Rug-Rel Considered technology L Ovaldy Services	ACCEPTANCE TEST PROCEDURE		DOC Name ATP	PART NUMBER 0313-000-274	
IN VEHICLE CREW CONSOLE DP231		REV A	SH No. 26	PREPD. Shruti B R	DATE 23/01/25
		Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

APPENDIX 'A'-FUNCTIONAL TEST DATA RECORDS

TEST DATA RECORD SHEET - 1

VISUAL INSPECTION

Project : DP231

Date: 7/3/2025

DUT: In Vehicle Crew Console Serial No.: よっユナトロロタ

Test Condition: POST-ATP

S.NO	SPECIFICATIONS	Observed Value	REMARKS OK/NOT OK
Dimensi	ons:		-
a	Length:300mm±5%	300mm	
b	Width:400mm±5%	400mm	
с	Height:200mm±5%	210mm	
d	Weight: 12Kg	12.75kg	
Connecto	or Discription:	0	
e	J1(D38999/24WB5PN)	Present	
f	J2(D38999/24WB5SA)	Present Present	
g	J3(D38999/24WB5SA)	Present	
h	J4(D38999/24WA35PN)	Present	
i	J5(D38999/24WA35SN)	Present	
j	J6(D38999/24WC35PN)		
k	J7(RE38999/24WDUSB-SB)	Present Present	
l,	J8(RE38999/24WDUSB-SB)	Present	

Rug-Rel Rep

Rug-Rel	ACCEPTANCE TEST PROCEDURE		DOC Name ATP	PART NUMBER 0313-000-274	
IN VEHICLE CREW CONSOLE		REV A	SH No. 27	PREPD. Shruti B R	DATE 23/01/25
Б	P231	Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

ISOLATION TEST

Project : DP231

Date: 0 7 03 2025

DUT: In Vehicle Crew Console Serial No.: トゥンチムロのタ

Test Condition:

s.no	PARAMETER	SPECIFICATIONS	Observed Value	REMARKS OK/NOT OK
а	J1 (A & C) +28V	No continuity should come	Observed	
b	J1 (B & D) GND	No continuity should come	observed	
С	J1 (A & E) Earth	No continuity should come	observed	

Rug-Rel Rep

Rug-Rel Commitment towards Technology I Quality Services	ACCEPTANCE TEST PROCEDURE		DOC Name ATP	PART NUMBER 0313-000-274	
IN VEHICLE CREW CONSOLE		REV A	SH No. 28	PREPD. Shruti B R	DATE 23/01/25
D	P231	Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

Power ON & OFF Test

Project : DP231

Date: 07/03/2025

DUT

: In Vehicle Crew Console

Serial No.: R0274009

Test Condition:

Power ON test:

SI No	Test Description	Specified values	Observed Value (Yes /No)	Remarks
1	Switch ON DC	PWR_ON LED RED glows	Yes	
2	"PWR SW" in ON position	SBC booted with Ubuntu 22.04	Ves	

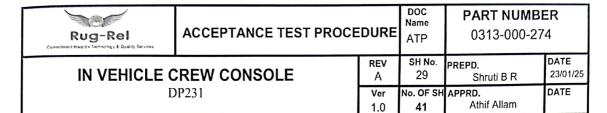
Power OFF test:

SI No	Test Description	Specified values	Observed Value (Yes /No)	Remarks
1	Switch OFF DC	PWR_ON RED LED OFF	Yes	
2	Power supply OFF position	SBC - No output on monitor	Yes	

Power Consumption test:

	Voltage (V)	Current (A)	Remarks
18V	18V	1.30 A	
24V	23.9 8V	0 99A	
32V	32V	0.78A	

Rug-Rel Rep



SBC Testing (Ubuntu)

Project : DP231

Date: 07/03/2025

DUT

: In Vehicle Crew Console

Serial No.: RO274009

Test Condition:

Processor Detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	Processor	CPU Detected	OK	
2	CPU manufacturer	Genuine Intel	Genuine intel	
3	CPU Type	13th Gen Intel(R) Core (TM) i7-	intel (K) welth)
		1365UE	17-136 WE	
4	CPUID	Family 6, Model 186, Stepping 3	Family 6, Stepping	,
5	Physical CPU's	1	21, 11, 2	
6	Cores per CPU	10	10	
7	Hyperthreading	Enabled	Enable	
8	CPU speed	1700.0 MHz	1760.0MHz	

RAM Detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	RAM Test	RAM detected	OK	
2	Total Physical Memory	7718 MB	7718 MB	
3	Memory devices			
3.1	Channel A-D	8192 MB, DDR4, 3200 MT/s	848, DDR 4, 326	MTK

SSD Storage detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	SSD storage detection	SSD detected		
2	Disk drive:	256GB	232.293	

Rug-Rel Rep

Rug-Rel Consilinant feature 1 frontaining & Gould's for view	ACCEPTANCE TEST PROCEDURE		DOC Name ATP	PART NUMB 0313-000-27	
IN VEHICLE C	REW CONSOLE	REV A	SH No. 30	PREPD. Shruti B R	DATE 23/01/25
•••	P231	Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

SBC Testing (Ubuntu)

Project : DP231

Date: 0 7 03 2025

DUT

: In Vehicle Crew Console

Serial No.: 20274009

Test Condition:

Network Ports test

Test Setup for ETH Ping:

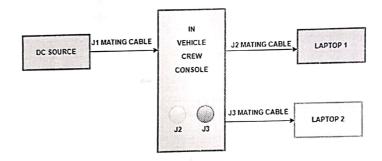


Figure 11: Test setup of Eth ping Test

Ethernet Port 1 Test

SI No	Test Name	Specified values	Observed Value	Remarks
1	Ethernet Port	Ethernet Port detected	OK	
2	Network	Intel(R) I210 Gigabit Network Connection	OK	
3	IPv4	Assign any IP address	OK	
4	Speed	1000Mb/s	OK	

Ethernet Port 2 Test

Ethernet Port 2 is connected to the ethernet switch through backplane internally. Check for the port

speed showing 1000Mbps.

