEZ33114283-302 (8 OZ), P/N SEZ33114283-312 (2 OZ)]

Reference Documents:

GCAR G3106

CR G2996

Contact:

Patricia Barrett

1.3 EXERCISE EQUIPMENT

DEFINITION:

Equipment, softgoods, and consumables to support ISS exercise and strength maintaining activities.

NOTE: Treadmill, TVIS, CVIS, and other non-portable exercise equipment are provided by Wyle Biomedical Systems Division and are not included in this document.

END-ITEMS:

EGGSERCIZER	85
EXCERISE TUBING ASSEMBLY	87
FINGER EXERCISER	89
FOAM BALL.....	90
GRIP MASTER	91
GRIP STRENGTH DYNAMOMETER.....	92
PINCH GAUGE.....	93
POWER STICK	94
POWER WEB.....	95

EGGSERCIZER

PART NO. SDD33111962-001

DESCRIPTION:

- Foam egg is placed in palm of hand and squeezed to maintain muscle tone in fingers and hand

Weight:

3.16 oz

Volume or Measurements:

1.5" x 2.8" x 3.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Health for Life

Vendor P/N: EC0009

Reference Documents:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



EXERCISE SURFACE BOOTIES

PART NO. 9770R

DESCRIPTION:

- Black, 100% Nylon Bootie for use with contingency exercise device
 - Slips over running shoe to create a slick surface for running in place / slide exercise
- 1" elastic band around opening for secure fit

Weight:

2.72 oz

Volume or Measurements:

12" long, 6" wide

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: MF Athletic Company

Vendor P/N: 9770R

Reference Documents:

GCAR G3947

Materials MATL-01-159

CR SSCN 5333

Contact:

Terry Wille



EXCERISE TUBING ASSEMBLY

P/N: SEZ33112286-301

DESCRIPTION:

- Stretch Latex Tubing used for strength training.

Weight:

1.893 lbs

Volume or Measurements:

Envelope Dimensions:

12" x 14" x 2.5" (od)

Each tube is 20ft. long with diameters:

Black: 0.438" (od)

Blue: 0.375" (od)

Green: 0.25" (od)

Red: 0.188" (od)

Yellow: 0.125" (od)

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro

Stowage:

Packed with crew preference items

Limited Life:

N/A

Lineage:

JSC CTSD COTS for ISS



Reference Documents:

GCAR G3255

Vendor: Integrated Medical Inc.

Part numbers:

Black: HYG03318 Blue: HYG3319

Green: HYG3320 Red: HYG3321

Yellow: HYG3322

Contact:

Terry Wille

FINGER EXERCISER

PART NO. SDD33111963-001

DESCRIPTION:

- Rubber membrane surrounded by plastic frame
- The finger exerciser is used by placing the thumb through the hole and all four fingers on the rubber membrane
- This equipment is used to maintain muscle tone

Weight:

2.77 oz

Volume or Measurements:

5.8" x 7.4" x 0.5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Abilitations

Vendor P/N: 1-78657-194

Reference Documents:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



FOAM BALL

PART NO. SDD33111961 -001 YELLOW 7" DIA
-003 GREEN 6.25" DIA

DESCRIPTION:

- These foam balls are used by squeezing with each hand
- The green and yellow balls provide varied resistance for maintaining hand strength

Weight:

-001 2.6 oz
-003 2.27 oz

Volume or Measurements:

See Heading

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard Stowage Tray

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Sportime

P/N: -001 1-52986-191

-003 1-07650-191

Reference Documents:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



GRIP MASTER
PART NO. SDD33111967-001 (RED)
-003 (BLACK)

DESCRIPTION:

- Individual finger buttons
- Rubber grip
- Used to maintain grip strength

Weight:

2.76 oz

Volume or Measurements:

3.6" x 3.0" x 0.9"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Health for Life

Vendor P/N: GM0009

Reference Documents:

GCAR G3231 (Red)

G3926 (Black)

Materials MATL-99-142

CR SSCN 005073 (Black)

Contact:

Terry Wille



GRIP STRENGTH DYNAMOMETER PART NO. SDD33111968-001

DESCRIPTION:

- Grip strength measured from 0-100 kgf

Weight:

1.37 lbs

Volume or Measurements:

9.5" x 2.3" x 6.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Takei Scientific Instruments Co.

Vendor P/N: TKK5001 Grip-A

Reference Documents:

GCAR	G3453 (New) (Grandfathered for use on ISS)
GCAR	G3421 (Old) (Original certification for use on SS)
CR	G05338
Cert. Proj. Req.	JSC17038
SAR	SAR-42
Materials	MATL-00-005

Contact:

Terry Wille



PINCH GAUGE

PART NO. SDD33111965-001

DESCRIPTION:

- Measures pinch strength from 0-60 lbf or 0-25 kgf.

Weight:

5.42 oz

Volume or Measurements:

1.5" x 3.4" x 1.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Wrist tether, stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Creative Health Products

Vendor P/N: T-2T

Reference Document:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



POWER STICK

PART NO. SDD33111966-001

DESCRIPTION:

- Increase / decrease resistance by turning ends for multiple levels of workout
- Foam grips
- Used for wrist and forearm exercise

Weight:

4.62 lbs

Volume or Measurements:

17.0" x 2.0" dia

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Health for Life

Vendor P/N: PK0009

Reference Documents:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



POWER WEB

PART NO. SDD33111964-001

DESCRIPTION:

- Rubber web held in shape by metal ring.
- The power web is used by placing the fingers of one hand in the holes and squeezing.
- This equipment is used to maintain dexterity and muscle tone in the fingers and hands.

Weight:

13.58 oz

Volume or Measurements:

0.5" x 14.0" dia

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD off-the-shelf for ISS

Vendor: Sportime

Vendor P/N: 1-42890-194

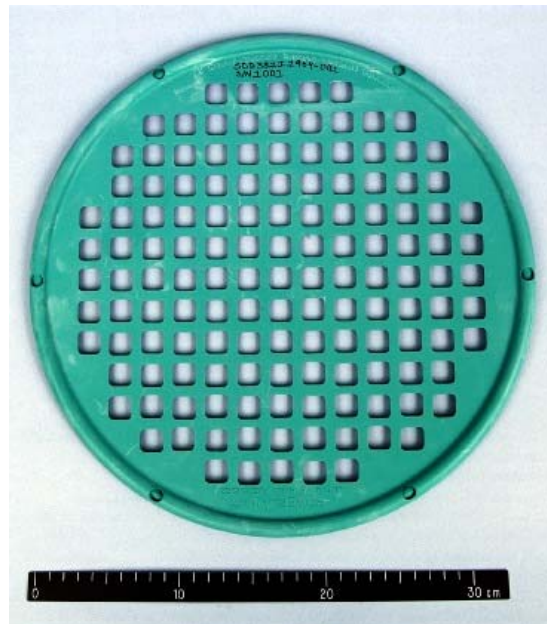
Reference Documents:

GCAR G3231

Materials MATL-99-142

Contact:

Terry Wille



1.4 INVENTORY MANAGEMENT

DEFINITION:

Equipment to support identification of consumables and loose equipment.

END-ITEMS:

BAR CODE READER 97

BAR CODE READER (BCR)

Part NO. SEG33109788-302

DESCRIPTION:

- Replaces -301 Configuration
- Portable LASER scanner to read bar codes for on-orbit inventory control
- 8 MB RAM
- Class II LASER (640-680 nm wavelength, 1.0 MW maximum output)
- Transfers data to computer via data cable (SEG33109789-301)
- Mobile Base Assembly (SEG33111319-301) charging time: 4 hours from 0%, trickle charge at 100%
- Rechargeable NiMH Battery
- Eliminates need for direct cable interface by incorporating RF mode to transmit data to a laptop

Weight:

0.9 lbs

Volume or Measurements:

7 3/16" x 2 5/8" x 2 3/16"

Type:

Outfitted

Power:

Dolphin NiMH Battery Pack Assy, P/N SEG33109788-321
3.6 V, 1500 mAh: 10 hours of operation on fully charged battery

Bar Code Reader Cable Assy, P/N SEG33109789-302

Battery Charged in BCR Mobile Base Assy, P/N
SEG33111319-301

Mobile Base Assy powered via 28V PEEK or Shuttle
Connector using Power Cable, P/N SEG33109789-302

Fuse:

Thermal Fuse 0.5A in mobile base

Restraint:

Velcro hook fastener

Stowage:

Standard stowage trays

Limited Life:

Replace Battery after 5 years



Mobile Base Assy

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Hand Held Products

BCR P/N: 90021080

Batt P/N: 200-00233

JSC CTSD New Development for ISS

Mobile Base Assy

Reference Documents:

GCAR G3597

Materials MATL-00-035A

CR G05453

MUA LM/ISS-35

Cert./Proj. Req. JSC17038

Contact:

Craig Perez

1.5 PORTABLE ILLUMINATION

DEFINITION:

Portable task lighting to support nominal work activities.

END ITEMS:

COMBINATION LIGHT ASSEMBLY	100
CREW MEMBER FLASHLIGHT	102
FIBER-OPTIC PENLIGHT ADAPTER ASSEMBLY	104
HEADBAND PENLIGHT HOLDER ASSEMBLY	105
HEADLAMP LIGHT SOURCE ASSY	106
IVA PORTABLE UTILITY LIGHT ASSEMBLY	107
LED HEADLAMP ASSEMBLY	109
SNAKELIGHT ASSY	110

COMBINATION LIGHT ASSEMBLY
OPS NOM: ARC WHITE FLASHLIGHT (AWFL)
PART NO. SEZ33115753-301 (WITH BATTERIES INSTALLED)
PART NO. SEZ33115753-303 (WITHOUT BATTERIES INSTALLED)

DESCRIPTION:

- The Arc White Flashlight (AWFL) consists of a commercial off-the-shelf Energizer Arc White from Eveready, part number CFL420.
- This flashlight runs on four (4) AA Alkaline Batteries.
- It is a dual purpose flashlight, which provides incandescent or fluorescent illumination for the crewmember.

Weight:

0.4 lb with batteries installed
0.2 lb without batteries

Volume or Measurements:

5.90" x 2.20" x 1.85"

Type:

Outfitted



Power:

Four (4) AA Alkaline Batteries, P/N 528-41350-3, will be supplied by USA/FCE.
The batteries are non-rechargeable.

Fuse:

N/A

Restraint:

Velcro hook

A wrist tether may be attached utilizing the following:

- Book, Tether Assembly (12") SEC32100180-313
- Book, Tether Assembly (24") SEC32100180-314
- Book, Tether Assembly (36") SEC32100180-315

Stowage:

The AWFL is locker stowed except for on-orbit use.

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC modified Commercial-Off-the-Shelf (COTS) for STS and ISS

Vendor: Eveready

P/N: CFL420

Reference Documents:

GCAR	G4637
ARM	JSC60366
VM	JSC60367
RAESR	JSC60418
Materials	MATL-03-087

Contact:

Craig Perez

CREW MEMBER FLASHLIGHT

PART NO. 528-20084	-3	Clear Lens
	-4	Red Lens
	-5	Clear Lens w/ Lanyard
	-6	Red Lens w/ Lanyard

DESCRIPTION:

- Provides 2200 Peak Beam Candlepower light (clear lens)
- Fits into Headband Penlight Holder Assy (SEG33112399-301) for hands-free light
- 4.5 hours to 25% initial light output
- Bulb life: 20 hours
- Spare bulb in end cap
- Spare bulbs (P/N 107-000-003) found in Spare Bulb Kit (P/N 528-21064-2)
- Adjustable beam width

Weight:

3.78 oz.

Volume or Measurements:

5 3/4" x 1" dia

Type:

Outfitted

**Power:**

Two (2) AA Alkaline Batteries (non-rechargeable)

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard Stowage Trays / Crew Preference Bag

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: Maglite

P/N: Mini Maglite AA

Bulb P/N: LM2A001

107-000-227

107-000-003

Reference Documents:

GCAR	G4385
Materials	ES5-86-112L
	ES5-88-087M

Contact:

Craig Perez

FIBER-OPTIC PENLIGHT ADAPTER ASSEMBLY PART NO. SEG33109827-301

DESCRIPTION:

- One of two Penlight Accessories developed for the ISS
- Directs STS developed penlight beam to tight and hard to reach places
- 13 inch length

Weight:

0.1 lbs

Volume or Measurements:

36 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Screws into penlight housing

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

P/N: 6545352

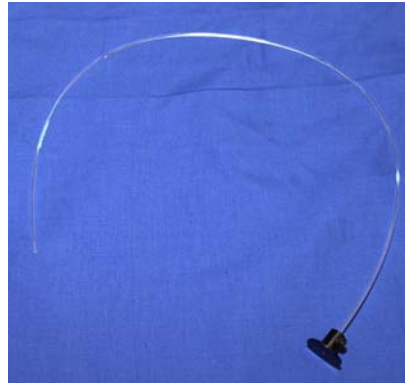
Reference Documents:

EIS SSP50345

GCAR G3282

Contact:

Fatonia Rivera



HEADBAND PENLIGHT HOLDER ASSEMBLY PART NO. SEG33112399-301

DESCRIPTION:

- One of two Penlight Accessories developed for the ISS
- Allows the crewmembers to hold and position the STS-developed penlight with minimum use of their hands

Weight:

0.1 lbs

Volume or Measurements:

27 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Wraps around crewmember's head while securing light.

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

Vendor P/N: 11525T85

Reference Documents:

EIS SSP50345

GCAR G3282

Contact:

Fatonia Rivera

HEADLAMP LIGHT SOURCE ASSY

PART NO. SJZ33114010-301

DESCRIPTION:

- Provide hands-free light source for crew member
- Head strap adjusts to fit various size heads
- Bulb life: 14 hours
- Spare bulbs (P/N SEZ33114030-501) found in Spare Bulb Kit Assy (P/N SJZ33114014-301)

Weight:

5 oz.

Volume or Measurements:

3" x 2" x 2.5"

Type:

Outfitted



Power:

Two (2) AA Alkaline Batteries (non-rechargeable) 5-hour battery life

Fuse:

N/A

Restraint:

Velcro hook fastener

Elastic headband used to secure headlamp light source assembly to crew member's head.

Stowage:

Standard stowage trays / Crew Preference Bag

Limited Life:

AA Alkaline batteries have shelf life of 3 years from manufacture

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: L.L. Bean Inc., supplied by Scott Resources, Inc.

P/N: OAN68-12

Reference Documents:

EIS JSC40103

SAR JSC29222

GCAR G3783

Materials MATL-01-053

Contact:

Fatonia Rivera

IVA PORTABLE UTILITY LIGHT ASSEMBLY

PART NO. SEG33107306-301

-303

DESCRIPTION:

- Allows in-site lamp change out
- Equipped with a handle (for two fingers) on the back of the unit translation
- Equipped with a dimmer to control light intensity
- Internal fan for cooling
- 14 foot power cable (non-removable)
- On-orbit 35-watt spare bulb can convert the on-orbit spare -301 configuration to a -303 configuration by replacing the -301 50-watt bulb with the 35-watt spare bulb.
- The -301 configuration is not to be used with any UOP without GFCI protection. The -301 currently on orbit will be configured to -303 if the current TeSS light needs to be replaced.
- **-303 Configuration:**
 - Modified for use only in Temporary Sleep Stations (TeSS) by the installation of an on-orbit external ground wire to meet shock hazard requirements.
 - 35-watt bulb beam spread is 40 degrees
 - A 35-watt bulb contained in the lens housing

Weight:

3.84 lbs

Volume or Measurements:

198.4 cu in

Type:

Outfitted

Power:

120 VDC UOP, .5 amps

Lamp Assembly, SEG33111358-303, nominally provides 3500 hours of life

Fuse:

1.0 amp fuse

Restraint:

The Portable Utility Light has a Camera Shoe interface (Shuttle Part No.SED33105356-303) that allows the light assembly to interface with either the ISS Flexible Bracket or the ISS Multi-use Bracket for attachment to the Seat Track. A Spring Clamp is also provided to allow the Portable Utility Light to interface with the ISS structure where Hand Rails are provided. The light also has a fabric handle.

Stowage:

Standard stowage tray

Limited Life:

N/A



Lineage:

PUL

EIS No. JSC 27199, JSC CTSD New Development for ISS

Bulb

Vendor: GE Lighting

P/N -303 35MR16/Q/40/TL

P/N -301 50MR16/Q/60/TL

Reference Documents:

EIS JSC27199

Materials MATL-98-186 (Original Configuration)

MATL-01-155 (TeSS Configuration)

Training Manual LMSMSS 32707

Stress HDID-SAS-98-0233

SAR JSC 28434

GCAR G3933 (TeSS)

PDA Procedure JSC-28462

ISS EMEP TIA#0792

Contact:

Feng Li

LED HEADLAMP ASSEMBLY

PART NO. SEZ33103989-301 (WITH BATTERIES INSTALLED)

-303 (WITHOUT BATTERIES INSTALLED)

DESCRIPTION:

- The LED Headlamp Assy. consists of a commercial off-the-shelf Tikka Headlamp from Petzl, Inc., part number E43P.

Weight:

.07 kg with batteries installed

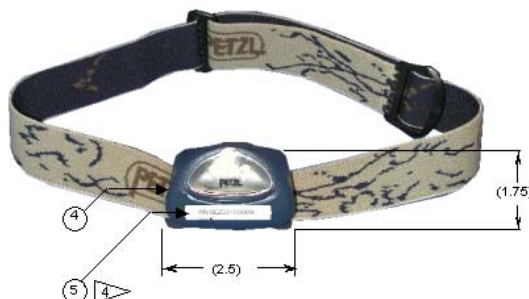
.04kg without batteries installed

Volume or Measurements:

4" x 2.5" x 2.75"

Type:

Outfitted



Power:

Three (3) AAA Alkaline batteries are required. They are provided by United Space Alliance (USA) Flight Crew Equipment (FCE) and are non-rechargeable.

Fuse:

N/A

Restraint:

Crew-worn

Stowage:

The LED Headlamp Assy. is locker stowed except for on-orbit use.

Limited Life:

AAA Alkaline Battery: 3 years from date of manufacture

Lineage:

JSC modified Commercial-Off-the-Shelf (COTS) for ISS

Vendor: Petzl, Inc.

Vendor P/N: E43P

Reference Documents:

CR SSCN 7397

ARM JSC 60314 CTSD-SS-2671

VM JSC 60315 CTSD-SS-2672

Materials MATL-03-055

HA (Short) JSC 60325 CTSD-SS-2676

Battery Memo EP-03-02

GCAR G4582

Contact:

Fatonia Rivera

SNAKELIGHT ASSY PART NO. SED33111320-301

DESCRIPTION:

- Small Flexible Light
- Powered by two (2) Alkaline AA Batteries
- Spare bulbs found in Spare Bulb Kit (P/N 528-21064-3)

Weight:

.395 lb

Volume or Measurements:

7.4" x 2.3" x 1.1"

Type:

Outfitted



Power:

Two (2) AA Alkaline Batteries (non-rechargeable)

Replace bulb (P/N 173618-00) at failure. Specifications require a minimum bulb life of 8 hours at 2.4 VDC.

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Standard Stowage Trays

Limited Life:

AA Alkaline Batteries: 3 years from date of manufacture

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Black & Decker

P/N: SLM1

Bulb P/N: 173618-00

Reference Documents:

EIS JSC17038

Materials MATL-00-0027

SAR G3446

GCAR G3446

Contact: Craig Perez

1.6 RESTRAINTS AND MOBILITY AIDS

DEFINITION:

Portable intravehicular activity (IVA) crew and equipment translation and restraint devices.

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3 - INCH BUNDLING WRAP ASSEMBLY

PART NO. SEG33109828-301

DESCRIPTION:

- Teflon helical bundling ties used to organize and secure data cables and wires 5/16"-3" dia.

Weight:

.4 lbs, 10 foot lengths

Volume or Measurements:

54 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Self secure to wire/data cable

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

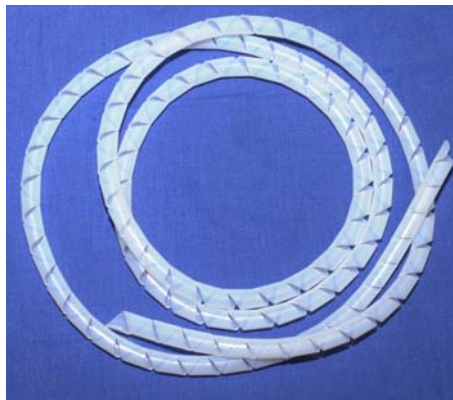
P/N: 7432K62

Reference Documents:

GCAR G3508

Contact:

Keshla Johnson



8 - INCH BUNDLING WRAP ASSEMBLY PART NO. SEG33112403-301

DESCRIPTION:

- Teflon helical bundling ties used to organize and secure data cables and wires 15/16"-8" dia.

Weight:

1.2 lbs, 10 foot lengths

Volume or Measurements:

144 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Self secure to wire/data cable

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

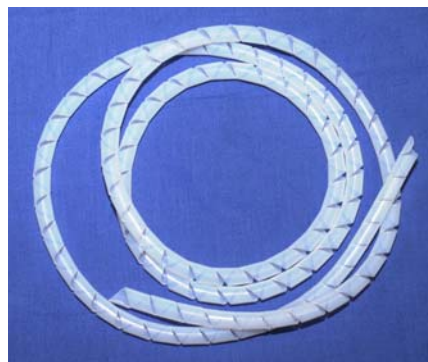
P/N: 70085K71

Reference Documents:

GCAR G3508

Contact:

Keshla Johnson



LARGE ADJUSTABLE BUNGEE

PART NO. SEG33107626

-302 with Goretex sleeving
 -304 without Goretex sleeving
 -306 redesign without Goretex sleeving
 -308 per MIL-C-5651D

DESCRIPTION:

- 36-72 inch bungee (measured from hook end to hook end, unloaded)
- 1 spring closed stainless steel hook at each end, and a third hook used for length adjustment.
- Used to restrain miscellaneous items (elastically tie down).
- Designed to interface with the Seat Track Stud and other bungees.
- -302, - 304 certifications rescinded for design flaw, elastic loop could not hold bungee clips under loading
- -306 was redesign, comes only without Goretex sleeving
- -308 was redesigned to manufacture the bungee cord per MIL-C-5651D

Weight:

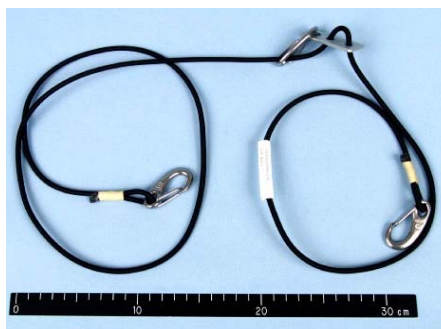
4.8 oz

Volume and Measurements:

32 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Seat Track Stud and/or Bungee Ring

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3072 (-302)
	G3232 (-304)
	G3855A (-306)
CR	G05961 (-308)
EIS	JSC27167B (-302,-306)
Materials	MATL-98-121 (-302)
	MATL-99-136 (-304)
	MATL-01-087 (-306)
MUA	LM/ISS-14R1 (-306)
PMP	SSP50158 (-302,-306)
PDA Procedure	JSC-28462
RAESR	JSC28427 (-302,-306)

Contact:

Keshla Johnson

LARGE NON-ADJUSTABLE BUNGEE

PART NO. SEG33107625 **-302 with Goretex sleeving**
-304 without Goretex sleeving
-306 redesign without Goretex sleeving
-308 per MIL-C-5651D

DESCRIPTION:

- 14 inch bungee (measured from hook end to hook end, unloaded)
- 1 spring closed stainless steel hook at each end.
- Used to restrain miscellaneous items (elastically tie down).
- Designed to interface with the Seat Track Stud and other bungees.
- -302, - 304 certifications rescinded for design flaw, elastic loop could not hold bungee clips under loading
- -306 was redesign, comes only without goretex sleeving
- -308 was redesigned to manufacture the bungee cord per MIL-C-5651D

Weight:

4 oz

Volume or Measurements:

14 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Seat Track Stud and/or Bungee Ring

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3072 (-302)
	G3232 (-304)
	G3855A (-306)
CR	G05961 (-308)

EIS	JSC27167B (-302)
	JSC27167B (-306)
Materials	MATL-98-121 (-302)
	MATL-99-136 (-304)
	MATL-01-087 (-306)
PMP	SSP50158 (-302)
RAESR	JSC28427 (-302)

Contact:

Keshla Johnson

SMALL ADJUSTABLE BUNGEE **PART NO. SEG33107626**

-301 with Goretex sleeving
-303 without Goretex sleeving
-305 redesign without Goretex sleeving
-307 per MIL-C-5651D

DESCRIPTION:

- 18-36 inch bungee (measured from hook end to hook end, unloaded)
- 1 spring closed stainless steel hook at each end, and a third hook used for length adjustment.
- Used to restrain miscellaneous items (elastically tie down).
- Designed to interface with the Seat Track Stud and other bungees.
- -301, - 303 certifications rescinded for design flaw, elastic loop could not hold bungee clips under loading
- -305 was redesign, comes only without Goretex sleeving
- -307 was redesigned to manufacture the bungee cord per MIL-C-5651D.

Weight:

3.52 oz

Volume or Measurements:

24 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Seat Track Stud and/or Bungee Ring

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS



Reference Documents:

GCAR	G3072 (-301)
	G3232 (-303)
	G3855A (-305)
EIS	JSC27167B (-301,-305)
PMP	SSP50158 (-301,-305)
MUA	LM/ISS-14 Rev1 (-305)
RAESR	JSC28427 (-301)
	JSC28427A (-305)
Materials	MATL-98-121 (-301)
	MATL-99-136 (-303)
CR	G05961 (-307)
PDA Procedure	JSC-28462

Contact:

Keshla Johnson

SMALL NON-ADJUSTABLE BUNGEEES

PART NO. SEG33107625-303 without Goretex sleeving
-305 new design without Goretex sleeving
-307 per MIL-C-5651D

DESCRIPTION:

- 8 inch bungee (measured from hook end to hook end, unloaded)
- 1 spring closed stainless steel hook at each end.
- Used to restrain miscellaneous items (elastic tie-down).
- A stainless steel ring is attached to one of the ends, next to a hook to allow attachment of another bungee.
- Designed to interface with the Seat Track Stud and other bungees.
- -301, - 303 certifications rescinded for design flaw, elastic loop could not hold bungee clips under loading
- -305 was redesigned, comes only without Goretex sleeving
- -307 was redesigned to manufacture the bungee cord per MIL-C-5651D.

Weight:

1.6 oz

Volume or Measurements:

8 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Seat Track Stud and/or Bungee Ring

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3072 (-301)
	G3232 (-303)
	G3855A (-305)
CR	G05961 (-307)
EIS	JSC27167B (-301)
	JSC27176A (-305)
Materials	MATL-98-121 (-301)
	MATL-99-136 (-303)
	MATL-01-087 (-305)
PMP	SSP50158 (-301)
	SSP50158 (-305)
RAESR	JSC28427 (-301)
	JSC28427A (-305)
MUA	LM/ISS-14 Rev1 (-305)
PDA Procedure	JSC-28462 (-305)

Contact:

Keshla Johnson

MPLM BUNGEE KIT (36"-72")
PART NO. SEG33107626-306
PART NO. SEG33110621-003

DESCRIPTION:

- Series of Adjustable Bungees that crisscross to form webbing that interfaces with seat track studs that attach to the seat track.
- Designed to provide temporary on orbit stowage.
- Certified to launch in place.
- Not certified to restrain anything during launch or landing.

Weight:

80.8 oz.

Volume or Measurements:

517.5 cu

Type:

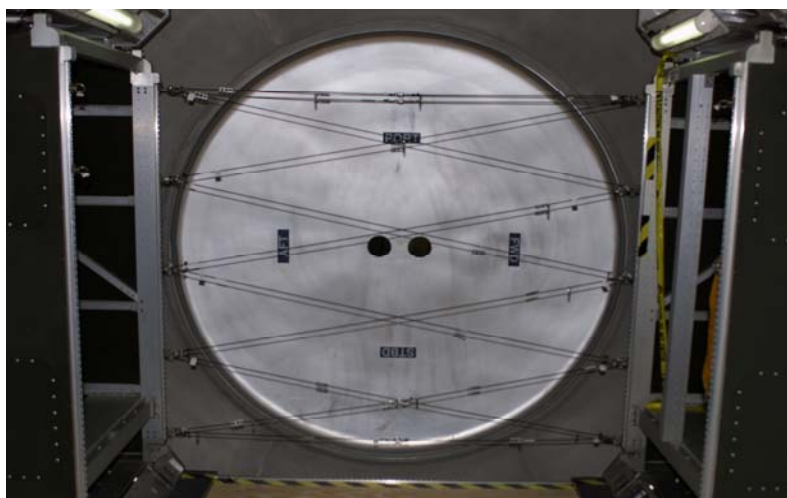
Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Seat Track

Stowage:

Launch Installed

Limited Life:

N/A

Lineage:

JSC Modified Shuttle for ISS

Reference Document:

GCAR	G4329
GCAR	G4330
Proj. Req.	JSC27167
PMP	SSP50158
SAR	JSC28427A
Materials	MATL-01-087
MUA	LM/ISS-14 Rev1
CR	SSCN5871A

Contact:

Keshla Johnson

CABLE RESTRAINT PART NO. SDG33107627-001

DESCRIPTION:

- 1.75" ID spring loaded stainless steel pass through that restrains wires and cables against the seat track interface.
- Provides a means of restraining cables and wires.
- Designed to interface with seat track.

Weight:

.32 oz

Volume or Measurements:

6.76 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC Modified Shuttle for ISS

Reference Documents:

GCAR	G3073
PDA Procedure	JSC-28462
Proj. Req.	JSC27167
PMP	SSP50158
SAR	JSC28428
Materials	MATL-98-119
EIS	JSC27167B

Contact:

Feng Li

CABLE TRAY ASSY**PART NO. SEG33113708****-301 1.5" TRAY****-303 2.0" TRAY****DESCRIPTION:**

- Each cable tray provided is 2 foot length
- Removable cover that slides or snaps onto the channel to retain wires & cables
- Cable trays may be installed using double-sided tape or Velcro
- Clear polycarbonate material

Weight:

1.5" Tray - .64 lb ea

2.0" Tray - .72 lb ea

Volume or Measurements:

1.5"/2.0" x 1.5" x 3'

Type:

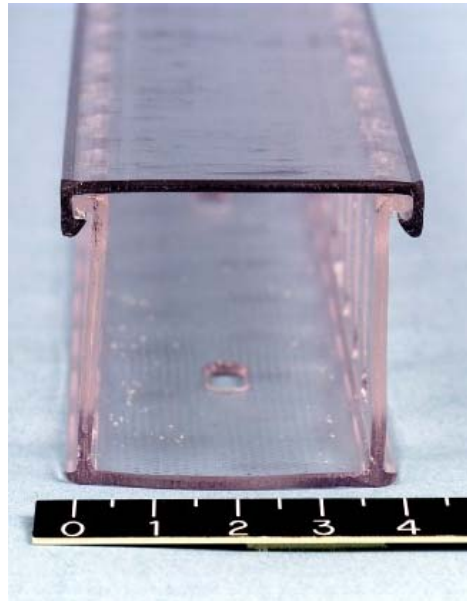
Outfitted

Power:

N/A

Fuse:

N/A

**Restraint:**

Hook fastener or double-sided tape (not included)

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Panduit

P/N:	PC2CL6	Cable Tray Cover
P/N:	PE2.0x1.5CL6	Cable Tray
P/N:	PC1.5CL6	Cable Tray Cover
P/N:	PE1.5x1/5CL6	Cable Tray

Reference Documents:

GCAR	G3565
Cert. Req.	JSC40013
CR	G05724
Materials	MATL-00-173
Proj. Req.	JSC29061
RAESR	JSC29074

Contact:

Feng Li

FLEXIBLE BRACKET

PART NO. SEG33107630-301

DESCRIPTION:

- Similar to the current Shuttle LocLine Bracket with the exception that it is adapted to interface with the seat track.
- Consists of a series of flexible hose segments which fit together to form a flexible bracket.
- A camera shoe interface (female) is provided on the Flexible Bracket. Attaching hardware must have a male camera shoe interface or have Part No. SDD33103310-001 (Stainless Steel) or SDD33103310-002 (Aluminum) incorporated as part of the equipment's assembly in order to attach to the Flexible Bracket.

Weight:

.7 lbs

Volume or Measurements:

112.5 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

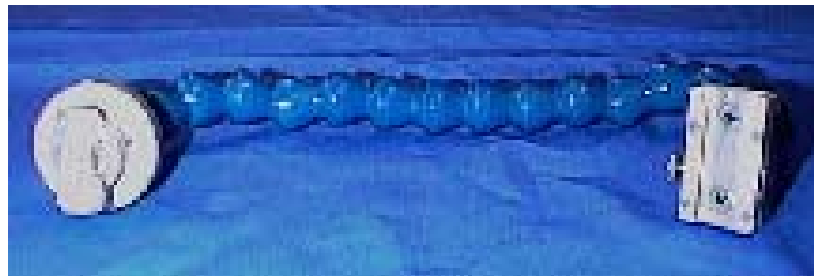
EIS No. JSC 27170, JSC CTSD Modified Shuttle for ISS

Reference Documents:

GCAR	G1722
EIS	JSC27167B
CR	SSP54101-2
Materials	MATL-98-042
Stress	HDID-SAS-98-0036
PDA Procedure	JSC-28462

Contact:

Keshla Johnson



ISS HANDRAIL CLAMP ASSY. PART NO. SEG33107633-301

DESCRIPTION:

- Attaches to a standard U.S. only Hand Rail in order to provide a seat track interface at that location.

Weight:

.54 lbs

Volume or Measurements:

11 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Handrail

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G1723	EIS	JSC27167B
PDA Procedure	JSC-28462	Materials	MATL-98-041
CR	SSP54101-2	Stress	HDID-SAS-98-0062

Contact:

Feng Li



LONG DURATION CREW MEMBER RESTRAINT PART NO. SEG33107621-301

DESCRIPTION:

- Provides support at the toe, ankle, and calf areas and can provide comfort for long duration tasks.
- Adjustable support designed to hold a crew member's body in a semi sitting position
- Has 4 foam support pads that provide support to the top and bottom of feet.
- Pads slip over the CFE provided rails and can be used with and without the knee support.
- Attaches to the Contractor Furnished Equipment (CFE) Long Duration Foot Restraint Rail Assembly, Part number G11F5008-1 of the CFE Long Duration Foot Restraint, Part number G11F5000-1.
- Two foam support pads provide support behind the knee.

Weight:

11.1 lbs

Volume or Measurements:

1 cu ft

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Attaches to the Contractor Furnished Equipment (CFE) Long Duration Foot Restraint Rail Assembly, Part number G11F5008-1 of the CFE Long Duration Foot Restraint, Part number G11F5000-1.

