

US Spacesuit Usage

Jonathan McDowell

July 28, 2006

1 NASA Spacesuits

The following table gives the spacesuits used for each NASA piloted spaceflight prior to the STS program.

An STS EMU has a mass of around 120 kg (early flights); 140-150 kg (ISS). The Apollo suit had a mass of 160 kg.

Mission	Crew	EMU serial
MR-3	Shepard	M-22
MR-4	Grissom	M-21
MA-6	Glenn	M-23
MA-7	Carpenter	M-26
MA-8	Schirra	M-15
MA-9	Cooper	M-20
GT-3	Grissom	G3C-1
	Young	G3C-4
GT-4	McDivitt	G4C-3
	White	G4C-8/VCM/HHMU
GT-5	Cooper	G4C-10
	Conrad	G4C-15
GT-7	Borman	G5C-5
	Lovell	G5C-6
GT-6A	Schirra	G3C-3
	Stafford	G4C-21
GTA-8	Armstrong	G4C-24
	Scott	G4C-27/ELSS/ESP/HHMU
GT-9A	Stafford	G4C-17
	Cernan	G4C-32/ELSS/AMU
GTA-10	Young	G4C-19
	Collins	G4C-36/ELSS/HHMU
GTA-11	Conrad	G4C-39
	Gordon	G4C-40/ELSS/HHMU
GTA-12	Lovell	G4C-41
	Aldrin	G4C-42/ELSS
Apollo 7	Schirra	A7L-004
	Eisele	A7L-005
	Cunningham	A7L-006
Apollo 8	Borman	A7L-030
	Lovell	A7L-037
	Anders	A7L-031
Apollo 9	McDivitt	A7L-020
	Scott	A7L-019
	Schweickart	A7L-015
Apollo 10	Stafford	A7L-047
	Young	A7L-043
	Cernan	A7L-044
Apollo 11	Armstrong	A7L-056

	Collins	A7L-033
	Aldrin	A7L-077
Apollo 12	Conrad	A7L-065
	Gordon	A7L-066
	Bean	A7L-067
Apollo 13	Lovell	A7L-078
	Swigert	A7L-088
	Haise	A7L-061
Apollo 14	Shepard	A7L-090
	Roosa	A7L-085
	Mitchell	A7L-073
Apollo 15	Scott	A7LB-315
	Worden	A7LB-094
	Irwin	A7LB-320
Apollo 16	Young	A7LB-322
	Mattingly	A7LB-082
	Duke	A7LB-327
Apollo 17	Cernan	A7LB-328
	Evans	A7LB-404
	Schmitt	A7LB-329
SL-2	Conrad	A7LB-614
	Kerwin	A7LB-615
	Weitz	A7LB-616
SL-3	Bean	A7LB-632
	Garriott	A7LB-633
	Lousma	A7LB-634
SL-4	Carr	A7LB-626
	Gibson	A7LB-627
	Pogue	A7LB-628
ASTP	Stafford	A7L-801
	Brand	A7L-806
	Slayton	A7L-803

The next table details STS flights, giving both the EMU and PLSS serial numbers.

EMU	PLSS	Crew		
1002	1003	1 EV-1	Young	
1003	1005	1 EV-2	Crippen	
1009	1006	2 EV-1	Engle	
1010	1005	2 EV-2	Truly	
1012	1006	3 EV-1	Lousma	
1013	1005	3 EV-2	Fullerton	
1019	1006	4 EV-1	Mattingly	
1016	1005	4 EV-2	Hartsfield	
1023	1006	5 EV-1	Lenoir	0:00
1022	1005	5 EV-2	Allen	0:00
1026	1003	6 EV-1	Musgrave	3:54
1024	1005	6 EV-2	Peterson	3:54
1025	1006	6 BU		
1028	1005	7 EV-1	Thagard	
1027	1003	7 EV-2	Fabian	
1031	1005	8 EV-1	Gardner	
1032	1006	8 EV-2	Truly	
1037	1008	9 EV-1	Young	
1036	1007	9 EV-2	Garriott	
1040	1008	41-B EV-1	McCandless	11:37
1038	1009	41-B EV-2	Stewart	11:37
1041	1007	41-B BU		
1043	1008	41-C EV-1	Nelson	10:06
1044	1009	41-C EV-2	Van Hoften	10:06
1045	1007	41-C BU		
1046	1006	41-D EV-1	Mullane	
1048	1010	41-D EV-2	Hawley	
1049	1003	41-G EV-1	Leestma	3:29
1050	1008	41-G EV-2	Sullivan	3:29
1053	1005	41-G BU		
1051	1009	51-A EV-1	Allen	12:14
1052	1007	51-A EV-2	Gardner	12:14
1054	1006	51-A BU		
1055	1003	51-C EV-1	Buchli	
1056	1008	51-C EV-2	Shriver	
1059	1007	51-D EV-1	Hoffmann	3:10

