



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

LUNAR ROVER VEHICLE STOWAGE LIST

APOLLO 15

(J-1 SERIES)

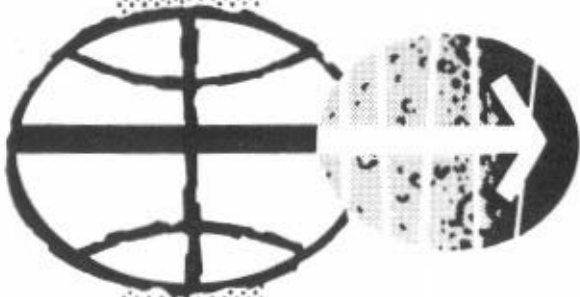
JULY 23, 1971

FOR INFORMATION CONTACT MISSION SUPPORT EQUIPMENT OFFICE

PG15/J. W. THOMPSON 483-4358

DB 2633

MANNED SPACECRAFT CENTER HOUSTON, TEXAS



APOLLO 15 (CM /LM-10)
LRV STOWAGE LIST

PAGE 1 OF 11

ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
A0101.1	SEB33100125-204	Magazine, 16mm DAC	8	4	1.0	1 - on 16mm camera 3 - Zone B				
A0108.1 end A0108.2	SEB33100082-217	Magazine, 70mm L.S. Hasselblad	13	6	1.4	1 ea - on item A1015 3 - Zone B 1 - on item A1045 in Zone B.				
A1005	SEB33100113-304	Filter, Polarizing	1	1	.2	1 - on item A1015				Item deleted. Used around LM only.
A1008.3	SKB32100116-371	LM Lunar Surface Maps Procedures	1	1	1.5	1 - on item R1002				
A1015	SEB33100040-307	Camera, 70mm L.S. Hasselblad	2	2	3.6	1 ea - on crew, interim loc under CDR seat				
A1016	SEB33100048-305	Lens, 60mm	2	2	1.7	1 ea - on item A1015				
A1027	SEB33100294-302	Trigger, 70mm L.S. Hasselblad	3	3	.2	1 ea - on item A1015 1 - on item				

APOLLO 15 (CM 112/YM-10)
LRV STOWAGE LIST

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ITEM	PAR NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER THAVENSE			CHANGE
							1	2	3	
A1028	SEB33100293-302A	Handle, 70mm L.S. Hasselblad	3	3	.5	1 ea - on item A1015 1 - on item A1045				
A1042	SEB33100402-301	Lens Brush	3	2	.1	2 - Zone A on pallet				
A1043	SEB33100295-308	Camera/Pwr Pack Assy, 16mm L.S.	1	1	8.9	1 - on 16mm steff on in- board handhold				
A1043.1	SEB33100100-215	Camera, 16mm L.S.	1	1		1 - on 16mm steff on in- board handhold				
A1043.2	SEB33100010-303	10mm Lens, 16mm L.S.	1	1		1 - on 16mm L.S. camera				
A1043.3	SEB33100303-302	Handle, 16mm L.S.	1	1		1 - on 16mm L.S. camera				
A1043.4	SEB33100304-3,3	Power Pack, 16mm L.S.	1	1		1 - on 16mm L.S. camera				

APOLLO 15 (. 12/IM-10)
LR STOWAGE LIST

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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
A1043.5	SEB3310C396-301	RCU Bracket, 16mm L.S.	1	1		1 - on 16mm L.S. camera				
A1045	SEB33100040-309	Camera, L.S. Elect., Hasselblad	1	1	3.1	1 - Zone B				
A1046	SEB33100284-302	Lens, 500mm	1	1	4.6	1 - on item A1045				
A1047	SEB33100031-204	Ringsight	1	1	.1	1 - on item A1045				
B1001.1	S 742170-3	Bracket, 70mm Camera Mount	3	3	.6	1 ea - on item A1015. 1 - on item A1045				
B1041	SEB33100290-302	Safety Line, Lunar Surface (100 ft)	1	1	1.3	1 - in L.S. safety line bag				
B1045	SEB39105185-301	Brush, Lunar Dust	1	1	1.3	1 - Zone A, on pallet				
B1047	SDB33100214-306	Bag, Lunar Surface Safety Line	1	1	.1	1 - Zone A on pallet				