Stowage:

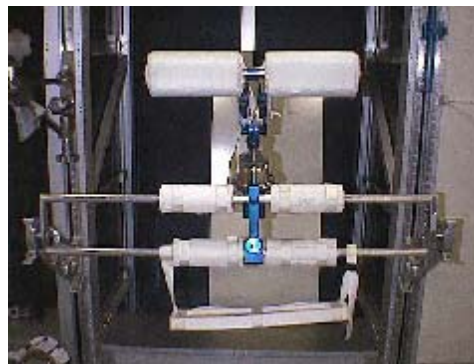
Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS



Reference Documents:

GCAR	G3069
PDA Procedure	JSC-28462
EIS	JSC27167
PMP	SSP50158
SAR	JSC28429
Materials	MATL-98-122
Stress	HDID-SAS-98-0241

Contact:

Feng Li

MULTIUSE BRACKET

PART NO. SEG33107631-301

DESCRIPTION:

- Similar to the current Shuttle Multiuse Bracket with the exception that it is adapted to interface with the seat track.
- A mechanical arm with a central elbow and ball joints on each end.
- A single knob at the elbow joint tightens all joints.
- A camera shoe interface (female) is provided on the Multiuse Bracket. Attaching hardware must have a male camera shoe interface or have Part No. SDD33103310-001 (Stainless Steel) or SDD33103310-002 (Aluminum) incorporated as part of the equipment's assembly in order to attach to the Multiuse Bracket.

Weight:

2.5 lbs

Volume or Measurements:

180 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD Modified Shuttle for ISS

Reference Documents:

GCAR	G1724	Materials	MATL-98-040
PDA Procedure	JSC-28462	Stress	HDID-SAS-97-0270
EIS	JSC27167B	FW&T	JSC65529
CR	SSP54101-2		

Contact:

Feng Li



PANEL COVERS

PART NO. SEG33107639-301

DESCRIPTION:

- A 16" x 41" Aluminum panel that attaches to a rack front and provides workspace and pile fastener attachment points. (The panel spans the width of an ISS rack and covers approximately ¼ of the rack front.)
- 2" x 2" squares of pile fasteners are attached to the panel front at 2" intervals.
- The panel attaches to the seat track on either side of a rack front with the aid of four (4) Standoff Assemblies.

Weight:

6.62 lbs

Volume or Measurements:

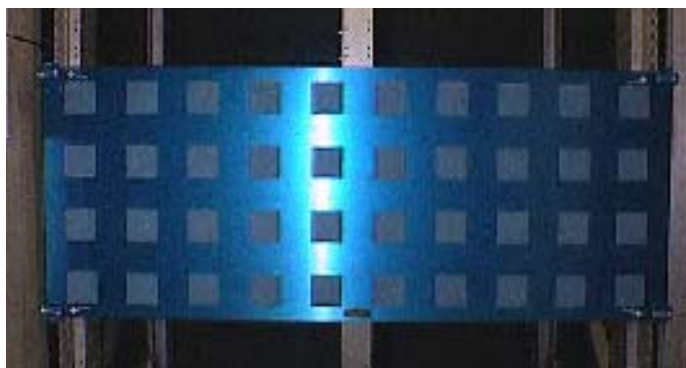
120 cu in

Type:

Outfitted

Power:

N/A



Fuse:

N/A

Restraint:

Seat Track

Stowage:

Strapped in STS or Resupply Stowage Platform

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3090
PDA Procedure	JSC-28462
Proj. Req.	JSC27167
PMP	SSP50158

SAR	JSC28430
Materials	MATL-98-126
Stress	HDID-SAS-99-0084

Contact:

Feng Li

PILE FASTENER RESTRAINT PART NO. SEG33107628-301

DESCRIPTION:

- A small stud which attaches to the seat track.
- On the top of the small stud is a flat section of pile fastener which can be used to hold miscellaneous items including tools.

Weight:

.64 oz

Volume or Measurements:

1.69 cu in

Type:

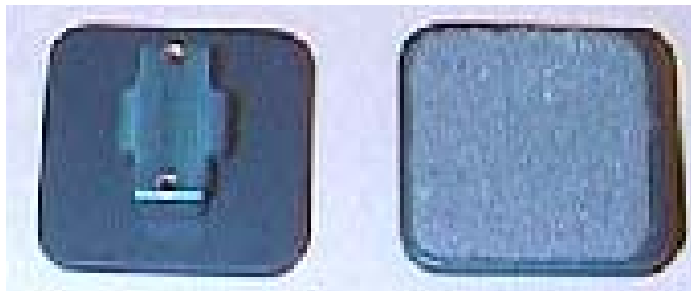
Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR G3070
PDA Procedure JSC-28462
PMP SSP50158

SAR JSC28431
Materials MATL-98-120

Contact:

Feng Li

PMA RETENTION NET

PART NO. SEG33113429-301

DESCRIPTION:

- Made of Nomex netting, with the use of webbing around the outside circumference. This webbing houses a small thin metal wire used to help the PMA Retention Net retain its shape when in use. The Nomex netting is reinforced with 1" webbing going across both sides of the face of the netting. The PMA Retention Net uses four Velcro (T-strap), webbing attachment handles to mount to the four PMA handrails along the interior of the PMA.
- Protects PMA hatch when PMA is used for storage.

Weight:

2.52 lbs

Volume or Measurements:

66.6 cu. in.

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Handrails in the PMA

Stowage:

Cargo Transfer Bag (CTB) MLE

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3648
Cert. Req.	JSC29042
SAR	JSC28933
Materials	MATL-00-154
Stress	HDID-SAS-98-0062

Contact:

Keshla Johnson



QUICK TWIST WIRE MOUNT ASSEMBLY PART NO. SEG33112402-301

DESCRIPTION:

- Quick twist clip for securing data cables/wires

Weight:

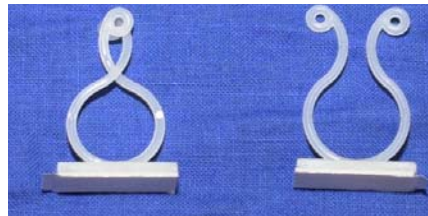
1.6 oz per 25

Volume or Measurements:

50 cu in per 25

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Adhesive back

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster Carr

Vendor P/N: 70535K65

Reference Documents:

GCAR G3282

Contact:

Feng Li

RACK FRONT RESTRAINT ASSY (SPIDER STRAP)

PART NO. SEG33115135-301

DESCRIPTION:

- The RFRA was designed to respond to a need to return from ISS packing foam and softgoods.
- The RFRA attaches to the front of a Resupply Stowage Rack (RSR) using its seat tracks to restrain a single Triple sized Crew Transfer Bag (CTB)
- Up to two Triple CTBs may be attached to an RSR
- Stowage requirements and limitations plus installation instructions are sewn onto the face of the RFRA

Weight:

4 lbs

Volume or Measurements:

2" x 33" x 11.5" +/- 0.5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

- Each RFRA is to be used with a single Triple Sized Crew Transfer Bag filled a minimum of 2/3 full of foam and softgoods only.
- The maximum weight of the packed single 3CTB is 80lbs.
- If two RFRA are attached to an RSR, the combined weight of the 3 CTBs and RFRA's must not exceed 100lbs.

Stowage:

The RFRA is to be soft stowed on launch, installed on orbit and installed for landing.

Limited Life:

N/A

Lineage:

Designed and developed for NASA by Lockheed Martin Space Operations Corp.

Reference Documents:

GCAR	G4544
CR	6725 Rev1
VM	JSC47907
ARM	JSC47906
SAR	JSC47934
Materials	MATL-03-026
MUA	LM/ISS-114
Stress	MSAD-03-0020

Contact:

Feng Li

RACK RETENTION NET

PART NO. SEG33107623-301

DESCRIPTION:

- Restrain soft goods within large and small zipper pockets on the front of a rack face.
- Spans width of rack and covers 1/2 of rack front (32" x 38" in.)
- Is attached to the seat tracks, via the Rack Seat Track Studs, on both sides of the rack at the four corners.
- Net has 7 zippered pockets with all but the largest having Velcro
- There are 4 - 8"x8" pockets, 2 - 8"x16" pockets, and 1 - 16"x36" pocket.

Weight:

1.86 lbs

Volume or Measurements:

720 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Attaches to Rack Seat Track Stud,
Part No. SDG33116021-301 or -303

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3074	PMP	SSP50158
PDA Procedure	JSC-28462	SAR	JSC28432
EIS	JSC27167	Materials	MATL-98-123

Contact:

Keshla Johnson

RACK SEAT TRACK STUD**PART NO. SDG33110621 -001****-003 Modified for ZSR Seat Track****DESCRIPTION:**

- Attaches to any seat track or seat track button larger than 2"
- Provides the Crew with a 1.12 in. inner diameter ring for hardware restraint attachment.
- Can also be used as an attachment point for bungees, and the rack retention net.

Weight:

2.08 oz

Volume or Measurements:

3.75 cu in

Type:

Outfitted

**Power:**

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

(-001)		(-003)	
GCAR	G3071	GCAR	G4379A
EIS	JSC27167B	EIS	JSC27167
SAR	JSC28433	SAR	JSC28433
Materials	MATL-98-173	Materials	MATL-98-123
PMP	SSP50158	PMP	SSP50158
		CR	G08038R7

Contact:

Keshla Johnson

RING CLIP ASSEMBLY SEG33111332-301

DESCRIPTION:

- Ring Clip Assembly used to interface with the Russian Bungees to provide a placement for them to attach.

Weight:

.24 oz

Volume or Measurements:

1.38" x 1.00" x .06"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Livelock Fastener, P/N CA18184T-6

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Clip

P/N: SDG33111331-001

JSC CTSD Modified off-the-shelf for ISS

Ring

Vendor: Rome Fasteners

Vendor P/N: 12S202

Reference Documents:

GCAR G05724

Cert. Req. JSC40013

Proj. Req. JSC29061

RAESR JSC29074

Materials MATL-00-173



Contact:

Keshla Johnson

RSR TRAY LINERS/DIVIDERS ASSY.

PART NO. SED39135691 -301

-303 thru -309

-311

-313 thru -319

-321

-323 thru -327

-329 thru -335

-337 thru -355

-357 thru -365

-367 thru -373

Single Tray Liner, front/back

Single Tray Liner, left/right

Double Tray Liner, front/back

Double Tray Liner, left/right

Triple Tray Liner, front/back

Triple Tray Liner, left/right

Tray Liner, bottom

Tray Divider, vertical

Tray Divider, vertical

Tray Divider, vertical

DESCRIPTION:

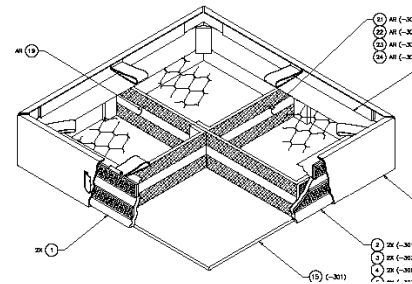
- Consists of liners, dividers and a restraint net (SED39135692-305) for various RSR Tray sizes
- Cover bottom and sides of tray to provide a cushion for hardware being stowed in RSR Trays
- Vertical dividers divide tray into vertical components

Weight:

Varies

Volume or Measurements:

-301	4" x 17" x 1/2"	-303	4" x 9 1/2" x 1/2"
-305	4" x 16 1/2" x 1/2"	-307	4" x 29 1/2" x 1/2"
-309	4" x 33 1/2" x 1/2"	-311	9 1/4" x 17" x 1/2"
-313	9 1/4" x 9 1/2" x 1/2"	-315	9 1/4" x 16 1/2" x 1/2"
-317	9 1/4" x 29 1/2" x 1/2"	-319	9 1/4" x 33 1/2" x 1/2"
-321	14 1/2" x 17" x 1/2"	-323	14 1/2" x 16 1/2" x 1/2"
-325	14 1/2" x 29 1/2" x 1/2"	-327	14 1/2" x 33 1/2" x 1/2"
-329	17" x 9 1/2" x 1/2"	-331	17" x 16 1/2" x 1/2"
-333	17" x 29 1/2" x 1/2"	-335	17" x 33 1/2" x 1/2"
-337	16 3/4" x 4" x 1/2"	-339	16 3/4" x 4 1/2" x 1/2"
-341	4 5/8" x 4" x 1/2"	-343	7 7/8" x 4" x 1/2"
-345	14 3/8" x 4" x 1/2"	-347	16 3/8" x 4" x 1/2"
-349	4 3/8" x 4 1/2" x 1/2"	-351	7 7/8" x 4 1/2" x 1/2"
-353	14 3/8" x 4 1/2" x 1/2"	-355	16 3/8" x 4 1/2" x 1/2"
-357	9 1/4" x 16 3/4" x 1/2"	-359	9 1/4" x 4 3/8" x 1/2"
-361	9 1/4" x 7 7/8" x 1/2"	-363	9 1/4" x 14 3/8" x 1/2"
-365	9 1/4" x 16 3/8" x 1/2"	-367	14 1/2" x 16 3/4" x 1/2"
-369	14 1/2" x 7 7/8" x 1/2"	-371	14 1/2" x 14 3/8" x 1/2"
-373	14 1/2" x 16 3/8" x 1/2"		



Restraint:

Inserted into RSR tray

Stowage:

RSR Tray

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3665
CR	SSCN4183
Materials	MATL-00-208

Contact:

Feng Li

VELCRO CABLE STRAPS

PART NO. 528-43074-1

DESCRIPTION:

- The Velcro Cable Straps are used to restrain pre-routed cables for various powered hardware, video equipment, etc.
- The Velcro Cable Strap is capable of holding up to 1lb in a 1-G environment.
- Velcro Cable Straps must be installed with a minimum of 1.5" overlap.
- Can only hold cables bunnies of 1.75" or less.

Weight:

0.004 lbm

Volume or Measurements:

1" x 8" x 0.1"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

N/A



Limited Life:

Velcro Cable Straps are to be replaced after 1 mission when they are installed in shuttle during pre-launch

Lineage:

FCE CCB CR# G08663R1, G08663R2, G09414

Reference Documents:

GCAR	G5417B
CR	G09414
Materials	MATL-98-185

Contact:

Keshla Johnson

VOLUME E BAG ASSY

PART NO. SED33117573-801

DESCRIPTION:

- The Volume E Bag Assembly is used to hold Public Affairs Office (PAO) items and is stowed inside the Volume E locker on the Shuttle middeck.

Weight:

4.0 lbs

Volume or Measurements:

24.25" x 15.75" x 27.75"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Locker stowed

Limited Life:

N/A

Lineage:

CR G08881

Reference Documents:

GCAR	G5404
CR	G08881
Materials	6230-SGA-98-117R1

Contact:

Daniel Molina



WICKET SAFETY CAP **PART NO. SED33119893-301 (DOUBLE)** **-302 (SINGLE)**

DESCRIPTION:

- The Wicket Safety Caps are a crew preference item for IVA use only.
- They are a crew preference item used on switch guards to provide additional protection to a switch from being inadvertently moved.

Weight:

0.050 lbs (-301)

0.035 lbs (-302)

Volume or Measurements:

2.10" x 1.04" x 1" (-301)

1.18" x 1.04" x 1" (-302)

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Locker stowed

Limited Life:

N/A

Lineage:

JSC CTSD development for Shuttle

Reference Documents:

GCAR	G5514
CR	G08703R5
ARM	JSC 65297
VM	JSC 65302
Materials	MATL-06-073

Contact:

Keshla Johnson



WINDOW OBSERVATIONAL RESEARCH FACILITY (WORF) SMALL CAMERA BRACKET ASSY. PART NO. SEG33114959-301

DESCRIPTION:

- Provides a stable mount for crew Earth observations out of the USL nadir window
- Consists of one Ball Stack Assy (P/N SEG33106870-702), two interface plates, one Adjustable Camera Mount Assy w/ screws, one camera shoe.
- IVA cameras with standard camera attachment can be attached to the bracket via the Camera Mount Adapter Assy

Weight:

7.749 lbs

Volume or Measurements:

6" x 6" x 19"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Mounted to the Lower Payload Support Shelf of the WORF Rack via 4ea 0.190-32 bolts

Stowage:

WORF Rack Stowage Drawer

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS
Modification to Ball Stack Assy

Reference Documents:

GCAR	G4473A
RAESR	JSC 47866
Limited Life	LLIL-WCBA-001
ARM	JSC 47848
Stress	MSAD-02-0319

VM	JSC 47859
Materials	MATL-02-172
MUA	ISS/LM-104
Procedures	MGUEWORF014
	MGUEWORF015



Contact:

Feng Li

WIRE MOUNT CLIP ASSEMBLY PART NO. SEG33112401-301

DESCRIPTION:

- Clip requiring manual actuation for securing data cables/wires

Weight:

.5 lbs per 25

Volume or Measurements:

75 cu in per 25

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Adhesive back

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

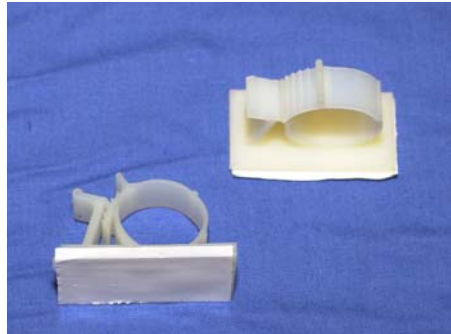
Vendor P/N: 7565K49

Reference Documents:

GCAR G3282

Contact:

Feng Li



WIRE MOUNT SELF CLOSING CLIP ASSEMBLY PART NO. SEG33112400-301

DESCRIPTION:

- Self closing clip for data cables/wires

Weight:

6.4 oz per 25

Volume or Measurements:

75 cu in per 25

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Adhesive back

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

Vendor P/N: 7565K64

Reference Documents:

GCAR G3282

Contact:

Feng Li



1.7 TOOLS AND DIAGNOSTIC EQUIPMENT

DEFINITION:

A Maintenance Work Area, tools, diagnostic and maintenance test equipment to support routine maintenance, the identification of failed systems, isolation of failures, and replacement of defective devices

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ACOUSTIC METER PART NO. SEG33108707-301

DESCRIPTION:

- Portable, hand-held unit
- Capable of sound level measurements, octave band analysis, and vibration analysis
- Can measure sound insulation, sound distribution, and acoustic properties of enclosures
- Microphone:
 - Type 4188 prepolarized free-field ½" condenser microphone
 - Sensitivity: -30 dB re 1V/Pa ±2 dB
 - Frequency range: 8 Hz to 12.5 kHz
 - Capacitance: 12 pico Farads
- Measuring Ranges: 20 dB to 140 dB (10 dB to 140 dB w/ filter selected)
- Band-pass filters: Eight 1/1-octave filters at 1/1-octave intervals (base 10)
- Center frequencies: 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000 Hz
- Detectors:
 - Simultaneous RMS and peak with independent frequency weightings
 - Linearity range: 80 dB
 - Pulse range: 83 dB
 - Non-linear distortion: Negligible
 - Peak detector rise time: <50µs

Weight:

2.0 lbs

Volume or Measurements:

9.3" x 3.5" x 1.5"

Type:

Outfitted

Power:

Four (4) AA alkaline batteries

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Locker

Limited Life:

AA Alkaline battery life: 12 hours



Lineage:

JSC CTSD modified off-the-shelf hardware for ISS

Vendor: Bruel and Kjaer

P/N: 2236C

Reference Documents:

GCAR G3016

Cert. Req. SSP50345

Proj. Req. SLG33111382

PMP TTA49

SAR JSC284200

Procedures LMSMSS32741

Materials MATL-98-191

MUA S02

Stress HDID-SAS-98-0245

Contact:

Fatonia Rivera

ARIS TOOLS

PART NO. SEG33109848-301

DESCRIPTION:

- Set of Ball Tip Hex Bits, one (1) Standard Socket (-313), one (1) Hex Tip Bit (-315)
- The ARIS Tools are categorized as hand tools and are not certified to interface with any powered tools.
- They will be used to fasten hard to reach cap head screws.
- See measurements below for sizes.

Weight:

Varies

Volume or Measurements:

- 301 1/4" Drive, 3/16" Ball-tip Hex Driver, 5" long
- 303 1/4" Drive, 5/16" Ball-tip Hex Driver, 6" long
- 305 1/4" Drive, 3/32" Ball-tip Hex Driver, 6" long
- 307 1/4" Drive, 5/32" Ball-tip Hex Driver, 6" long
- 309 3/8" Drive, 3/8" Ball-tip Hex Driver, 5" long
- 311 1/4" Drive, 9/64" Ball-tip Hex Driver, 6" long
- 313 1/4" Drive, 9/16", 6 point Standard Socket
- 315 1/4" Drive, 7/64" Hex Driver, 6" long
- 317 1/4" Drive, 7/64" Ball-tip Hex Driver, 6" long

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook



Stowage:

Standard stowage trays

-301 -303 -309 -313 -317

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: Snap-On

P/N:

-301	TMAB6E5TL	-303	TMAB10E6TL
-305	TMAB3E6TL	-307	TMAB5E6TL
-309	FAB12E5TL	-311	TMAB4.5E6TL
-313	TM18	-315	TMAL3.5E2
-317	TMAB3.5E1.8P		

Reference Documents:

GCAR	G3784	ARM	JSC47720
Proj. Req.	SSP50345	VM	JSC47721
Materials	MATL-00-071		

Contact:

Fatonia Rivera

BATTERY TESTER ASSY

PART NO. SEG33114630-301

DESCRIPTION:

- Used to test batteries. sizes include: AA, AAA, C, D, 9V
- Circuits are fused to protect crew and hardware from harm.

Weight:

3 oz

Volume or Measurements:

5.5" x 2.2" x 1.75"

Type:

Outfitted

Power:

N/A

Fuse:

1/8 amp fuse

3/8 amp fuse

Restraint:

Velcro hook fastener

Stowage:

Soft stowed

Limited Life:

N/A

Lineage:

New Hardware for ISS

Reference Documents:

GCAR: G4359

Materials: MATL-02-073

Contact:

Craig Perez



CABLE CUTTER/POUCH ASSY

PART NO. SEG33113153-301

DESCRIPTION:

- USA Cable Cutters (528-20145-30) in orange Nomex pouch (SEG33113152-301) used to cut drag-through cables in case of emergency module isolation.

Weight:

3 oz

Volume or Measurements:

2.4" x 4" x .25" (pouch)

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro strap loops around
D-rings and handrails

Stowage:

Will be strapped to D-ring with Velcro strap for easy access

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR G3585
Materials MATL-00-169

Contact:

Fatonia Rivera



CAPTURE/CENTERING DEVICE ASSY. PART NO. SEG33108573-301

DESCRIPTION:

- Used for capturing and centering slotted screws and fasteners while using power tools.
- Retains the fastener during removal or installation.
- Fastener head diameter may not exceed .36 inches.

Weight:

2.4 oz

Volume or Measurements:

.98 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

1/4 inch hex shank

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Vermont American, Lincolnton, NC

Vendor P/N: 29077

Reference Documents:

GCAR G3508 (April 2000)

GCAR G3306 (September 1999)

Proj. Req. SSP50345

Materials MATL-99-200

Contact:

Craig Perez



CLAMP & BRACKET KIT

PART NO. SJG33112385-301

DESCRIPTION:

- Contains: (See list on next page for sizes)
 - Various sizes stainless steel washers
 - Various sizes aluminum sheet stock
 - Aluminum angle stock
 - Various sizes stainless steel hex nuts
 - Various sizes stainless steel screws
 - 1/4" & 3/8" Pop Rivets
 - Stainless Steel Wire, .025"dia
 - Hand Punch
 - Pop Rivet Gun
 - Vise Grips
 - Tin Snips
- For contingency use as needed



Consumables Kit

Weight:

11 lbs

Volume or Measurements:

17" x 10" x 7"

Type:

Contains two kits:

- Consumable Kit (Consumable)
- Tool Kit (Outfitted)



Tool Kit

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR G3509
 Proj. Req. SSP50345
 SAR JSC39366
 Materials MATL-00-071

Contact:

Fatonia Rivera

List of Clamp and Bracket Kit Components

Description	Part Number	Qty per Assy	Assy per Kit
1/4" Pop Rivet, .125" dia, Assy	SEG33113014-301	20	13
3/8" Pop Rivet, .125" dia, Assy	-303	20	13
4-40 Screw Assy	-305	50	1
6-32 Screw Assy	-307	50	1
8-32 Screw Assy	-309	50	1
10-24 Screw Assy	-311	50	1
1/4-20 Screw Assy	-313	50	1
4-40 Hex Nut Assy	-315	50	1
6-32 Hex Nut Assy	-317	50	1
8-32 Hex Nut Assy	-319	50	1
10-24 Hex Nut Assy	-321	50	1
1/4-20 Hex Nut Assy	-323	50	1
4-40 Washer Assy	-325	100	1
6-32 Washer Assy	-327	100	1
8-32 Washer Assy	-329	100	1
10-24 Washer Assy	-331	100	1
1/4-20 Washer Assy	-333	100	1
Aluminum Angle Stock	SDG33112988-001	1	8
Aluminum Sheet Stock .030" x 2.0" x 12.0"	-003	1	8
Aluminum Sheet Stock .030" x 4.0" x 12.0"	-005	1	8
Aluminum Sheet Stock .030" x 6.0" x 12.0"	-007	1	8
Aluminum Sheet Stock .030" x 1.0" x 15.0"	-009	1	8
Cres Wire, .025 dia	SJG3311285-501	100 ft	1

COLDPLATE WIREWAY KIT ASSY. PART NO. SJG33111361-301

DESCRIPTION:

- Teflon sheets
- Provides a means for protecting coldplates on ISPR racks from damage during ORU removal or installation.
- Prevents snagging and tangling of wires during ORU removal and installation.

Weight:

15.5 lbs

Volume or Measurements:

744 cu in

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Nomex bag

Stowage:

Standard stowage trays



Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3330
Cert. Req.	SSP50345
SAR	JSC39295
Materials	MATL-00-003

Contact:

Craig Perez

COMBINATION WRENCH ASSEMBLY

P/N: SEG33116079 -301 1-1/4" OEX40B
 -303 1-5/8" OEX44B

DESCRIPTION:

- Originally certified for the removal and replacement (R&R) of the Node 2 CCAA Heat Exchanger flex lines scheduled for 12A-1.
- Standard chrome finished open end- box end combination wrench.

Weight:

2.2 lbs each

Volume or Measurements:

17" x 2-9/16" x 3/4"

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook for temporary stowage

Stowage:

Standard stowage tray

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: Snap-On

Vendor part no: See above

Reference Documents:

CR: SSCN 7959

Materials: MATL-03-131

GCAR: G4763

Contact:

Fatonia Rivera

CROWFOOT WRENCHES**PART NO. SEG33114112**

	-301	2-1/2"	FC80A
	-303	1-3/4"	FC56A
	-305	1-3/16"	FC38A
	-307	1"	FC32B
	-001	5/16"	TMRX10
	-003	7/16"	FC14B
SEG33114127	-301	1-1/4"	FC64A
	-303	2"	FC40A
SEG33114218	-301	1-3/8"	FC44A
SEG33113226	-301	1-5/8"	FC52A

DESCRIPTION:

- Set of crowfoot wrenches for nominal and contingency on-orbit use

Weight:

SEG33114112-301	1.07 lbs
-303	.36 lbs
-305	.19 lbs
-001	.027 lbs
-003	.057 lbs
SEG33114127-301	.24 lbs
-303	.67 lbs
SEG33114218-301	.29 lbs
SEG33111764-301	.32 lbs

Volume or Measurements:

SEG33114112-301	4 1/8" x 4" x 3/4"
-303	2 3/4" x 2 1/2" x 5/8"
-305	1 7/8" x 2" x 5/8"
-001	1/2" x 1 3/4" x 1/4"
-003	13/16" x 1 5/16" x 1/2"
SEG33114127-301	2 1/8" x 2 1/8" x 5/8"
-303	3 3/8" x 3" x 3/4"
SEG33114218-301	2 9/16" x 2 3/8" x 5/8"
SEG33111764-301	2 5/8" x 2 1/2" x 9/16"

**Type:**

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays / IVA Hand Tool Kit

Limited Life:

N/A

Lineage:

JSC CTSD Modified off-the-shelf for ISS

Vendor: Snap-On

Vendor part no: See above

Reference Documents:

(SEG33114112-301, -303, -305, -307, -001, -003)

GCAR	G3959
ARM	JSC40191
RAESR	JSC28952B
Materials	MATL-01-122
VM	JSC40192

(SEG33114127-301, -303)

GCAR	G4179 (-301)
	G3820 (-303)
SAR	JSC47677 (-301)
RAESR	JSC28952 (-303)
Materials	MATL-01-225 (-301)
	MATL-01-086 (-303)

(SEG33114218-301)

GCAR	G3959
Proj. Req.	JSC40191
RAESR	JSC28952B
Materials	MATL-01-122
VM	JSC40192

(FC52A)

GCAR	G3500
RAESR	JSC28952
Materials	MATL-99-161B

Contact:

Fatonia Rivera

DIAL TORQUE WRENCH ASSY PART NO. SEG33116504-301

DESCRIPTION:

- Provides torque between 0-30 in/lbs within +/- 2% when calibrated
- Allows crewmember to read the amount of torque being applied
- Chrome finish with plastic dial cover, no lubricant

Weight:

1.05 lbs

Volume or Measurements:

10" x 10" x .75"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook

Stowage:

Standard stowage tray

Limited Life:

The Dial Torque Wrench has a calibration cycle of 1 year.

Lineage:

N/A

Reference Documents:

CR:	SSCN 8357
PR&VD	JSC 60488
V&VD	JSC 60489
RAESR	JSC 60491
Materials:	MATL-04-012 MUA# LM/ISS-25
GCAR:	G4769

Contact:

Fatonia Rivera



DOUBLE-SIDED FOAM TAPE

PART NO. SLG33114216	-001	4016-1/4"
	-003	4016-3
	-005	4016-1/2"
	-007	4016-3/4"
	-009	4016-1"
	-011	4016-1 1/2"
	-013	4016-2"

DESCRIPTION:

- Double-sided Urethane Foam tape with acrylic adhesive for nominal and contingency on-orbit use
- Originally requested for attaching hardware such as Cable Tray Assys (SED33113708-301) to non-flat surfaces
- Operational from 0°C to 40°C

Weight:

0.54 lbs

Volume or Measurements:

12 1/2" dia

See widths above

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Stowed when not in use

Stowage:

Standard stowage trays

Limited Life:

Two (2) years from date of manufacture

Lineage:

JSC CTSD

Modified off-the-shelf for ISS

CR# G4973



Reference Documents:

GCAR	G3884
CR	GCCB4973
Materials	MATL-01-111
MUA	S04

Contact:

Craig Perez

DRIVER/DRILL BIT POUCH KIT

PART NO. SJG33114294-301

DESCRIPTION:

- Provides a safe method of containing some of the more commonly used driver bits and sockets.
- Wraps around drill handle.

Weight:

2.6 oz (with bits/sockets)

Volume or Measurements:

3 1/4" x 4 1/8" x 1/2"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener

Strap with D-ring for attaching to drill



Stowage:

Standard stowage tray

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Driver Drill Bit Pouch

JSC CTSD off-the-shelf for ISS

- 1 ea. 1/4" Socket Adapter
Vendor: Makita USA, Inc.
P/N: 785516-A
- 1 ea. 3/8" Socket Adapter
Vendor: Makita USA, Inc.
P/N: 785517-A
- 1 ea. #2 Phillips/double-ended bit:
Vendor: Makita USA, Inc.
P/N: 7846140
- 1 ea. #3 Phillips/double-ended bit: Snap-On Tools, Inc.
Vendor: Snap-On Tools, Inc.
P/N: SDMD 2173

Reference Documents:

GCAR	G3980
CR	5039
Materials	MATL-01-170
Proj. Req.	JSC47623
RAESR	JSC47638
VM	JSC47634

Contact:

Fatonia Rivera

ETHERNET REPAIR KIT PART NO. SJG33110638-301

DESCRIPTION:

- Used for repairing bad or damaged cables that interface with the vehicle Ethernet bus via the RJ-45 connector.
- Consists of a wire crimper and ten (10ea) RJ-45 connectors.

Weight:

1.22 lbs

Volume or Measurements:

103.5 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Softgoods bag

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Ideal Tools Sycamore, IL

Parts available as kit P/N: 87916

Ethernet Crimp Tool P/N: 30-496

Connectors P/N: RJ-45

Reference Documents:

GCAR G3303

Cert. Req. SSP50345

Proj. Req. LMSEAT33132

SAR JSC39295

Materials MATL-99-180

Contact:

Craig Perez



FIBERSCOPE KIT

PART NO. SJG33116129-301

DESCRIPTION:

The Fiberscope Kit hardware, which is housed in a foam-lined soft goods pouch, is used to remotely view inaccessible areas (behind racks/panels) and retrieve small articles with mechanically grasping tools. The Fiberscope Kit consists of:

- Extractors that can be threaded along scope tube to reach items.
- Lens adapter for Minicam (528-20946-1)

Part Number

1) SDG33117913-301

2) SDG33117343-301

3) SDG33117343-302

4) SDG33117342-301

5) SDG33117344-301

6) SDG33117346-301

7) SDG33117902-301

8) SDG33117927-301

a) SDG33117925-301

b) 1150020

c) 1150047

d) 1150045

e) 1150021

f) 1150048

g) 1150046

10) SJG33117926-301

a) SDG33117926-301

b) SEG33117345-307

c) SEG33117345-306

d) SEG33117345-305

e) SEG33117345-304

f) SEG33117345-303

g) SEG33117345-302

h) SEG33117345-301

11) MB-99400

12) 3030733AC or JCRM12V50W

13) 7648A713

Part Name

Fiberscope Pouch Assy

Fiberscope Layer Foam Assy

Power System Foam Assy

Light Source Power System Assy

Fiberscope Assy

Light Source Assy

Lens Adaptor Assy

Viewing Tips Kit

Viewing Tips Pouch Assy

AT60S/NF

AT100D/NF

AT60D/NF

AT60S/FF

AT100D/FF

AT60D/FF

Extraction Tools Kit

Extraction Tool Album Assy

Guide Tube Tips Assy

Guide Tube Kit-Extraction Tool

Snare Loop Extraction Tool

3-Prong Grasper Forceps Extraction Tool

4-Wire Basket Extraction Tool

Magnet Extraction Tool

Alligator Jaw Forceps Extraction Tool

Eye Cup

Light Bulb

Kapton Tape

Weight:

13.6 lbs.