1060	1010	51-D EV-2	Griggs	3:10	
1061	1003	51-B EV-1	Thagard		
1057	1006	51-B EV-2	Gregory		
1063	1005	51-G EV-1	Fabian		
1062	1009	51-G EV-2	Nagel		
1064	1010	51-F EV-1	Musgrave		
1065	1007	51-F EV-2	England		
1067	1006	51-I EV-1	Van Hoften	11:51	
1066	1003	51-I EV-2	Fisher	11:51	
1068	1009	51-I BU			
1071	1005	51-J EV-1	Hilmers		
1072	1008	51-J EV-2	Stewart		
1074	1010	61-A EV-1	Buchli		
1073	1007	61-A EV-2	Dunbar		
1077	1006	61-B EV-1	Ross	12:20	
1070	1011	61-B EV-2	Spring	12:20	
1079	1008	61-B BU			
1078	1005	61-C EV-1	Nelson		
1081	1010	61-C EV-2	Chang		
1080	1007	51-L EV-1	McNair	Destroyed	
1075	1012	51-L EV-2	Onizuka	Destroyed	
1091	1005	26R EV-1	Nelson		
1090	1011	26R EV-2	Lounge		
1090	1011	27R EV-1	Ross		
1092	1013	27R EV-2	Shepherd		
1094	1013	29R EV-1	Bagian		
1090	1011	29R EV-2	Springer		
1096	1005	30R EV-1	Thagard		
1095	1003	30R EV-2	Lee		
1099	1013	28R EV-1	Adamson		
1098	1011	28R EV-2	Brown		
2001	1003	34 EV-1	Chang		
2003	1005	34 EV-2	Baker		
2006	1013	33R EV-1	Carter		
2005	1009	33R EV-2	Thornton		
2003	1005	32R EV-1	Dunbar		
2001	1003	32R EV-2	Low		
2007	1014	36 EV-1	Hilmers		
2008	1011	36 EV-2	Thuot		
2010	1009	31R EV-1	McCandless		
2012	1003	31R EV-2	Sullivan		
2011	1013	31R BU			
2013	1005	41 EV-1	Melnick		
2008	1011	41 EV-2	Akers		
2010	1009	38 EV-1	Springer		
2011	1013	38 EV-2	Meade		
2007	1014	35 EV-1	Hoffman		
2009	1006	35 EV-2	Lounge		
2009	1006	37 EV-1	Ross		
2011	1013	37 EV-2	Apt		
2014	1008	37 BU			
2008	1011	39 EV-1	Harbaugh		
2013	1005	39 EV-2	McMonagle		
2007	1014	40 EV-1	Bagian		
2010	1009	40 EV-2	Jernigan		
2014	1008	43 EV-1	Low		
2009	1006	43 EV-2	Adamson		
2008	1011	48 EV-1	Buchli		
2013	1005	48 EV-2	Gemar		
2019	1009	44 EV-1	Runco		
2018	1014	44 EV-2	Voss		
2013	1005	42 EV-1	Thagard		
2017	1013	42 EV-2	Readdy		
2022	1009	45 EV-1	Sullivan		
2018	1014	45 EV-2	Foale		
2020	1006	49 EV-1	Thuot		
2015	1010	49 EV-2	Hieb		
2016	1015	49 EV-3	Thornton		
2014	1008	49 EV-4	Akers		
2013	1005	50 EV-1	Baker		
2017	1013	50 EV-2	Meade		
2018	1014	46 EV-1	Hoffman		
2021	1011	46 EV-2	Chang		
2022	1009	47 EV-1	Apt		
2016	1015	47 EV-2	Davis		
2017	1013	52 EV-1	Shepherd		

