

Dump OBCP code
 File: H_FCP_DHS_3045.xls
 Author: S. Manganelli



Procedure Summary

Objectives

The ASW function "OBCP Management" is responsible of executing the loaded Procedures.

This procedure describes the steps needed to dump the code of a given OBCP.

Summary of Constraints

Default status of the function: "Stopped".

When the function is stopped, it does not accept any other telecommands than the:

- Start Function TC(8,1,107);
- Report Function Status TC(8,5,107).

Thus, if the function is stopped this procedure cannot be executed.

Spacecraft Configuration

Start of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

End of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

Reference File(s)

Input Command Sequences

Output Command Sequences

HFD3045A
 HFD3045B

Referenced Displays

ANDs	GRDs	SLDs
ZAZAI999		(None)

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
01/11/07		1	Created	cmevi-hp	

Status : Version 4 - Unchanged
 Last Checkin: 15/03/09

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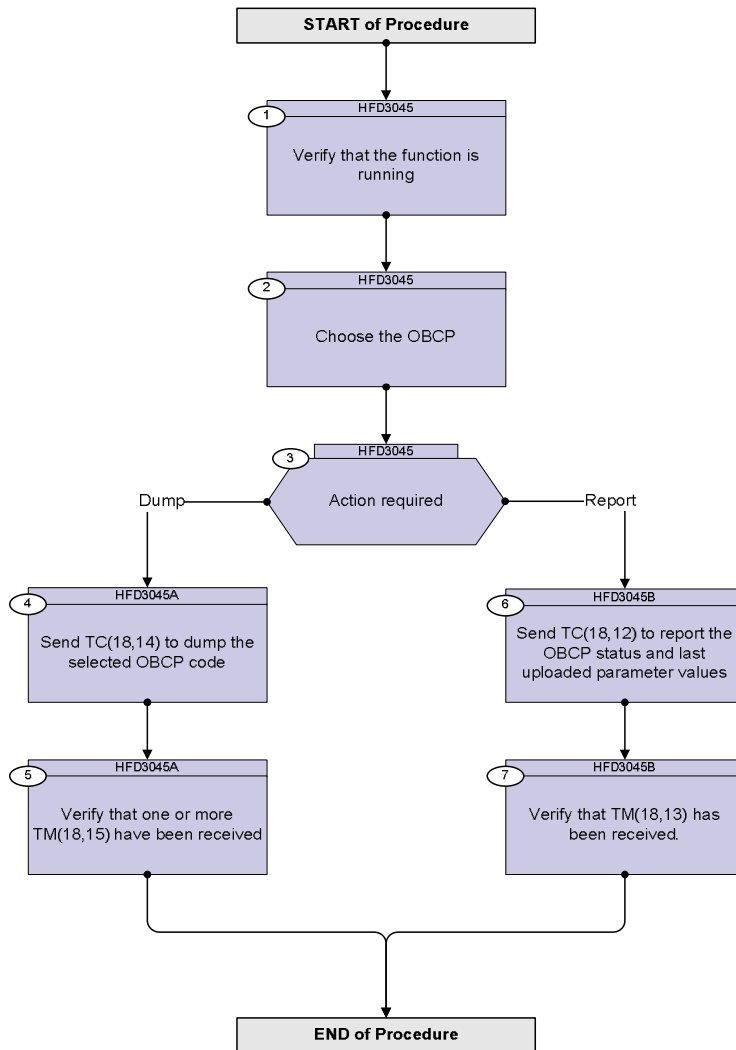


10/06/08	1	2	TC Flag and Seq Properly changed	S. Manganelli	
28/11/08	2	3	Procedure updated according to latest version received from industry on 29/09/2008	cmevi-hp	
15/03/09	2.2	4	Fixed MOIS FP bug	S. Manganelli	