Volume or Measurements:

22" x 12.5" x 5.5"

Type:

Outfitted



Power:

IVA 12V NiMH Battery (SEG33111376-301, -302)

Bulb should last 50-100 hours and should be replaced when failed

Fuse:

6A fuse in the power supply base

Restraint:

Hook Fastener

Stowage:

Locker Stowed

Limited Life:

Kapton tape has a shelf life of 2-years for the adhesive

Lineage:

Commercial Off-The-Shelf (COTS)

Manufacturer: Olympus

P/Ns:

Fiberscope: 7110821

Light Source Assy: KLS-131

Lens Adapter Assy: 1150196 w/ LO-999CMT C-mount adapter

Snare Loop Extraction Tool: 7203S

3-Prong Grasper Forceps Extraction Tool: 7203G

4-Wire Basket Extraction Tool: 7203B

Magnet Extraction Tool: 7203M

Alligator Jaw Forceps Extraction Tool: 7203A

Light Source Power Supply is modified from the Soldering Iron Base (SEG33110603) design to accommodate power via the IVA 12V NiMH Battery

Reference Document:

GCAR G5017

CR SSCN 7961 & 8461

Materials MATL-05-021

Stress MSAD-04-0175

Contact:

Craig Perez

FOAM APPLICATOR ASSEMBLY

PART NO. SED33119859-301

DESCRIPTION:

- The Foam Applicator Assembly is IVA-only hardware designed to fill a crack of 1/64" by 3/4" with a depth of 3/8" that separates a pressure differential range of 0-15.9 psi for 16 days in order to prevent leakage of crew cabin air through that area.
- The Foam Applicator Assembly consists of a COTS Foam Applicator Cartridge (P/N SED33119859-701) containing a two-part silicone rubber RTV foam and a Cartridge Nozzle, both enclosed within two COTS zip lock bags.
- To operate, properly mix the foam mixture using the COTS handle, and then immediately eject the foam material into the pre-determined area.
- The Foam Applicator is one-time use.

Weight:

0.30 lb

Volume or Measurements:

10" x 10" x 2"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Locker stowed

Limited Life:

12 Months

Lineage:

Modified COTS hardware

Reference Document:

GCAR	G5401B
CR	G09275R1
Materials	MATL-05-032A
ARM	JSC 62318B
RAESR	JSC 62353B

Contact:

Bum Jacinto



FOLDING HONE KIT

PART NO. SEG33112396-301

DESCRIPTION:

- Used for sharpening dull knives and scissors.
- Has two (2) sharpening surfaces, course and fine.
- Folding covers that form a handle when not deployed for use.

Weight:

2.72 oz

Volume or Measurements:

3.75 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Ziploc bag

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: McMaster-Carr

P/N: 4598A8

Reference Documents:

GCAR G3508 (New)

GCAR G3341 (Old)

Cert. Req. SSP50345

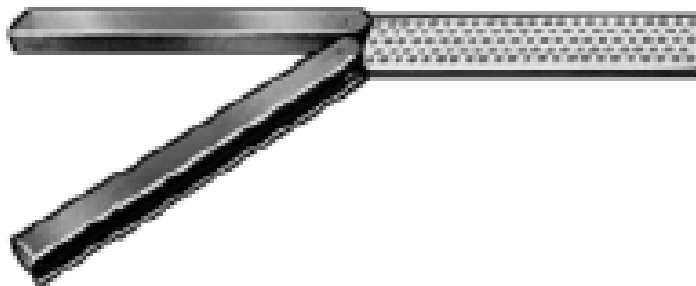
SAR JSC39365

Materials MATL-00-006

MUA S02

Contact:

Craig Perez



HIGH TORQUE LOCKER TOOL PART NO. SDZ33114002-001

DESCRIPTION:

- Provides a means for on-orbit locker removal and replacement
- Tip of the tool is a 3/16" hex head male that interfaces with locker fasteners
- The drive is a 1/4" hex head that can be driven by a ratchet or driver.
- Rated to a torque of 115 in-lbs
- Made of MP35N

Weight:

0.64 lbs

Volume or Measurements:

28" x .312" dia

Type:

Outfitted



Power:

N/A

Fuse:

N/A

Restraint:

This hardware will be stowed when not in use.

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS
Modified from Locker Tool Kit (SJG331110363-301)
CR# 4493

Reference Documents:

GCAR	G3803
CR	SSCN 4493
ARM	JSC 29187
VM	JSC 29188
Materials	MATL-01-067
ICD	LMSEAT 33577
Stress	MSAD-01-0102
RAESR	JSC 29288

Contact:

Craig Perez

IMPACT DRIVER KIT PART NO. SJG33110640-301

DESCRIPTION:

- 1/4" hex shank
- No Load Speed: 0-2200 RPM
- Impacts per Minute: 0-3000 IPM
- Maximum Torque: 870 in-lbs

Weight:

3.7 lbs with battery

Volume or Measurements:

6-15/16 long

Type:

Outfitted

Power:

Uses 12 VDC NiMH or NiCAD battery packs
(SEG33111376-301, -302 or SEG33111352-301)
Batteries charged using SMPA / Battery Charger
(SEG33111349-303)

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS
Vendor: Makita
P/N: 6914DWAE



Reference Documents:

GCAR	G3512
Cert. Req.	SSP50345
SAR	JSC39294
Materials	MATL-00-001
MUA	S01

Contact:

Fatonia Rivera

ISS PIN KIT PART NO. SJG33110644-301

DESCRIPTION:

- Designed to be used for minor electrical repairs and maintenance.
- Consists of a Nomex bag and several jumper assemblies in 12, 16, 20, and 22 GA sizes as well as spare electrical parts and test leads.

Weight:

6.287 lbs

Volume or Measurements:

10" x 10" x 3"

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Softgoods bag, which will be stowed when not in use.



Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS
CR# 4934

Reference Documents:

GCAR	G3958
VM	JSC47617
Proj. Req.	JSC47615
SAR	JSC39296
Materials	MATL-01-145
CR	SSCN4934

Contact:

Fatonia Rivera

List of Pin Kit Components

P/N	Description	Qty
7-52935-1	Spade Terminals - #6 Hole 16Ga	5
7-52937-1	Spade Terminals - #10 Hole 16Ga	5
8-31890-1	Ring Terminals - #8 Hole 20-22Ga	5
8-320565-1	Ring Terminals - #8 Hole 16Ga	5
8-320619-1	Ring Terminals - #6 Hole 16Ga	5
8-35108-1	Ring Terminals - #8 Hole 10-12Ga	5
8-35149-2	Ring Terminals - #6 Hole 10-12 Ga	5
8-36152-1	Ring Terminals - #6 Hole 20-22 Ga	5
8-36154-1	Ring Terminals - #10 Hole 20-22 Ga	5
8-36160-1	Ring Terminals - #10 Hole 16Ga	5
8-52929-1	Spade Terminals - #6 Hole 20-22 Ga	5
8-52930-1	Spade Terminals - #8 Hole 20-22 Ga	5
8-52931-1	Spade Terminals - #10 Hole 20-22 Ga	5
8-35109-1	Ring Terminals - #10 Hole 10-12Ga	5
8-52936-1	Spade Terminals - #8 Hole 16Ga	5
8-52941-2	Spade Terminals - #6 Hole 10-12 Ga	5
8-52942-1	Spade Terminals - #8 Hole 10-12 Ga	5
8-52943-1	Spade Terminals - #10 Hole 10-12 Ga	5
FVC1210	Butt Splices - 12 Ga	8
FVC1614	Butt Splices - 14-16 Ga	8
FVC2216	Butt Splices - 20-22 Ga	16
3560-0	Test Adapter - 20 Ga Socket	2
3561-2	Test Adapter - 20 Ga Pin	2
3562-0	Test Adapter - 16 Ga Socket	2
3563-2	Test Adapter - 16 Ga Pin	2
3564-0	Test Adapter - 12 Ga Socket	2
3565-2	Test Adapter - 12 Ga Pin	2
4690-0	Test Adapter - 22 Ga Socket	2
4691-2	Test Adapter - 22 Ga Pin	2
SEG33114372-301	Test Connectors - Minigrabber 24"	4
SEG33114372-303	Test Connectors - Minigrabber 48"	4
1437-2	Alligator Clips	8
M23053/11-201-C	Insulation Tubing - 5" 22 Ga	6
M23053/11-202-C	Insulation Tubing - 5" 20 Ga	6
M23053/11-109-C	Insulation Tubing - 5" 12-16 Ga	10
SEG33112714-301	24" Pin/Socket -12GA	8
SEG33112714-303	24" Pin/Socket -16GA	8
SEG33112714-305	24" Pin/Socket -20GA	8
SEG33112714-307	24" Pin/Socket -22GA	8
SEG33112715-301	5" Pin/Pin -12GA	6
SEG33112715-303	5" Pin/Pin -16GA	6
SEG33112715-305	5" Pin/Pin -20GA	6
SEG33112715-307	5" Pin/Pin -22GA	6
SEG33112716-301	5" Pin/Socket -12GA	6

P/N	Description	Qty
SEG33112716-303	5" Pin/Socket -16GA	6
SEG33112716-305	5" Pin/Socket -20GA	6
SEG33112716-307	5" Pin/Socket -22GA	6
SEG33112717-301	5" Socket/Socket -12GA	6
SEG33112717-303	5" Socket/Socket -16GA	6
SEG33112717-305	5" Socket/Socket -20GA	6
SEG33112717-307	5" Socket/Socket -22GA	6
SEG33112718-301	Pin/3Socket -22GA	1
SEG33112718-303	Pin/3Socket -20GA	1
SEG33112719-301	Pin/4Socket -22GA	1
SEG33112719-303	Pin/4Socket -20GA	1
SEG33112720-301	Pin/5Socket -22GA	1
SEG33112720-303	Pin/5Socket -20GA	1
M39029/56-350	22GA socket	24
M39029/56-353	12GA socket	12
M39029/57-357	20GA socket	24
M39029/57-358	16GA socket	24
M39029/58-360	22GA pin	24
M39029/58-363	20GA pin	24
M39029/58-364	16GA pin	24
M39029/58-365	12GA pin	12
M22759/11-22-9	22 Ga wire	50 ft
M22759/11-20-9	20 Ga wire	50 ft
M22759/11-16-9	16 Ga wire	50 ft
M22759/11-12-9	12 Ga wire	50 ft

IVA 12V NIMH BATTERY (MAKITA BATTERY)
PART NO. SEG33111376 -301 2.2AH
-302 3.0AH

DESCRIPTION:

- This 12V battery was originally certified with the IVA Driver/Drill Kit, but has since been used to power the Impact Driver, Soldering Iron, and Fiberscope.
- The battery is charged on orbit via a battery pack adapter for the SMPA/Battery Charger (SEG33111349-303)
- Battery is Makita standard sonically welded battery pack with 2ea polyswitches and 1 ea thermistor and absorbent added to each pack.
- Because battery is modified, regular Makita chargers will not charge battery on the ground. Makita quick-chargers are available in the Class III lockers and are labeled as modified. Flight and Class III SMPA can also be used to charge batteries on the ground.
- Battery should be completely depleted prior to charging whenever possible and should not be left in the charger when it is not in use. Battery can be cycled to clear memory, if one is developed.

Weight:

1.47 lb

Volume or Measurements:

75 cu in

Type:

Outfitted

Power:

10 Ea 1.2V, 3Ah NiMH Sanyo Sub C cells

Fuse:

2 ea LR4-730 Polyswitch

1 ea 103AT-2 Thermistor

Restraint:

Hook fastener

Stowage:

Standard locker

Limited Life:

10-years from manufacture

(5/24/06 is the -302 lot date of manufacture)



Lineage:

Modified COTS development for ISS

-301 Makita Cell Pack p/n 1233

-302 Makita Cell Pack p/n 1235

Reference Documents:

GCAR #G3284

CR for -302 CR#9729

SAR #70

Materials Cert #MATL-98-160, MATL-99-053

Contact:

Feng Li

IVA DRIVER/DRILL KIT PART NO. SJG33109829-303

DESCRIPTION:

- Portable hand-held unit
- 3/8 inch keyless chuck
- No Load Speed: Low, 0-450 RPM High, 0-1400 RPM
- 17 Torque settings in both speed settings

Weight:

4.2 lbs with battery

Volume or Measurements:

75 cu in

Type:

Outfitted

Power:

12 VDC NiMH or NiCad battery pack
(SEG33111376-301, -302 or SEG33111352-301)

Batteries charged using SMPA / Battery Charger (SEG33111349-303)



Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Makita

P/N: 6213DWAE

Reference Documents:

GCAR	G3284
CR	G05189
Cert./Proj. Req	SSP50345
EIS	JSC17038
SAR	SAR-70
Materials	MATL-98-053
	MATL-98-166
PDA Procedure	JSC-28480

Contact:

Feng Li

IVA HAND TOOLS PART NO. SEG33109820-301

IVA Hand Tool Box Assy P/N SEG33113668-301 replaces this soft stowed Tool Kit.

DESCRIPTION:

- Supports the ISS function of providing approved on-orbit Organizational and Intermediate maintenance equipment, tools, spares and material, as required, to sustain the on-orbit system Hand Tools. The standard tool list is comprised of tools to be used for ORU removal and replacement.

Weight:

115 lbs

Volume or Measurements:

8 cu ft

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener and straps

Stowage:

Kits

Limited Life:

Note: All items listed below must be launched with at least 6 months of life remaining.

Silicone Lubricant (1204K12): 3 years from date of manufacture

Kapton Tape (7648A32): 2 years from date of manufacture

Aluminum Tape (3M425): 2 years from date of manufacture

Shuttle Gray Tape (PC21F): 2 years from date of manufacture

Flame Retardant Cloth Tape (225FR-1,-2): 3 years from date of manufacture

Lineage:

JSC CTSD modified off-the-shelf for ISS

See following kit information for vendor P/N.



Reference Documents:

GCAR	G3212 (New)
GCAR	G3820 (Old)
SAR	JSC28952
Materials	MATL-01-086

Contact:

Fatonia Rivera

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
Tool Kit Bag Assembly / Hand Tools - IVA	IVA Hand Tool Box Assembly	00000001		
<u>KIT A: Combination, Crowfoot, Adjustable Wrenches</u>	KIT A: Combination/Crowfoot/Adjustable Wrenches	00000002		
1. Combination Wrench, 12 Point, 1 5/16"	1 5/16" Combination Wrench	000002-1	SO115	OEX42B
2. Combination Wrench, 12 Point, 1"	1" Combination Wrench	000002-2	SO 114	SOEX32
3. Combination Wrench, 12 Point, 15/16"	15/16" Combination Wrench	000002-3	SO 114	SOEX30
4. Combination Wrench, 12 Point, 7/8"	7/8" Combination Wrench	000002-4	SO 114	SOEX28
5. Combination Wrench, 12 Point, 13/16"	13/16" Combination Wrench	000002-5	SO 114	SOEX26
6. Combination Wrench, 12 Point, 3/4"	3/4" Combination Wrench	000002-6	SO 114	SOEX24
7. Combination Wrench, 12 Point, 11/16"	11/16" Combination Wrench	000002-7	SO 114	SOEX22
8. Combination Wrench, 12 Point, 5/8"	5/8" Combination Wrench	000002-8	SO 114	SOEX20
9. Combination Wrench, 12 Point, 9/16"	9/16" Combination Wrench	000002-9	SO 114	SOEX18
10. Combination Wrench, 12 Point, 1/2"	1/2" Combination Wrench	000002-10	SO 114	SOEX16
11. Combination Wrench, 12 Point, 7/16"	7/16" Combination Wrench	000002-11	SO 114	SOEX14
12. Combination Wrench, 12 Point, 7/16"	7/16" Combination Wrench	000002-12	SO 114	SOEX14
13. Combination Wrench, 12 Point, 3/8"	3/8" Combination Wrench	000002-13	SO 114	SOEX12
14. Combination Wrench, 12 Point, 11/32"	11/32" Combination Wrench	000002-14	SO 115	OEX11B
15. Combination Wrench, 12 Point, 5/16"	5/16" Combination Wrench	000002-15	SO 115	OEX10B
16. Combination Wrench, 12 Point, 1/4"	1/4" Combination Wrench	000002-16	SO 115	OEX8B
17. Miniature Wrench, 6 Point, 5/32" X 3/16"	5/32"X3/16" Combination Wrench	000002-17	Techni-Tool	322WR132
18. Miniature Wrench, 6 Point, 3/16" X 5/32"	3/16"X5/32" Combination Wrench	000002-18	Techni-Tool	322WR132
19. Miniature Wrench, 12 Point, 13/64" X 7/32"	13/64"X7/32" Combination Wrench	000002-19	Techni-Tool	322WR132
20. Miniature Wrench, 12 Point, 7/32" X 15/64"	7/32"X15/64" Combination Wrench	000002-20	Techni-Tool	322WR132
21. Miniature Wrench, 12 Point, 15/64" X 1/4"	15/64"X1/4" Combination Wrench	000002-21	Techni-Tool	322WR132
22. Miniature Wrench, 12 Point, 1/4" X 9/32"	1/4"X9/32" Combination Wrench	000002-22	Techni-Tool	322WR132
23. Miniature Wrench, 12 Point, 9/32" X 5/16"	9/32"X5/16" Combination Wrench	000002-23	Techni-Tool	322WR132
24. Miniature Wrench, 12 Point, 5/16" X 11/32"	5/16"X11/32" Combination Wrench	000002-24	Techni-Tool	322WR132
25. Miniature Wrench, 12 Point, 11/32" X 3/8"	11/32"X3/8" Combination Wrench	000002-25	Techni-Tool	322WR132
26. Miniature Wrench, 12 Point, 3/8" X 7/16"	3/8"X7/16" Combination Wrench	000002-26	Techni-Tool	322WR132
27. Crowfoot, 3/8" Drive, 3/8"	3/8" Crowfoot, 3/8" Drive	000002-27	SO71	FCO12
28. Crowfoot, 3/8" Drive, 9/16"	9/16" Crowfoot, 3/8" Drive	000002-28	SO71	FC18A
29. Crowfoot, 3/8" Drive, 11/16"	11/16" Crowfoot, 3/8" Drive	000002-29	SO71	FC22A
30. Crowfoot, 3/8" Drive, 3/4"	3/4" Crowfoot, 3/8" Drive	000002-30	SO71	FC24A
31. Crowfoot, 3/8" Drive, 13/16"	13/16" Crowfoot, 3/8" Drive	000002-31	SO71	FC26A
32. Crowfoot, 3/8" Drive, 7/8"	7/8" Crowfoot, 3/8" Drive	000002-32	SO71	FC28A
33. Pipe Wrench	Pipe Wrench	000002-33	SO 132	PWA10A
34. Adjustable Wrench, 6" Long	6" Adjustable Wrench	000002-34	SO132	AD6
35. Adjustable Wrench, 10" Long	10" Adjustable Wrench	000002-35	SO132	AD10
36. Wrench, 15 Deg Offset 3/4"-13/16", Low Torque	Offset 3/4"x 13/16" Wrench	000002-36	SO124	LTA2426

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
KIT B: L-Wrenches	KIT B: L-Wrench Kit	00000003		
1. Folding L-Wrench Set; .05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", and 3/16"	0.05"-3/16" Folding L-Wrench Set	000003-1	SO 129	AW9K
2. Folding L-Wrench Set; 3/16", 7/32", 1/4", 5/16", and 3/8"	3/16"-3/8" Folding L-Wrench Set	000003-2	SO 129	AW5K
3. L-Wrenches, .028", .035", .05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16"	0.028"-9/16" L-Wrench Set	000003-3	SO 130	AW1020K
KIT C: Sockets, 3/8" Drive	KIT C: Socket Kit, 3/8" Drive	00000004		
1. Deep Socket, 3/8" Drive, 12 Point, 1/4"	1/4" Deep Socket, 3/8" Drive	000004-1	SO 66	SF081
2. Deep Socket, 3/8" Drive, 12 Point, 5/16"	5/16" Deep Socket, 3/8" Drive	000004-2	SO 66	SF101
3. Deep Socket, 3/8" Drive, 6 Point, 11/32"	11/32" Deep Socket, 3/8" Drive	000004-3	SO 66	SFS111
4. Deep Socket, 3/8" Drive, 12 Point, 3/8"	3/8" Deep Socket, 3/8" Drive	000004-4	SO 66	SF121
5. Deep Socket, 3/8" Drive, 12 Point, 7/16"	7/16" Deep Socket, 3/8" Drive	000004-5	SO 66	SF141
6. Deep Socket, 3/8" Drive, 12 Point, 1/2"	1/2" Deep Socket, 3/8" Drive	000004-6	SO 66	SF161
7. Deep Socket, 3/8" Drive, 12 Point, 9/16"	9/16" Deep Socket, 3/8" Drive	000004-7	SO 66	SF181
8. Deep Socket, 3/8" Drive, 12 Point, 19/32"	19/32" Deep Socket, 3/8" Drive	000004-8	SO 66	SF191
9. Deep Socket, 3/8" Drive, 12 Point, 5/8"	5/8" Deep Socket, 3/8" Drive	000004-9	SO 66	SF201
10. Deep Socket, 3/8" Drive, 12 Point, 11/16"	11/16" Deep Socket, 3/8" Drive	00004-10	SO 66	SF221
11. Deep Socket, 3/8" Drive, 12 Point, 3/4"	3/4" Deep Socket, 3/8" Drive	00004-11	SO 66	SF241
12. Deep Socket, 3/8" Drive, 12 Point, 13/16"	13/16" Deep Socket, 3/8" Drive	00004-12	SO 66	SF261
13. Deep Socket, 3/8" Drive, 12 Point, 7/8"	7/8" Deep Socket, 3/8" Drive	00004-13	SO 66	SF281
14. Deep Socket, 3/8" Drive, 12 Point, 15/16"	15/16" Deep Socket, 3/8" Drive	00004-14	SO 66	SF301
15. Deep Socket, 3/8" Drive, 12 Point, 1"	1" Deep Socket, 3/8" Drive	00004-15	SO 66	SF321
16. Standard Socket, 3/8" Drive, 12 Point, 1/4"	1/4" Socket, 3/8" Drive	00004-16	SO 65	F081
17. Standard Socket, 3/8" Drive, 12 Point, 5/16"	5/16" Socket, 3/8" Drive	00004-17	SO 65	F101
18. Standard Socket, 3/8" Drive, 12 Point, 11/32"	11/32" Socket, 3/8" Drive	00004-18	SO 65	F111
19. Standard Socket, 3/8" Drive, 12 Point, 3/8"	3/8" Socket, 3/8" Drive	00004-19	SO 65	F121
20. Standard Socket, 3/8" Drive, 12 Point, 7/16"	7/16" Socket, 3/8" Drive	00004-20	SO 65	F141
21. Standard Socket, 3/8" Drive, 12 Point, 7/16"	7/16" Socket, 3/8" Drive	00004-21	SO 65	F141
22. Standard Socket, 3/8" Drive, 12 Point, 1/2"	1/2" Socket, 3/8" Drive	00004-22	SO 65	F161
23. Standard Socket, 3/8" Drive, 12 Point, 9/16"	9/16" Socket, 3/8" Drive	00004-23	SO 65	F181
24. Standard Socket, 3/8" Drive, 12 Point, 19/32"	19/32" Socket, 3/8" Drive	00004-24	SO 65	F191
25. Standard Socket, 3/8" Drive, 12 Point, 5/8"	5/8" Socket, 3/8" Drive	00004-25	SO 65	F201
26. Standard Socket, 3/8" Drive, 12 Point, 11/16"	11/16" Socket, 3/8" Drive	00004-26	SO 65	F221
27. Standard Socket, 3/8" Drive, 12 Point, 3/4"	3/4" Socket, 3/8" Drive	00004-27	SO 65	F241
28. Standard Socket, 3/8" Drive, 12 Point, 13/16"	13/16" Socket, 3/8" Drive	00004-28	SO 65	F261
29. Standard Socket, 3/8" Drive, 12 Point, 7/8"	7/8" Socket, 3/8" Drive	00004-29	SO 65	F281
30. Standard Socket, 3/8" Drive, 12 Point, 15/16"	15/16" Socket, 3/8" Drive	00004-30	SO 65	F301

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
31. Standard Socket, 3/8" Drive, 12 Point, 1"	1" Socket, 3/8" Drive	00004-31	SO 65	F321
<u>KIT D: Hex Head Drivers, Hex Shanks</u>	KIT D: Hex Head Drivers	00000005		
1. Hex Head Driver, 1/2" Drive, 7/16"	7/16" Hex Head, 1/2" Drive	000005-1	SO 88	SA14E
2. Hex Head Driver, 3/8" Drive, 1/8"	1/8" Hex Head, 3/8" Drive	000005-2	SO 72	FA4E
3. Hex Head Driver, 3/8" Drive, 9/64"	9/64" Hex Head, 3/8" Drive	000005-3	SO 72	FA4.5E
4. Hex Head Driver, 3/8" Drive, 5/32"	5/32" Hex Head, 3/8" Drive	000005-4	SO 72	FA5E
5. Hex Head Driver, 3/8" Drive, 5/32"	5/32" Hex Head, 3/8" Drive	000005-5	SO 72	FA5E
6. Hex Head Driver, 3/8" Drive, 3/16"	3/16" Hex Head, 3/8" Drive	000005-6	SO 72	FA6E
7. Hex Head Driver, 3/8" Drive, 7/32"	7/32" Hex Head, 3/8" Drive	000005-7	SO 72	FA7E
8. Hex Head Driver, 3/8" Drive, 1/4"	1/4" Hex Head, 3/8" Drive	000005-8	SO 72	FA8E
9. Hex Head Driver, 3/8" Drive, 5/16"	5/16" Hex Head, 3/8" Drive	000005-9	SO 72	FA10E
10. Hex Head Driver, 3/8" Drive, 3/8"	3/8" Hex Head, 3/8" Drive	00005-10	SO 72	FA12E
11. Hex Head Driver, 3/8" Drive, 3/8", 6" Long	6", 3/8" Hex Head Driver, 3/8" Drive	00005-11	SO72	FA12LE
12. Hex Head Driver, 3/8" Drive, 5/32", 6" Long	6", 5/32" Hex Head Driver, 3/8" Drive	00005-12	SO72	FA5LE
13. Hex Head Driver, 1/4" Drive, 1/16"	1/16" Hex Head, 1/4" Drive	00005-13	SO 49	TMA2E
14. Hex Head Driver, 1/4" Drive, 5/64"	5/64" Hex Head, 1/4" Drive	00005-14	SO 49	TMA2.5E
15. Hex Head Driver, 1/4" Drive, 3/32"	3/32" Hex Head, 1/4" Drive	00005-15	SO 49	TMA3E
16. Hex Head Driver, 1/4" Drive, 7/64"	7/64" Hex Head, 1/4" Drive	00005-16	SO 49	TMA3.5E
17. Hex Head Driver, 1/4" Drive, 1/8"	1/8" Hex Head, 1/4" Drive	00005-17	SO 49	TMA4E
18. Hex Head Driver, 1/4" Drive, 9/64"	9/64" Hex Head, 1/4" Drive	00005-18	SO 49	TMA4.5E
19. Hex Head Driver, 1/4" Drive, 5/32"	5/32" Hex Head, 1/4" Drive	00005-19	SO 49	TMA5E
20. Hex Head Driver, 1/4" Drive, 3/16"	3/16" Hex Head, 1/4" Drive	00005-20	SO 49	TMA6E
21. Hex Head Driver, 1/4" Drive, 7/32"	7/32" Hex Head, 1/4" Drive	00005-21	SO 49	TMA7E
22. Hex Head Driver, 1/4" Drive, 1/4"	1/4" Hex Head, 1/4" Drive	00005-22	SO 49	TMA8E
23. Ball Tip Hex Head Driver, 1/4" Drive, 1/8"	1/8" Ball Tip Hex Head 1/4" Drive	00005-23	SO 49	TMAB4E
24. Hex Shank - 1/4" Drive	Hex Shank 1/4" Drive	00005-24	SO 52	GMB3042
25. Hex Shank - 1/4" Drive	Hex Shank 1/4" Drive	00005-25	SO 52	GMB3042
26. Hex Shank - 3/8" Drive	Hex Shank 3/8" Drive	00005-26	SO 77	A3081A
<u>KIT E: Extensions, Adapters, Ratchets, Handles, Accessories, 1/4" and 3/8" Drive</u>	KIT E: Ratchet, Handles, Accessories	00000006		
1. Extension, 3/8" Drive, 4" Long	4" Ext 3/8" Drive	000006-1	SO 64	FXXK4
2. Extension, 3/8" Drive, 6" Long	6" Ext 3/8" Drive	000006-2	SO 64	FXXK6
3. Extension, 3/8" Drive, 11" Long	11" Ext 3/8" Drive	000006-3	SO 64	FXXK11
4. Ratchet, 3/8" Drive, 7-3/8" Long, Sealed	Ratchet 3/8" Drive	000006-4	SO 62	F830
5. Driver Handle, 3/8" Drive	Driver Handle 3/8" Drive	000006-5	SO 64	F50A
6. Breaker Bar, 3/8" Drive	Breaker Bar 3/8" Drive	000006-6	SO 64	F12L
7. Adapter, 3/8" Female to 1/4" Male	3/8" to 1/4" Adapter	000006-7	SO 44	TM1
8. Adapter, 3/8" Female to 1/2" Male	3/8" to 1/2" Adapter	000006-8	SO 64	A2A
9. Universal Joint, 3/8" Drive	Univ Joint 3/8" Drive	000006-9	SO 64	FU8A
10. Extension, 1/4" Drive, 2" Long	2" Ext 1/4" Drive	00006-10	SO45	TMXXK2
11. Extension, 1/4" Drive, 4" Long	4" Ext 1/4" Drive	00006-11	SO 45	TMXXK4
12. Extension, 1/4" Drive, 6" Long	6" Ext 1/4" Drive	00006-12	SO 45	TMXXK60

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
13. Extension, 1/4" Drive, 10" Long	10" Ext 1/4" Drive	00006-13	SO 45	TMXK100
14. Ratchet, 1/4" Drive, 4-1/2" Long, Sealed	Ratchet 1/4" Drive	00006-14	SO 43	TM830
15. Speed Handle Assembly	Speed Handle Assy	00006-15	JSC/RI/FEPC	
16. Driver Handle, 1/4" Drive	Driver Handle 1/4" Drive	00006-16	SO 44	TM4B
17. Universal Joint, 1/4" Drive	Univ Joint 1/4" Drive	00006-17	SO 44	TMU8
18. Adapter, 1/4" Female to 3/8" Male	1/4" to 3/8" Adapter	00006-18	SO 44	TA3
19. Adapter, 1/4" Female to 3/8" Male	1/4" to 3/8" Adapter	00006-19	SO 44	TA3
20. Ratchet, 1/4" Drive, 6" Long, Flex Handle	Flex Handle Ratchet, 1/4" Drive	00006-20	SO43	TM831
21. Ratchet, 3/8" Drive, 6" Long, Flex Handle	Flex Handle Ratchet, 3/8" Drive	00006-21	SO62	FM711
<u>KIT F: Sockets, 1/4" Drive</u>	KIT F: Sockets, 1/4" Drive	00000007		
1. Deep Socket, 1/4" Drive, 6 Point, 1/8"	1/8" 6 Pt Deep Socket, 1/4" Drive	000007-1	SO 47	STM04
2. Deep Socket, 1/4" Drive, 6 Point, 5/32"	5/32" 6 Pt Deep Socket, 1/4" Drive	000007-2	SO 47	STM05
3. Deep Socket, 1/4" Drive, 12 Point, 3/16"	3/16" Deep Socket, 1/4" Drive	000007-3	SO 47	STMD6
4. Deep Socket, 1/4" Drive, 12 Point, 7/32"	7/32" Deep Socket, 1/4" Drive	000007-4	SO 47	STMD7
5. Deep Socket, 1/4" Drive, 12 Point, 1/4"	1/4" Deep Socket, 1/4" Drive	000007-5	SO 47	STMD8
6. Deep Socket, 1/4" Drive, 12 Point, 9/32"	9/32" Deep Socket, 1/4" Drive	000007-6	SO 47	STMD9
7. Deep Socket, 1/4" Drive, 12 Point, 5/16"	5/16" Deep Socket, 1/4" Drive	000007-7	SO 47	STMD10
8. Deep Socket, 1/4" Drive, 12 Point, 11/32"	11/32" Deep Socket, 1/4" Drive	000007-8	SO 47	STMD11
9. Deep Socket, 1/4" Drive, 12 Point, 3/8"	3/8" Deep Socket, 1/4" Drive	000007-9	SO 47	STMD12
10. Deep Socket, 1/4" Drive, 12 Point, 7/16"	7/16" Deep Socket, 1/4" Drive	00007-10	SO 47	STMD14
11. Deep Socket, 1/4" Drive, 12 Point, 1/2"	1/2" Deep Socket, 1/4" Drive	00007-11	SO 47	STMD16
12. Deep Socket, 1/4" Drive, 12 Point, 9/16"	9/16" Deep Socket, 1/4" Drive	00007-12	SO 47	STMD18
13. Standard Socket, 1/4" Drive, 6 Point, 1/8"	1/8" 6 Pt Socket, 1/4" Drive	00007-13	SO 46	TM04
14. Standard Socket, 1/4" Drive, 6 Point, 5/32"	5/32" 6 Pt Socket, 1/4" Drive	00007-14	SO 46	TM05
15. Standard Socket, 1/4" Drive, 12 Point, 3/16"	3/16" Socket, 1/4" Drive	00007-15	SO 46	TMD6
16. Standard Socket, 1/4" Drive, 12 Point, 7/32"	7/32" Socket, 1/4" Drive	00007-16	SO 46	TMD7
17. Standard Socket, 1/4" Drive, 12 Point, 1/4"	1/4" Socket, 1/4" Drive	00007-17	SO 46	TMD8
18. Standard Socket, 1/4" Drive, 12 Point, 9/32"	9/32" Socket, 1/4" Drive	00007-18	SO 46	TMD9
19. Standard Socket, 1/4" Drive, 12 Point, 5/16"	5/16" Socket, 1/4" Drive	00007-19	SO 46	TMD10
20. Standard Socket, 1/4" Drive, 12 Point, 11/32"	11/32" Socket, 1/4" Drive	00007-20	SO 46	TMD11
21. Standard Socket, 1/4" Drive, 12 Point, 3/8"	3/8" Socket, 1/4" Drive	00007-21	SO 46	TMD12
22. Standard Socket, 1/4" Drive, 12 Point, 7/16"	7/16" Socket, 1/4" Drive	00007-22	SO 46	TMD14
23. Standard Socket, 1/4" Drive, 12 Point, 1/2"	1/2" Socket, 1/4" Drive	00007-23	SO 46	TMD16
24. Standard Socket, 1/4" Drive, 12 Point, 9/16"	9/16" Socket, 1/4" Drive	00007-24	SO 46	TMD18
25. Standard Socket, 1/4" Drive, 6 Point, 5/8"	5/8" 6 Pt Socket, 1/4" Drive	00007-25	SO 46	TM20
<u>Kit G: Torque Limiting Driver, Torque Wrenches</u>	Kit G: Trq Driver/Wrenches	00000008		
1. Torque Limiting Driver, 1/4" Drive (5 - 35 Inch-Pounds)	(5-35 inlbs) Trq Driver, 1/4" Drive	000008-1	SO 207	QTS135
2. Torque Wrench, 3/8" Drive (150 - 1000 Inch-Pounds)	(150-1000 inlbs) Trq Wrench 3/8" Drive	000008-2	SO 205	QJR284E
3. Torque Wrench, 3/8" Drive (30 - 200 Inch-Pounds)	(30-200 inlbs) Trq Wrench, 3/8" Drive	000008-3	SO 205	QJR217D