2015	1010	52 EV-2	Jernigan	
2014	1008	53 EV-1	Voss	
2020	1006	53 EV-2	Clifford	
2018	1014	54 EV-1	Harbaugh	4:28
2015	1010	54 EV-2	Runco	4:28
2014	1008	56 EV-1	Foale	
2022	1009	56 EV-2	Cockrell	
2016	1015	55 EV-1	Ross	
2013	1005	55 EV-2	Harris	
2018	1014	57 EV-1	Low	5:40
2020	1006	57 EV-2	Wisoff	5:40
2025	1010	51 EV-1	Walz	
2023	1003	51 EV-2	Newman	
2027	1015	58 EV-1	Lucid	
2013	1005	58 EV-2	Wolf	
2014	1008	61 EV-1	Hoffman	
2026	1013	61 EV-2	Musgrave	
2030	1014	61 EV-3	Thornton	
2029	1009	61 EV-4	Akers	
2025	1010	60 EV-1	Chang	
2027	1015	60 EV-2	Davis	
2033	1005	62 EV-1	Thuot	
2032	1003	62 EV-2	Gemar	
2030	1014	59 EV-1	Godwin	
2014	1008	59 EV-2	Jones	
2026	1013	65 EV-1	Chiao	
2033	1005	65 EV-2	Thomas	
2032	1003	64 EV-1	Lee	
2029	1009	64 EV-2	Meade	
2025	1010	68 EV-1	Wisoff	
2030	1014	68 EV-2	Smith	
2031	1006	66 EV-1	Parazynski	
2014	1008	66 EV-2	Tanner	
2029	1009	63 EV-1	Foale	
2032	1003	63 EV-2	Harris	
		63 BU		
2033	1005	67 EV-1	Jernigan	
2039	1013	67 EV-2	Grunsfeld	
2038	1008	71 EV-1	Harbaugh	
2035	1015	71 EV-2	Baker, E	
2039	1013	70 EV-1		
2040	1014	70 EV-2		
2042	1009	69 EV-1	Voss	
2041	1010	69 EV-2	Gernhardt	
		69 BU		
2032	1003	73 EV-1	Lopez Alegria	
2034	1011	73 EV-2	Coleman	
2035	1015	74 EV-1	Ross	
2038	1008	74 EV-2	McArthur	
2041	1010	72 EV-1	Chiao	
2042	1009	72 EV-2	Barry	
2043	1006	72 EV-3	Scott,W	
		72 BU		
2040	1014	75 EV-1	Chang-Diaz	
2035	1015	75 EV-2	Nicollier	
2039	1013	76 EV-1	Godwin	
2044	1005	76 EV-2	Clifford	
		76 BU		
2042	1009	77 EV-1	Runco	
3003	1003	77 EV-2	Bursch	
		77 BU		
3015	1015	78 EV-1	Helms	
3010	1010	78 EV-2	Linnehan	
3014	1014	79 EV-1	Walz	
3011	1011	79 EV-2	Apt	
3013	1013	80 EV-1	Jernigan	
3006	1006	80 EV-2	Jones	
3015	1015	80 BU		
3010	1010	81 EV-1	Wisoff	
3009	1009	81 EV-2	Grunsfeld	
3003	1003	82 EV-1	Lee	
3008	1008	82 EV-2	Smith	
3014	1014	82 EV-3	Harbaugh	
3008	1008	82 EV-4	Tanner	
3011	1011	83 EV-1	Gernhardt	
3015	1015	83 EV-2	Thomas	