APOLLO 15 (CM 112/LM-10)
LRV STOWAGE LIST


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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
B1052	SV729602-9	Buddy SISS Assy	1	1	7.7	1 - on back of IMP seat				P/N change from -5. CCBD 1E006, 1E0193. New item. CCBD 1E0046A.
B1066	SEE 39106736-301	Strap, ICRU Retainer	1	1		1 - on item B1047				
E1001	2265826	GCTA - Ground Controlled TV Assy	1	1		1 - right side forward chassis				
E1001.1	2265840-501	Color TV Camera	1	1	12.9	1 - right side forward chassis				
E1001.2	2265825-501	TCU - TV Control Unit	1	1	12.5	1 - right side forward chassis				
E1001.5	2270086-501	Cable, TCU/OTV 3 ft.	1	1		1 - on items E1001.1 and E1001.2				Item removed. Attached to TCU. CCBD 1E0288.
E1002	8370855-502	Communication Relay System	1	1	67.2	See below				
E1002.1	8370854-502	LCRU	1	1	(54.4)	1 - middle forward chassis				
E1002.3	8151103-3	Battery, LCRU	3	2		1 - in item E1002.1 1 - Zone B				Added.

ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY P R TRAVERSE			CHANGE
							1	2	3	
E1002.4	8370891-502	Hi-Gain Antenna Assy	1	1	(10.3)	1 - left side forward chassis				
E1002.5	8670994-502	Low-Gain Antenna Assy	1	1	(2.5)	1 - inboard-handhold (interchangeable with left and right sides)				
E1003	TBD	TV Lens Filter	1	1	.3	1 - on item E1001.1				Item deleted. CCBD 110093A.
R1001	SEB33100733-301	Staff, 16cm L.S.	1	1	1.5	1 - inboard handhold (interchangeable with left and right sides)				
R1002	SEB33100865-301	LRV Map Holder	1	1	.5	1 - inboard handhold (R.H.)				
R1003	SEB33100879-301	Bag, Gnomon	1	1	0.8	Earth launch - under CDR seat Lunar traverse - on back of CDR seat				
R1004	SEB33100881-303	Adapter Assy, 20 DSB 70mm Hesselblad	2	2		1 ea - on item A1015				New item. CCBD 110300.

APOLLO 15 (CM 112/IM-10)
LRV STOWAGE LIST

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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
G4008	SEB39105248-306	Tool Extension	1	1	1.8	1 - Zone A on hand tool carrier and on crew (LMP waist tether)				P/N change from -304. CCED 0S0245A.
G4009	SEB39106245-301	Tongs (32-inch)	2	2	1.0	2 - Zone A, on hand tool carrier and (1) on crew (CDR waist tether)				
G4012	SEB39100317-302	Gnomon	1	1	.6	1 - Zone A, on hand tool carrier and in item R1003				
G4034	2347200-501, Rev. E	Laser Ranging Retro Reflector	1	1	80.2					Added "Rev. E" to P/N
G4035	SGB39105801-402	Lunar Hand Tool Carrier	1	1	13.8	1 - Zone A, on pallet				
G4035.2	SEB39105725-301	Scoop, Adjustable Sampling	1	1	.8	1 - Zone A, on hand tool carrier and on crew (LMP waist tether)				
G4035.3	SEB39100319-301	Hammer	1	1	2.8	1 - Zone A on hand tool carrier and on crew (LMP PISS tool carrier)				
G4035.5	SDB39106391-302	Drive Tube Tool Assy	1	1	.1	1 - on crew (LMP PLSS tool carrier)/HTC				P/N change from TBD.

APOLLO 15 (CM 112/IM-10)
LRV STOWAGE LIST

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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
G4047	467A806000-099	Drill Assy, Apollo L.S.	1	1	26.5	2				P/N change from -089. CCBD 110086
G4048	M10543RM004-03	Bags, Extra Sample Collection	4	4	1.2	4 - Zone A, on pallet				
G4049	SEB39106050-302	Penetrometer Assy, Self Recording	1	1	5.3	1 - Zone A, on pallet				
G4049.1	SEB39106051-302	Upper Housing Assy (Penetrometer)	1	1	(2.0)	1 - Zone A, on penetrom- eter assy				
G4052	SEB39106331-TBD	Return Cover (Penetrometer)	1	1	Neg	1 - Zone A, on pallet				Item deleted. CCBD 110243
G4053	SEB39106329-301	Accessory Holder Assy (Penetrometer)	1	1	.5	1 - Zone A, on pallet				
G4054	SEB39106380-303	Rake, Lunar Sampling	1	1	4.3	1 - Zone A, on pallet				P/N change from -301. CCBD 180089.