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
<u>KIT H: Files, Cutting Tools, Saws</u>	KIT H: Files, Cutting Tools/Saws	00000009		
1. Hacksaw	Hacksaw	000009-1	SO 224	HS5
2. Replacement Blades	Hacksaw Blades	000009-2	McMASTER	4047A12
3. Scissors, 2" Cut Length, 8-1/4" Long	Scissors, 2" Cut, 8-1/4" Long	000009-3	McMASTER	36875A12
4. File Set, Small (Round, Half-Round, Flat, Crossing, Knife, Square, 3-Square, Equaling, Barrette, Joint, Slitting, and Marking)	File Set, Small	000009-4		
			SO 227	HBFN120
5. File Set, Large (Hand, Warding, Half-Round, Square, Round, and Slim Taper)	File Set, Large	000009-5		
			SO 226	HB100
6. Saw Hand, Finger Grip (Bone Saw)	Bone Saw	000009-6	Bestway Prod.	NSN5110-00-570-6896
7. Saw Hand, Finger Grip (Replacement Blades-qty 3)	Bone Saw Blades	000009-7	Bestway	NSN5110-00-570-6896
<u>KIT I: Screwdrivers</u>	KIT I: Screwdrivers	00000010		
1. Jewelers Screwdriver Set, Flat Tip (6 Piece Set)	Jewelers Screwdriver Set Flat Tip	000010-1	Radio Shack	641948
2. Jewelers Screwdriver, Phillips Head, 000	Jewelers Screwdriver Phillips 000	000010-2	McMaster Carr	7026A23
3. Jewelers Screwdriver, Phillips Head, 00	Jewelers Screwdriver Phillips 00	000010-3	McMaster Carr	7026A22
4. Jewelers Screwdriver, Phillips Head, 0	Jewelers Screwdriver Phillips 0	000010-4	McMaster Carr	7026A18
5. Jewelers Screwdriver, Phillips Head, 1	Jewelers Screwdriver Phillips 1	000010-5	McMaster Carr	7026A19
6. Phillips Head Driver, 3/8" Drive, #2, 4-1/32" Long	Phillips #2 3/8" Drive 4-1/32"	000010-6	SO 73	FP24E
7. Phillips Head Driver, 3/8" Drive, #3, 4-1/32" Long	Phillips #3 3/8" Drive 4-1/32"	000010-7	SO 73	FP34E
8. Phillips Head Driver, 3/8" Drive, #4, 2-9/16" Long	Phillips #4 3/8" Drive 2-9/16"	000010-8	SO 73	FP42E
9. Torq Set, Apex Bit, #2 long	#2 Torq Tip Bit Long	000010-9	APEX	273B-2
10. Torq Set, Apex Bit, #4 long	#4 Torq Tip Bit Long	000010-10	APEX	273B-4
11. Torq Set, Apex Bit, #6 long	#6 Torq Tip Bit Long	000010-11	APEX	273B-6
12. Torq Set, Apex Bit, #8 long	#8 Torq Tip Bit Long	000010-12	APEX	273B-8
13. Torq Set, Apex Bit, #10 long	#10 Torq Tip Bit Long	000010-13	APEX	273B-10
14. Common Tip Screwdriver, Short (0.018" X 1/8" X 3")	Common Tip Screwdriver 3"	000010-14	SO 145	SSDE43B
15. Common Tip Screwdriver, Long (0.037" X 1/4" X 4")	Common Tip Screwdriver 4"	000010-15	SO 148	UDS104
16. Common Tip Screwdriver, Long (0.037" X 1/4" X 4")	Common Tip Screwdriver 4"	000010-16	SO 148	UDS104
17. Common Tip Screwdriver, Long (0.037" X 1/4" X 4")	Common Tip Screwdriver 4"	000010-17	SO 148	UDS104
18. Common Tip Screwdriver, Long (0.037" X 1/4" X 4")	Common Tip Screwdriver 4"	000010-18	SO 148	UDS104
19. Phillips Head Screwdriver, #0, 3" Long Blade	Phillips Screwdriver #0	000010-19	SO 146	SSDEP30B

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
20. Phillips Head Screwdriver, #1, 10" Long Blade	Phillips Screwdriver #1	00010-20	SO 146	SSDEP61B
21. Flat Tip Head Driver, 3/8" Drive, 1/4" X 1/32"	Small Flat Tip Driver, 3/8" Drive	00010-21	SO 73	F23E
22. Flat Tip Head Driver, 3/8" Drive, 3/8" X 1/16"	Large Flat Tip Driver, 3/8" Drive	00010-22	SO 73	F31E
<u>KIT J: Pliers, Wire Cutters, Wire Strippers, Crimp Tools, Strap Wrench, and Retaining Ring Tools</u>	KIT J: Pliers, Cutters/Strippers, Crimp, Strap Wrench, Retaining Ring Tools	00000011		
1. Combination Pliers	Combination Pliers	000011-1	SO 158	45
2. Needle Nose Pliers, Small	Small Needle Nose Pliers	000011-2	SO 168	94BCP
3. Needle Nose Pliers, Large	Large Needle Nose Pliers	000011-3	SO 160	95ACP
4. Pliers, Vise Grip, Jaw Grip	Vise Grips	000011-4	SO 164	VP7WR
5. Adjustable Joint Pliers, 7" Straight Jaw	Adjustable Joint Pliers, Straight Jaw	000011-5	Craftsman	45028
6. Adjustable Joint Pliers	Adjustable Joint Pliers, Curved	000011-6	Craftsman	45029
7. Retaining Ring Tool	Retaining Ring Tool Straight	000011-7	SO 162	PR12A
8. Retaining Ring Tool	Retaining Ring Tool 90 Deg	000011-8	SO 162	PRH129
9. Connector Pliers	Connector Pliers	000011-9	SO 167	PWC52A
10. Connector Pliers	Connector Pliers	00011-10	SO 167	PWC52A
11. Crimp Tool	Crimp Tool	00011-11	DMC	MH860
12. Mini-Pliers, Straight, 6" Long	Mini Pliers Straight 6"	00011-12	SO 171	MPS6
13. Splice Crimp Tool	Spliced Crimp Tool	00011-13	GE	WT 111-M
14. Wire Cutters	Wire Cutters	00011-14	SO161	184BCP
15. Wire Stripper	Wire Stripper	00011-15	Hisco	45181
16. Strap Wrench	Strap Wrench	00011-16	Daniel	BT-BS-630
<u>KIT K: Hammer, Chisel, Punch, Pry Bar</u>	KIT K: Hammer/Chisel/Punch/Pry Bar	00000012		
1. Dead Blow, Ball Peen Hammer	Dead Blow Ballpeen Hammer	000012-1	SO 222	HBD16
2. Chisel, 1/2" Point Edge, 6" Long	Chisel Set 1/2" Pt 6" Long	000012-2	SO 220	PPC816A
3. Long Tapered Punch, 8" Long	Flat Head Punch 8" Long	000012-3	SO 220	PPC205A
4. Center Punch	Center Punch	000012-4	SO220	PPC6A
5. Pry Bar	Pry Bar	000012-5	SO219	1515
<u>KIT L: Screw Extractor Set (25 Piece Set)</u>	KIT L: Screw Extractor Set	00000013	SO258	E1020
KIT M: Tap and Die Set (24 piece set)	KIT M: Tap and Die Set	00000014	SO240	TD2400A
<u>Kit N: Limited Area Tool Kit</u>	Kit N: Limited Area Tool Kit	00000015		
1. Wrench, Ratcheting Box, 1/4"-5/16"	1/4"X5/16" Ratcheting Box, Wrench	000015-1	SO121	R810SA
2. Bit, Phillips, #0	#0 Phillips Bit	000015-2	SO155	SDM220A
3. Bit, Phillips, #1	#1 Phillips Bit	000015-3	SO155	SDM321B
4. Bit, Phillips, #2	#2 Phillips Bit	000015-4	SO155	SDM322B
5. Bit, Phillips, #3	#3 Phillips Bit	000015-5	SO155	SDM323B
6. Bit, Torq Set, #2 short	#2 Short Torq Bit	000015-6	APEX	170-2
7. Bit, Torq Set, #4 short	#4 Short Torq Bit	000015-7	APEX	170-4

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
8. Bit, Torq Set, #6 short	#6 Short Torq Bit	000015-8	APEX	170-6
9. Bit, Torq Set, #8 short	#8 Short Torq Bit	000015-9	APEX	170-8
10. Bit, Torq Set, #10 short	#10 Short Torq Bit	00015-10	APEX	170-10
<u>KIT O: Sockets, Hex Head Drivers, Metric; 1/4" Drive</u>	KIT O: Metric Sockets/Hex Head Drivers, 1/4" Drive	00000016		
1. Metric Shallow Socket, 1/4" Drive, 6 Point, 4 mm	4 mm Socket, 1/4" Drive	000016-1	SO 46	TMM4
2. Metric Shallow Socket, 1/4" Drive, 6 Point, 5 mm	5 mm Socket, 1/4" Drive	000016-2	SO 46	TMM5
3. Metric Shallow Socket, 1/4" Drive, 6 Point, 5.5 mm	5.5 mm Socket, 1/4" Drive	000016-3	SO 46	TMM5.5
4. Metric Shallow Socket, 1/4" Drive, 6 Point, 6 mm	6 mm Socket, 1/4" Drive	000016-4	SO 46	TMM6
5. Metric Shallow Socket, 1/4" Drive, 6 Point, 7 mm	7 mm Socket, 1/4" Drive	000016-5	SO 46	TMM7
6. Metric Shallow Socket, 1/4" Drive, 6 Point, 8 mm	8 mm Socket, 1/4" Drive	000016-6	SO 46	TMM8
7. Metric Shallow Socket, 1/4" Drive, 6 Point, 9 mm	9 mm Socket, 1/4" Drive	000016-7	SO 46	TMM9
8. Metric Shallow Socket, 1/4" Drive, 6 Point, 10 mm	10 mm Socket, 1/4" Drive	000016-8	SO 46	TMM10
9. Metric Shallow Socket, 1/4" Drive, 6 Point, 11 mm	11 mm Socket, 1/4" Drive	000016-9	SO 46	TMM11
10. Metric Shallow Socket, 1/4" Drive, 6 Point, 12 mm	12 mm Socket, 1/4" Drive	00016-10	SO 46	TMM12
11. Metric Shallow Socket, 1/4" Drive, 6 Point, 13 mm	13 mm Socket, 1/4" Drive	00016-11	SO 46	TMM13
12. Metric Shallow Socket, 1/4" Drive, 6 Point, 14 mm	14 mm Socket, 1/4" Drive	00016-12	SO 46	TMM14
13. Metric Deep Socket, 1/4" Drive, 6 Point, 4 mm	4 mm Deep Socket, 1/4" Drive	00016-13	SO47	STMM4
14. Metric Deep Socket, 1/4" Drive, 6 Point, 5 mm	5 mm Deep Socket, 1/4" Drive	00016-14	SO47	STMM5
15. Metric Deep Socket, 1/4" Drive, 6 Point, 5.5 mm	5.5 mm Deep Socket, 1/4" Drive	00016-15	SO47	STMM5.5
16. Metric Deep Socket, 1/4" Drive, 6 Point, 6 mm	6 mm Deep Socket, 1/4" Drive	00016-16	SO47	STMM6
17. Metric Deep Socket, 1/4" Drive, 6 Point, 7 mm	7 mm Deep Socket, 1/4" Drive	00016-17	SO47	STMM7
18. Metric Deep Socket, 1/4" Drive, 6 Point, 8 mm	8 mm Deep Socket, 1/4" Drive	00016-18	SO47	STMM8
19. Metric Deep Socket, 1/4" Drive, 6 Point, 9 mm	9 mm Deep Socket, 1/4" Drive	00016-19	SO47	STMM9
20. Metric Deep Socket, 1/4" Drive, 6 Point, 10 mm	10 mm Deep Socket, 1/4" Drive	00016-20	SO47	STMM10
21. Metric Deep Socket, 1/4" Drive, 6 Point, 11 mm	11 mm Deep Socket, 1/4" Drive	00016-21	SO47	STMM11

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
22. Metric Deep Socket, 1/4" Drive, 6 Point, 12 mm	12 mm Deep Socket, 1/4" Drive	00016-22	SO47	STMM12
23. Metric Deep Socket, 1/4" Drive, 6 Point, 13 mm	13 mm Deep Socket, 1/4" Drive	00016-23	SO47	STMM13
24. Metric Deep Socket, 1/4" Drive, 6 Point, 14 mm	14 mm Deep Socket, 1/4" Drive	00016-24	SO47	STMM14
25. Metric Folding Hex Key Set (2 X 51, 2.5 X 57, 3 X 62, 4 X 66, 5 X 57, 6 X 97, and 8 X 104 mm)	Metric Folding Hex Key Set	00016-25	SO 129	AWEM7K
26. Metric Standard Hex Head Driver, 1/4" Drive, 2 mm	2mm Hex Head, 1/4" Drive	00016-26	SO 49	TMAM2E
27. Metric Standard Hex Head Driver, 1/4" Drive, 2.5 mm	2.5 mm Hex Head, 1/4" Drive	00016-27	SO 49	TMAM2.5
28. Metric Standard Hex Head Driver, 1/4" Drive, 3 mm	3 mm Hex Head, 1/4" Drive	00016-28	SO 49	TMAM3E
29. Metric Standard Hex Head Driver, 1/4" Drive, 4 mm	4 mm Hex Head, 1/4" Drive	00016-29	SO 49	TMAM4E
30. Metric Standard Hex Head Driver, 1/4" Drive, 5 mm	5 mm Hex Head, 1/4" Drive	00016-30	SO 49	TMAM5E
31. Metric Standard Hex Head Driver, 1/4" Drive, 6 mm	6 mm Hex Head, 1/4" Drive	00016-31	SO 49	TMAM6E
<u>Kit P: Sockets, Hex Head Drivers, Crowfoot Wrenches.</u>	Kit P: Metric Sockets/Hex Head Drivers/	00000017		
1. Metric Shallow Socket, 3/8" Drive, 6 Point, 8 mm	8 mm Socket, 3/8" Drive	000017-1	SO 65	FSM81
2. Metric Shallow Socket, 3/8" Drive, 6 Point, 8 mm	8 mm Socket, 3/8" Drive	000017-2	SO 65	FSM81
3. Metric Shallow Socket, 3/8" Drive, 6 Point, 9 mm	9 mm Socket, 3/8" Drive	000017-3	SO 65	FSM91
4. Metric Shallow Socket, 3/8" Drive, 6 Point, 10 mm	10 mm Socket, 3/8" Drive	000017-4	SO 65	FSM101
5. Metric Shallow Socket, 3/8" Drive, 6 Point, 10 mm	10 mm Socket, 3/8" Drive	000017-5	SO 65	FSM101
6. Metric Shallow Socket, 3/8" Drive, 6 Point, 11 mm	11 mm Socket, 3/8" Drive	000017-6	SO 65	FSM111
7. Metric Shallow Socket, 3/8" Drive, 6 Point, 12 mm	12 mm Socket, 3/8" Drive	000017-7	SO 65	FSM121
8. Metric Shallow Socket, 3/8" Drive, 6 Point, 12 mm	12 mm Socket, 3/8" Drive	000017-8	SO 65	FSM121
9. Metric Shallow Socket, 3/8" Drive, 6 Point, 13 mm	13 mm Socket, 3/8" Drive	000017-9	SO 65	FSM131
10. Metric Shallow Socket, 3/8" Drive, 6 Point, 14 mm	14 mm Socket, 3/8" Drive	00017-10	SO 65	FSM141
11. Metric Shallow Socket, 3/8" Drive, 6 Point, 15 mm	15 mm Socket, 3/8" Drive	00017-11	SO 65	FSM151
12. Metric Shallow Socket, 3/8" Drive, 6 Point, 16 mm	16 mm Socket, 3/8" Drive	00017-12	SO 65	FSM161

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
13. Metric Shallow Socket, 3/8" Drive, 6 Point, 17 mm	17 mm Socket, 3/8" Drive	00017-13	SO 65	FSM171
14. Metric Shallow Socket, 3/8" Drive, 6 Point, 18 mm	18 mm Socket, 3/8" Drive	00017-14	SO 65	FSM181
15. Metric Shallow Socket, 3/8" Drive, 6 Point, 19 mm	19 mm Socket, 3/8" Drive	00017-15	SO 65	FSM191
16. Metric Shallow Socket, 3/8" Drive, 22 mm	22 mm Socket, 3/8" Drive	00017-16	SO 65	FSM221
17. Metric Shallow Socket, 3/8" Drive, 24 mm	24 mm Socket, 3/8" Drive	00017-17	SO 65	FSM241
18. Metric Deep Socket, 3/8" Drive, 6 Point, 8 mm	8 mm Deep Socket, 3/8" Drive	00017-18	SO 66	SFSM8
19. Metric Deep Socket, 3/8" Drive, 6 Point, 9 mm	9 mm Deep Socket, 3/8" Drive	00017-19	SO 66	SFSM9
20. Metric Deep Socket, 3/8" Drive, 6 Point, 10 mm	10 mm Deep Socket, 3/8" Drive	00017-20	SO 66	SFSM10
21. Metric Deep Socket, 3/8" Drive, 6 Point, 10 mm	10 mm Deep Socket, 3/8" Drive	00017-21	SO 66	SFSM10
22. Metric Deep Socket, 3/8" Drive, 6 Point, 11 mm	11 mm Deep Socket, 3/8" Drive	00017-22	SO 66	SFSM11
23. Metric Deep Socket, 3/8" Drive, 6 Point, 12 mm	12 mm Deep Socket, 3/8" Drive	00017-23	SO 66	SFSM12
24. Metric Deep Socket, 3/8" Drive, 6 Point, 12 mm	12 mm Deep Socket, 3/8" Drive	00017-24	SO 66	SFSM12
25. Metric Deep Socket, 3/8" Drive, 6 Point, 13 mm	13 mm Deep Socket, 3/8" Drive	00017-25	SO 66	SFSM13
26. Metric Deep Socket, 3/8" Drive, 6 Point, 14 mm	14 mm Deep Socket, 3/8" Drive	00017-26	SO 66	SFSM14
27. Metric Deep Socket, 3/8" Drive, 6 Point, 15 mm	15 mm Deep Socket, 3/8" Drive	00017-27	SO 66	SFSM15
28. Metric Deep Socket, 3/8" Drive, 6 Point, 16 mm	16 mm Deep Socket, 3/8" Drive	00017-28	SO 66	SFSM16
29. Metric Deep Socket, 3/8" Drive, 6 Point, 17 mm	17 mm Deep Socket, 3/8" Drive	00017-29	SO 66	SFSM17
30. Metric Deep Socket, 3/8" Drive, 6 Point, 18 mm	18 mm Deep Socket, 3/8" Drive	00017-30	SO 66	SFSM18
31. Metric Deep Socket, 3/8" Drive, 6 Point, 19 mm	19 mm Deep Socket, 3/8" Drive	00017-31	SO 66	SFSM19
32. Metric Standard Hex Head Driver, 3/8" Drive, 4 mm	4 mm Hex Head, 3/8" Drive	00017-32	SO 72	FAM4E
33. Metric Standard Hex Head Driver, 3/8" Drive, 5 mm	5 mm Hex Head, 3/8" Drive	00017-33	SO 72	FAM5E
34. Metric Standard Hex Head Driver, 3/8" Drive, 6 mm	6 mm Hex Head, 3/8" Drive	00017-34	SO 72	FAM6E
35. Metric Standard Hex Head Driver, 3/8" Drive, 7 mm	7 mm Hex Head, 3/8" Drive	00017-35	SO 72	FAM7E
36. Metric Standard Hex Head Driver, 3/8" Drive, 8 mm	8 mm Hex Head, 3/8" Drive	00017-36	SO 72	FAM8E
37. Metric Standard Hex Head Driver, 3/8" Drive, 9 mm	9 mm Hex Head, 3/8" Drive	00017-37	SO 72	FAM9E

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
38. Metric Standard Hex Head Driver, 3/8" Drive, 10 mm	10 mm Hex Head, 3/8" Drive	00017-38	SO 72	FAM10E
39. Metric Standard Socket, 3/8" Drive, 12 Point, 6 mm	6 mm Socket, 3/8" Drive	00017-39	SO 65	FM6
40. Metric Standard Socket, 3/8" Drive, 12 Point, 7 mm	7 mm Socket, 3/8" Drive	00017-40	SO 65	FM7
41. Metric Standard Socket, 3/8" Drive, 12 Point, 8 mm	8 mm Socket, 3/8" Drive	00017-41	SO 65	FM8
42. Metric Standard Socket, 3/8" Drive, 12 Point, 9 mm	9 mm Socket, 3/8" Drive	00017-42	SO 65	FM9
43. Metric Standard Socket, 3/8" Drive, 12 Point, 10 mm	10 mm Socket, 3/8" Drive	00017-43	SO 65	FM10
44. Crowfoot, 3/8" Drive, 10 mm	10 mm Crowfoot, 3/8 Drive	00017-44	SO71	FCOM10
45. Crowfoot, 3/8" Drive, 12 mm	12 mm Crowfoot, 3/8 Drive	00017-45	SO71	FCOM12
46. Crowfoot, 3/8" Drive, 13 mm	13 mm Crowfoot, 3/8 Drive	00017-46	SO71	FCOM13
47. Crowfoot, 3/8" Drive, 14 mm	14 mm Crowfoot, 3/8 Drive	00017-47	SO71	FCOM14
48. Crowfoot, 3/8" Drive, 15 mm	15 mm Crowfoot, 3/8 Drive	00017-48	SO71	FCOM15
<u>KIT Q: Metric Combination Wrenches</u>	KIT Q: Metric Combination Wrenches	00000018		
1. Metric Combination Wrench, 6 Point, 7 mm	7 mm Combination Wrench	000018-1	SO115	OSHM70B
2. Metric Combination Wrench, 12 Point, 8 mm	8 mm Combination Wrench	000018-2	SO115	OEXM80B
3. Metric Combination Wrench, 12 Point, 9 mm	9 mm Combination Wrench	000018-3	SO115	OEXM90B
4. Metric Combination Wrench, 12 Point, 10 mm	10 mm Combination Wrench	000018-4	SO 114	SOEXM10
5. Metric Combination Wrench, 12 Point, 10 mm	10 mm Combination Wrench	000018-5	SO 114	SOEXM10
6. Metric Combination Wrench, 12 Point, 11 mm	11 mm Combination Wrench	000018-6	SO 114	SOEXM11
7. Metric Combination Wrench, 12 Point, 12 mm	12 mm Combination Wrench	000018-7	SO 114	SOEXM12
8. Metric Combination Wrench, 12 Point, 12 mm	12 mm Combination Wrench	000018-8	SO 114	SOEXM12
9. Metric Combination Wrench, 12 Point, 13 mm	13 mm Combination Wrench	000018-9	SO 114	SOEXM13
10. Metric Combination Wrench, 12 Point, 14 mm	14 mm Combination Wrench	00018-10	SO 114	SOEXM14
11. Metric Combination Wrench, 12 Point, 15 mm	15 mm Combination Wrench	00018-11	SO 114	SOEXM15
12. Metric Combination Wrench, 12 Point, 16 mm	16 mm Combination Wrench	00018-12	SO 114	SOEXM16
13. Metric Combination Wrench, 12 Point, 17 mm	17 mm Combination Wrench	00018-13	SO 114	SOEXM17
14. Metric Combination Wrench, 12 Point, 18 mm	18 mm Combination Wrench	00018-14	SO 114	SOEXM18
15. Metric Combination Wrench, 12 Point, 19 mm	19 mm Combination Wrench	00018-15	SO 114	SOEXM19
16. Metric Combination Wrench, 22 mm	22 mm Combination Wrench	00018-16	SO 115	OEXM220B

PART NAME	OPS NAME	IMS NUMBER	VENDOR (SO=Snap-on & pg # in Catalog)	VENDOR PART NUMBER
17. Metric Combination Wrench, 24 mm	24 mm Combination Wrench	00018-17	SO 115	OEXM240B
<u>KIT R: Special Provisioning Tools</u>	KIT R: Special Provisioning Tools	00000019		
1. 7/16" Socket	7/16" EVA Socket, 3/8" Drive	000019-1	JSC	SEG33106931-301
2. 5/32" Hex Driver	5/32" Stubby Hex Head, 1/4" Drive	000019-2	SO 49	TMAXSSE
3. 3/16" Hex Driver - 6"	6", 3/16" Hex Head Driver, 3/8" Drive	000019-3	SO 73	FABL6E
4. 6" Flex Extension	6" Flex Extension, 1/4" Drive	000019-4	SO 42	TM61A
5. 11/16" Crowfoot (modified)	11/16" Modified Crowfoot, 3/8" Drive	000019-5	SO 71	FCO22A.195TH
6. 11/16" Open End Wrench, Offset (modified)	11/16" Open End Wrench, Modified	000019-6	SO 124	VS22B.195TH
7. 11/16" Open End Wrench, Offset (modified)	11/16" Open End Wrench, Modified	000019-7	SO 124	VS22B.195TH
<u>IVA Tool Box, Lid #2</u>	IVA Tool Box, Lid #2	00000020		
1. Electrical Tape	Electrical Tape	000020-1	McMaster-Carr	7648A32
2. Tape, Aluminum	Aluminum Tape	000020-2	3M	3M425
3. Tape, Utility (qty 3 rolls)	Grey Tape, 2" width	000020-3	Polyken Kendall	225FR-2
	Grey Tape, 2" width	000020-4	Polyken Kendall	225FR-2
	Grey Tape, 1" width	000020-5	Polyken Kendall	225FR-1
4. Caliper, Dial Type	Caliper, Dial Type	000020-6	SO 236	PMF134
5. Inspection Mirror	Insp Mirror	000020-7	McMaster-Carr	1016T2
6. Lubricant, Silicone tube	Lubricant Silicone	000020-8	McMaster-Carr	1204K12
7. Tablecloth, Tool	Tool Tablecloth	000020-9	JSC-FEPC	528-20158-1
<u>IVA Tool Box, Lid #1</u>	IVA Tool Box, Lid #1	00000021		
1. Feeler Gauge, nonmetallic	Nonmetallic Feeler Gauge	000021-1	McMaster-Carr	82755A11
2. Feeler Gauge	Feeler Gauge	000021-2	SO 233	FB335
3. Thread Gauge	Thread Gauge	000021-3	SO239	TD1040
4. Magnifying Glass (7X)	Magnifying Glass (7X)	000021-4	Fairfield Scientific	81-23-63
5. Mechanical Finger, 17-1/2" Long	Mech Finger	000021-5	SO261	GA353A
6. Tape Measure, 10 Feet Long (English/Metric)	Tape Measure	000021-6	Lufkin	PC-10
7. Steel Rule, 12"/300 mm	Steel Rule	000021-7	SO232	YA120A
8. Tweezer Kit	Tweezer Kit	000021-8	SO 171	YA456
9. Eye Protection, Glasses	Eye Protection	000021-9	McMaster-Carr	5405T12
10. Static Wrist Tether	Static Wrist Tether	00021-10	Richmond SC	6060X776

IVA HAND TOOL BOX ASSY PART NO. SEG33113668-301

This replaces the soft-stowed Tool Kit P/N SEG33109820-301.

DESCRIPTION:

- Replaces the ISS Tool Kit previously in Node 1 locker location NOD1D4_G2 as the primary tool and accessory stowage.
- Capable of installation in a Node 1 triple-size locker or other locker with similar dimensions (34" deep, 17.75" wide, 15.75" tall). This tool box enables the crew to access or return a single tool more quickly than with the current ISS Tool Kit, as well as decrease the crew time performing a post-work inventory of the tools.
- Consists of five Tray Assemblies (SEG33113668-321, -323, -325, -327, -329) inserted into two Wedge Assemblies (SEG33113669-301 and -303) hard-docked on either side of the locker. The trays measure 32.5" x 14.25" x 2.5" and weigh approximately 7.25 lbs before population of the tools. Each tray is fitted with foam inserts that securely hold the tools in place and are also removable in order to accommodate tool replacement and substitution. These inserts have tool silhouettes cut into them for individual tool stowage (the depth of the cut depends on the tool) and each tool will be individually labeled on the foam. The contents of each tray are clearly labeled on the face of the trays.
- At launch, the trays and wedges will be soft stowed in foam. The trays will launch fully stocked with tools.
- Each tray has the capability of being inserted face "up" or face "down" and also pivots, ensuring clear visibility and accessibility of all tools. Each tray is also removable for transport to the worksite and will have Velcro on the backside so it can be attached flat to the wall.
- Two tray soft covers (SEG33113670-301) are available to cover the trays while they are away from the toolbox for extended periods of time.
- The following pages list the contents of the ISS IVA Tool Box. NOTE: The item number at the right of the table is the item number on the SEG33113668 drawing for quick reference.

Weight:
165 lbs

Volume or Measurements:
17.75" x 34.0" x 15.5"

Type:
Outfitted

Power:
N/A

Fuse:
N/A

Restraint:
Hard-docked in a triple-size locker



Stowage:

Soft stowed in foam (launch)
Hard-docked in a triple-size locker
(ISS)

Limited Life:

N/A

Lineage:

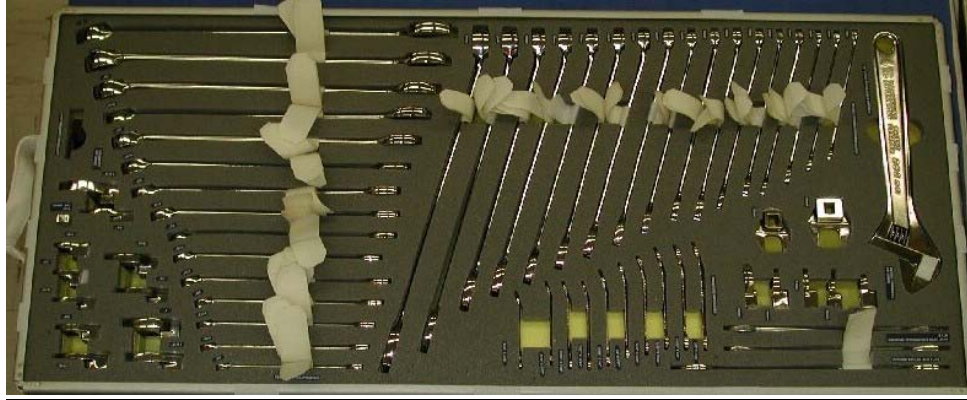
Designed and developed for NASA by
Lockheed Martin Space Operations Corp.
Note: Replaces prior Soft ISS Tool Kit

Reference Documents:

GCAR	G4116
ARM	JSC29014
RAESR	JSC29016
Materials	MATL-01-089
Stress	MASD-01-0206
CR	SSCN5351
NCR	ITB-NCR-001
VM	JSC29015
Training	LMSEAT33426
Manual	

Contact:

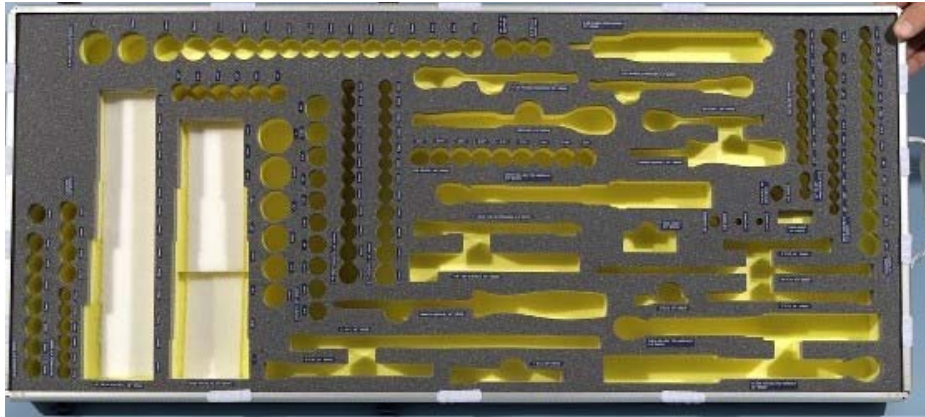
Fatonia Rivera

TRAY 1: Combination, Crowfoot, and Wrenches

PART NAME	PART NUMBER	VENDOR (SO=Snap-on pg # in 300 Catalog)	VENDOR PART NUMBER	QTY	ITEM #
TRAY 1: Combination, Crowfoot, Wrenches					
1. Adjustable Wrench, 10" Long	SKG33117562-913	SO 132	AD10	1	11
2. 11/16" Open End Wrench, Offset (modified)	SKG33117562-904	SO 124	VS22B.195TH	2	12
3. Wrench, 15 Deg Offset 3/4"-13/16", Low Torque	SKG33117562-337	SO 124	LTA2426	1	13
4. Metric Combination Wrench, 6 Point, 7 mm	SKG33117562-315	SO 115	OSHM70B	1	14
5. Metric Combination Wrench, 12 Point, 8 mm	SKG33117562-316	SO 115	OEXM80B	1	15
6. Metric Combination Wrench, 12 Point, 9 mm	SKG33117562-317	SO 115	OEXM90B	1	16
7. Metric Combination Wrench, 12 Point, 10 mm	SKG33117562-301	SO 114	SOEXM10	2	17
8. Metric Combination Wrench, 12 Point, 11 mm	SKG33117562-302	SO 114	SOEXM11	1	18
9. Metric Combination Wrench, 12 Point, 12 mm	SKG33117562-303	SO 114	SOEXM12	2	19
10. Metric Combination Wrench, 12 Point, 13 mm	SKG33117562-304	SO 114	SOEXM13	1	20
11. Metric Combination Wrench, 12 Point, 14 mm	SKG33117562-308	SO 145	SOEXM14	1	21
12. Metric Combination Wrench, 12 Point, 15 mm	SKG33117562-309	SO 114	SOEXM15	1	22
13. Metric Combination Wrench, 12 Point, 16 mm	SKG33117562-310	SO 114	SOEXM16	1	23
14. Metric Combination Wrench, 12 Point, 17 mm	SKG33117562-311	SO 114	SOEXM17	1	24
15. Metric Combination Wrench, 12 Point, 18 mm	SKG33117562-312	SO 114	SOEXM18	1	25
16. Metric Combination Wrench, 12 Point, 19 mm	SKG33117562-313	SO 114	SOEXM19	1	26
17. Metric Combination Wrench, 22 mm	SKG33117562-314	SO 115	OEXM220B	1	27
18. Metric Combination Wrench, 24 mm	SKG33117562-305	SO 115	OEXM240B	1	28
19. Crowfoot, 3/8" Drive, 19 mm	SEG33114495-303	SO 165	FCOM19A	1	29
20. Crowfoot, 3/8" Drive, 17 mm	SEG33114495-301	SO 165	FCOM17A	1	30
23. Crowfoot, 3/8" Drive, 15 mm	SKG33117562-752	SO 71	FCOM15	1	31
24. Crowfoot, 3/8" Drive, 14 mm	SKG33117562-755	SO 71	FCOM14	1	32
25. Crowfoot, 3/8" Drive, 13 mm	SKG33117562-756	SO 71	FCOM13	1	33
26. Crowfoot, 3/8" Drive, 12 mm	SKG33117562-001	SO 71	FCOM12	1	34
27. Crowfoot, 3/8" Drive, 10 mm	SKG33117562-002	SO 71	FCOM10	1	35
28. Miniature Wrench, 12 Point, 3/8" X 7/16"	SKG33117562-510	Techni-Tool	322WR132	1	36
29. Miniature Wrench, 12 Point, 11/32" X 3/8"	SKG33117562-509	Techni-Tool	322WR132	1	37
30. Miniature Wrench, 12 Point, 5/16" X 11/32"	SKG33117562-508	Techni-Tool	322WR132	1	38
31. Miniature Wrench, 12 Point, 9/32" X 5/16"	SKG33117562-507	Techni-Tool	322WR132	1	39