3006	1006	84 EV-1	Clervoy	
3013	1013	84 EV-2	Lu	
3011	1011	94 EV-1	Gernhardt	
3015	1015	94 EV-2	Thomas	
3009	1009	85 EV-1	Curbeam	
3017	1017	85 EV-2	Robinson	
3014	1014	86 EV-1	Parazynski	
3008	1008	86 EV-2	Titov	
3017	1017	87 EV-1	Scott	
3003	1003	87 EV-2	Doi	
3013	1013	89 EV-1	Reilly	
3016	1016	89 EV-2	Anderson	
3017	1017	90 EV-1	Linnehan	
3008	1008	90 EV-2	Williams	
3011	1011	91 EV-1	Chang	
3014	1014	91 EV-2	Kavandi	
3011	1011	95 EV-1	Robinson	
3010	1010	95 EV-2	Duque	
3015	1015	88 EV-1	Ross	
3013	1013	88 EV-2	Newman	
3006	1006	88 BU	(Sturckow)	
3006	1006	96 EV-1	Jernigan	
3011	1011	96 EV-2	Barry	
3010	1010	96 BU		
3003	1003	93 EV-1	Tognini	
3014	1014	93 EV-2	Coleman	
3015	1015	103 EV-1	Smith	
3017	1017	103 EV-2	Grunsfeld	
3003	1003	103 EV-3	Foale	
3008	1008	103 EV-4	Nicollier	
		99 EV-1	Theile	
		99 EV-2	Kavandi	
		101 EV-1	Williams	
		101 EV-2	Voss	
3011		101 BU		
		106 EV-1	Lu	
		106 EV-2	Malenchenko	
		106 BU		
3005		92 EV-1	Chaio	
		92 EV-2	McArthur	
		92 EV-3	Wisoff	
		92 EV-4	Lopez-Alegria	
3011		97 EV-1	Tanner	
3013		97 EV-2	Noriega	
3016		97 BU		
3005		98 EV-1	Jones	
3004		98 EV-2	Curbeam	
		98 BU		
		102 EV1	Voss	
3003		102 EV2	Helms	
		102 EV3	Thomas	
3005?		102 EV4	Richards	
		100 EV1	Hadfield	
3011?		100 EV2	Parazynski	
3010?		104 EV1	Gernhardt	
3013?		104 EV2	Reilly	
3003		104 BU		
3010?		105 EV1	Barry	
3017?		105 EV2	Forrester	
3006?		108 EV1	Godwin	
3009		108 EV2	Tani	
		109 EV1	Grunsfeld	
		109 EV2	Linnehan	
		109 EV3	Newman	
		109 EV3	Massimino	
3015?		110 EV1	Smith	
3009		110 EV2	Walheim	
		110 EV3	Ross	
		110 EV4	Morin	
3013		111 EV1	Chang-Diaz	
3015		111 EV2	Perrin	
3017		112 EV1	Wolf	
3011		112 EV2	Sellers	
3017		113 EV1	Lopez-Alegria	
3009		113 EV2	Herrington	
3016?		107 EV1	Brown	destroyed

3014?	107 EV2	Anderson	destroyed
3017	114 EV1	Noguchi	
3004	114 EV2	Robinson	
3009	114 ISS-FE	Phillips	
3010	114 ISS-CDR	Krikalyov	
3008	121	BU	
3006	121 EV1	Sellers	
3015	121 EV2	Fossum	

ISS EMU	Up	Down
3005	98	104?
3011	100	104?
3010?	104	105
3013	104	105
30xx	105	110
3017	105	108
3014	108	111
3009	108	113
3015	110	111
3013	111	121
3011	111	114
3017	113	113?
3005	113	114
3010	114	121
3009	114	121
3006	121	
3015	121	

1.0.1 Spacesuits

The Shuttle spacesuits, or EMUs (Extravehicular Mobility Units), built by Hamilton Standard, were themselves reusable spaceships. The PLSS (Portable Life Support System), a box worn as a backpack, contains most of the crucial hardware, and the suits are often identified by their PLSS number. An EMU number was also given to each suit; two suits were given the same EMU number if most of their components remained unchanged, but this was not done in any consistent way. In addition to the PLSS, major components of an EMU include the helmet, and the upper (HUT) and lower (LTA) parts of the suit proper. The HUT came in four sizes, small, medium, large and extra large, unlike earlier spacesuits which were fit to each individual astronaut.

Spacesuit components

PLSS	Portable Life Support System
HUT	Hard Upper Torso
LTA	Lower Torso Assembly
Helm	Helmet
DCM	Display and control module
SOP	Secondary Oxygen Pack
ARM	Arm
CCA	Communications carrier assembly
EVVA	EV Visor assembly
LCVG	Liquid cooling and ventilation garment

IDB Insuit drink bag
 SCU Service and Cooling Umbilical
 CCC Contaminant control cartridge
 Bat Battery