APO LO 15 (CM 112/IM-10)
LRV STOWAGE LIST

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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY P R TRAVERSE			CHANGE
							1	2	3	
G4056	M10543RM004-04	Sample Collection Bag (Earth launch on pallet)	2	2	1.8	2 - Zone A, on pallet				
	M10543RM004-04	Sample Collection Bags (Earth launch in SRC's)	2	2	1.8	2 - Zone A on hand tool carrier				
	11306EM030-00	20 Bag Dispenser (Flat Bags)	6	4	1.1	1 - Zone A on hand tool carrier and in Zone B & C 1 ea - on item A1015				
	SEB39106392-301	Lower Drive Tube Assy	5	5	.6	2 - Zone C				
	SRB39106393-301	Upper Drive Tube Assy	4	4	.6	9 - Zone A, in sample collection bags on hand tool carrier and in Zone C				
	SEB39107125-302	Core Tube Cap Dispenser Assy	3	2	.2	1 - Zone A on hand tool carrier and on crew (LMP PLSS tool carrier)				
	EM40021-01	Special Environment Sample Cont (SESC)	3	2	1.0	1 - Zone C 1 - Zone A, in sample collection bag on hand tool carrier 1 - Zone C				

APOLLO 15 (12/LM-10)
LRV STOWAGE LIST

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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
	467A806009-001 -003	Drill Stems	5 1	5 1	.4 .4	6 - Zone A, sample collect- ion bag on hand tool carrier and under LMP seat				
	467A8060003-029 -039	Drill Stem Caps and Retainers	1 1	1 1	.15 .15	2 - Zone A, in sample collection bag on hand tool carrier and under LMP seat				
ø3060	LDW340-58630.3-1	Bag, Sample Return	1	1	3.2	1 - Zone A on pellet				P/N change from -TBD.
ø3067	LDW340-60720-1	LRV AFT Pallet Assy	1	1	29.7	1 - Zone A				
ø3072	LDW340-60784-5	Drill String Vice	1	1	.5	1 - Zone A, on pellet				P/N change from -1.