PART NAME	PART NUMBER	VENDOR (SO=Snap-on pg # in 300 Catalog)	VENDOR PART NUMBER	QTY	ITEM #
32. Miniature Wrench, 12 Point, 1/4" X 9/32"	SKG33117562-506	Techni-Tool	322WR132	1	40
33. Miniature Wrench, 12 Point, 15/64" X 1/4"	SKG33117562-505	Techni-Tool	322WR132	1	41
34. Miniature Wrench, 12 Point, 7/32" X 15/64"	SKG33117562-504	Techni-Tool	322WR132	1	42
35. Miniature Wrench, 12 Point, 13/64" X 7/32"	SKG33117562-503	Techni-Tool	322WR132	1	43
36. Miniature Wrench, 6 Point, 3/16" X 5/32"	SKG33117562-502	Techni-Tool	322WR132	1	44
37. Miniature Wrench, 6 Point, 5/32" X 3/16"	SKG33117562-501	Techni-Tool	322WR132	1	45
38. Combination Wrench, 12 Point, 1"	SKG33117562-318	SO 114	SOEX32	1	46
39. Combination Wrench, 12 Point, 15/16"	SKG33117562-319	SO 114	SOEX30	1	47
40. Combination Wrench, 12 Point, 7/8"	SKG33117562-320	SO 114	SOEX28	1	48
41. Combination Wrench, 12 Point, 13/16"	SKG33117562-321	SO 114	SOEX26	1	49
42. Combination Wrench, 12 Point, 3/4"	SKG33117562-322	SO 114	SOEX24	1	50
43. Combination Wrench, 12 Point, 11/16"	SKG33117562-323	SO 114	SOEX22	1	51
44. Combination Wrench, 12 Point, 5/8"	SKG33117562-324	SO 114	SOEX20	1	52
45. Combination Wrench, 12 Point, 9/16"	SKG33117562-306	SO 114	SOEX18	1	53
46. Combination Wrench, 12 Point, 1/2"	SKG33117562-307	SO 114	SOEX16	1	54
47. Combination Wrench, 12 Point, 7/16"	SKG33117562-325	SO 114	SOEX14	2	55
49. Combination Wrench, 12 Point, 3/8"	SKG33117562-326	SO 114	SOEX12	1	56
50. Combination Wrench, 12 Point, 11/32"	SKG33117562-327	SO 115	OEX11B	1	57
51. Combination Wrench, 12 Point, 5/16"	SKG33117562-328	SO 115	OEX10B	1	58
52. Combination Wrench, 12 Point, 1/4"	SKG33117562-329	SO 115	OEX8B	1	59
53. Crowfoot 11/16" (modified)	SKG33117562-946	SO 71	FCO22A.195TH	1	60
54. Crowfoot, 3/8" Drive, 1 5/16"	SEG33112392-301	SO 71	FC42A	1	61
55. Crowfoot, 3/8" Drive, 3/4"	SKG33117562-757	SO 71	FC24A	1	62
56. Crowfoot, 3/8" Drive, 13/16"	SKG33117562-758	SO 71	FC26A	1	63
57. Crowfoot, 3/8" Drive, 7/8"	SKG33117562-759	SO 71	FC28A	1	64
58. Crowfoot, 3/8" Drive, 1"	SKG33117562-307	SO 164	SEG33114112-307	1	65
59. Crowfoot, 3/8" Drive, 1 3/16"	SKG33117562-305	SO 164	SEG33114112-305	1	66
60. Crowfoot, 3/8" Drive, 7/16"	SKG33117562-003	SO 164	SEG33114112-003	1	67
61. Crowfoot, 3/8" Drive, 3/8"	SKG33117562-760	SO 71	FCO12	1	68
62. Crowfoot, 3/8" Drive, 9/16"	SKG33117562-761	SO 71	FC18A	1	69
63. Crowfoot, 3/8" Drive, 5/8"	SEG33112392-301	SO 164	FC20B	1	70
64. Crowfoot, 3/8" Drive, 11/16"	SKG33117562-762	SO 71	FC22A	1	71
65. Crowfoot, 1/4" Drive, 5/16"	SEG33114112-001	SO 163	TMRX10	1	72

TRAY 2: Sockets, Drivers, Torque Wrenches, and Ratchets



PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
1. Metric Standard Hex Head Driver, 3/8" Drive, 4 mm	SKG33117562-608	SO 72	FAM4E	1	73
2. Metric Standard Hex Head Driver, 3/8" Drive, 5 mm	SKG33117562-609	SO 72	FAM5E	1	74
3. Metric Standard Hex Head Driver, 3/8" Drive, 6 mm	SKG33117562-610	SO 72	FAM6E	1	75
4. Metric Standard Hex Head Driver, 3/8" Drive, 7 mm	SKG33117562-611	SO 72	FAM7E	1	76
5. Metric Standard Hex Head Driver, 3/8" Drive, 8 mm	SKG33117562-612	SO 72	FAM8E	1	77
6. Metric Standard Hex Head Driver, 3/8" Drive, 9 mm	SKG33117562-601	SO 72	FAM9E	1	78
7. Metric Standard Hex Head Driver, 3/8" Drive, 10 mm	SKG33117562-602	SO 72	FAM10E	1	79
8. Metric Standard Hex Head Driver, 1/4" Drive, 2 mm	SKG33117562-603	SO 49	TMAM2E	1	80
9. Metric Standard Hex Head Driver, 1/4" Drive, 2.5 mm	SKG33117562-604	SO 49	TMAM2.5	1	81
10. Metric Standard Hex Head Driver, 1/4" Drive, 3 mm	SKG33117562-613	SO 49	TMAM3E	1	82
11. Metric Standard Hex Head Driver, 1/4" Drive, 4 mm	SKG33117562-614	SO 49	TMAM4E	1	83
12. Metric Standard Hex Head Driver, 1/4" Drive, 5 mm	SKG33117562-615	SO 49	TMAM5E	1	84
13. Metric Standard Hex Head Driver, 1/4" Drive, 6 mm	SKG33117562-616	SO 49	TMAM6E	1	85
14. Metric Deep Socket, 1/4" Drive, 6 Point, 4 mm	SKG33117562-617	SO 47	STMM4	1	86
15. Metric Deep Socket, 1/4" Drive, 6 Point, 5 mm	SKG33117562-618	SO 47	STMM5	1	87
16. Metric Deep Socket, 1/4" Drive, 6 Point, 5.5 mm	SKG33117562-619	SO 47	STMM5.5	1	88
17. Metric Deep Socket, 1/4" Drive, 6 Point, 6 mm	SKG33117562-620	SO 47	STMM6	1	89
18. Metric Deep Socket, 1/4" Drive, 6 Point, 7 mm	SKG33117562-621	SO 47	STMM7	1	90
19. Metric Deep Socket, 1/4" Drive, 6 Point, 8 mm	SKG33117562-622	SO 47	STMM8	1	91
20. Metric Deep Socket, 1/4" Drive, 6 Point, 9 mm	SKG33117562-623	SO 47	STMM9	1	92
21. Metric Deep Socket, 1/4" Drive, 6 Point, 10 mm	SKG33117562-624	SO 47	STMM10	1	93
22. Metric Deep Socket, 1/4" Drive, 6 Point, 11 mm	SKG33117562-606	SO 47	STMM11	1	94
23. Metric Deep Socket, 1/4" Drive, 6 Point, 12 mm	SKG33117562-607	SO 47	STMM12	1	95
24. Metric Deep Socket, 1/4" Drive, 6 Point, 13 mm	SKG33117562-647	SO 47	STMM13	1	96

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
25. Metric Deep Socket, 1/4" Drive, 6 Point, 14 mm	SKG33117562-648	SO 47	STMM14	1	97
26. Metric Shallow Socket, 1/4" Drive, 6 Point, 4 mm	SKG33117562-640	SO 46	TMM4	1	98
27. Metric Shallow Socket, 1/4" Drive, 6 Point, 5 mm	SKG33117562-641	SO 46	TMM5	1	99
28. Metric Shallow Socket, 1/4" Drive, 6 Point, 5.5 mm	SKG33117562-642	SO 46	TMM5.5	1	100
29. Metric Shallow Socket, 1/4" Drive, 6 Point, 6 mm	SKG33117562-643	SO 46	TMM6	1	101
30. Metric Shallow Socket, 1/4" Drive, 6 Point, 7 mm	SKG33117562-644	SO 46	TMM7	1	102
31. Metric Shallow Socket, 1/4" Drive, 6 Point, 8 mm	SKG33117562-645	SO 46	TMM8	1	103
32. Metric Shallow Socket, 1/4" Drive, 6 Point, 9 mm	SKG33117562-646	SO 46	TMM9	1	104
33. Metric Shallow Socket, 1/4" Drive, 6 Point, 10 mm	SKG33117562-657	SO 46	TMM10	1	105
34. Metric Shallow Socket, 1/4" Drive, 6 Point, 11 mm	SKG33117562-658	SO 46	TMM11	1	106
35. Metric Shallow Socket, 1/4" Drive, 6 Point, 12 mm	SKG33117562-659	SO 46	TMM12	1	107
36. Metric Shallow Socket, 1/4" Drive, 6 Point, 13 mm	SKG33117562-660	SO 46	TMM13	1	108
37. Metric Shallow Socket, 1/4" Drive, 6 Point, 14 mm	SKG33117562-637	SO 46	TMM14	1	109
38. Metric Standard Socket, 3/8" Drive, 12 Point, 6 mm	SKG33117562-638	SO 65	FM6	1	110
39. Metric Standard Socket, 3/8" Drive, 12 Point, 7 mm	SKG33117562-639	SO 65	FM7	1	111
40. Metric Standard Socket, 3/8" Drive, 12 Point, 8 mm	SKG33117562-693	SO 65	FM8	1	112
41. Metric Standard Socket, 3/8" Drive, 12 Point, 9 mm	SKG33117562-694	SO 65	FM9	1	113
42. Metric Standard Socket, 3/8" Drive, 12 Point, 10 mm	SKG33117562-695	SO 65	FM10	1	114
43. Metric Deep Socket, 3/8" Drive, 6 Point, 8 mm	SKG33117562-625	SO 66	SFSM8	1	115
44. Metric Deep Socket, 3/8" Drive, 6 Point, 9 mm	SKG33117562-626	SO 66	SFSM9	1	116
45. Metric Deep Socket, 3/8" Drive, 6 Point, 10 mm	SKG33117562-627	SO 66	SFSM10	2	117
47. Metric Deep Socket, 3/8" Drive, 6 Point, 11 mm	SKG33117562-628	SO 66	SFSM11	1	118
48. Metric Deep Socket, 3/8" Drive, 6 Point, 12 mm	SKG33117562-629	SO 66	SFSM12	2	119
50. Metric Deep Socket, 3/8" Drive, 6 Point, 13 mm	SKG33117562-630	SO 66	SFSM13	1	120
51. Metric Deep Socket, 3/8" Drive, 6 Point, 14 mm	SKG33117562-631	SO 66	SFSM14	1	121
52. Metric Deep Socket, 3/8" Drive, 6 Point, 15 mm	SKG33117562-632	SO 66	SFSM15	1	122
53. Metric Deep Socket, 3/8" Drive, 6 Point, 16 mm	SKG33117562-633	SO 66	SFSM16	1	123
54. Metric Deep Socket, 3/8" Drive, 6 Point, 17 mm	SKG33117562-634	SO 66	SFSM17	1	124
55. Metric Deep Socket, 3/8" Drive, 6 Point, 18 mm	SKG33117562-635	SO 66	SFSM18	1	125
56. Metric Deep Socket, 3/8" Drive, 6 Point, 19 mm	SKG33117562-636	SO 66	SFSM19	1	126
57. Deep Socket, 3/8" Drive, 12 Point, 1/4"	SKG33117562-705	SO 66	SF081	1	127
58. Deep Socket, 3/8" Drive, 12 Point, 5/16"	SKG33117562-706	SO 66	SF101	1	128
59. Deep Socket, 3/8" Drive, 6 Point, 11/32"	SKG33117562-707	SO 66	SFS111	1	129
60. Deep Socket, 3/8" Drive, 12 Point, 3/8"	SKG33117562-708	SO 66	SF121	1	130
61. Deep Socket, 3/8" Drive, 12 Point, 7/16"	SKG33117562-709	SO 66	SF141	1	131
62. Deep Socket, 3/8" Drive, 12 Point, 1/2"	SKG33117562-685	SO 66	SF161	1	132
63. Deep Socket, 3/8" Drive, 12 Point, 9/16"	SKG33117562-686	SO 66	SF181	1	133
64. Deep Socket, 3/8" Drive, 12 Point, 19/32"	SKG33117562-687	SO 66	SF191	1	134
65. Deep Socket, 3/8" Drive, 12 Point, 5/8"	SKG33117562-688	SO 66	SF201	1	135
66. Deep Socket, 3/8" Drive, 12 Point, 11/16"	SKG33117562-689	SO 66	SF221	1	136
67. Deep Socket, 3/8" Drive, 12 Point, 3/4"	SKG33117562-690	SO 66	SF241	1	137

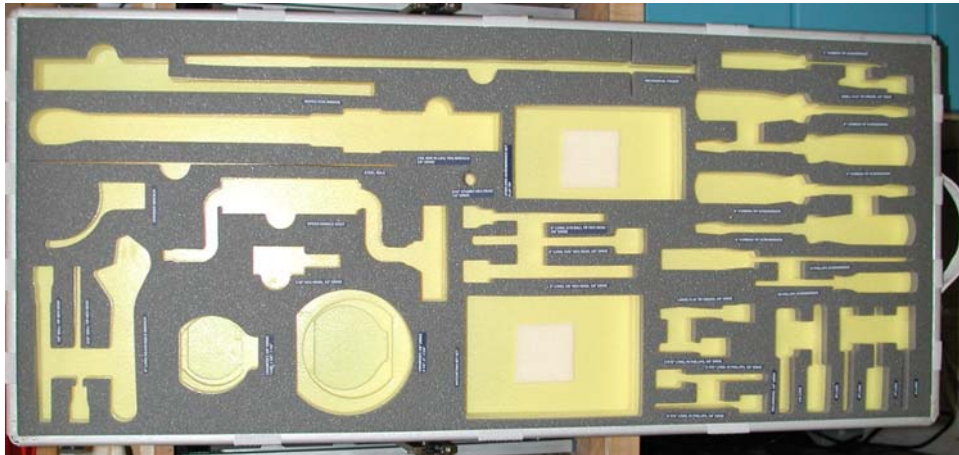
PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
68. Deep Socket, 3/8" Drive, 12 Point, 13/16"	SKG33117562-691	SO 66	SF261	1	138
69. Deep Socket, 3/8" Drive, 12 Point, 7/8"	SKG33117562-692	SO 66	SF281	1	139
70. Deep Socket, 3/8" Drive, 12 Point, 15/16"	SKG33117562-714	SO 66	SF301	1	140
71. Deep Socket, 3/8" Drive, 12 Point, 1"	SKG33117562-715	SO 66	SF321	1	141
72. Metric Shallow Socket, 3/8" Drive, 6 Point, 8 mm	SKG33117562-605	SO 65	FSM81	2	142
74. Metric Shallow Socket, 3/8" Drive, 6 Point, 9 mm	SKG33117562-649	SO 65	FSM91	1	143
75. Metric Shallow Socket, 3/8" Drive, 6 Point, 10 mm	SKG33117562-650	SO 65	FSM101	2	144
77. Metric Shallow Socket, 3/8" Drive, 6 Point, 11 mm	SKG33117562-651	SO 65	FSM111	1	145
78. Metric Shallow Socket, 3/8" Drive, 6 Point, 12 mm	SKG33117562-652	SO 65	FSM121	2	146
80. Metric Shallow Socket, 3/8" Drive, 6 Point, 13 mm	SKG33117562-653	SO 65	FSM131	1	147
81. Metric Shallow Socket, 3/8" Drive, 6 Point, 14 mm	SKG33117562-654	SO 65	FSM141	1	148
82. Metric Shallow Socket, 3/8" Drive, 6 Point, 15 mm	SKG33117562-655	SO 65	FSM151	1	149
83. Metric Shallow Socket, 3/8" Drive, 6 Point, 16 mm	SKG33117562-656	SO 65	FSM161	1	150
84. Metric Shallow Socket, 3/8" Drive, 6 Point, 17 mm	SKG33117562-661	SO 65	FSM171	1	151
85. Metric Shallow Socket, 3/8" Drive, 6 Point, 18 mm	SKG33117562-662	SO 65	FSM181	1	152
86. Metric Shallow Socket, 3/8" Drive, 6 Point, 19 mm	SKG33117562-663	SO 65	FSM191	1	153
87. Metric Shallow Socket, 3/8" Drive, 22 mm	SKG33117562-664	SO 65	FSM221	1	154
88. Metric Shallow Socket, 3/8" Drive, 24 mm	SKG33117562-665	SO 65	FSM241	1	155
89. Standard Socket, 3/8" Drive, 12 Point, 1/4"	SKG33117562-725	SO 65	F081	1	156
90. Standard Socket, 3/8" Drive, 12 Point, 5/16"	SKG33117562-726	SO 65	F101	1	157
91. Standard Socket, 3/8" Drive, 12 Point, 11/32"	SKG33117562-727	SO 65	F111	1	158
92. Standard Socket, 3/8" Drive, 12 Point, 3/8"	SKG33117562-728	SO 65	F121	1	159
93. Standard Socket, 3/8" Drive, 12 Point, 7/16"	SKG33117562-729	SO 65	F141	2	160
95. Standard Socket, 3/8" Drive, 12 Point, 1/2"	SKG33117562-730	SO 65	F161	1	161
96. Standard Socket, 3/8" Drive, 12 Point, 9/16"	SKG33117562-731	SO 65	F181	1	162
97. Standard Socket, 3/8" Drive, 12 Point, 19/32"	SKG33117562-732	SO 65	F191	1	163
98. Standard Socket, 3/8" Drive, 12 Point, 5/8"	SKG33117562-733	SO 65	F201	1	164
99. Standard Socket, 3/8" Drive, 12 Point, 11/16"	SKG33117562-710	SO 65	F221	1	165
100. Standard Socket, 3/8" Drive, 12 Point, 3/4"	SKG33117562-711	SO 65	F241	1	166
101. Standard Socket, 3/8" Drive, 12 Point, 13/16"	SKG33117562-712	SO 65	F261	1	167
102. Standard Socket, 3/8" Drive, 12 Point, 7/8"	SKG33117562-713	SO 65	F281	1	168
103. Standard Socket, 3/8" Drive, 12 Point, 15/16"	SKG33117562-734	SO 65	F301	1	169
104. Standard Socket, 3/8" Drive, 12 Point, 1"	SKG33117562-735	SO 65	F321	1	170
105. Extension, 3/8" Drive, 4" Long	SKG33117562-773	SO 64	FXX4	1	171
106. Extension, 3/8" Drive, 6" Long	SKG33117562-774	SO 64	FXX6	1	172
107. Extension, 3/8" Drive, 11" Long	SKG33117562-775	SO 64	FXX11	1	173
108. Driver Handle, 3/8" Drive	SKG33117562-942	SO 64	F50A	1	174
109. EVA Socket, 3/8" Drive, 7/16"	SEG33106931-301			1	175
110. 6" Flex Extension, 1/4" Drive	SKG33117562-772	SO 42	TM61A	1	176
111. Torque Wrench, 3/8" Drive 30-200 In-lbs	SEG33117289-302	SO 205	QC2R200	1	177
112. Hex Head Driver, 3/8" Drive, 1/8"	SKG33117562-722	SO 72	FA4E	1	178
113. Hex Head Driver, 3/8" Drive, 9/64"	SKG33117562-723	SO 72	FA4.5E	1	179
114. Hex Head Driver, 3/8" Drive, 5/32"	SKG33117562-767	SO 72	FA5E	2	180
116. Hex Head Driver, 3/8" Drive, 3/16"	SKG33117562-746	SO 72	FA6E	1	181
117. Hex Head Driver, 3/8" Drive, 7/32"	SKG33117562-747	SO 72	FA7E	1	182

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
118. Hex Head Driver, 3/8" Drive, 1/4"	SKG33117562-748	SO 72	FA8E	1	183
119. Hex Head Driver, 3/8" Drive, 5/16"	SKG33117562-749	SO 72	FA10E	1	184
120. Hex Head Driver, 3/8" Drive, 3/8"	SKG33117562-750	SO 72	FA12E	1	185
121. Driver Handle, 1/4" Drive	SKG33117562-941	SO 44	TM4B	1	186
122. Ratchet, 3/8" Drive, 7-3/8" Long, Sealed	SKG33117562-938	SO 62	F830	1	187
123. Ratchet, 1/4" Drive, 4-1/2" Long, Sealed	SKG33117562-939	SO 43	TM830	1	188
124. Ratchet, 1/4" Drive, 6" Long, Flex Handle	SKG33117562-940	SO43	TM831	1	189
125. Ratchet, 3/8" Drive, 6" Long, Flex Handle	SKG33117562-336	SO62	FM711	1	190
126. Adaptor, 3/8" Female to 1/4" Male	SEG33117595-301	SO 44	TM1	2	191
128. Adaptor, 3/8" Female to 1/2" Male	SEG33117595-302	SO 64	A2A	1	192
129. Torque Limiting Driver, 1/4" Drive, 5-35 In-lbs	SEG33117289-301	SO 207	QTS135	1	193
130. Torque Wrench, 1/4" Drive, 40-200 In-lbs	SEG33112394-301	SO 262*	QC1R200	1	194
131. Torque Wrench, 1/4" Drive, 10-50 In-lbs	SEG33112395-301	SO 262*	QC1R50	1	195
132. Universal Joint, 3/8" Drive	SKG33117562-905	SO 64	FU8A	1	196
133. Extension, 1/4" Drive, 2" Long	SKG33117562-763	SO45	TMXK2	1	197
134. Extension, 1/4" Drive, 4" Long	SKG33117562-764	SO 45	TMXK4	1	198
135. Extension, 1/4" Drive, 6" Long	SKG33117562-765	SO 45	TMXK60	1	199
136. Extension, 1/4" Drive, 10" Long	SKG33117562-766	SO 45	TMXK100	1	200
137. Hex Shank - 1/4" Drive	SKG33117562-008	SO 52	GMB3042	2	201
139. Hex Shank - 3/8" Drive	SKG33117562-009	SO 77	A3081A	1	202
140. Universal Joint, 1/4" Drive	SKG33117562-010	SO 44	TMU8	1	203
141. Ball Tip Hex Head Driver, 1/4" Drive, 1/8"	SKG33117562-666	SO 49	TMAB4E	1	204
142. Adaptor, 1/4" Female to 3/8" Male	SEG33117595-303	SO 44	TA3	2	205
144. Hex Head Driver, 1/4" Drive, 1/16"	SKG33117562-736	SO 49	TMA2E	1	206
145. Hex Head Driver, 1/4" Drive, 5/64"	SKG33117562-737	SO 49	TMA2.5E	1	207
146. Hex Head Driver, 1/4" Drive, 3/32"	SKG33117562-738	SO 49	TMA3E	1	208
147. Hex Head Driver, 1/4" Drive, 7/64"	SKG33117562-739	SO 49	TMA3.5E	1	209
148. Hex Head Driver, 1/4" Drive, 1/8"	SKG33117562-740	SO 49	TMA4E	1	210
149. Hex Head Driver, 1/4" Drive, 9/64"	SKG33117562-741	SO 49	TMA4.5E	1	211
150. Hex Head Driver, 1/4" Drive, 5/32"	SKG33117562-742	SO 49	TMA5E	1	212
151. Hex Head Driver, 1/4" Drive, 3/16"	SKG33117562-743	SO 49	TMA6E	1	213
152. Hex Head Driver, 1/4" Drive, 7/32"	SKG33117562-744	SO 49	TMA7E	1	214
153. Hex Head Driver, 1/4" Drive, 1/4"	SKG33117562-748	SO 49	TMA8E	1	215
154. Deep Socket, 1/4" Drive, 6 Point, 1/8"	SKG33117562-696	SO 47	STM04	1	216
155. Deep Socket, 1/4" Drive, 6 Point, 5/32"	SKG33117562-673	SO 47	STM05	1	217
156. Deep Socket, 1/4" Drive, 12 Point, 3/16"	SKG33117562-674	SO 47	STMD6	1	218
157. Deep Socket, 1/4" Drive, 12 Point, 7/32"	SKG33117562-675	SO 47	STMD7	1	219
158. Deep Socket, 1/4" Drive, 12 Point, 1/4"	SKG33117562-676	SO 47	STMD8	1	220
159. Deep Socket, 1/4" Drive, 12 Point, 9/32"	SKG33117562-677	SO 47	STMD9	1	221
160. Deep Socket, 1/4" Drive, 12 Point, 5/16"	SKG33117562-678	SO 47	STMD10	1	222
161. Deep Socket, 1/4" Drive, 12 Point, 11/32"	SKG33117562-679	SO 47	STMD11	1	223
162. Deep Socket, 1/4" Drive, 12 Point, 3/8"	SKG33117562-680	SO 47	STMD12	1	224
163. Deep Socket, 1/4" Drive, 12 Point, 7/16"	SKG33117562-681	SO 47	STMD14	1	225
164. Deep Socket, 1/4" Drive, 12 Point, 1/2"	SKG33117562-682	SO 47	STMD16	1	226
165. Deep Socket, 1/4" Drive, 12 Point, 9/16"	SKG33117562-704	SO 47	STMD18	1	227
166. Standard Socket, 1/4" Drive, 6 Point, 1/8"	SKG33117562-716	SO 46	TM04	1	228

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
167. Standard Socket, 1/4" Drive, 6 Point, 5/32"	SKG33117562-717	SO 46	TM05	1	229
168. Standard Socket, 1/4" Drive, 12 Point, 3/16"	SKG33117562-718	SO 46	TMD6	1	230
169. Standard Socket, 1/4" Drive, 12 Point, 7/32"	SKG33117562-719	SO 46	TMD7	1	231
170. Standard Socket, 1/4" Drive, 12 Point, 1/4"	SKG33117562-720	SO 46	TMD8	1	232
171. Standard Socket, 1/4" Drive, 12 Point, 9/32"	SKG33117562-721	SO 46	TMD9	1	233
172. Standard Socket, 1/4" Drive, 12 Point, 5/16"	SKG33117562-697	SO 46	TMD10	1	234
173. Standard Socket, 1/4" Drive, 12 Point, 11/32"	SKG33117562-698	SO 46	TMD11	1	235
174. Standard Socket, 1/4" Drive, 12 Point, 3/8"	SKG33117562-699	SO 46	TMD12	1	236
175. Standard Socket, 1/4" Drive, 12 Point, 7/16"	SKG33117562-701	SO 46	TMD14	1	237
176. Standard Socket, 1/4" Drive, 12 Point, 1/2"	SKG33117562-702	SO 46	TMD16	1	238
177. Standard Socket, 1/4" Drive, 12 Point, 9/16"	SKG33117562-703	SO 46	TMD18	1	239
178. Standard Socket, 1/4" Drive, 6 Point, 5/8"	SKG33117562-724	SO 46	TM20	1	240

*denotes pg# in the Snap-on 500 Catalog

TRAY 3: Screwdrivers, Bits, Crowsfeet, Transfer Net



PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
1. Phillips Head Driver, 3/8" Drive, #3, 4-1/32" Long	SKG33117562-915	SO 72		3	241
2. Speed Handle Assembly	528-20169-1	JSC/RI/FEPC		1	242
3. Steel Rule, 12"/300 mm	SKG33117562-911	SO 232	YA120A	1	243
2. Adjustable Wrench, 6" Long	SKG33117562-912	SO 132	AD6	1	244
4. Torque Wrench, 3/8" Drive, 200-1000 In-lbs	SEG33117289-303	SO 205	QC2R1000	1	245
5. Inspection Mirror	SKG33117562-923	McMaster-Carr	1016T2	1	246
6. Mechanical Finger, 17-1/2" Long	SKG33117562-931	SO261	GA353A	1	247
7. Crowfoot, 3/8" Drive, 1-1/4"	SEG33114127-301	SO 164	FC40A	1	248

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
8. Crowfoot, 3/8" Drive, 1-3/8"	SEG33114218-301	SO 164	FC44A	1	249
9. Crowfoot, 3/8" Drive, 1-5/8"	SEG33113226-301	SO 164	FC52A	1	250
10. Crowfoot, 3/8" Drive, 1 3/4"	SEG33114112-303	SO 164	FC56A	1	251
11. Crowfoot, 3/8" Drive, 2"	SEG33114127-303	SO 164	FC64A	1	252
12. Crowfoot, 3/8" Drive, 2 1/2"	SEG33114112-301	SO 164	FC80A	1	253
13. Ratcheting Bit Set	SJG33114298-301			1	254
14. Hex Head Driver, 3/8" Drive, 3/8", 6" Long	SKG33117562-751	SO 72	FA12LE	1	255
15. Hex Head Driver, 3/8" Drive, 5/32", 6" Long	SKG33117562-768	SO 72	FA5LE	1	256
16. 3/16" Hex Driver - 6"	SKG33117562-917	SO 73	FABL6E	1	257
17. 5/32" Hex Driver	SKG33117562-918	SO 49	TMAXS5E	1	258
18. Jewelers Screwdriver Set, Flat Tip (6 Piece Set)	641948	Radio Shack	641948	1	259
19. Phillips Head Driver, 3/8" Drive, #2, 4-1/32" Long	SKG33117562-914	SO 73	FP24E	2	260
20. Phillips Head Driver, 3/8" Drive, #4, 2-9/16" Long	SKG33117562-784	SO 73	FP42E	1	261
21. Flat Tip Head Driver, 3/8" Drive, 1/4" X 1/32"	SKG33117562-785	SO 73	F23E	1	262
22. Flat Tip Head Driver, 3/8" Drive, 3/8" X 1/16"	SKG33117562-786	SO 73	F31E	1	263
23. Hex Head Driver, 1/2" Drive, 7/16"	SKG33117562-919	SO 88	SA14E	1	264
24. Torq Set, Apex Bit, #2 long	SKG33117562-330	APEX	273B-2	1	265
25. Torq Set, Apex Bit, #4 long	SKG33117562-331	APEX	273B-4	1	266
26. Torq Set, Apex Bit, #6 long	SKG33117562-332	APEX	273B-6	1	267
27. Torq Set, Apex Bit, #8 long	SKG33117562-333	APEX	273B-8	1	268
28.. Torq Set, Apex Bit, #10 long	SKG33117562-334	APEX	273B-10	1	269
29.. Phillips Head Screwdriver, #0, 3" Long Blade	SKG33117562-792	SO 146	SSDEP30B	1	270
30. Phillips Head Screwdriver, #1, 6" Long Blade	SKG33117562-901	SO 146	SSDEP61B	1	271
31. Common Tip Screwdriver, Short, 0.018" X 1/8" X 3"	SKG33117562-902	SO 145	SSDE43B	1	272
32. Common Tip Screwdriver, Long, 0.037" X 1/4" X 4"	SKG33117562-903	SO 148	UDS104	4	273
33. 3/8" Ball Tip Hex Head, 3/8" Drive, 5" Long	SEG33109848-309	SO 104	FABL5E	1	274
34. 5/32" Ball Tip Hex Head, 3/8" Drive, 5" Long	SEG33109848-321	SO 104	FABL12E	1	275
35. Spanner Wrench	683-13419	Boeing		1	276

TRAY 4: L-Wrenches, Pliers, Crimp Tools, Wire Cutters



PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
1. L-Wrench, .028 "	SKG33117562-776	SO 131	AW028	1	277
2. L-Wrench, .035 "	SKG33117562-777	SO 132	AW035	1	278
3. L-Wrench, .05 "	SKG33117562-778	SO 133	AW050	1	279
4. L-Wrench, 1/16 "	SKG33117562-779	SO 134	AW2	1	280
5. L-Wrench, 5/64 "	SKG33117562-780	SO 135	AW2-1/2	1	281
6. L-Wrench, 3/32 "	SKG33117562-781	SO 136	AW3	1	282
7. L-Wrench, 7/64 "	SKG33117562-782	SO 137	AW3-1/2	1	283
8. L-Wrench, 1/8 "	SKG33117562-783	SO 138	AW4	1	284
9. L-Wrench, 9/64 "	SKG33117562-753	SO 139	AW4-1/2	1	285
10. L-Wrench, 5/32 "	SKG33117562-754	SO 140	AW5	1	286
11. L-Wrench, 3/16 "	SKG33117562-007	SO 141	AW6	1	287
12. L-Wrench, 7/32 "	SKG33117562-793	SO 142	AW7	1	288
13. L-Wrench, 1/4 "	SKG33117562-794	SO 143	AW8	1	289
14. L-Wrench, 5/16 "	SKG33117562-795	SO 144	AW10	1	290
15. L-Wrench, 3/8 "	SKG33117562-796	SO 145	AW12	1	291
16. L-Wrench, 7/16 "	SKG33117562-797	SO 146	AW14	1	292
17. L-Wrench, 1/2 "	SKG33117562-798	SO 147	AW16	1	293
18. L-Wrench, 9/16 "	SKG33117562-799	SO 148	AW18	1	294
19. L-Wrench, 5/32" Modified	SEG33113213-301		SEG33113213-301	1	295
20. Folding L-Wrench Set; (.05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 1/4", 5/16", and 3/8")	SKG33117562-789	SO 129	AW9K	1	296
21. Metric Folding Hex Key Set (2 X 51, 2.5 X 57, 3 X 62, 4 X 66, 5 X 57, 6 X 97, and 8 X 104 mm)	SKG33117562-791	SO 129	AWEM7K	1	298
22. Connector Pilers	SKG33117562-930	SO 167	PWC52A	2	299
23. Vise Grips	SKG33117562-947	SO 164	VP7WR	1	300
24. Strap Wrench	SKG33117562-925	Daniels		1	301
25. Mini-Pliers, Straight, 6" Long	SKG33117562-943	SO 171	MPS6	1	302
26. Splice Crimp Tool	SKG33117562-929	GE	WT 111-M	1	303
27. Adjustable Joint Pliers, Curved	SKG33117562-944	Craftsman	45029	1	304

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
28. Crimp Tool	SKG33117562-769	Daniels	MH860	1	305
locator for MS27490-16	SKG33117562-003	Daniels		1	306
locator for MS27490-20	SKG33117562-004	Daniels		1	307
locator for M24308/12-1	SKG33117562-005	Daniels		1	308
29. Wire Stripper	SKG33117562-927	Hisco	45181	1	309
30. Adjustable Joint Pliers, 7" Straight Jaw	SKG33117562-945	Craftsman	45028	1	310
31. Retaining Ring Tool, Straight	SKG33117562-936	SO 162	PR12A	1	311
32. Needle Nose Pliers, Small	SKG33117562-770	SO 168	94BCP	1	312
33. Needle Nose Pliers, Large	SKG33117562-771	SO 160	95ACP	1	313
34. Combination Pliers	SKG33117562-928	SO 158	45	1	314
35. Wire Cutters	SKG33117562-926	SO 161	184BCP	1	315
36. Retaining Ring Tool, 90 Degrees	SKG33117562-937	SO 162	PRH129	1	316

TRAY 5: Wrenches, Files, Saws, Tethers, Punches

PART NAME	PART NUMBER	VENDOR	VENDOR P/N	QTY	ITEM #
1. Combination Wrench, 12 Point, 1 5/16"	SKG33117562-338	S115	OEX42B	1	317
2. Pipe Wrench	SKG33117562-933	SO 132	PWA10A	1	318
3. Caliper, Dial Type	SKG33117562-922	SO 236	PMF134	1	319
4. File Handle, Large	SDG33114300-013	SO 227	HF613BL	1	320
5. Feeler Gauge	FB335	SO 233	FB335	1	321
6. Hacksaw	SKG33117562-787	SO 224	HS5	1	322
7. Snap-On or HSBM1024B Replacement Blades	SKG33117562-006	McMaster Carr	4047A12	3	323
8. Saw Hand, Finger Grip (Bone Saw)	SKG33117562-788	Bestway Prod.	NSN5110-00-570-6896	1	324
9. Tape Measure, 10 Feet Long (English/Metric)	SKG33117562-920	Lufkin	PC-10 OR 2210-10	1	325
10. Breaker Bar, 3/8" Drive	SKG33117562-916	SO 64	F12L	1	326
11. Thread Gauge	SKG33117562-921	SO 239	TD1040	1	327
12. Feeler Gauge, nonmetallic	SKG33117562-910	McMaster Carr	82755A11	1	328
13. File Set, Small (Round, Half-Round, Flat, Crossing, Knife, Square, 3-Square, Equaling, Barrette, Joint, Slitting, Marking, and Handle)	SJG33114296-301	SO 227	HBFN120	1	329
14. Static Wrist Tether	SKG33117562-335	Richmond SC	6060X776	2	330
15. Magnifying Glass (7X)	SKG33117562-924	Fairfield Scientific	81-23-63	1	331
16. Scissors, 2" Cut Length, 8-1/4" Long	SKG33117562-934	McMaster	3687A12	1	332
17. Dead Blow, Ball Peen Hammer	SKG33117562-932	SO 222	HBD16	1	333
18. Chisel, 1/2" Point Edge, 6" Long	SKG33117562-907	SO 222	PPC816A	1	334
19. Pry Bar	SKG33117562-908	SO 219	I515	1	335
20. Center Punch	SKG33117562-906	SO 220	PPC6A	1	336
21. Long Tapered Punch, 6" Long	SKG33117562-907	SO 220	PPC205A	1	337
22. Hand File, Large	SDG33114300-001	SO 226	HB4MA	1	338
23. Warding File, Large	SDG33114300-003	SO 226	HB4W	1	339
24. Half-round File, Large	SDG33114300-005	SO 226	HB4HR	1	340
25. Square File, Large	SDG33114300-007	SO 226	HB4SQ	1	341
26. Round File, Large	SDG33114300-009	SO 226	HB4R	1	342
27. Slim Taper File, Large	SDG33114300-011	SO 226	HB4T	1	343

LARGE GAUGE PIN KIT **PART NO. SJG33115400-301**

DESCRIPTION:

- The Large Gauge Pin Kit consists of electrical jumpers and accessories for 0, 4 and 8 gauge maintenance and repair applications.
- The kit also includes step-down jumpers for 0-4Ga, 4-8Ga and 8-12 Ga step-down applications.
- The jumpers and accessories in these kits are contained in an existing CTB and bundled with Velcro tie-wraps (P/N: 528-43074-1)
- Hardware part numbers are documented to fly as subassemblies as required. See consumables listing on following page.