PLSS Reuse Table

EMU	PLSS	HUT	LTA	Helmet	DCM	SOP	User	Time EV
1002	1003	1009L	1017	1004			STS-1 EV-1	Young
1026	1003	1024L	1019	1004			STS-6 EV-1	Musgrave
1027	1003	1024L	1034	1006			STS-7 EV-2	Fabian
1049	1003	1023L	1064	1013			41-G EV-1	Leestma
1055	1003	1023L	1043	1013			51-C EV-1	Buchli
1061	1003	1023L	1050	1013			51-B EV-1	Thagard
1066	1003	1023L	1035	1014			51-I EV-2	Fisher
1095	1003	1047XL			2004	1015	30R EV-2	Lee
2001	1003	1035L	1084	1016	2004	1003	34 EV-1	Chang
2001	1003	1025S	1078	1031	2004	1003	32R EV-2	Dunbar
2012	1003	1038M	1079	1031	2004	1003	31R EV-2	Sullivan
2023	1003	1043L	1085	1029	2014	1004	51 EV-2	Newman
2032	1003	1047XL	1103	1030	2014	1006	62 EV-2	
2032	1003	1047XL	1102	1045	2003	1006	64 EV-1	
2032	1003						63 EV-2	Harris
2032	1003						73 EV-1	Lopez-Alegria
3003	1003						77 EV-2	
3003	1003						82 EV-1	Lee
3003	1003						93 EV-1	Tognini
3003	1003						103 EV-3	Foale
3003	1003						102 EV2	Helms
3003	1003						104 BU	
3004	1004						98 EV-2	Curbeam
3004	1004						114 EV2	Robinson
1003	1005	1021L	1007	1006			1 EV-2	Crippen
1010	1005	1021L	1007	1005			2 EV-2	Truly
1013	1005	1021L	1028	1006			3 EV-2	Fullerton
1016	1005	1021L	1028	1004			4 EV-2	Hartsfield
1022	1005	1018S	1033	1004			5 EV-2	Allen
1024	1005	1021L	1017	1006			6 EV-2	Peterson
1028	1005	1021L	1036	1004			7 EV-1	Thagard
1031	1005	1021L	1026	1004			8 EV-1	Gardner
1053	1005	1031L	1060				41-G BU	
1063	1005	1026L	1049	1013			51-G EV-1	Fabian
1071	1005	1026L	1055	1004			51-J EV-1	Hilmers
1078	1005	1026L	1057	1015	1008	1006	61-C EV-1	Nelson
1091	1005	1034L	1050	1026	2004	1014	26R EV-1	Nelson
1096	1005	1034L			2005	1014	30R EV-1	Thagard
2003	1005	1034L	1083	1027	2005	1006	34 EV-2	Baker
2003	1005	1034L	1083	1027	2005	1006	32R EV-1	Low
2013	1005	1043L	1089	1027	2005	1014	41 EV-1	Melnick
2013	1005	1043L	1091	1031	2005	1014	39 EV-2	McMonagle
2013	1005	1043L	1087	1026	2005	1014	48 EV-2	Gemar
2013	1005	1043L	1087	1026	2005	1014	42 EV-1	Thagard
2013	1005	1043L	1087	1026	2005	1014	50 EV-1	
2013	1005	1047XL	1097	1024	2005	1014	55 EV-2	
2013	1005	1047XL	1096	1031	2005	1014	58 EV-2	
2033	1005	1035L	1082	1029	2005	1014	62 EV-1	
2033	1005	1035L	1087	1040	2005	1014	65 EV-2	
2033	1005						67 EV-1	Jernigan
2044	1005						76 EV-2	Clifford
3005	1005						92 EV-1	Chaio
3005	1005						98 EV-1	Jones
3005	1005						98	TO ISS
3005?	1005						102 EV4	Richards
3005	1005						104?	FROM ISS
3005	1005						113	TO ISS
3005	1005						114	FROM ISS
1009	1006	1009L	1019	1004			2 EV-1	Engle
1012	1006	1017XL	1025	1004			3 EV-1	Lousma
1019	1006	1011M	1007	1006			4 EV-1	Mattingly