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Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
<p><i>TC Seq. Name :HFD3045 (Dummy sequence)</i></p> <p><i>TimeTag Type:</i> <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
1		Verify that the function is running		Next Step: 2
		Verify Telemetry	ObcpSts DEH36170 = Running	AND=ZAZAI999
2		Choose the OBCP		Next Step: 3
3		Action required		Next Step: Dump 4 Report 6
<p><i>TC Seq. Name :HFD3045A (Dump OBCP code)</i></p> <p><i>TimeTag Type: N</i> <i>Sub Schedule ID:</i></p> <p style="text-align: center;">□</p>				
4		Send TC(18,14) to dump the selected OBCP code		Next Step: 5
		When this request is received, the CDMU ASW shall prepare one or more TM-Reports (18,15) of the specified OBCP.		
		Execute Telecommand	DumpObcp DCT79170	
		Command Parameter(s) :	ObcpId DH135170 OBCPID	
		TC Control Flags :	GBM IL DSE --Y -- --	
		Subsch. ID : 10 Det. descr. : TEMPLATE DumpOBCP TC(18,14)		
5		Verify that one or more TM(18,15) have been received		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch										
		<p>Note: the OBCP procedure is dumped at a 6 packets per second rate, thus reporting an OBCP of maximum length requires 39 seconds.</p> <p>WARNING Execution of other TC of OBCP management function are delayed during a dump.</p>												
5.1		The OBCP code can be reported in a single TM packet		<input type="checkbox"/>										
		Only one packet is received.												
		Verify Packet Reception TM 18-15 Dump of a copy of an OBCP Packet Details: <table style="margin-left: 200px;"> <tr><td>APID:</td><td>16</td></tr> <tr><td>Type:</td><td>18</td></tr> <tr><td>Subtype:</td><td>15</td></tr> <tr><td>PI1:</td><td></td></tr> <tr><td>PI2:</td><td></td></tr> </table>	APID:	16	Type:	18	Subtype:	15	PI1:		PI2:		ObcpDump	
APID:	16													
Type:	18													
Subtype:	15													
PI1:														
PI2:														
		Verify Telemetry <table style="margin-left: 100px;"> <tr><td>ProcedureID</td><td>DE293170</td></tr> </table>	ProcedureID	DE293170		(None)								
ProcedureID	DE293170													
		Verify Telemetry <table style="margin-left: 100px;"> <tr><td>ObcpSegmId</td><td>DE313170</td></tr> </table>	ObcpSegmId	DE313170	= 0 <dec>	(None)								
ObcpSegmId	DE313170													
		Verify Telemetry <table style="margin-left: 100px;"> <tr><td>N_Repet_8bit</td><td>DE315170</td></tr> </table>	N_Repet_8bit	DE315170		(None)								
N_Repet_8bit	DE315170													
		The following parameter is repeated N times												
		Verify Telemetry <table style="margin-left: 100px;"> <tr><td>ObcpCode</td><td>DE314170</td></tr> </table>	ObcpCode	DE314170		(None)								
ObcpCode	DE314170													
5.2		The length of an OBCP code requires, for its reporting, a sequence of TM packets		<input type="checkbox"/>										
5.2.1		The K packets required to dump the code		<input type="checkbox"/>										
		Each received TM(18,15) will be identified by a unique Segment-Identifier starting with 1 and increasing by one for subsequents packets and will carry a segment of the overall OBCP code.												
		Verify Packet Reception TM 18-15 Dump of a copy of an OBCP Packet Details: <table style="margin-left: 200px;"> <tr><td>APID:</td><td>16</td></tr> <tr><td>Type:</td><td>18</td></tr> <tr><td>Subtype:</td><td>15</td></tr> <tr><td>PI1:</td><td></td></tr> <tr><td>PI2:</td><td></td></tr> </table>	APID:	16	Type:	18	Subtype:	15	PI1:		PI2:		ObcpDump	
APID:	16													
Type:	18													
Subtype:	15													
PI1:														
PI2:														
		Verify Telemetry <table style="margin-left: 100px;"> <tr><td>ProcedureID</td><td>DE293170</td></tr> </table>	ProcedureID	DE293170		(None)								
ProcedureID	DE293170													

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry ObcpSegmId DE313170	1 to K (max 254)	(None)
		Verify Telemetry N_Repet_8bit DE315170		(None)
		The following parameter is repeated N times		
		Verify Telemetry ObcpCode DE314170		(None)
5.2.2		A last packet at the end of the dump		<input type="checkbox"/>
		After transmission of all the required TM-packets a TM(18,15) will be sent with Segment_ID set to FFhex, and Length set to zero.		
		Verify Packet Reception TM 18-15 Dump of a copy of an OBCP Packet Details: APID: 16 Type: 18 Subtype: 15 PI1: PI2:	ObcpDump	
		Verify Telemetry ProcedureID DE293170		(None)
		Verify Telemetry ObcpSegmId DE313170	= FF <hex>	(None)
		Verify Telemetry N_Repet_8bit DE315170	= 0 <dec>	(None)
TC Seq. Name :HFD3045B (Report OBCP status)				
TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
6		Send TC(18,12) to report the OBCP status and last uploaded parameter values		Next Step: 7
		When this request is received, CDMU ASW reports the actual status of the specified OBCP as well as the last uploaded parameter values.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand ReptObcpStatus Command Parameter(s) : ObcpId DH135170 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : TEMPLATE Report OBCP Status and Parameters TC(18,12)	DCT78170 OBCPID	
7		Verify that TM(18,13) has been received.		Next Step: END
		Verify Packet Reception TM 18-13 OBCP Status Report Packet Details: APID: 16 Type: 18 Subtype: 13 PI1: PI2:	ObcpStsRpt	
		Verify Telemetry ProcedureID DE293170	OBCPID	(None)
		Verify Telemetry OBCPStatus DEZA8170	Running/Stopped/Suspended	(None)
		Verify Telemetry StepID DEZA9170	line number in the source code	(None)
7.1		32 bits parameters		<input type="checkbox"/>
		Verify Telemetry N_Repetition DE014170	0 to 38	(None)
		The following parameters are repeated N times		
		Verify Telemetry ObcpPid DE296170	32 bits parameter ID	(None)
		Verify Telemetry ObcpPidVal32 DE312170	32 bits parameter last uploaded value	(None)
7.2		64 bits parameters		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry N64 DER1E170	0 to 23	(None)
		The following parameters are repeated N64 times		
		Verify Telemetry ObcpPid DE296170	64 bits parameter ID	(None)
		Verify Telemetry ObcpPidVal64 DER1D170	64 bits parameter last uploaded value	(None)
End of Procedure				