Weight:

46 lbs

Volume or Measurements:

1.87 cu ft

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Velcro Hook on ziplocks

Stowage:

Standard stowage trays



Limited Life:

Electrical Tape (250-5S): 1 year from date of manufacture

Lineage:

JSC CTSD New Development for ISS
CR# SSCN6922

Reference Documents:

GCAR	G4904
VM	JSC47957
Proj. Req.	JSC47956
RAESR	JSC60394
Materials	MATL-04-001

Contact:

Fatonia Rivera

Large Gauge Pin Kit Contents (1/2)

STANDARD JUMPERS

Part Number	Part Name	Qty
SEG33115401-301	6 inch 0 ga Pin-Skt	6
SEG33115401-302	6 inch 4 ga Pin-Skt	6
SEG33115401-303	6 inch 8 ga Pin-Skt	6
SEG33115402-301	6 inch 0 ga Pin-Pin	6
SEG33115402-302	6 inch 4 ga Pin-Pin	6
SEG33115402-303	6 inch 8 ga Pin-Pin	6
SEG33115403-301	6 inch 0 ga Skt-Skt	6
SEG33115403-302	6 inch 4 ga Skt-Skt	6
SEG33115403-303	6 inch 8 ga Skt-Skt	6
SEG33115404-301	36 inch 0 ga Pin-Skt	3
SEG33115404-302	36 inch 4 ga Pin-Skt	3
SEG33115404-303	36 inch 8 ga Pin-Skt	3
SEG33115405-301	36 inch 0 ga Pin-Pin	3
SEG33115405-302	36 inch 4 ga Pin-Pin	3
SEG33115405-303	36 inch 8 ga Pin-Pin	3
SEG33115406-301	36 inch 0 ga Skt-Skt	3
SEG33115406-302	36 inch 4 ga Skt-Skt	3
SEG33115406-303	36 inch 8 ga Skt-Skt	3

Part Number	Part Name	Qty
S-1/0	0-4ga Split Bolt Connector	18
S-4	4-8ga Split Bolt Connector	18
GB26	0-4ga Bus Bar w/ Set Screw	2
GB4C	4-8ga Bus Bar w/ Set Screw	2
727	Cable Cutter	1
250-5S	Electrical Tape	2

STEP DOWN JUMPERS

Part Number	Part Name	Qty
SEG33115409-301	0-4ga Pin-Pin Step Down	6
SEG33115409-302	4-8ga Pin-Pin Step Down	6
SEG33115409-303	8-12ga Pin-Pin Step Down	6
SEG33115410-301	0-4ga Pin-Skt Step Down	6
SEG33115410-302	4-8ga Pin-Skt Step Down	6
SEG33115410-303	8-12ga Pin-Skt Step Down	6
SEG33115411-301	0-4ga Skt-Pin Step Down	6
SEG33115411-302	4-8ga Skt-Pin Step Down	6
SEG33115411-303	8-12ga Skt-Pin Step Down	6
SEG33115412-301	0-4ga Skt-Skt Step Down	6
SEG33115412-302	4-8ga Skt-Skt Step Down	6
SEG33115412-303	8-12ga Skt-Skt Step Down	6

LOCKER TOOL KIT

PART NO. SJG33111363-301

DESCRIPTION:

- Provide a means for on-orbit locker removal and replacement.
- Tip of the tool is a 3/16" hex head male that interfaces with locker fasteners.
- The drive is a 3/8" square which can be driven by a ratchet or driver.
- Rated to a torque of 30 in-lbs.
- Folds in middle for stowage

Weight:

1 lb

Volume or Measurements:

104 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Nomex softgoods bag

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3293
Materials	MATL-99-129

Contact:

Craig Perez



LOGIC ANALYZER KIT PART NO. SJG33110645-301

DESCRIPTION:

- Consists of LABVIEW interface accessories and a LABVIEW Logic Analyzer software card.
- Labview software analyzes digital and analog data from circuit boards.
- Kit Contains:
 - 1 Shielded Cable Assy (SEG33111954-301)
 - 2 Daqcard / Adapter Cable Assemblies (SEG33111951-301)
 - 3 Test Lead Assemblies (SEG33111955-301)

Weight:

N/A

Volume or Measurements:

12.5" x 5"x 2"

Type:

Outfitted

Power:

PCMCIA card plugs into laptop and draws power from computer
Software: LABVIEW (supplied by others)

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

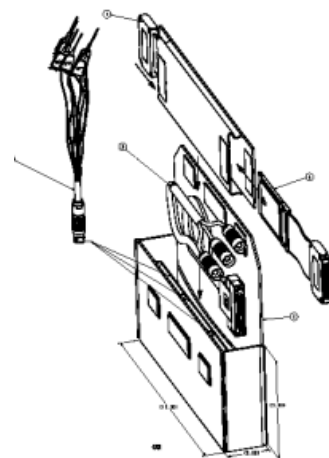
JSC CTSD Modified-off-the-shelf for ISS

Vendor: LABVIEW

Vendor part no: Data Acquisition Card DIO-24

Reference Documents:

GCAR	G3281
CR	SSP50345
EIS	JSC27166B
PMP	TTA49
SAR	JSC28423
Procedures	LMSMSS32746B
Materials	MATL-98-171



MUA MATL-98-192
S01 (Pressure Probe)
S03 (Logic Analyzer kit, Pressure Probe kit, Scopemeter Downlink Cable)
Stress HDID-SAS-98-0244
HDID-SAS-98-0249

Contact:
Craig Perez

MAGNIFYING VISOR ASSY PART NO. SEG33112398-301

DESCRIPTION:

- Headband adjusts with Velcro.
- Two(2) plastic magnifying lenses; one fixed and one adjustable.

Weight:

0.3 lbs

Volume or Measurements:

10" x 10" x 2"

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Ziplock

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS
Vendor: Electronics Parts Outlet, Webster, TX
P/N: LP-23II

Reference Documents:

GCAR	G3508 (New)
GCAR	G3307 (Old)
Proj. Req.	SSP50345
Materials	MATL-99-200

Contact:

Craig Perez

MAINTENANCE WORK AREA PART NO. (SEE DESCRIPTION)

DESCRIPTION:

- The Maintenance Work Area (MWA) is used to provide a portable and collapsible work bench system to support on-orbit maintenance activities.
- Includes a Work Surface with seat track
- The work surface (P/N SEG33110270-301) can also be rotated to the rack face in 15 degree increments within a 180 degree range.
- Includes Rack Mounting Hardware (P/N SEG33110280-301, left and P/N SEG33110280-302, right) that attaches system to seat track.
- Includes a Utility Strip (P/N SEG33108463-301)
 - 6 amp fuse
 - Utility Outlet Panel (UOP) style input connector
 - 4 UOP style output connectors with individual on/off switch
 - Fuse holder incorporated into bottom of plate holds 10 fuses
 - Tethered protective caps for connectors
 - LED indicator illuminates for power input status, each power output, and fuse status.
 - Uses any 120V UOP power cable
- Includes a Utility Kit (P/N SJG33110310-301)
 - Provides the ability to attach various ORUs to the work surface assembly
 - Standard clamp adapters
 - Velcro pile fasteners
 - Circuit board holders
 - Track restraint assembly
 - Bar clamp assembly
 - 14 inch removable seat track
 - Tool restraint
 - Electrical pass thru connector
 - Track Lock Assy
 - Vacuum hose adapter
 - 1', 3', 5' ground cords
- Includes a Debris Containment System (P/N SEG33110290-301)
 - Provides an internal work volume (i.e., closed tent)
 - Transparent walls are made of Aclar/Polyester Laminate (a flame resistant material), which is supported by five horizontal removable rods
 - Baseplate with 8 clamps
 - Four glove ports.
 - Two utility ports for the utility strip or for the vacuum cleaner.
 - Viewing window
 - 40 micron wire mesh air intake
 - ORU access zipper
 - Three glove sizes available
- Utilizes the ISS Vacuum Cleaner for the capture and disposal of any 6 microns (0.3 microns if HEPA filter is used) or larger particulates or liquids that may be generated within the work volume during maintenance procedures.

Weight:

50 lbs

Volume or Measurements:

4723.16 cu in (with tent)

Type:

Outfitted

Power:

Vacuum, 120 VDC, 2.2 Amps

Utility Strip, 120 VDC, 6 Amps

Fuse:

Vacuum Cleaner, 3.0 amp

Utility Strip, 6.0

Restraint:

Seat Track

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27/65, JSC CTSD

New Development for ISS

Reference Documents:

GCAR 3320

JSC 28462

JSC 28424

JSC 27162

MATL-99-207A

MATL-99-002

MATL-98-208

WSTF-97-30614

WSTF-96-30324

WSTF-96-30315

WSTF-96-29940

WSTF-96-30316

HDID-SAS-98-0015

HDID-SAS-98-0230

HDID-SAS-98-0031

HDID-SAS-98-0029

HDID-SAS-97-0320

HDID-SAS-99-0055

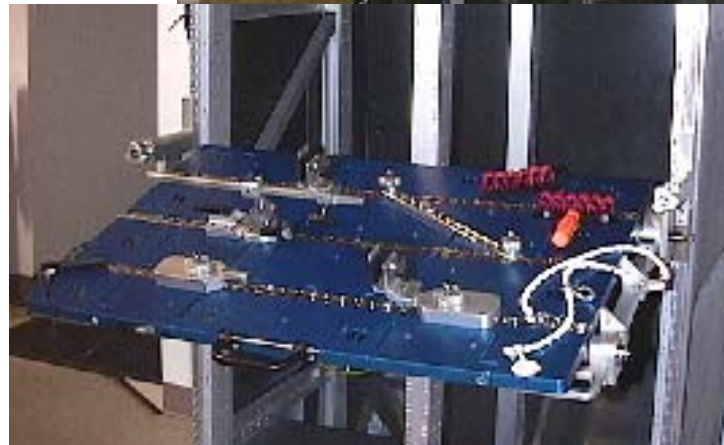
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HDID-SAS-99-0080

TPS#6N9820170

TPS#6N9820428



Contact:

Craig Perez

MULTIPLEXER/DEMULTIPLEXER (MDM) REPLACEMENT CARD KIT PART NO. SJG3311778-301

DESCRIPTION:

- Provides physical and electrostatic discharge (ESD) protection during stowage, transportation, insertion, extraction, and translation of the MDM Cards in the STS and ISS programs.
- Two sizes of ESD carriers (SEG3311779-301, SEG3311780-301) shall be provided, one (1) Card Puller Assembly (SEG3311774-301 or -303) and a Stowage Pouch (SEG3311775-301), which shall contain the tool and Card Carriers in a stowage locker.
- The Card Puller Assembly is used to remove, install, and transport cards in and out of the MDM chassis and the Card Carrier.
- An Extractor Adapter (P/N SLG33114631-301), although not part of the MDM CCA kit, is used exclusively with the kit. It aids in the installation and removal of 5 V Power Supply cards. It provides an interface between the Card Puller Assembly and the 5 V Power Supply card.

Weight:

27 lbs (Kit - empty carriers)

55 lbs (Kit – full carriers)

4 oz Extractor Adapter

Volume or Measurements:

1.53 cu ft – Kit

2.42 cu in – Extractor Adapter

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Nomex softgoods bag

Stowage:

Standard stowage trays

Limited Life:

N/A



Lineage:

JSC CTSD New Development for ISS

EIS No. JSC-28455, Stand. ICD No. JSC-28513

Reference Documents:

GCAR	G3328
Cert. Req.	SSP50345
EIS	JSC 28455
ICD	JSC 28513
Materials	MATL-99-210 (MDM Kit) MATL-03-006 (Extractor Adapter) MATL-03-029 (Card Puller Assy)
Stress	HDID-SAS-99-0274
SAR	JSC 39297
HA (Short)	JSC 60341
Training	
Manual	JSC 60369
Pre-Flight	
Funct. Rqmts	LMSEAT 33220
Cert/Verif	LMSEAT 33221
PMP	TTA49

Contact:

Fatonía Rivera

POCKET MAGNIFIER ASSEMBLY

PART NO. SEG33112397-301

DESCRIPTION:

- Handheld, 25X magnifier

Weight:

1.6 oz

Volume or Measurements:

27 cu in



Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Pen clip

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: MIL Corporation, Aurora, IL

P/N 183-201

Reference Documents:

GCAR G3282

Contact:

Craig Perez

POWER SUPPLY (120 VDC)

PART NO. SEG33110150-301

DESCRIPTION:

- The DC Power Supply supplies 0 to 150 Volts DC and 0 to 7 amps of current; use of calibrated multimeter is required to verify output before use.
- The DC Power Supply displays the current and voltage supplied to a system under test.
- The voltage protection (OVP) and temperature shutdown (latching) circuits protect the item under test.
- Standard analog control
- Optional internal computer control (GPIB or RS232)
- Standard over voltage protection (OVP)
- Power is provided to the unit from the ISS 120 Volt DC source (UOP).
- The DCPS is designed for air-cooling.
- The DCPS includes a panel display with seven (7) segment indicators for simultaneous voltage and current display and OVP set point, and one (1) rocker ON/OFF Main Power Switch.
- The outlet connectors are in the form of standard banana jacks and are readily accessible by the crew for use with auxiliary equipment.
- An Accessory Kit, P/N SJG633110142-301, is also provided with the unit.
- GSE Cable SEG33110144-301 is required to power on this hardware for ground testing
- Acceptable Minimum Operational Pressure: 11.56 PSI

Weight:

28 lbs

Volume or Measurements:

1.16 cu ft

Type:

Outfitted



Power:

120 VDC UOP, 15A outlet with internal power factor correction, 7 Amps

Fuse:

Two (2) 10 amp fuses are provided on the input and output lines of the DCPS.

Restraint:

The DCPS assembly is mounted to the seat track through the use of clamps and brackets from the Maintenance Work Area parts kit. It also may be tethered to the seat track through the use of D-rings on the Power Supply.

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27165, JSC CTSD modified off-the-shelf for ISS

Vendor: Xantrex

Vendor P/N: XHR 150-7 M21/M22/M25

Reference Documents:

GCAR G3103

EIS JSC27165

SAR JSC28422

Procedures LMSMSS32742

Materials MATL-99-002A

PMP TTA49

Stress HDID-SAS-98-0246

HDID-SAS-98-0286

HDID-SAS-98-0258

Contact:

Craig Perez

POWER SUPPLY ACCESSORY KIT

PART NO. SJG33110142-301

DESCRIPTION:

- Kit Contains:
 - Power Supply Probes Kit (SJG33110149-301)
 - Jaw Clamp Assy, MWA (SEG33110172-301)
 - Cable Assy, Power Supply (SEG33111384-301)
 - Cable Assy, UOP (SEG33108825-303)
 - Handle Assy (SEG33110146-701)

These accessories are used to restrain Power Supply and to facilitate use from inside the MWA.

Weight:

10 lbs

Volume or Measurements:

1.16 cu ft

Type:

Outfitted

Power:

N/A

Fuse:

10 amp ceramic fuse

Restraint:

Clips to D-Rings on Power Supply

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR	G3103
EIS	JSC27165
SAR	JSC28422
Procedures	LMSMSS32742
Materials	MATL-99-064
	MATL-98-178
	MATL-98-207A

Contact:

Craig Perez



REMOVABLE POCKET ASSY PART NO. SED13101631-303

DESCRIPTION:

- Provides storage for tools, utensils, and other small crew provisioning hardware
- May be attached to crewmember's clothing to for transport
- -303 consists of -305 and -307 attached via hook and loop fastener
- NOTE: Pocket Assy does not include items shown in picture.

Weight:

0.461 pounds (-303)

0.255 pounds (-305)

0.206 pounds (-307)

Volume or Measurements:

7" x 10" x 2"

Type:

Outfitted

Power:

N/A

Fuse:

N/A



-305



-307

Restraint:

Hook fastener

Can be strapped onto crewmember's pants via loops on back of Pocket Assy.

Pocket Assy will not attach directly to COTS clothing.

Stowage:

Standard stowage trays or Crew Preference Bag.

Limited Life:

N/A

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

GCAR G3835

Materials MATL-01-095

Contact:

Fatonia Rivera

SCOPEMETER LOAD AND CONNECTOR KIT (SLaCK) PART NO. SJG33120108-301

DESCRIPTION:

- The Scopemeter Load and Connector Kit (SLaCK) will provide the crewmember the ability to convert BNC cables with male plugs to stackable banana plugs for versatility during signal measurement as well as to provide a resistive load of 600 ohms.

Weight:

0.10 lbs

Volume or Measurements:

10" x 10" x 0.75"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Locker Stowed

Limited Life:

N/A

Lineage:

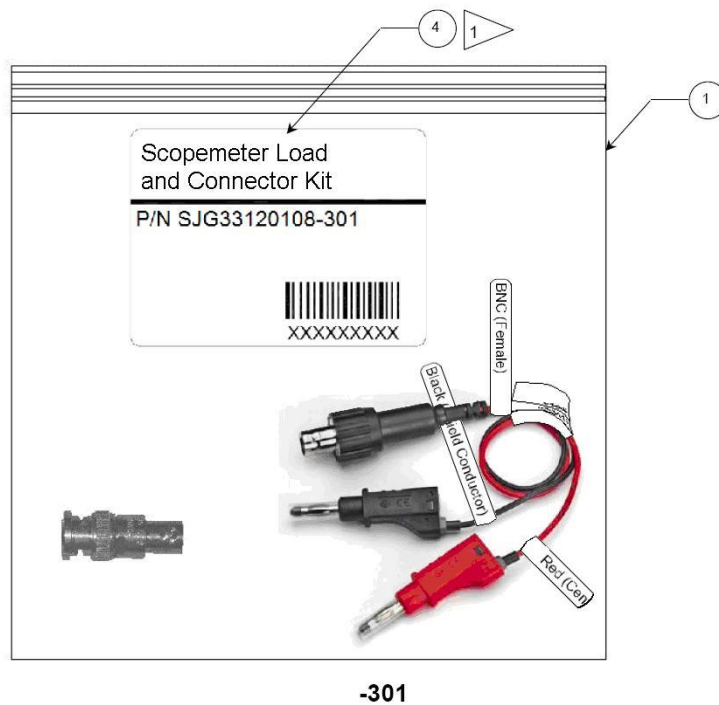
SSCN 010340

Reference Documents:

GCAR	G5519
Materials	MATL-07-035
RAESR	JSC 65509
PRVD	JSC 65496

Contact:

Craig Perez



SCOPEMETER KIT PART NO. SJG33115340-301

(This Scopemeter Kit replaces Scopemeter and Accessories Kit SEG39130246-301, -303; the last old kit was returned on ULF1.1.)

DESCRIPTION:

The Kit contains the following hardware:

- Fluke Scopemeter (SEG39129678-301 (with Alkaline Batteries), -303 (with Fluke rechargeable battery pack)
 - Functions both as a digital multimeter and an oscilloscope with specialized probes for measuring values such as temperature, pressure, and current.
 - Displays state and timing diagrams of digital signals.
 - Stores and downloads digital or analog signals of a device under test to a computer via Scopemeter downlink cable (P/N: SEG33111952-301 which is found in Pressure/Downlink Kit, P/N: SEG39130251-301).
- 2 ea 22, 20, 16, and 12 GA Socket Test Adapters
- 2 ea 22, 20, 16, and 12 GA Pin Test Adapters
- 2 ea Test Lead (red/black)
- 2 ea Alligator Clip (red/grey)
- 1 ea Industrial Alligator Clip
- 2 ea high Frequency Adapters
- 2 ea Mini Test Hooks (red/grey)
- 2 ea Trim Screwdrivers (red/grey)
- 2 ea 10:1 Pin Adapters (red/grey)
- 2 ea 10:1 Banana Adapters (red/grey)
- 2 ea 10:1 Probe (red/grey)
- Also available for Scopemeter (not included in kit):
 - Temperature Probe Assy (SEG39130243-301)
 - Pressure / Vacuum Module Assy (Pressure Probe) (SEG39130244-301)
 - Current Probe (SEG39130242-301)



Weight:

2 lbs

Volume or Measurements:

10.4" x 5" x 1.9"

Type:

Outfitted

Power:

- 4 C-cell alkaline batteries provide two to three (2-3) hours of operation.
- 4.8 Volt NiCad Fluke rechargeable battery pack (PM9086/011) which is recharged within the Scopemeter by the SMPA / Battery Charger Kit (SEG33111349-303.) provides four (4) hours of operation
- Can be powered for use by the SMPA / Battery Charger Kit.
- A 3 Volt lithium battery is used for memory retention of the last parameter settings used. This battery is not replaceable except by the vendor.

Fuse:



Raychem LTP070 Polyswitch

VMax Interrupt	15V	Trip Current	1.5A
Max Current	100A	Time to Trip	5.0sec @ 3.5A
Hold Current	.7A		

Restraint:

Hook Fastener

Stowage:

Standard stowage trays

Limited Life:

5 yr rechargeable battery pack useful life

1 yr Calibration Life

Lineage:

JSC CTSD Modified off-the-shelf for ISS – certified as part of the Diagnostic Caddy.

Vendor: Fluke Instruments

Vendor part no: 105B Scopemeter

Reference Documents:

GCAR	G3873		
CR	SSP50345	Materials	MATL-98-171
EIS	JSC27166		MATL-98-207A
PMP	TTA49		MATL-98-192
SAR	JSC28423		MATL-99-080
Stress	HDID-SAS-98-0244	Procedures	LMSMSS32746A
	HDID-SAS-98-0249		

Contact:

Craig Perez



SCOPEMETER TEMPERATURE PROBE KIT

PART NO. SEG39130249-301

DESCRIPTION:

- The Scopemeter Temperature Probe Kit consists of a Nomex pouch with a surface temperature probe (SEG39130243-301).
- The temperature probe is capable of measuring -50 to +150 deg C or -58 to +302 deg F.
- The temperature probe switch has three settings: deg F, Off, and deg C
- The two prongs on the probe are plugged into the Scopemeter banana jacks and the Scopemeter converts each mV into one degree (Celsius or Fahrenheit).
- Celsius Measurements Ambient Temp (at data module) Accuracy
 - 15 to 35 C
 - ± 1 C from 0 to 100 C decreasing linearly to ± 3 C at -50 to 150 C
 - 0 to 15 C and 35 to 50 C
 - ± 2 C from 0 to 100 C decreasing linearly to ± 4 C at -50 to 150 C
- Fahrenheit Measurements Ambient Temp Accuracy
 - 59 to 95 F
 - ± 1.8 F from 32 to 212 F decreasing linearly to ± 5.4 F at -58 to 302 F
 - 32 to 59 F and 95 to 122 F
 - ± 3.6 F from 32 to 212 F decreasing linearly to ± 7.2 F at -58 to 302 F

Weight:

.66 lbs

Volume or Measurements:

7" x 4" x 1"

Type:

Outfitted

Power:

A 9 Volt alkaline battery provides 1600 hours of operation

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays

Limited Life:

1 yr Calibration



Lineage:

Originally certified as part of the Diagnostic Caddy (which never flew)

Manufacturer: Fluke

P/N: 80T-150U

Reference Documents:

GCAR# G3281

Contact:

Craig Perez

SCOPEMETER PRESSURE / DOWNLINK KIT

PART NO. SEG39130251-301

DESCRIPTION:

- The Scopemeter Pressure / Downlink Kit consists of a Nomex pouch with one Scopemeter Downlink Cable (SEG33111952-301) and one Scopemeter Pressure Probe (SEG39130244-301).
- The downlink cable has an RS232 (serial) connector on one end (and also comes with an RS232 to parallel adapter). The cable allows data to be output from the Scopemeter to a computer or printer. It requires FlukeView software, which is available on the MPSD load on ISS laptops.
- The Scopemeter Pressure Probe is made up of the Crystal MultiCal Pressure Module modified with both male and female QDs. The female QD allows ambient pressures to be taken without the use of the ECLS Internal Sampling Adapter (ISA). When the female QD is removed (SEG39130244-302 configuration), the male QD is compatible with the ISA and can be used interchangeably with the ECLS pressure probe, P/N: 1525,760mmHgA/30PSIA.
- The Crystal MultiCal Pressure Module is capable of measuring pressures up to 50 PSIA, however, the Scopemeter Pressure Probe is only certified to measure pressures up to 15 PSIA.
- The two prongs on the probe are plugged into the Scopemeter banana jacks and the Scopemeter converts each mV into one mmHg.
- The Pressure Probe performs best with a 10MOhm digital multimeter such as the STS Fluke 87 Multimeter, but is used on orbit with the Scopemeter. The pressure probe itself has an accuracy of +/- (0.098% of reading + 0.2 mmHgA) or +/- (0.08% of reading + 0.01 PSIA).

Weight:

1.5 lbs

Volume or Measurements:

5.5" x 4.75" x 3.75"

Type:

Outfitted

Power:

A 9 Volt alkaline battery provides 400 hours of operation

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays



Limited Life:

1 yr Calibration

9V Battery needs to be replaced annually

Lineage:

Originally certified as part of the Diagnostic Caddy (which never flew)

Manufacturer: Crystal

P/N: 1525, 760mmHgA/30PSIA

Reference Documents:

GCAR# G3281

Contact:

Craig Perez

SCOPEMETER CURRENT PROBE KIT

PART NO. SEG39130250-301

DESCRIPTION:

- Current Probe Kit consists of a Nomex pouch and AC/DC current probe (P/N SEG39130242-301).
- The current probe is capable of measuring from 50mA to 100A with the following accuracy:

0 to 10A @ 100 mV/A	+/- 3% of reading +50mA
0 to 40A @ 10 mV/A	+/- 4% of reading +50 mA
40 to 80A @ 10 mV/A	+/- 12% of reading +50 mA
80 to 100A @ 10 mV/A	+/- 15% of reading

For accurate readings, center the wire in the jaws, avoid letting the wire touch the clamp.

- Selectable output of 10 millivolts per 1 amp for the 100 A range, and 100 millivolts per 1 amp for the 10 A range.
- The probe measures the magnetic field created by electric current. This field's strength and polarity are dependant on the magnitude and direction of the current.
- Measure current flow through one wire at a time: If current is flowing through two wires in the same direction, the magnetic fields add together. If the current is flowing in the opposite directions in two wires, the fields will subtract from one another and only their difference will be measured.
- The probe clamp's arrow indicates the positive flow direction of current. A negative reading will result if the probe is clamped on the wire "backwards." No damage or loss of accuracy will result from a negative reading.

Weight:

1 lb

Volume or Measurements:

10.6" x 4" x 1"

Type:

Outfitted

Power:

A 9 Volt alkaline battery provides 55 hours of operation

Fuse:

N/A

Restraint:

Hook fastener

Stowage:

Standard stowage trays



Limited Life:

1 yr Calibration

9V Battery needs to be replaced annually.

Lineage:

Originally certified as part of the Diagnostic Caddy (which never flew)

Reference Documents:

GCAR# G3281

Contact:

Craig Perez

SCOPEMETER POWER ADAPTER (SMPA) / BATTERY CHARGER KIT PART NO. SJG3311349-303

DESCRIPTION:

- Charges Modified Makita 12V Batteries (SEG33111376-301, -302 & SEG33111352-301)
- Integrated circuit monitors battery temperature and charge.
- Reduces to trickle-charging when battery is fully charged.
- 5 LEDs indicate operation status (Power, No Battery, Charging, Ready, Temp Fault)
- Supplies 12VDC 1Amp to the Fluke Scopemeter (SEG39129678-301) via the 4' Scopemeter Adapter Cable (P/N: SEG33113009-301)
- Also charges HRF Common Batteries via LEMO female plug
- 21 hours are needed to charge the Scopemeter battery pack
- 45 minutes are needed to charge a 2.2 Ah Makita battery (SEG33111376-301) and 1 hour 45 minutes for the 3.0 Ah Makita battery (SEG33111376-302)
- Tool Battery Charging Adapter (P/N: SEG33110639-302)
- SMPA Charger (blue box) (P/N: SEG33110643-303)

Weight:

4.5lb

Volume or Measurements:

SMPA / Battery Charger without cables:

7" x 4" x 2"

Softgoods Bag:

11 3/4" x 6 1/2" x 3 1/4"

Type:

Outfitted

Power:

Vehicle-provided 28 VDC power

Fuse:

Automatic resettable 3 Amp Fuse

Restraint:

Velcro Hook on base of Unit

Stowage:

Standard stowage tray within softgoods bag

Limited Life:

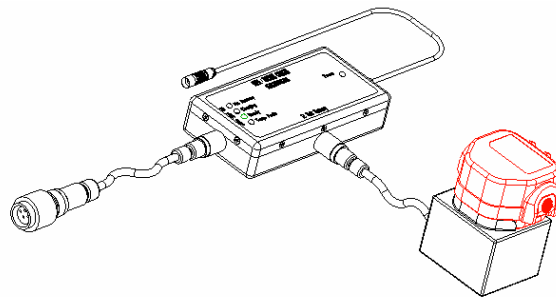
N/A

Lineage:

JSC CTSD new development for ISS

Manufacturer: Summit Products

P/N: PRC-1003



Reference Documents:

GCAR	G3393
Cert. Req.	SSP50345
Proj. Req.	LMSEAT33244
ICD	LMSEAT33433
RAESR	JSC28956
Materials	MATL-00-127
MUA	S01

Contact:

Craig Perez

SCREW EXTRACTOR MASTER KIT

PART NO. SJG33116581-301

DESCRIPTION:

- This kit enhances the capability of the existing Kit L Screw Extractor Set (SJG33109849-301), which has various sizes of hardened steel drill bits, drill guides, and separate extractors.
- The Screw Extractor Master Kit contains cobalt, left-handed drill bits, which should back a stripped screw out without any additional work. However, if required, the kit also contains flute-shaped extractor bits and two types of tap handle.
- Gel or water should be placed at the site to catch shavings during drilling.
- This kit is manifested for its first flight on 12A.1.
- This kit contains:
 - 1ea Kit L Screw Extractor Set
 - Locations to contain the existing 1/8", 3/16", 1/4" and 5/16" drill bits
 - 1ea 4-Jaw Tap Handle with Velcro tab
 - 1ea Screw-Type Tap Handle with velcoin
 - 1ea #1 Fluted Extractor Bit for fasteners 3/32" to 5/32"
 - 1ea #2 Fluted Extractor Bit for fasteners 5/32" to 7/32"
 - 1ea #3 Fluted Extractor Bit for fasteners 7/32" to 9/32"
 - 1ea #4 Fluted Extractor Bit for fasteners 9/32" to 3/8"
 - 1ea #5 Fluted Extractor Bit for fasteners 3/8" to 5/8"
 - 1ea Cobalt Left-Handed Drill Bits in sizes 5/64", 7/64", 5/32", 1/4", 19/64". These bits are a gold color and are also marked with white stamping ink on the blunt end.