PLSS Reuse Table

EMU	PLSS	HUT	LTA	Helmet	DCM	SOP	User	Time EV	
1023	1006	1020M	1007	1006			5 EV-1	Lenoir	0:00
1025	1006	1009L					6 BU		
1032	1006	1009L	1038	1006			8 EV-2	Truly	
1046	1006	1028M	1050	1004			41-D EV-1	Mullane	
1054	1006	1028M	1040				51-A BU		
1057	1006	1031L	1043	1014			51-B EV-2	Gregory	
1067	1006	1019XL	1045	1013			51-I EV-1	Van Hoften	11:51
1077	1006	1035L	1042	1004	1006	1005	61-B EV-1	Ross	12:20
2009	1006	1039L	1071	1026	2003	1006	35 EV-2	Lounge	
2009	1006	1039L	1080	1024	2003	1006	37 EV-1	Ross	
2009	1006	1039L			2006	1006	43 EV-2	Low	
2020	1006	1039L	1078	1030	2006	1006	49 EV-1	Thuot	
2020	1006	1039L	1094	1029	2007	1006	53 EV-2		
2020	1006	1039L	1084	1036	2006	1006	57 EV-2		
2031	1006						66 EV-1	Parazynski	
2043	1006						72 EV-3	Scott W	
3006	1006						80 EV-2	Jones	
3006	1006						84 EV-1	Clervoy	
3006	1006						88 BU	(Sturckow)	
3006	1006						96 EV-1	Jernigan	
3006?	1006						108 EV1	Godwin	
3006	1006						121	TO ISS	
3006	1006						121 EV1	Sellers	
1036	1007	1024L	1035	1006			9 EV-2	Garriott	
1041	1007	1029M					41-B BU		
1045	1007	1019XL	1044				41-C BU		
1052	1007	1030L	1063	1006			51-A EV-2	Gardner	12:14
1059	1007	1030L	1053	1006			51-D EV-1	Hoffmann	3:10
1065	1007	1030L	1042	1006			51-F EV-2	England	
1073	1007	1037M	1071	1014	1011	1007	61-A EV-2	Dunbar	
1080	1007	1037M	1069	1018	1011	1005	51-L EV-1	McNair	Destroyed
1037	1008	1021L	1017	1004			9 EV-1	Young	
1040	1008	1020M	1044	1006			41-B EV-1	McCandless	11:37
1043	1008	1009L	1035	1004			41-C EV-1	Nelson	10:06
1050	1008	1029M	1052	1014			41-G EV-2	Sullivan	3:29
1056	1008	1017XL	1050	1014			51-C EV-2	Shriver	
1072	1008	1016M	1051	1006	1004	1006	51-J EV-2	Stewart	
1079	1008	1039L	1072		1004	1012	61-B BU		
2014	1008	1035L	1079		2004	1015	37 BU		
2014	1008	1035L			2004	1015	43 EV-1	Adamson	
2014	1008	1036L	1091	1029	2011	1015	49 EV-4	Akers	
2014	1008	1036L	1084	1025	2011	1015	53 EV-1		
2014	1008	1036L	1094	1025	2011	1015	56 EV-1		
2014	1008	1039L	1091	1029	2010	1015	61 EV-1	Hoffman	
2014	1008	1039L	1094	1036	2010	1015	59 EV-2		
2014	1008						66 EV-2	Tanner	
2038	1008						71 EV-1	Harbaugh	
2038	1008						74 EV-2	McArthur	
3008	1008						82 EV-2	Smith	
3008	1008						82 EV-4	Tanner	
3008	1008						103 EV-4	Nicollier	
3008	1008						121	BU	
1038	1009	1016M	1036	1013			41-B EV-2	Stewart	11:37
1044	1009	1017XL	1045	1006			41-C EV-2	Van Hoften	10:06
1051	1009	1033M	1044	1004			51-A EV-1	Allen	12:14
1062	1009	1035L	1046	1014			51-G EV-2	Nagel	
1068	1009	1017XL	1066				51-I BU		
2005	1009	1018S	1082	1026	2014	1010	33R EV-2	Thornton	
2010	1009	1045M	1078	1027	2014	1010	31R EV-1	McCandless	
2010	1009	1034L	1086	1031	2014	1010	38 EV-1	Springer	
2010	1009	1038M	1082	1027	2014	1010	40 EV-2	Jernigan	
2019	1009	1051L	1095	1025	2014	1010	44 EV-1	Runco	
2022	1009	1029M	1095	1028	2014	1010	45 EV-1	Sullivan	
2022	1009	1029M	1100	1026	2014	1010	47 EV-1		
2022	1009	1029M	1099	1029	2014	1010	56 EV-2		
2029	1009	1036L	1103	1036	2008	1010	61 EV-4	Akers	
2029	1009	1036L	1089	1038	2011	1018	64 EV-2		
2029	1009						63 EV-1	Foale	
2042	1009						69 EV-1	Voss	