APOLLO 15 (CM 112/ M-10)
 LRV INSTALLED GFE LIST

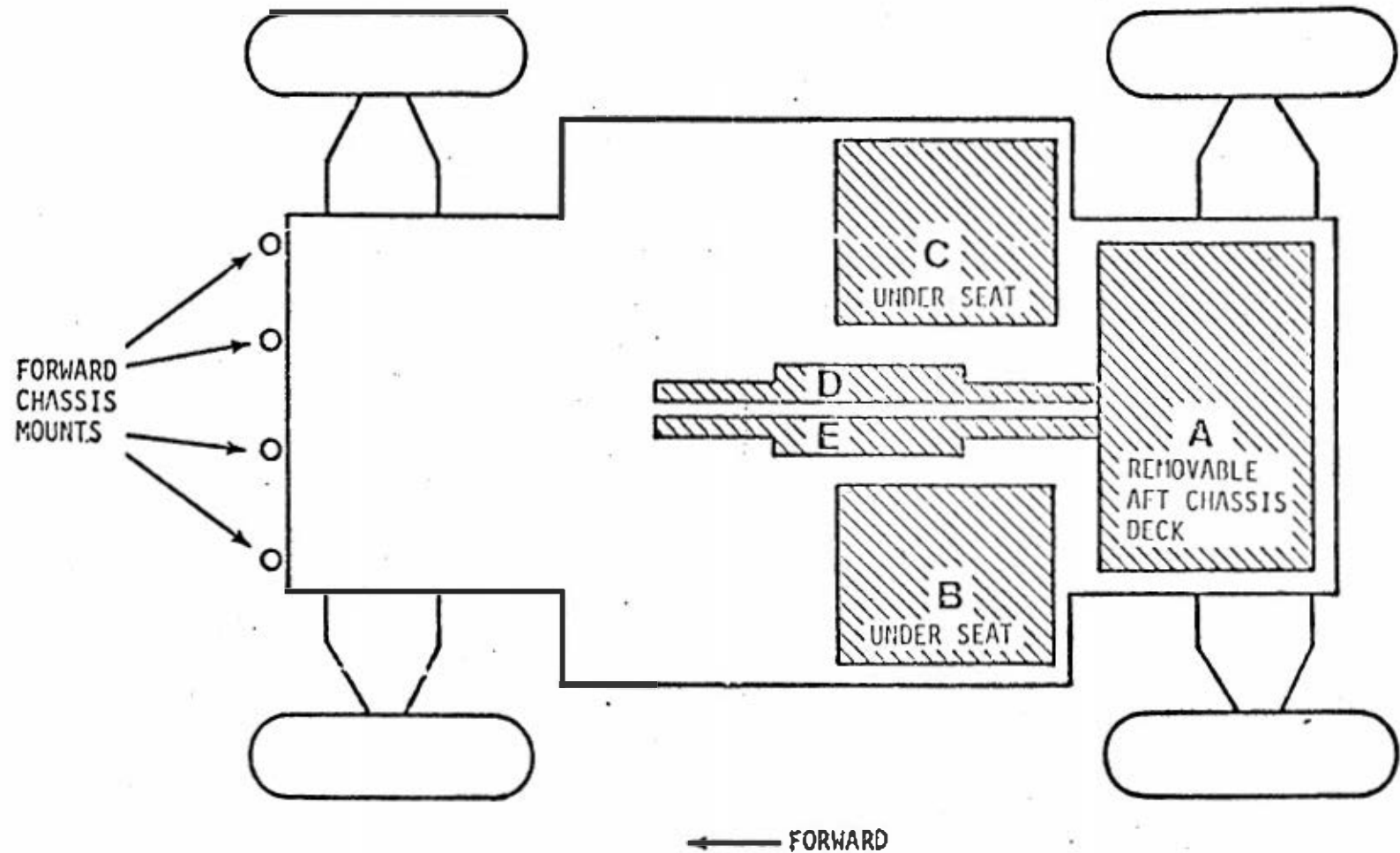
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ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT WT (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
	SEB33100770-303	Bag Assy, R.H. Payload Stowage, LRV quipment		1	1.82	1 - Zone C				
	SEB33100770-305	Bag Assy, L.H. Payload Stowage, LRV Equipment		1	3.3	1 - Zone B				
	8671561-502	Post Assy - LCRU (R.H.)		1	.8	1 - installed on middle for- ward chassis				
	8671562-502	Post Assy - LCRU (L.H.)		1	.8	1 - installed on middle for- ward chassis				
	8670957-502	Cable, Assy, LCRU/ LRV/TV		1	1.0	1 - installed on forward chassis				
	8779373-501	HGA Adapter Interface		1	.24	1 - installed on left side forward chassis				
	8779373-502	TV Camera Adapter Interface		1	.24	1 - installed on right side forward chassis				

APOLLO 15 (CM 1-10)
 LRV INSTALLED Gross LIST

ITEM	PART NUMBER	NOMENCLATURE	S/C QTY	MAX LRV QTY	UNIT W (LB)	STOWAGE LOCATION	QTY PER TRAVERSE			CHANGE
							1	2	3	
	LDW340-60719-1	Adapter Installation - LR AF Chassis Pallet		1	2.9	1 - installed on Zone A for LR AF Chassis pallet				
	8779692-503	Cable Stowage Adapter (L.H.)		1	.24	3				
	8779692-504	Cable Stowage Adapter (R.H.)		1	.24	4				

LUNAR ROVING VEHICLE STOWAGE ZONES



INFORMATION SHEET

For planning purposes the Apollo 15 (J-1 Series) LRV Storage List provides a baseline configuration for Apollo 16 and 17.