Weight:

3.35 lb

Volume or Measurements:

11" x 7-1/2" x 1-7/8"



Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Nomex softgoods bag

Stowage:

Standard stowage trays

Limited Life:

N/A



Lineage:

ISS CR SSCN 8213 to improve the capability of the existing screw extractor kit

Reference Documents:

GCAR	G4966
Cert. Req.	JSC28484
Proj. Req.	JSC62000
PDA Req.	JSC62001
SAR	JSC62082
Materials	MATL-04-058

Contact:

Fatonia Rivera

SEWING KIT PART NO. SJG33110642-301

DESCRIPTION:

- Provide a variety of needles, threads, and threaders for on-orbit sewing and mending of clothing and fabric.
- Kit contains
 - Built-in pin cushion
 - 4ea spools 40 wt Rayon embroidery thread
 - 2-250yd spools each, Gold and Blue
 - 3 ea Thimbles
 - 3 ea Needle Threaders
 - 10 ea Size 1 Safety Pins
 - 10 ea Size 2 Safety Pins
 - 3 ea of 3 different size needles
 - 5-1/4" Blunt-Point Shears (2-1/4" cut length, forged steel with chrome over nickel plating)
 - 4-1/2" Flat Pliers
 - 5" Bent Pliers
 - 6" Filament holder, slotted, grooved tip, locking (Tweezers)

Weight:

1.5 lb

Volume or Measurements:

176 cu in

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Nomex softgoods bag

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

EIS No. JSC 27170, JSC CTSD New Development for ISS



Reference Documents:

GCAR	G3508 (April 2000)
GCAR	G3272 (August 1999)
Cert. Req.	SSP50345
Proj. Req.	LMSEAT33133
SAR	JSC39295
Materials	MATL-99-154

Contact:

Fatonia Rivera

SHARP SCIENTIFIC CALCULATOR ASSY PART NO. SEG33113711-301

DESCRIPTION:

- Performs basic and scientific calculations
- Display is LCD

Weight:

3.52 oz

Volume or Measurements:

5.7" x 3.3" x 0.65"

Type:

Outfitted

Power:

Two (2) 1.5V silver oxide batteries

USA P/N:528-41875-4

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Standard stowage trays

Limited Life:

Silver Oxide Battery, 1.5V (528-41875-4): shelf life of approximately 1 year.

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Sharp

P/N: EL 506 RB

Reference Documents:

GCAR G3682

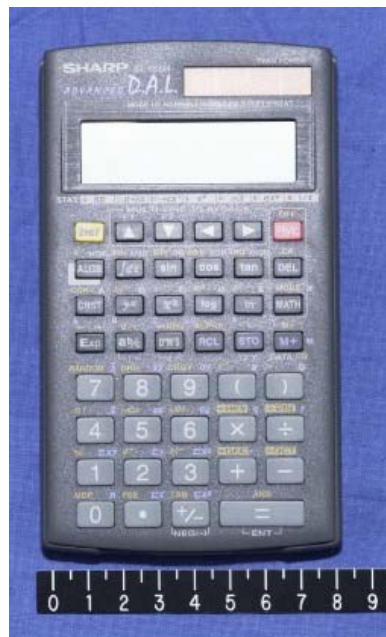
RAESR JSC40091

Materials MATL-00-236

MUA S04

VM JSC29144

CR G05746R1



Contact:

Craig Perez

SMALL GAUGE CRIMP TOOL

P/N: SEG33116078-301

DESCRIPTION:

- Comprised of a tool frame and screw-mounted turret head
- Crimp tool is capable of crimping 12, 16, and 20 gauge pins/sockets to 12-26 gauge wire
- Turret heads are interchangeable with an Allen wrench; only the 12, 16, 20 gauge head is certified/provided at this time
- Crimp tool is not calibrated; crew must check each crimp via an inspection and pull test
- Certified for launch/landing/use on both US and Russian vehicles/segments

Weight:

1.35 lbs

Volume or Measurements:

9.75" x 1.4" x .7"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook tab for temporary stowage

Limited Life:

N/A

Stowage:

Standard stowage trays

Lineage:

JSC CTSD unmodified off-the-shelf for ISS

Manufacturer: Daniels Manufacturing Corp

Turret Head P/N: TH163

Tool Frame P/N: AF8



Reference Documents:

CR: SSCN 7960

Materials: MATL-03-130

GCAR: G4762

Contact:

Fatonia Rivera

SOLDERING IRON KIT

PART NO. SJG33110598-301

DESCRIPTION:

- Battery operated soldering iron for use on ISS or STS
- Safety guard around soldering iron stand to prevent burns
- This hardware is certified to operate up to 600F. A temperature runaway failure can occur if the barrel is covered during use.
- Kit contains:
 - Two spare cleaning sponges
 - Two rolls of Desoldering Wick
 - Two 1 lb. Rolls of 60/40 Alloy Solder
 - This solder is a high activity RA core flux designed for excellent instant wetting action. Although it is a RA-based material, the residues are non-corrosive if not cleaned. Per J-STD-004 is classified as ROM1 flux.
 - 2 Heat Sink Clips
 - Spare Soldering Tips
- Must be used in MWA containment tent while soldering.

Weight:

6.8 lb

Volume or Measurements:

Soldering Iron:

7" x 4" x 4"

Kit Within Softgoods Bag:

12" x 7.8" x 5.5"

Type:

Outfitted

Power:

12 VDC NiMH or NiCad battery pack

(SEG33111376-301, -302 or SEG33111352-301)

Batteries charged using SMPA / Battery Charger (SEG33111349-303)

Fuse:

5 Amp Manual Resettable Breaker

Restraint:

Hook Velcro

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD new development for ISS



Reference Documents:

GCAR	G3393
Cert. Req.	SSP50345
SAR	JSC3929
Materials	MATL-00-034
MUA	LM/ISS-32

Contact:

Craig Perez

TAP AND DIE SET (KIT M) PART NO. SJG33109850-301

DESCRIPTION:

The Tap and Die Set may be used for a variety of different applications:

- Dies may be used to restore damaged threads of fasteners, loose screws, or threaded studs. Die may also be used to cut external threads in metal, plastic, or hard rubber.
- Taps: Clean/repair damaged internal threads, such as threaded inserts or captive nuts utilizing the tap from the Tap and Die Set. Tap may also be used to cut threads into a newly drilled hole.
- See following pages for more detailed information.

Weight:

3.36 lbs

Volume or Measurements:

21.25" x 10.375"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook Velcro

Stowage:

Locker Stowed

Limited Life:

N/A

Lineage:

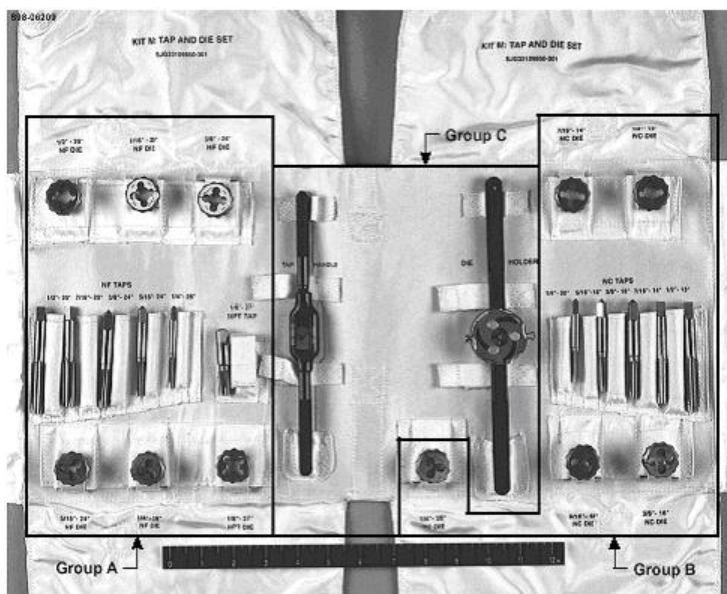
Flt 02A IDRD SSP 54101-02/FCSD CCP

Reference Documents:

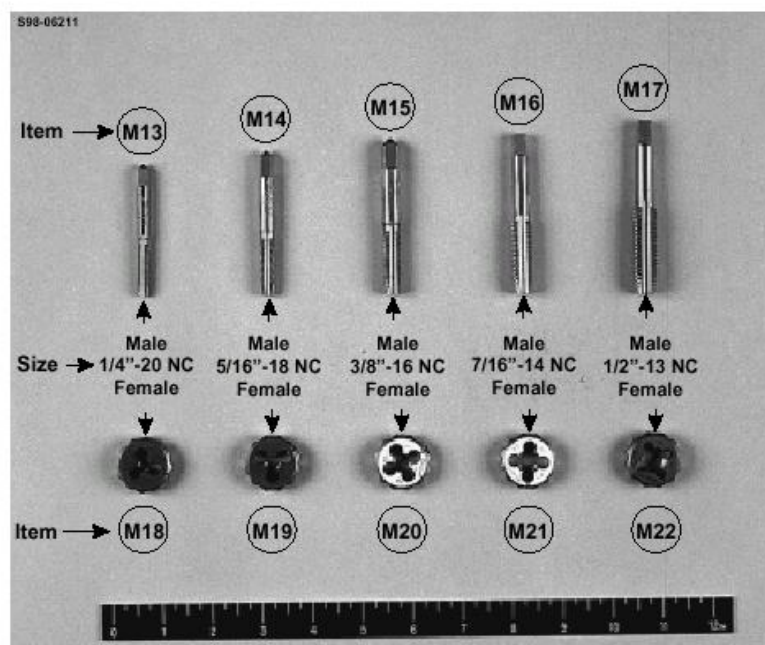
GCAR	G3212
SODF Procedures	IFM A.2.11 Tap Set Usage
	IFM A.2.12 Die Set Usage

Contact:

Fatonia Rivera



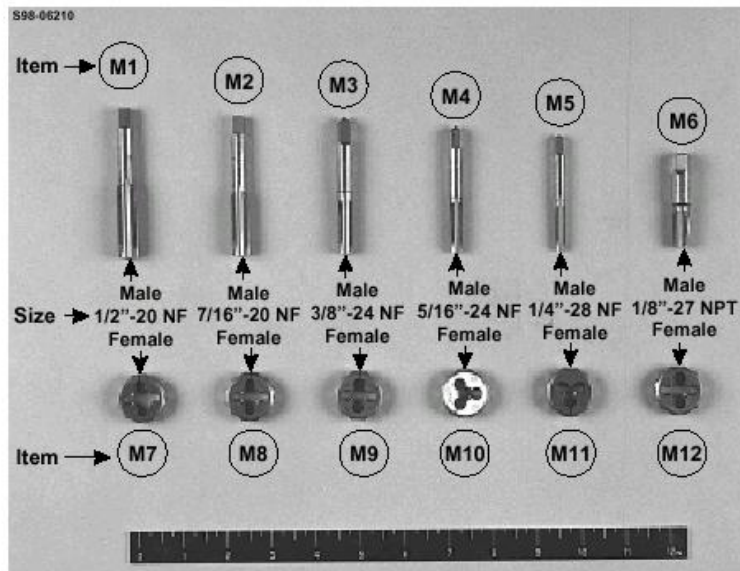
Group B - NC Taps and Dies



Kit M, items M13-M22 - Tool dimensions				
Item		Thread size (in.)	Manuf. part no. (male tap)	Manuf. part no. (female die)
Male	Female			
M13	M18	1/4 - 20 NC	T100	D010*
M14	M19	5/16 - 18 NC	T101	D011*
M15	M20	3/8 - 16 NC	T102	D012*
M16	M21	7/16 - 14 NC	T103	D013
M17	M22	1/2 - 13 NC	T104	D014

*1-inch double hex adjustable.

Group A - NF and NPT Taps and Dies



Kit M, items M1-M12 - Tool dimensions				
Item		Thread size (in.)	Manuf. part no. (male tap)	Manuf. part no. (female die)
Male	Female			
M1	M7	1/2 - 20 NF	T109	D019*
M2	M8	7/16 - 20 NF	T108	D018*
M3	M9	3/8 - 24 NF	T107	D017*
M4	M10	5/16 - 24 NF	T106	D016*
M5	M11	1/4 - 28 NF	T105	D015*
M6	M12	1/8 - 27 NPT	T110	D020**

*1-inch double hex adjustable.

**1-inch double hex nonadjustable.

This Kit Contains one of each of the following:

Acronyms:

NC-National Coarse Thread Series

NF-National Fine Thread Series

NPT-National Form Taper Pipe Thread

Die Holder	TD10A
Tap Handle	TD88A
Dies	
1/2" - 20 NF Die	D019
7/16" - 20 NF Die	D018
3/8" - 24 NF Die	D017
5/16" - 24 NF Die	D016
1/4" - 28 NF Die	D015
1/4" - 20 NC Die	D010
5/16" - 18 NC Die	D011
3/8" - 16 NC Die	D012
7/16" - 14 NC Die	D013
1/2" - 13 NC Die	D014
1/8" - 27 NPT Die	D020
Taps	
1/2" - 20 NF Tap	T109
7/16" - 20 NF Tap	T108
3/8" - 24 NF Tap	T107
5/16" - 24 NF Tap	T106
1/4" - 28 NF Tap	T105
1/4" - 20 NC Tap	T100
5/16" - 18 NC Tap	T101
3/8" - 16 NC Tap	T102
7/16" - 14 NC Tap	T103
1/2" - 13 NC Tap	T104
1/8" - 27 NPT Tap	T110

TORQUE ANALYZER KIT PHASE I

PART NO. SJG33115179-301

DESCRIPTION:

- The Torque Analyzer Kit Phase I (TAK1) is the Handheld PDA with a module which connects to seat track; used to measure and display the torque produced by a torque input device. The TAK1 Kit contains the following:

Part Number	Part Name
SEG33115176-301	TA Handheld Assy (2 ea)
SEG33115180-301	Torque Analyzer Assy (2 ea)
SDG33115175-301	Pouch Assy. (2 ea)
SDG33115177-701	Foam Block Assy
062974	Run down Adapter (2 ea)
065145-WD5	Cable (2 ea)
SEG33117595-301	3/8" to 1/4" Adapter

- Each S/N PDA module is calibrated with a specific S/N transducer and they must be used together. The PDA must be set up to work with the transducer each time it is turned on.
- During calibration, a calibration factor is established and documented on the transducer calibration sticker. This is the factor that needs to be input into the PDA during setup.

Weight:

5.2 lbs.

Volume or Measurements:

12" x 6.5" x 7.5"

Type:

Outfitted

Power:

PDAs are powered by 4ea AAA Alkaline batteries

Fuse:

N/A

Restraint:

Hook Fastener

Storage:

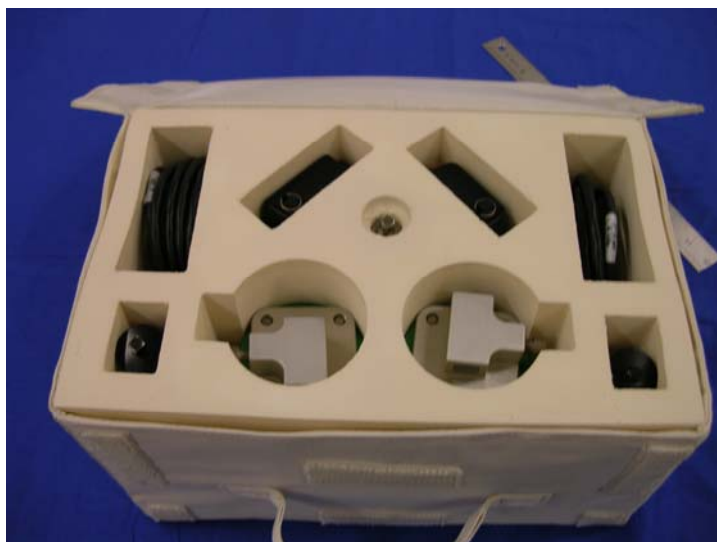
Locker Stowed

Limited Life:

2 yr. calibration life

Lineage:

Modified Commercial off-the-shelf
Manufacturer: Mountz Inc.



Reference Documents:

GCAR

Materials

Stress

EMI

G4550 US

G4996 Russian

MATL-02-197

MSAD-02-0536

EV4-10/02-071

Contact:

Fatonia Rivera

TORQUE WRENCH ASSY**P/N: SEG33117289****-301 5-35 IN LBS, 1/4" DRIVE****-302 40-200 IN LBS, 3/8" DRIVE****-303 200-1000 IN LBS, 3/8" DRIVE****DESCRIPTION:**

- Each dash number is a chrome-finished click type torque wrench configured with Velcro in a Ziplock bag labeled with a Sharpie. Torque Wrenches must be zeroed when not in use in order to maintain calibration. Previously certified as part numbers QTS135, QJR217D, and QJR284E corresponding to -301, -302, and -303 respectively:

Weight:

-301 0.85 lbs

-302 1.8 lbs

-303 2.2 lbs

Volume or Measurements:

-301 7" x 1-1/4" dia

-302 11-1/16" x 7/8" dia

-303 15-9/16" x 1-5/32" dia

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro hook fastener

Stowage:

ISS IVA Toolbox

Limited Life:

1-year Calibration Life

Lineage:

Modified COTS for ISS

Manufacturer: Snap-On

-301 QTS135

-302 QJR217D or QC2R200

-303 QJR284E or QC2R1000



Reference Documents:

GCAR G3266

(previously certified under G2033)

CR SSCN 8571

Contact:

Fatonia Rivera

UTILITY KNIFE

PART NO. SLG33113712-001

DESCRIPTION:

- 3.5" black stainless steel blade
- 5" carbon fiber handle
- Blade locks open and closed
- Belt clip attached to handle
- NOTE: Reverse hook and NASA Meatball added to SPECWAR model

Weight:

4.24 oz

Volume or Measurements:

8.4" x 1.4" x 0.5"

Type:

Outfitted

Power:

N/A



Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Standard stowage trays

Limited Life:

N/A

Lineage:

JSC CTSD modified off-the-shelf for ISS

Vendor: Emerson Knives Inc.

Vendor P/N: NSE2B

Model: SPECWAR

Reference Documents:

GCAR G3676
Materials MATL-00-195

Contact:

Craig Perez

WISE ASSY. PANAVISE **PART NO. SEG33114312-301**

DESCRIPTION:

- This Pana Vise will only be used for IVA tasks aboard ISS.
- This tool is a simple bench clamped vise used to secure components.
- This tool is manufactured by Pana Vise, is made of coated steel, and will be soft stowed for launch and landing.
- This tool is categorized as a hand tool and during on-orbit use it will not interface with any powered tools.
- There are no safety critical uses where the structural failure of this tool, due to the presence of flaws, will cause a catastrophic hazard. In the event of structural failure of these tools, there are redundant tools to perform the function.

Weight:
5.3 lbs.

Volume or Measurements:
Unstowed configuration of the end item.

Type:
Outfitted

Power:
N/A

Fuse:
N/A

Restraint:
Hook fastener

Stowage:
Standard stowage tray

Limited Life:
N/A

Lineage:
JSC CTSD modified off-the-shelf hardware for ISS
Vendor: Pana Vise Inc.
Vendor P/N: Model 301 (-310)
Model 311 (-311)

Reference Documents:

GCAR G4245
ARM JSC47649
Materials MATL-01-210
VM JSC47759



-310



-311

SEG33114312-301 is -310 and -311 combined

Contact:
Craig Perez

1.8 STOWAGE EQUIPMENT

DEFINITION:

The Resupply Stowage Platform Stowage System provides the capability to transport unconditioned, pressurized cargo to and from ISS in an MPLM to support resupply of the ISS.

NOTE: The Cargo Transfer Bags (CTBs) provide for protection, preservation, and stowage of hardware during launch, ascend, on-orbit, descent, and landing. The RSPSS may be configured into 57 different configurations, which may transport M-01, M-02, or M-03 bags or CTBs.

NOTE: Responsibility for this hardware has been transferred to the Lockheed Martin Cargo Mission Contract (CMC).

END ITEMS:

CARGO TRANSFER BAG.....	238
CDRA/5MLE BAG MOUNTING PLATES	240
RESUPPLY STOWAGE PLATFORM STOWAGE SYSTEM (RSPSS)	242

CARGO TRANSFER BAG**PART NO. SEG33111836-303, HALF SIZE, NO WINDOWS****PART NO. SEG33111837-303, FULL SIZE, W/ WINDOWS****PART NO. SEG33111838-303, FULL SIZE, NO WINDOWS****PART NO. SEG33111839-303, DOUBLE SIZE, NO WINDOWS****DESCRIPTION:**

- Size units are in Middeck Locker Equivalents
- Designed to stow in the SpaceHab Forward Bulkhead, SpaceHab Aft Bulkhead, SpaceHab Aft Subfloor, SpaceHab Single Rack, SpaceHab Double Rack, Shuttle Middeck Lockers and MPLM.
- Accessories include the following:
 - SEG33111841-301 thru -331, Optional dividers
 - SEG33111842-301, Pocket Assembly
 - SEG33111843-305, -307 Velcro straps with D-Ring for CTB restraint in the FGB and Unity Node Module (available in 58 ½" and 78") -301 and -303 certs revoked due to offgassing odor

Weight:

Half Size, 2.2 lbs

Full Size, w/ windows, 3.7 lbs

Full Size, no windows, 4.0 lbs

Double Size, 4.0 lbs

Triple Size, 6.2 lbs



without window



with window

Volume or Measurements:

Half Size, 1.0 cu ft

Full Size, w/ windows, 1.87 cu ft

Full Size, no windows, 1.87 cu ft

Double Size, 3.59 cu ft

Triple Size, 5.31 cu ft

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Stowed except SEG33111843-301, 303, 305, 307 for CTB restraint in the FGB and Unity Node Module.

Stowage:

SpaceHab Forward Bulkhead, SpaceHab Aft Bulkhead, SpaceHab Aft Subfloor, SpaceHab Single Rack, SpaceHab Double Rack, Shuttle Middeck Lockers and MPLM.

Limited Life:

N/A

Lineage:

EIS No. JSC 39207, JSC CTSD New Development

Reference Documents:

GCAR	G4604
CR	SSCN007763
Cert. Req.	JSC39207G
Proj. Req.	SSP50432
ICD	JSC39233
SAR	JSC47763A
Materials	MATL-03-083
MUA	AG396E, RevA
Stress	LMSMSS33039
	HDID-SAS-99-0074
	MSAD-00-0086
	MSAD-01-0562
	MSAD-03-0146

Contact:

Fatonia Rivera

CDRA/5MLE BAG MOUNTING PLATES

PART NO. SEG33114744-301/-303; SEG33114745-302/-304

DESCRIPTION:

- Consists of two half-inch aluminum (6061-T6) mounting plates (SDD39135984-701, -702) that are an interface between the shuttle program's 5MLE bag/straps and the Resupply Stowage Platform.
- Includes four aluminum (6063-T6) L-brackets, two that are approximately 12 inches long (SDD39135986-001) and two that are approximately 40 inches long (SDD39135985-001, -002). The L-brackets are for alignment purposes only. They are guides to center the 5MLE bag on the mounting plates.
- Hardware Function – This mounting system allows the Resupply Stowage Platform (RSP) in the MPLM to have the ability to transport a shuttle program provided 5MLE bag.
- The system is an interface plate between a Shuttle middeck 5MLE bag, straps, bracket, mounting hardware and a RSP. The 5MLE bag is centrally aligned using the short L-brackets along the top and bottom and the long L-brackets along the sides of the bag.

Weight:

80 lbs (weight of plates and straps)
185 lbs (weight of assy. and CDRA ORU, packing foam and Bag)

Volume or Measurements:

57.10" x 17.13" x 0.50" - Each plate
57.10" x 37.06" x 17.50"
– Plates and 5MLE Bag

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Hard mounted to the Resupply Stowage Platform (RSP)

Stowage:

Hard mounted to the Resupply Stowage Platform (RSP)

Limited Life:

N/A

Lineage:

Designed and developed for NASA by Lockheed Martin Space Operations Corp.

Note: Designed specifically to restrain a shuttle program 5MLE bag containing the CDRA ORU to an RSP.

Reference Documents:

(SEG33114744-301, -303)

GCAR	G4298	Materials	MATL-02-079A
VM	JSC47785	Stress	MSAD-02-0090
ARM	JSC47784	Fracture Plan	JSC25863
ICD	ISS-MPLM-IDD-006	CR	25-669-002025-001B
RevB	JSC28169A	Fracture	TM-SA-99-010
SAR	LMSEAT33897	Analysis	

Contact:

Fatonia Rivera

RESUPPLY STOWAGE PLATFORM STOWAGE SYSTEM (RSPSS) PART NO. SJG33111610-9XX (See Drawing)

DESCRIPTION:

- Serves as a carrier system for transporting unconditioned pressurized cargo to and from the space station in an MPLM.
- May be configured in 57 different configurations that are documented in the ICD for ISS RSP 1 Stowage System to Cargo Providers, SSP 50751.
- Designed to carry M-01 bags, M-02 bags, M-03 bags and cargo transfer bags.
- Can accommodate hard mounted payloads that comply with the ICD JSC28169
- Contains:
 - Resupply Stowage Platform Structure
 - Resupply Stowage Platform Fence Assemblies

Weight:

195 pounds w/o Fences and Straps
500 lbs maximum cargo

Volume or Measurements:

Occupies one rack space equivalent

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Secured to the MPLM by 4 mounting pins
(A, B, C, and D fittings)



Stowage:

Installed in the MPLM for launch, on-orbit, and for landing.
RSPSS may be used on-orbit in a USOS segment with ISS Program approval.

Limited Life:

N/A

Lineage:

ICD JSC 28169

Reference Documents:

GCAR	G4090
CR	G005530
Cert. Req.	SSP41000E
Proj. Req.	JSC27942C
ICD	JSC28169A
SAR	JSC39309
Limited Life	JSC39371B
	JSC39310
Materials	MATL-00-024
MUA	JE/ISS-1 Rev2
	ISS/JE2
	ISS/JE3
	ISS/JE4
Stress	JSC39336A

Contact:

Fatonia Rivera

1.9 PAYLOAD EQUIPMENT RESTRAINT SYSTEM (PERS)

DEFINITION:

A modular system of equipment designed to aid the crew in transferring and restraining loose equipment. The five elements of the PERS are the H-Strap, Single Strap, Tool Page Case, Belly Pack, and Laptop Restraint Belt. They are designed to work in concert with Restraints and Mobility (R&MA), Laptops, and Cargo Transfer Bags (CTBs).

These items were developed according to the requirements in Marshall Space Flight Center (MSFC) document, PERS-RQMT-0035A, Payload Equipment Restraint System (PERS) Design Requirements, Verification, and Compliance (RVC).

END ITEMS:

BELLY PACK	245
H-STRAP	246
LAPTOP RESTRAINT BELT (LRB)	247
SINGLE STRAP	248
TOOL PAGE CASE	249

BELLY PACK

PART NO. 96M71040-1 (PERS0031)

DESCRIPTION:

- 9"(height) x 12" (width) x 9.5" (Depth)
- Can be worn around the waist for transporting and restraining small equipment and tools.
- Also, can be mounted to the H-Strap for stowage at the work-site.

Weight:

1.7 lbs.

Volume or Measurements:

513 cubic inches

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook fastener or Steel Hooks

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

PERS-RQMT-0035A, MSFC FPD

New Development for ISS

Reference Documents:

PERS-DOC-0047

PERS-RQMT-0035A

Contact:

Fatonia Rivera



H-STRAP

PART NO. 96M70977-1A (PERS0042)

DESCRIPTION:

- Has (5) 6in. by 9in. mesh pockets with elastic openings.
- Provides a portable work surface with multiple interfaces for restraining a variety of loose equipment and tools.
- Uses ISS Rack Seat Track Stud interfaces for setup.
- Has four attachment interfaces: Velcro strips, cable tie wraps, D-rings, and elastic bands that the user can utilize.

Weight:

4.6 lbs.

Volume or Measurements:

83.5-91" x 10" x .5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

PERS-RQMT-0035A, MSFC FPD New Development for ISS

Reference Documents:

Safety Cert. G3837

PERS-DOC-0047

PERS-RQMT-0035A

Contact:

Fatonia Rivera



LAPTOP RESTRAINT BELT (LRB) PART NO. 96M71030-0 (PERS0032)

DESCRIPTION:

- Provides restraint for the Station Support Computer (SSC), the Portable Computer System (PCS), and the Payload Laptop.
- Can mount to the H-Strap for further restraining of the SSC at the work-site.
- Has a Velcro interface that can be used to restrain small objects.

Weight:

1.4 lbs.

Volume or Measurements:

6" x 12" x 8.75"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener or Steel Hooks

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

PERS-RQMT-0035A, MSFC FPD New Development for ISS

Reference Documents:

PERS-DOC-0047

PERS-RQMT-0035A

Contact:

Fatonia Rivera



SINGLE STRAP PART NO. 96M70977-1 (PERS0041)

DESCRIPTION:

- Portable multiple interface restraint device.
- Used to restrain a variety of loose equipment and tools.
- Uses ISS Rack Seat Track Stud interfaces for setup.
- Has four attachment interfaces: Velcro strips, cable tie wraps, D-rings, and elastic bands that the user can utilize.
- Utilizes a “floating” Rack Seat Track Stud, which can allow for multiple configurations.

Weight:

1.7 lbs.

Volume or Measurements:

81.0-92.5” x 2” x .5”

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Seat Track

Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

PERS-RQMT-0035A, MSFC FPD

New Development for ISS

Reference Documents:

PERS-DOC-0047

PERS-RQMT-0035A

Contact:

Fatonia Rivera



TOOL PAGE CASE PART NO. 96M70982-1 (PERS0033)

DESCRIPTION:

- Contains two removable Tool Pages held within the case by Velcro.
- Each Tool Page provides multiple interfaces to restrain tools and small equipment.
- Serves as a portable containment bag for restraining and transporting to/from a work-site.
- Have three interfaces: Velcro strips, elastic bands, and a snap-on, which can be utilized by the user.
- Can mount to the H-Strap for further restraining at the work-site.
- In a closed configuration, the zippered closure provides added containment of tools.

Weight:

2.4 lbs.

Volume or Measurements:

23" x 10.75" x 1"



Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Hook Fastener or Steel Hook



Stowage:

Standard Stowage Trays

Limited Life:

N/A

Lineage:

PERS-RQMT-0035A, MSFC FPD New Development for ISS

Reference Documents:

PERS-DOC-0047

PERS-RQMT-0035A

Contact:

Fatonia Rivera

2.0 ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEM (ECLSS)

DEFINITION:

Hardware certified by EC3 but operationally supported by ECLSS.

END-ITEMS:

20-MICRON CONDENSATE FILTER.....	251
AMMONIA RESPIRATOR KIT (ARK)	253
IVA AMMONIA DETECTION KIT (IVA ADK).....	255
MOISTURE REMOVAL KIT (MRK).....	256
OXYGEN SENSOR (7OX-V).....	257

20-MICRON CONDENSATE FILTER PART NO. SEG33117584-301

DESCRIPTION:

- The 20-micron is a polypropylene case with polypropylene filter media that connects between a Russian EDV and electric pump and a US CWC to filter large particulates from collected condensate prior to processing through the Russian SRV-K.
- The filter is wrapped in aluminum tape for flammability reasons and is stowed on the water wall when not in use.
- The filter can only be installed in one direction since there is one female and one male 3/8" water QD.
- The filter is flown wet with silver biocide to prevent microbial growth prior to first use.
- Each filter is certified for 1000 L of condensate per year.

Weight:
1.05 lbs.

Volume or Measurements:
10"L x 3" dia

Type:
Consumable

Power:
N/A

Fuse:
N/A

Restraint:
Filter is not structurally mounted and is free floating when in use; when not in use, filter is packed in foam for stowage.

Stowage:
Water wall

Limited Life:
2 years after first wetted (generally at PDA)
1 year after first use, or remainder of initial 2-year shelf life, whichever is shorter

Lineage:
CR SSCN 9232 – New development for ISS based on EMU 3-Micron Filter design.



Reference Documents:

GCAR	G5317
CR	SSCN 009232/VCB
Materials	MATL-06-017
RAESR	JSC 62496
Requirements	JSC 62495

Contact:

Darren Riggle

AMMONIA RESPIRATOR KIT (ARK)
PART NO. SJG33119908-301 **SMALL**
 -302 **MEDIUM**
 -303 **LARGE**

DESCRIPTION:

- The Ammonia Respirator is designed to be worn as a secondary response unit during an ammonia event.
- The Ammonia Respirator is designed to protect crewmembers for up to 8 hours in an environment where ammonia concentration is linearly decreasing from 1200 to 300 ppm ammonia.
- Fresnel Lenses are supplied for users that require corrective vision
- Ziplock bags are supplied for used Ammonia Cartridges

Weight:

8.00 lbs

Volume or Measurements:

16.5" x 12" x 6"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Stowage:

Soft stowed



Limited Life:

Ammonia Cartridge Assy (SEG33119910-301): 5 year shelf life

Ammonia Respirator (SEG33119909-301, -302, -303): 5 year shelf life

Lineage:

ISS CR# SSCN 10021

Reference Documents:

GCAR G5487

CR SSCN 10021

Materials MATL-07-006

Contact:

Daniel Molina

IVA AMMONIA DETECTION KIT (IVA ADK) PART NO. SJD33119795-301

DESCRIPTION:

- The Ammonia Detection Kit (ADK) has the capability to detect ammonia on the Space Shuttle as well as the ISS.
- The Draeger tubes have the capability to detect ammonia from ranges of 5 to 700 ppm using Draeger tubes 2/a (10 tubes) and 5/a (20 tubes).
- In order to take an accurate reading the crewmember shall actuate the air sampling pump 5 times when using the 2/a Draeger tubes and 10 times when using the 5/a Draeger tubes.

Weight:

4.0 lbs

Volume or Measurements:

4.5" x 14" x 8"

Type:

Outfitted

Power:

N/A

Fuse:

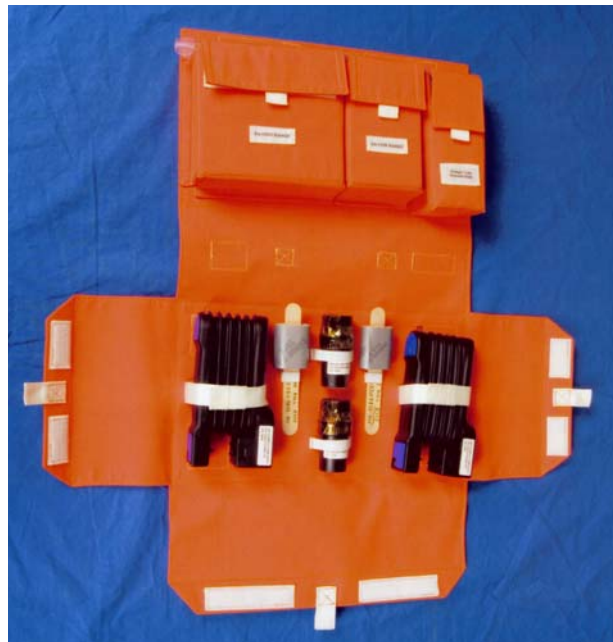
N/A

Restraint:

N/A

Stowage:

Soft Stowed



Limited Life:

Replace Draeger Tube Assy. (P/N SED33119793-701, -702) after 2 years.