PLSS Reuse Table

EMU	PLSS	HUT	LTA	Helmet	DCM	SOP	User	Time EV
2042	1009						72 EV-2	Barry
2042	1009						77 EV-1	Runco
3009	1009						81 EV-2	Grunsfeld
3009	1009						85 EV-1	Curbeam
3009	1009						108 EV2	Tani
3009	1009						108	TO ISS
3009	1009						EX3	Bursch
3009	1009						110 EV2	Walheim
3009	1009						113 EV2	Herrington
3009	1009						113	FROM ISS
3009	1009						114	TO ISS
3009	1009						114 ISS-FE	Phillips
3009	1009						EX12-1 CDR	McArthur
3009	1009						121	FROM ISS
1048	1010	1027M	1040	1006			41-D EV-2	Hawley
1060	1010	1036L	1042	1004			51-D EV-2	Griggs
1064	1010	1036L	1050	1004			51-F EV-1	Musgrave
1074	1010	1036L	1043	1015	1010	1010	61-A EV-1	Buchli
1081	1010	1036L	1075	1014	1010	1007	61-C EV-2	Chang
2015	1010	1040L	1098	1031	2009	1007	49 EV-2	Hieb
2015	1010	1045M	1099	1031	2008	1007	52 EV-2	
2015	1010	1051L	1080	1021	2008	1007	54 EV-2	
2025	1010	1051L	1100	1025	2004	1007	51 EV-1	
2025	1010	1051L	1100	1036	2004	1007	60 EV-1	
2025	1010	1051L	1084	1034	2004	1007	68 EV-1	
2041	1010						69 EV-2	Gernhardt
2041	1010						72 EV-1	Chiao
3010	1010						78 EV-2	Linnahan
3010	1010						81 EV-1	Wisoff
3010	1010						96 BU	
3010?	1010						104 EV1	Gernhardt
3010?	1010						104	TO ISS
3010?	1010						105 EV1	Barry
3010?	1010						105	FROM ISS
3010	1010						114	TO ISS
3010	1010						114 ISS-CDR	Krikalyov
3010	1010						EX12-1	Tokarev
3010	1010						121	FROM ISS
1070	1011	1033M	1051	1006	1002	1009	61-B EV-2	Spring
1090	1011	1043L	1071	1031	2002	1004	26R EV-2	Lounge
1090	1011	1043L	1080	1026	2002	1004	27R EV-1	Ross
1090	1011	1043L	1041	1014	2002	1004	29R EV-2	Springer
1098	1011	1046XL	1080	1025	2002	1011	28R EV-2	Brown
2008	1011	1044L	1084	1026	2002	1009	36 EV-2	Thuot
2008	1011	1044L	1090	1024	2002	1009	41 EV-2	Akers
2008	1011	1044L	1084	1016	2002	1009	39 EV-1	Harbaugh
2008	1011	1044L	1080	1027	2002	1009	48 EV-1	Buchli
2021	1011	1044L	1094	1028	2002	1009	46 EV-2	
2034	1011						73 EV-2	Coleman
3011	1011						79 EV-2	Apt
3011	1011						83 EV-1	Gernhardt
3011	1011						94 EV-1	Gernhardt
3011	1011						96 EV-2	Barry
3011	1011						101 BU	
3011	1011						97 EV-1	Tanner
3011?	1011						100 EV2	Parazynski
3011	1011						100	TO ISS
3011	1011						104?	FROM ISS
3011	1011						111	TO ISS
3011	1011						112 EV2	Sellers
3011	1011						EX6-2	Pettit
3011	1011						114	FROM ISS
1075	1012	1019XL	1070	1019	1009	1012	51-L EV-2	Onizuka
1092	1013	1046XL	1075	1025	2005	1017	27R EV-2	Shepherd
1094	1013	1036L	1050	1026	2006	1007	29R EV-1	Bagian
1099	1013	1036L	1074	1031	2006	1010	28R EV-1	Adamson
2006	1013	1046XL	1086	1025	2006	1011	33R EV-1	Carter
2011	1013	1033M			2006	1013	31R BU	