The supplying division letter code in the item column is as follows:

- A - Flight Crew Support Division
- B - Crew Systems Division
- E - Telecommunications System Division
- G - Lunar Surface Project Office
- R - Spacecraft Design Office

Flag note definitions:

- 1 Interim storage location is on top of LMP seat. (Only one crew member LRV operation)
- 2 Interim storage location is under the LMP seat. (Only one crew member LRV operation)
- 3 Outbound installation on left side forward chassis on HGA adapter interface for retention of one end of LCRU/LRV/TV cable assy. Removed on lunar surface.
- 4 Outbound installation on right side forward chassis on TV camera adapter interface for retention of one end of LCRU/LRV/TV cable assy. Removed on lunar surface.
- 5 These bags are stowed in the following places: pallet, hand tool carrier, Zone C, and PLSS tool carrier.

CCBD NUMBERS		ECP NUMBERS		MANNED SPACECRAFT CENTER			DATE
PCN				PROGRAM OFFICE CONFIGURATION CONTROL BOARD DIRECTIVE CHANGE PRIORITY _____			7-23-71
MSC							PAGE 1
OS-0153F							OF 1
MSFC		CHANGE TITLE		IMPACT ON <input type="checkbox"/> CSM <input type="checkbox"/> LM <input checked="" type="checkbox"/> GFE <input type="checkbox"/> LV <input type="checkbox"/> LF <input type="checkbox"/> EXP <input type="checkbox"/> GSE <input type="checkbox"/> OTHER _____			
KSC		Lunar Rover Vehicle Storage List					
CHANGE IMPACT SUMMARY		NOMENCLATURE AND PART NO. OF AFFECTED END ITEM					
		Not applicable					
GSE <input type="checkbox"/>		PRODUCTION EFFECTIVITY			MODIFICATION EFFECTIVITY		
SPARES <input type="checkbox"/>		Apollo 15 (J-1 Series)					
TRAINERS <input type="checkbox"/>		ESTIMATED COST					
SOFTWARE <input type="checkbox"/>		FY71		FY72		FY73	
FLIGHT PROGRA S <input type="checkbox"/>						TOTAL	
RTCC PROGRA S <input type="checkbox"/>		SCHEDULE IMPACT					
AOH <input type="checkbox"/>		DISPOSITION AND DIRECTED ACTION:					
STORAGE LIST <input checked="" type="checkbox"/>		CHANGE TO BE IMPLEMENTED ONLY WHEN ALL INTERFACE ACTIONS HAVE BEEN AUTHORIZED					
COMAT <input type="checkbox"/>		This CCBD approves the attached Apollo 15 (J-1 Series)					
TCRD <input type="checkbox"/>		LRV Storage List which updates the May 26, 1971,					
ERD <input type="checkbox"/>		released list. Future additions and/or deletions to the					
RETEST <input type="checkbox"/>		list shall be made by CCBD action.					
OTHER <input type="checkbox"/>							
WEIGHT		NOTE: The function of the attached list to control					
LM _____		hardware and hardware interfaces during prelaunch					
CSM _____		fit and function tests only, not equipment handling					
OTHER _____		and arrangement during a lunar traverse.					
ICDS AFFECTED							
INTERCENTER							
INTRACENTER							
CSM							
LM							
CONTRACT SPECIFICATIONS AFFECTED		AUTHORIZATION		CHANGE CATEGORY			
		APPROVED <input type="checkbox"/>		MANDATORY		PRODUCT IMPROVEMENT	
		APPRD WITH REVS <input type="checkbox"/>		MISSION REQUIREMENT <input type="checkbox"/>		COST SAVINGS <input type="checkbox"/>	
		DISAPPROVED <input type="checkbox"/>		COMPATIBILITY <input type="checkbox"/>		SCHEDULE IMPROVEMENT <input type="checkbox"/>	
ENDORSEMENTS <input type="checkbox"/> LM <input type="checkbox"/> CSM <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		RECORD <input type="checkbox"/>		IMPROVE FIELD CHECKOUT <input type="checkbox"/>		ENHANCE MISSION CAPABILITY <input type="checkbox"/>	
SIGNATURE		DOCUMENTATION <input type="checkbox"/>					
Signature: Raymond J. Kubicki		7/21/71		Signature: Raymond J. Kubicki			
Signature: Chris O. Brown for P.C. Frank		7/21/71		Signature: Raymond J. Kubicki			
Signature: R. B. Bradley		7/21/71		Signature: Raymond J. Kubicki			
				CHAIRMAN CONFIGURATION CONTROL BOARD			

DR 0122