Lineage:

FCE CCB CR# G09174, G09340

Reference Documents:

GCAR	G5369B
CR	G09174
	G09340
Materials	MATL-06-031
PRVD	JSC 65184
PDA Procedure	JSC 65196

Contact:

Michael Li

MOISTURE REMOVAL KIT (MRK)

PART NO. SEG11100311-305

DESCRIPTION:

- The Moisture Removal Kit (MRK) is used to reduce the dewpoint in ISS modules and for contingency ventilation.
- The Caframo Fan Assembly (SEG11100291-701, -703, -705) shall produce an output of no less than 50 SCFM over a 24 hour period.
- The MRK is designed for an operation temperature of 60°F to 90°F and a stowage temperature of 35°F to 120°F.

Weight:

9 lbs (w/o batteries)

Volume or Measurements:

Assy: 23" x 23" x 14"

Caframo Fan Assembly (P/N SEG11100291-701, -703, -705): 6" x 6" x 5"

Desiccant Bag Assembly (P/N SEG1110310-301): 23" x 23" x 3"

Type:

Outfitted

Power:

Four D-cell batteries

Fuse:

1.0A slow blow fuse

Restraint:

Flex Bracket Assy. (P/N SEG33107630-301)
connects the MRK to the Seat Track

Stowage:

Locker Stowed

Limited Life:

Desiccant Bag Assembly (P/N SEG1110310-301): maximum 1 year shelf life when dried and vacuum packaged

Lineage:

JSC CTSD New Development for ISS

Reference Documents:

PTRS CTSD-ADV-231 Rev. A

Contact:

Daniel Molina



OXYGEN SENSOR (7OX-V)

PART NO. 1705-0129

DESCRIPTION:

- 7OX-V oxygen sensor is a commercial off-the-shelf, self-powered, diffusion limited metal-air electrochemical type sensor.
- This oxygen sensor is used in the handheld Compound Specific Analyzer - Combustion Products (CSA-CP) for general oxygen monitoring and Compound Specific Analyzer - Oxygen (CSA-O2) for general oxygen monitoring and EVA Pre-Breathe support.

Weight:

33.5 grams

Volume or Measurements:

0.65"x 1.25" dia

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Installed in CSA-CP

Stowage:

Locker Stowed

Limited Life:

Manufacturer suggested shelf life is 1 ½ years from manufacture date
Certified shelf life is 15 months.

Lineage:

Commercial off-the-shelf
Manufacturer: City Tech

Reference Documents:

GCAR	G5214
CR	G09041R1
Materials	MATL-05-085

Contact:

Daniel Molina



3.0 ACTIVE THERMAL CONTROL SYSTEM (ATCS)

DEFINITION:

Hardware certified by EC3 but supported operationally by ATCS

END-ITEMS:

COOLANT QUALITY MONITORING KIT (CQMK).....	259
NON-INTRUSIVE FLOW METER KIT	261

COOLANT QUALITY MONITORING KIT (CQMK) PART NO. SEG46118274-304

DESCRIPTION:

- The CQMK is used to test 5ml samples of ITCS coolant for ammonia, pH, and Ortho-phthalaldehyde to check for micro leaks between the high-pressure ammonia and lower pressure water-based coolant loops. 250ml samples can also be taken for analysis on the ground to check fluid composition and look for any microbial growth.
- Containment bags were redesigned with a new HD300 material to prevent permeation of water vapor and CO2 through the sample. These contaminants can prematurely activate the test strip and contaminate the return sample.
- Consumable piece parts can be resupplied via kit configuration SEG46118247, which is flown in a large ziplock bag.
- The Kit consists of the following:
 1. 1 ea Nomex CQMK container (SEG46118275-703) which restrains all kit components
 2. 1 ea Laminated ammonia test card (SDG46118276-701) is a laminated test strip bottle label and allows the crew to quantify the results from the test strip color change
 3. 1 each Laminated pH test card (SDG46118277-701) is a laminated test strip card and allows the crew to quantify the results from the test strip color change
 4. 1 each Laminated OPA test card (SDG46121582-701) is a laminated test strip card and allows the crew to quantify the results from the test strip color change
 5. Max 18 ea Port Flush Bag Assys (SEG46118252-302) are Teflon 35 ml bags within a polyethylene ziplock containment bag. The Teflon bag interfaces with the IATCS sampling port and is used to flush the stagnant water from the sampling tool. This sample is discarded.
 6. Max 18 ea NH3 Test Strip Bag Assys (SEG46118255-303) are Teflon 5 ml bags within an HD300 containment bag sealed with double-sided tape prior to launch. The bag, with the test strip inside, is filled from the ITCS sampling port. The test strip changes color, the crewmember removes the strip from the bag and compares it to the test card. Max. 18 ea pH Test Strip Bag Assys (SEG46118257-302) are Teflon 5 ml bags within a polyethylene ziplock bag sealed prior to launch. The bag with the test strip inside, is filled from the ITCS sampling port. The test strip changes color, the crewmember removes the strip from the bag and compares it to the test card. Max 18 ea OPA Test Strip Bag Assys (SEG46121580-301) are Teflon 5 ml bags stored within an HD300 containment bag sealed with double-sided tape prior to launch. The bag with the test strip inside, is filled from the ITCS sampling port. The test strip changes color, the crewmember removes the strip from the bag and compares it to the test card.
 7. Max 18 ea Fluid Sample Bag Assys (SEG46118249-302) is a 150ml Teflon bag stored within an open HD300 containment bag, which is sealed once the sample is collected. The Teflon bags are filled with coolant when ammonia is detected in the system, or when the system owner wants a sample to test on the ground.
 8. For return from orbit, the fluid sample Bag Assy are kept within a (max 8ea per kit) Return Ziplock Bag Assy (SEG46118278-703). This is a 12" x 12" polyethylene ziplock bag (previously Teflon) with the same size

Pigmat absorbent square inside it to collect any fluid that escapes from any of the other sample bags.

Weight:

5.8 lbs.

Volume or Measurements:

18" x 9.25" x 6"

Type:

1-4 listed above - Consumable

5-6 listed above – Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener on all bags



Stowage:

Locker Stowed

Limited Life:

Fluid sample bags – 2 years from tape manufacture.

NH₃ Test strip bags – 2 years from test strip manufacture.

pH strip bags – 2 years from test strip manufacture

Ortho-phthalaldehyde (OPA) – 2 years from test strip manufacture

Lineage:

New development for ISS

Manufacturer:

Containment Bags – PacTech

Teflon Sample Bags – American Fluoroseal Corporation (AFC)

Reference Documents:

GCAR G4998 Rev. B

CR SSCN 008605/VCB

Materials MATL-02-072, MATL-04-060, MATL-05-064

Contact:

Terry Wille

NON-INTRUSIVE FLOW METER KIT PART NO. SJG33117585-301

DESCRIPTION:

- The Non-Intrusive Flow Meter Kit will be used to measure the flow rate of the coolant in the Moderate Temperature Loop (MTL).
- The flow meter will provide flow feedback to the crewmember enabling them to correctly adjust the Manual Flow Control Valve (MFCV) in several locations.
- The flow meter clamps to the outside of a pipe and uses ultrasonic technology to measure the fluid flow rate.
- The Non-Intrusive Flow Meter Kit provides the capability for a battery powered system to measure flow of a 1/2" titanium pipe for a flow range of 150-400 lbm/hr with an accuracy of ± 10 lbm/hr.

Weight:

18.2 lbs

Volume or Measurements:

15.5" x 18.5" x 8.0"

Type:

Outfitted

Power:

HRF Battery (P/N SEG33119789-301)
Sanyo 3V Internal Battery (internal to flow meter, installed by vendor)

Fuse:

0.7A

Restraint:

Velcro fastener

Stowage:

Soft stowed

Limited Life:

HRF Battery (P/N SEG33119789-301): 5 year shelf life

Flow Meter – internal battery (SEG33117586-301): 4 year service life once installed in flow meter; 8 year shelf life

Lineage:

ISS CR# G08846

Reference Documents:

GCAR	G5515
CR	G08846
Materials	MATL-06-061
PRVD	JSC 65121E

Contact: Daniel Molina



4.0 WATER TRANSFER SYSTEM (WTS)

DEFINITION:

Hardware certified by EC3 but operationally supported by WTS.

END-ITEMS:

CONTINGENCY WATER CONTAINER (CWC).....	263
PAYLOAD WATER CONTAINER (PWR)	264
OXYGEN GENERATION SYSTEM PAYLOAD WATER CONTAINER (OGS PWR)	
.....	265
ACTIVATED CARBON/ ION EXCHANGE FILTER ASSEMBLY (ACTEX).....	266

CONTINGENCY WATER CONTAINER (CWC) PART NO. SEG33113140-305

DESCRIPTION:

- The CWC is a soft container used for a variety of fluid collection and stowage applications on Shuttle and ISS systems. The Primary application of the CWC is as a container for the transport and resupply of potable water from the Shuttle to the ISS.

Weight:

2.95lbs. (empty)

Volume or Measurements:

16" Dia. X 21 ½" Lg. (full)

Type:

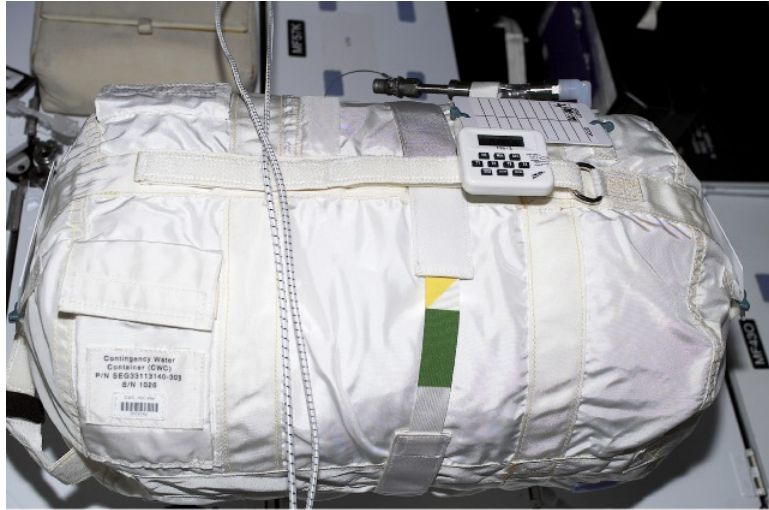
Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

(1) strap on each end, (1) strap lengthwise, 2" X 2" Velcro patches

Stowage:

Stowed empty in Shuttle Middeck Locker, MPLM, or equivalent.

Limited Life:

(16) washings of restraint bag

(50) Fill/empty cycles

Lineage:

Reference Documents:

GCAR	G4367 REV G
CR	SSCN 009524A/VCB
Materials	MATL-02-026
Stress	ESCG-4450-06-STAN-DOC-0001
Requirements	JSC 39375B

Contact:

Adam J. Shepherd

PAYLOAD WATER RESEVOIR (PWR) PART NO. SEG46117689-301

DESCRIPTION:

- The PWR is a soft container used for a variety of fluid collection and stowage applications on ISS systems. The Primary application of the PWR is as a container for the supply of iodinated water used to flush the EMU servicing/flushing coolant lines and reservoir.
- The PWR can also hold Internal Active Thermal Control System coolant, launched on the Shuttle in a special stowage configuration, to deliver replacement coolant fluid for ISS coolant loop servicing

Weight:

1.3 lbs. (empty)
22.3 lbs (full)

Volume or Measurements:

24" long X 13.3" wide X 1.0" high(empty)
19" long X 13.0" wide X 8.0" high(full)

Type:

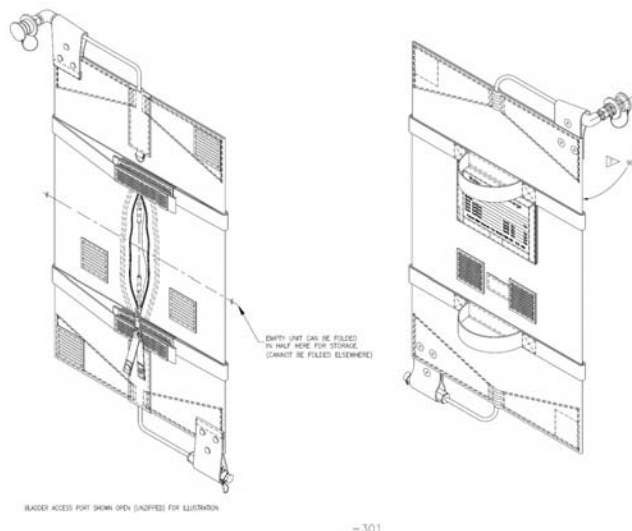
Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

(2) straps across width of bag, using Velcro patches, 2" X 2" Velcro Hook patches on opposing corners

Stowage:

Stowed empty in Shuttle Middeck Locker, MPLM, or equivalent. Stowed full in middeck location, surrounded with Pyrell foam and inside 2 sealed poly bags.

Limited Life:

(13) Fill/empty cycles

Reference Documents:

GCAR	G3925 Rev D
CR	TTA JSC-235
Materials	MATL-06-020B
Stress	MSAD-01-0228
Limited Life Items List	JSC-47609 Rev C
Requirements	JSC 40177C

Contact:

Darren Riggle

OXYGEN GENERATION SYSTEM PAYLOAD WATER CONTAINER (OGS PWR) PART NO. SEG46117689-302

DESCRIPTION:

- The OGS PWR is a soft container used for stowage of Iodinated water ISS systems. The Primary application of the PWR is as a container for the supply of iodinated water used to supply the ISS Oxygen Generation System rack with water needed for oxygen generation.

Weight:

3.1 lbs. (empty)
25.1 lbs (full)

Volume or Measurements:

24" long X 13.3" wide X 1.0" high(empty)
19" long X 13.0" wide X 8.0" high(full)

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

(2) straps across width of bag, using Velcro patches, 2" X 2" Velcro Hook patches on opposing corners

Stowage:

Stowed empty in Shuttle Middeck Locker, MPLM, or equivalent.

Limited Life:

(13) Fill/empty cycles

Reference Documents:

GCAR	G3925 Rev D
CR	TTA JSC-235
Materials	MATL-06-020B
Stress	MSAD-01-0228, ESCG-4450-06-STAN-DOC-105
Limited Life Items List	JSC-47609 Rev C
Requirements	JSC 40177C

Contact:

Darren Riggle

Stress HDID-SAS-98-0199
Requirements JSC 39084 Rev E

Contact:
Darren Riggle

5.0 OTHER

DEFINITION:

Hardware that EC3 certified, but operationally supported by groups noted.

END-ITEMS:

EDUCATIONAL PAYLOAD (SUPPORTED BY CB/PAO).....	269
EMU WATER PROCESSING KIT (A/L COOLANT LOOP RECOVERY) (SUPPORTED BY EC7 - EVA TOOLS AND EQUIPMENT BRANCH)	271
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ISS QD TRAINER ASSY (SUPPORTED BY EC7 - EVA TOOLS AND EQUIPMENT BRANCH) .	274
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EDUCATIONAL PAYLOAD

DETAILED SUPPLEMENTARY OBJECTIVE - 802

<u>STS 97:</u>	<u>Part Name</u>	<u>Part Number</u>
	Tomatosphere – Educational Prop	SED33113646-301
<u>STS 114:</u>	<u>Part Name</u>	<u>Part Number</u>
	Infrared Remote Control	SED33115162-301
	Infrared Remote Control w/out batteries	SED33115162-303
	Propeller Unit	SED33115162-305
	Spinning Top Assembly	SED33115337-301
	Top Handle	SED33115337-501
	Top	SED33115337-503
	Pull Starter	SED33115337-505
	Connector	SED33115337-507
	Origami Paper Packet	SED33115338-501
	Origami Bird	SED33115338-503
	Origami Swan	SED33115338-505
	Origami Frog	SED33115338-507
	Origami Control Moment Gyro (CMG)	SED33115338-509

EDUCATION PAYLOAD OPERATIONS

<u>EPO4:</u>	<u>Part Name</u>	<u>Part Number</u>
	EPO4 Kit	SJG33114386-301
	Weight Bag Assembly	SJG33114386-321
<u>EPO5:</u>	<u>Part Name</u>	<u>Part Number</u>
	Hand Toys Kit	SJG33114634-301
	Density Wand	SJG33114634-501
	Flipping Bear	SJG33114634-502
	Kendama	SJG33114634-503
	Pecking Hens	SJG33114634-504
	Hand String Toys Kit	SJG33114635-301
	Astro Jacks	SJG33114635-501
	Yo-Yo, RPM	SJG33114635-502
	Yo-Yo, Clutch	SJG33114635-503
	Jump Rope	SJG33114635-504
	Climbing Bear	SJG33114635-505
	Spinning Toys Kit	SJG33114636-301
	Boomerang	SJG33114636-501
	Origami Flipper	SJG33114636-502
	Pull String Top	SJG33114636-503
	Hand Helicopter, large	SJG33114636-504
	Hand Helicopter, small	SJG33114636-505
	Soccer/Marbles Kit	SJG33114637-301
	Marble, Low Density	SJG33114637-501

Marble, High Density	SJG33114637-502
Small Wood Marble	SJG33114637-503
Large Wood Marble	SJG33114637-504
Soccer Ball	SJG33114637-505
Lacrosse Kit	SJG33114638-301
Lacrosse Stick	SJG33114638-501
Lacrosse Ball	SJG33114638-502
Hockey Kit	SJG33114639-301
Hockey Stick	SJG33114639-501
Hockey Puck	SJG33114639-502
Vibrating Woodpecker	SDG33114614-501
Whimmy Diddle	SDG33114614-502
Whirly Gig	SDG33114614-503
Butterfly	SDG33114614-504
Balloon	SDG33114614-505

<u>EPO8:</u>	<u>Part Name</u>	<u>Part Number</u>
	Crazy Maze	SDG33115172-501
	Bits and Pieces Puzzle	SDG33115174-501
	Blues Harp	SDG33115169-501
	Chicken Shake	SDG33115171-501
	Balsa Airplane Assembly	SDG33115166-301
	Starfire Glider Assembly	SDG33115167-301
	Tools Block	SDG33115168-501
	Pu'ili	SDG33115349-501
	Wright Flyer Model	SDG33115350-501
	Paper Airplane Book Assembly	SDG33115351-301

<u>EPO9:</u>	<u>Part Name</u>	<u>Part Number</u>
	Tomatosphere II Assembly	SEG33115347-301

Contact:
Fatonia Rivera

EMU WATER PROCESSING KIT (A/L Coolant Loop Recovery)

P/N: SJG33118469-301

DESCRIPTION:

- The EMU A/L CLR Kit contains two complete EMU A/L CLR Units. The kit contains both EMU A/L CLR Units, packed in foam, and stored in a common Cargo Transfer Bag (CTB).
- The A/L CLR uses four different techniques for controlling particulate formation, activated carbon, ion exchange resin, filtration, and iodination. The EMU Ion Filter contains activated carbon which removes organic contaminants and ion exchange resin which removes ionic contaminants, the EMU 3-Micron Filter is flown wet and removes precipitates and suspended biomass, and the EMU Biocide Filter provides an iodine level of 1 to 4 ppm I₂ to control biomass growth. The A/L CLR can be used in two basic configurations, one with the EMU Ion filter, which contains the activated carbon and ion exchange resin, and the EMU 3-Micron Filter in series which provides a method to clean the loop of particulates larger than 3 microns in size. The second configuration is with the biocide filter which provides a method of iodinating the loop.
- The EMU A/L CLR Unit is capable of processing at least 4,000 ml of the attached ionic and organic load down to an organic concentration of 5.0 ppm or less total organic carbon and a conductivity of 5.0 micro-siemens/cm or less within a 1 hour period.

Hardware Part Name	Part Number
EMU Water Processing Kit	SJG33118469-301
2ea. Jumper Assembly, EMU Water Processing	SEG33118468-301
2ea. EMU Ion Filter	SEG33118472-301
4ea. EMU 3-Micron Filter	SEG33118473-301
2ea. EMU Biocide Filter	SEG33118474-301
2ea. EMU Water Processing Kit Foam	SDG33118486-301
2ea. Ziplock Bag, 24" x 24"	528-50000-8
2ea. Ziplock Bag, 8" x 8"	528-50000-3

Weight:

~23 lbs.

Volume or Measurements:

1 Cargo Transfer Bag

Type:

Consumable

Power:

N/A

Fuse:

N/A

Restraint:

Stowed in foam inserts when not connected to the EMU cooling loop

Stowage:

Standard Locker

Limited Life:

2-Yrs from JSC fabrication

Lineage:

New Development for ISS

EVA CCB, CR No. EVA 0034 Rev 3, EMU Support Equipment List

Reference Documents:

GCAR G5087

CARD JSC 62294A

RAESR JSC 62352

Fracture Plan JSC25863A

Material Memo MATL-05-084

Stress Analysis: ESCG-6400-05-MEMO-0083

Crew Procedure No. 1.527

Contact:

Javier Jimenez



INNER HATCH WINDOW SHIELD KIT

PART NO. SJD33117564-301

DESCRIPTION:

- The Inner Hatch Window Shield is designed to be installed and aligned on all active Common Berthing Mechanism (CBM) hatch windows to protect them from damage during nominal IVA operations.
- The Inner Hatch Window Shield Assembly allows Centerline Berthing Camera System (CBCS) fittings to stay in place while protecting the window of the CBM.

Weight:

2.5 lbs

Volume or Measurements:

14.5" (diameter) x 0.375" (thickness)

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro fastener

Stowage:

Soft stowed

Limited Life:

N/A



Lineage:

ISS CCB CR# 8014

Reference Documents:

GCAR	G5293
Materials	MATL-05-138
RAESR	JSC 65021
PRVD	JSC 62266

Contact:

Daniel Molina

ISS QD TRAINER ASSY

P/N: SEG43121903-301

DESCRIPTION:

- The ISS QD Trainer was developed to provide on-orbit refresher training on EVA QDs for crew members who had not had training several months prior to an ISS EVA.
- Male QDs in three sizes ($\frac{3}{4}$ ", 1" and 1.5") are mounted to an aluminum plate that is attached with Velcro to a Panel Cover Assembly.
- The crew uses this mockup to practice using the EVA Spool Positioning Device, Locking Collar, and mating Female QDs.
- Included in the kit are:
 - SEG43121903-302: On-Board Trainer (OBT) 1.0 In QD SPD Assembly
 - SEG43121903-303: OBT 1.5 In QD SPD Assembly
 - SEG43121939-301: OBT 0.75 Female QD w/ Locking Collar
 - SEG43121939-302: OBT 1.5 Female QD

Weight:

8.6 lbs

Volume or Measurements:

4.5" x 6.0" x 16.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A



Restraint:

Velcro attaches it to a Panel Cover Assy, which attached to a rack via seat track

Stowage:

Soft Stowed, The kit is delivered as piece parts and is assigned stowage at USA/FCE.

Limited Life:

N/A

Lineage:

New Development for ISS utilizing existing EVA Male (BOE 1F45540-505, 1F45540-503, 1F70135-1) and Female (BOE XN 1F45541-503, XN 1F70136-1) QDs, QD Tools - Spool

Positioning Device (SEG33114973-301, SEG33114974-301) and Locking Collar, and Panel Cover Assembly (SED33105467-304)

Reference Documents:

CR# SCN 9470

GCAR# G5346

Material Memo# Matl-06-026

Stress Memo# ESCG-4450-05-STAN-DOC-0118

Contact:

Terry Wille

PGT TORQUE ANALYZER KIT PHASE 2 (TAK2)

PART NO. SJG33115454-301

DESCRIPTION:

- The PGT Torque Analyzer Kit (TAK) is manufactured by Mountz, used to measure and display the torque produced by a Pistol Grip Tool (PGT).
- Same as TAK1, but includes stabilizing adapter that interfaces with PGT and reduces extraneous loading.

The PGT TAK Kit contains the following:

Part Number	Part Name
SEG33115176-301	TA Handheld Assy.
SEG33115423-301	PGT Torque Analyzer Assy.
SDG33115175-325	Pouch Assy., PGT Torque Analyzer
SDG33115493-701	Foam Block Assy. PGT Torque Analyzer
SJG33115454-001	ID Card, PGT TAK
065145-WD5	TA Adapter Cable
SJG33115454-501	Marking Pen (2ea.)

Weight:

6.1 lbs.

Volume or Measurements:

12"x 6.5" x 7.5"

Type:

Outfitted

Power:

EP-02-022 Battery

Fuse:

N/A

Restraint:

Hook Fastener

Stowage:

Locker Stowed

Limited Life:

2 yr calibration life

Lineage:

Commercial off-the-shelf Torque Transducer (as certified in TAK1, SJG33115179-301) with New NASA/JSC development to accommodate PGT interface.



Reference Documents:

GCAR	G4668
Materials	MATL-03-080
Stress	MSAD-03-0086
EMI	EV4-10/02-071
Battery Memo	EP-02-022

Contact:

Fatonia Rivera

TREADMILL HARNESS ASSY

PART NO. SEG46120250-301

DESCRIPTION:

- The Treadmill Harness Assembly is a Nomex belt with shoulder straps that is worn by the crewmember when using the Treadmill Vibration Isolation and Stabilization (TVIS) or Russian BD-1.

Weight:

5.0 lbs.

Volume or Measurements:

17"x 13"x 6"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

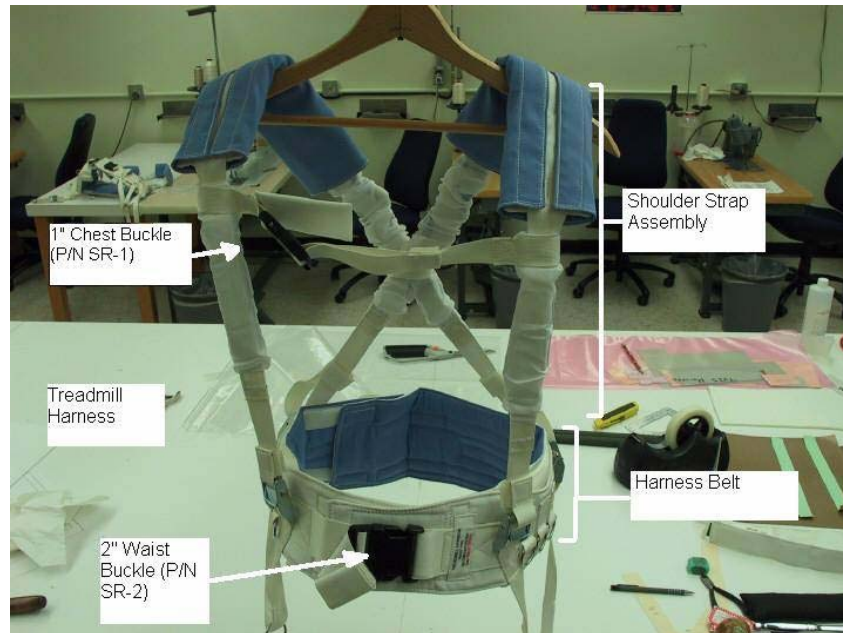
Crew worn

Storage:

Soft Stowed

Limited Life:

N/A



Lineage:

JSC CTSD for ISS

Reference Documents:

GCAR	G4986
Russian	G5008
CR	SSCN 8344
Materials	MATL-05-002
Stress	MSAD-05-0006

Contact:

Fatonia Rivera

TVIS GYRO REPAIR TOOL KIT

P/N: SJG33116475-301

DESCRIPTION:

Tool kit originally certified to perform IFM on failed TVIS gyroscope during 13P stage. Kit contains the following items contained within labeled Ziplock bags:

- 1 set ea Helical Insert Tools for sizes 4-40, 8-32, 10-24, 10-32
- 1 ea 3-Jaw Pressure Screw
- 10 ea 1"x12", 220 and 400 grit emery paper
- 1 ea 12 pt, 1/2" drive, 1-3/8" socket

Weight:

3.23 lb

Volume or Measurements:

13" x 18" x 5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Velcro Hook

Stowage:

Standard stowage trays



Limited Life:

N/A



Lineage:

JSC CTSD off-the-shelf for ISS

NASA P/N	Description	Vendor	Vendor P/N
SEG33116472-301	Bearing Removal Tool	Snap-On	CG243
SEG33116473	Abrasive Cloth		
-301		Metalite	MH61-R0126271
-303		Metalite	MH61-R0126267
SEG33116503-301	Standard Socket Assy	Snap-On	SW441
SEG33116474-301	Helical Insert Tools #4-40		
	Insert Extraction Tool	Heli-Coil	1227-06
	Tang Break-off Tool	Heli-Coil	3695-04
	Helical Inserting Tool	Heli-Coil	7551-04
SEG33116474-303	Helical Insert Tools #8-32		
	Tang Break-off Tool	Heli-Coil	3695-2
	Helical Inserting Tool	Heli-Coil	7551-2
SEG33116474-305	Helical Insert Tools #10-24		
	Tang Break-off Tool	Heli-Coil	3695-3
	Helical Inserting Tool	Heli-Coil	7551-3
SEG33116474-307	Helical Insert Tools #10-32	Heli-Coil	
	Tang Break-off Tool	Heli-Coil	1227-6
	Helical Inserting Tool	Heli-Coil	7552-3

Reference Documents:

CR	SSCN 8357
PR&VD	JSC 60488
V&VD	JSC 60489
Materials	MATL-04-010
RAESR	JSC 60491
GCAR	G4769

Contacts:

Fatonia Rivera

TVIS MAINTENANCE TOOLS KIT

PART NO. SJG33117580-301

DESCRIPTION:

- TVIS Maintenance Tools Kit were certified for periodic maintenance of the TVIS, enabling appropriate adjustments without having to remove the unit from the pit
- The Kit consists of the following tools, stowed in individually-labeled ziplock bags :

Part Number	Part Name
SEG33117570-301	TVIS Phillips Socket Driver Assy
SEG33117570-701	#0 Phillips Socket Driver, 1/4" drive
SEG33117570-702	#1 Phillips Socket Driver, 1/4" drive
SEG33117577-301	TVIS Tension Locking Nut Crowfoot Assy, 1-1/16"
SEG33117578-301	TVIS Torque Screw Driver Assy, 20-100 in-oz, 1/4" drive
SEG33117579-301	TVIS Toque Driver Assy, 0-96 in-oz, 1/4" drive
SEG33117581-301	TVIS Break-Over Torque Wrench Assy, 65 in-lbs, 3/16" Hex
SEG33117582-301	TVIS 3/16" Hex Key Assy (3/16" hex, .25" x 1.5" x 6")

Weight:

Kit - 2.3 lbs

Volume or Measurements:

13"x 18"x 5"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

Hook Fastener on each tool as well as each ziplock

Stowage:

Soft stowed

Limited Life:

The Torque Screwdriver and Torque Driver each have a 1-year calibration life.

Lineage:

Commercial off-the-shelf

TVIS Phillips Socket Driver Assy

Vendor: Snap-On

#0 P/N: TMP01E

#1 P/N: TMP12E
TVIS Tension Locking Nut Crowfoot Assy, 1-1/16"
Vendor: Snap-On
P/N: FC34B

TVIS Torque Screw Driver Assy, 20-100 in-oz, 1/4" drive
Vendor: Precision Tools
P/N: 61SM

TVIS Torque Driver Assy, 0-96 in-oz, 1/4" drive
Vendor: Precision Tools
P/N: DS1F96CZH

TVIS Break-Over Torque Wrench Assy, 65 in-lbs, 3/16" Hex
Vendor: Mountz
P/N: 20315/61449
(Hex Head is P/N: 61449, Handle is P/N: 20315, received as 20315/61449)

TVIS 3/16" Hex Key Assy
Vendor: Mountz
P/N: 61390

Reference Documents:

GCAR	G5233
Russian	U0914
CR	9194 Rev A
Materials	MATL-05-083B

Contact: Fatonia Rivera



Break-Over Torque Wrench
65 in-lb, 3/16" Hex



Torque Driver
0-96 in-oz, 1/4" Drive



#0 Phillips Socket



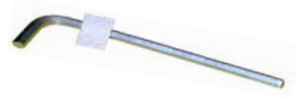
#1 Phillips Socket



1-1/16" Crowfoot



Torque Screwdriver, 20-100 in – oz, 1/4" Drive



3/16" L-Style Hex Key

ULD AUDIO CABLE ASSY

PART NO. SEG33117591-301

DESCRIPTION:

- The ULD Audio Cable Assy connects the ULD Receiver (CS.412231.002) to the Camcorder Assembly (SEZ16103293-301) for the purpose of recording the audio output of the ULD Receiver
- Hardware shall interface between the audio-out of the ULD Receiver (600 Ohm impedance) and the audio-in of the PD100A Camcorder (6800 Ohm impedance).
- Hardware design shall allow the recording of the ULD Receiver audio on the PD100A Camcorder.
- Hardware shall not interfere with the connection of a headphone jack to the PD100A Camcorder.

Weight:

4.0 lbs

Volume or Measurements:

60" x 2.0" x 2.0"

Type:

Outfitted

Power:

N/A

Fuse:

N/A

Restraint:

N/A

Storage:

Soft stowed

Limited Life:

N/A

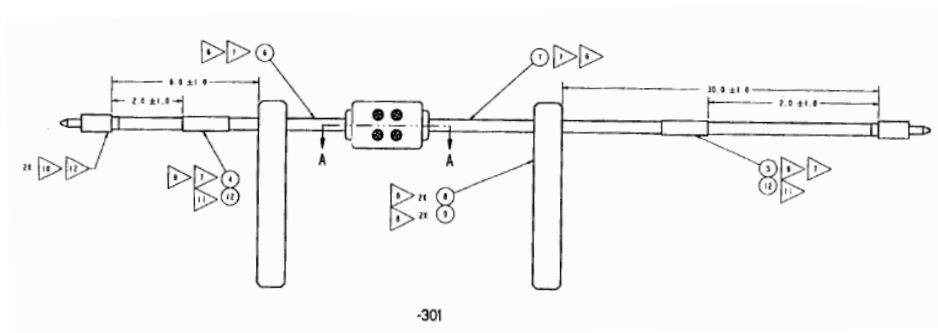
Lineage:

CR SSCN #009764

Reference Documents:

GCAR	G5516
CR	009764
ARM	JSC 65222
RAESR	JSC 65258
Materials	MATL-07-009
VM	JSC 65271

Contact: Keshla Johnson



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