PLSS Reuse Table

EMU	PLSS	HUT	LTA	Helmet	DCM	SOP	User	Time EV
2011	1013	1033M	1082	1016	2006	1013	38 EV-2	Meade
2011	1013	1033M	1087	1025	2006	1013	37 EV-2	Apt
2017	1013	1048XL	1097	1024	2013	1013	42 EV-2	Readdy
2017	1013	1035L	1099	1024	2013	1013	50 EV-2	
2017	1013	1048XL	1087	1024	2013	1013	52 EV-1	
2026	1013	1040L	1087	1035	2011	1013	61 EV-2	Musgrave
2026	1013	1040L	1082	1031	2011	1013	65 EV-1	
2039	1013						67 EV-2	Grunsfeld
2039	1013						70 EV-1	
2039	1013						76 EV-1	Godwin
3013	1013						80 EV-1	Jernigan
3013	1013						84 EV-2	Lu
3013	1013						88 EV-2	Newman
3013	1013						97 EV-2	Noriega
3013?	1013						104 EV2	Reilly
3013?	1013						104	TO ISS
3013?	1013						105	FROM ISS
3013	1013						111 EV1	Chang-Diaz
3013	1013						111	TO ISS
3013	1013						EX6 CDR	Bowersox
3013	1013						121	FROM ISS
2007	1014	1036L	1085	1025	2007	1011	36 EV-1	Hilmers
2007	1014	1036L	1085	1025	2007	1011	35 EV-1	Hoffman
2007	1014	1036L	1089	1026	2007	1011	40 EV-1	Bagian
2018	1014	1034L	1084	1031	2007	1011	44 EV-2	Voss
2018	1014	1034L	1094	1025	2007	1011	45 EV-2	Foale
2018	1014	1034L	1085	1025	2007	1011	46 EV-1	
2018	1014	1034L	1089	1026	2007	1011	54 EV-1	Harbaugh
2018	1014	1034L	1089	1030	2007	1008	57 EV-1	Low
2030	1014	1049S	1094	1030	2009	1008	61 EV-3	Thornton
2030	1014	1029M	1089	1035	2009	1008	59 EV-1	
2030	1014	1043L	1085	1042	2009	1008	68 EV-2	
2040	1014						70 EV-2	
2040	1014						75 EV-1	Chang-Diaz
3014	1014						79 EV-1	Walz
3014	1014						82 EV-3	Harbaugh
3014	1014						93 EV-2	Coleman
3014	1014						108	TO ISS
3014	1014						EX4	Walz
3014	1014						111	FROM ISS
3014	1014						107 EV1	Brown
								Destroyed
2016	1015	1049S	1082	1031	2010	1016	49 EV-3	Thornton
2016	1015	1049S	1088	1021	2012	1016	47 EV-2	
2016	1015	1035L	1079	1031	2012	1016	55 EV-1	
2027	1015	1048XL	1102	1034	2013	1016	58 EV-1	
2027	1015	1052	1099	1031	2006	1016	60 EV-2	
2035	1015						71 EV-2	Baker, E
2035	1015						74 EV-1	Ross
2035	1015						75 EV-2	Nicollier
3015	1015						78 EV-1	Helms
3015	1015						80 BU	
3015	1015						83 EV-2	Thomas
3015	1015						94 EV-2	Thomas
3015	1015						103 EV-1	Smith
3015?	1015						110 EV1	Smith
3015	1015						110	TO ISS
3015	1015						111 EV2	Perrin
3015	1015						111	FROM ISS
3015	1015						121	TO ISS
3015	1015						121 EV2	Fossum
3016	1016						97 BU	
3016	1016						107 EV2	Anderson
								Destroyed
3017	1017						85 EV-2	Robinson
3017	1017						103 EV-2	Grunsfeld
3017?							105 EV2	Forrester
3017							105	TO ISS
3017							108	FROM ISS
3017	1017						112 EV1	Wolf

PLSS Reuse Table

EMU	PLSS	HUT	LTA	Helmet	DCM	SOP	User	Time EV
3017	1017						113 EV1	Lopez-Alegria
3017	1017						114 EV1	Noguchi
UNK	UNK						63 BU	
UNK	UNK						69 BU	
UNK	UNK						72 BU	
UNK	UNK						76 BU	
UNK	UNK						77 BU	
UNK	UNK						99 EV-1	Theile
UNK	UNK						99 EV-2	Kavandi
UNK	UNK						101 EV-1	Williams
UNK	UNK						101 EV-2	Voss
UNK	UNK						106 EV-1	Lu
UNK	UNK						106 EV-2	Malenchenko
UNK	UNK						106 BU	
UNK	UNK						92 EV-2	McArthur
UNK	UNK						92 EV-3	Wisoff
UNK	UNK						92 EV-4	Lopez-Alegria
UNK	UNK						98 BU	
UNK	UNK						102 EV1	Voss
UNK	UNK						102 EV3	Thomas
UNK	UNK						100 EV1	Hadfield
UNK	UNK						105	TO ISS
UNK	UNK						109 EV1	Grunsfeld
UNK	UNK						109 EV2	Linnehan
UNK	UNK						109 EV3	Massimino
UNK	UNK						109 EV3	Newman
UNK	UNK						110 EV3	Ross
UNK	UNK						110 EV4	Morin
UNK	UNK						110	FROM ISS