SI No	Test Name	Specified values	Observed Value	Remarks
1	Ethernet Port	Ethernet Port detected	OK	
2	Network	Intel(R) I210 Gigabit Network Connection	OK	
3	IPv4	Assign any IP address	OK	
4	Speed	1000Mb/s	OK	

ACCEPTANCE TEST PROCEDURE		DOC Name ATP
CREW CONSOLE	REV A	SH No. 31
	ACCEPTANCE TEST PROCE	

DOC Name	PART NUMBER
Name	0040 000 074
ATP	0313-000-274

REV	SH No.	PREPD.	DATE 23/01/25
A	31	Shruti B R	
Ver	No. OF SH	APPRD.	DATE
1.0	41	Athif Allam	

Procedure for ping test:

- a. Connect J2 mating cable to laptop.
- b. Assign IP address and gateway in network setting as shown above.
- c. Open the "Open in terminal".

DP231

- d. Type "ping" in the black box and hit the space bar.
- e. Type the IP address you'd like to ping (e.g., 10.XXX.X.X).
- f. Ping reply should be received.

RS422-COM1 Port test:

RS422	-COM1 Port test:		Observed Value	Remarks
SI No	Test Name	Specified values		
1	COM Port	COM Ports detected	OK_	
2	Communications	₹tyS0	OK	
	Port:		nl	
3	Serial Port: ttyS0	Result: PASS	UK	

USB p	ort test	Obser	ved Value	Remarks
SI No	Test Name	Specified values	nk	
1	USB Ports	USB Ports detected	NV	
2	USB Ports	USB x HCI Compliant Host Controller		

Note: The above results are obtained when USB key board or joystick is connected. Check for the working of Keyboard.

Rug-Rel Rep

RUG-Rel Completed towards Sectionally, & Guidin, Services			DOC Name ATP	PART NUMBER 0313-000-274	
	REW CONSOLE	REV A	SH No. 32	PREPD. Shruti B R	DATE 23/01/25
•••	P231	Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

RS422 – COM 3 PORT TEST (Ubuntu)

Project : DP231

Date: 07/03/2025

DUT : In Vehicle Crew Console

Serial No.: R0274009

Test Condition:

RS422	- COM3 port test (Ubunti	Specified values	Observed Value	Remarks
SI No	Test Name	RS422 Port detected	OK	
1	1/34221011	Keys pressed on the keyboard to be		
2	113-122	shown on GUI of Minicom.	OK	
		E.g.: 00 AA EE WW.		

Rug-Rel Rep

Rug-Rel Concentrate transport, E Quality Services	ACCEPTANCE TEST PROCE	DURE	DOC Name ATP	PART NUMB 0313-000-27	4
	REW CONSOLE	REV A	SH No. 33	PREPD. Shruti B R	DATE 23/01/25
	DP231	Ver 1.0	No. OF SH 41	APPRD. Athif Allam	DATE

MEMBRANE KEYBOARD & BEZEL KEYS TEST (Ubuntu)

Project : DP231

Date: 07/03/2095

DUT

: In Vehicle Crew Console

Serial No.: R0274009

Test Condition:

Membran SI No	e Keyboard LED Test: Test Description	Observed Value	Remarks
1 2	Click the "Turn All ON" button. All LEDs in the GUI will turn ON Click the "Turn All OFF" button. All LEDs in the GUI will turn OFF	<u>о</u> ок	

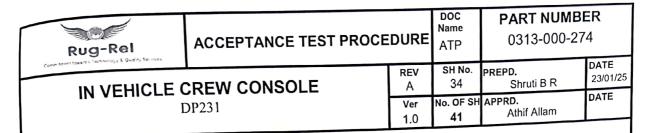
Membrane SI No	Keyboard Test: Bezel Keys Name	Observed Value	Remarks
	Press the button(e.g., Engine) on the physical membrane keyboard, the button	019	
1	in the GUI will ON & OFF Condition		

Note: Repeat the same procedure for all the button on the membrane keyboard.

Bezel Ke	y Test: Test Description	Observed Value	Remarks
SI No	Press the button(e.g.,F1) on the physical membrane keyboard, the button in the GUI will ON&OFF Condition	OK	
1		I - De-al kovs	

Note: Repeat the same procedure for all the button on the Bezel keys.

Rug-Rel Rep



JOYSTICK TEST (Ubuntu)

Project : DP231

Date: 07/03/2025

DUT

: In Vehicle Crew Console

Serial No.: R027 4009

Test Condition:

	Joystick Te	Test Description	Observed Value	Remarks
-	1	Press the button(e.g., B1) on the physical Joystick, the button will ON & OFF Condition	0 K	
	2	Move the joysticks in all directions and the axis values changing from -32767 to 32767	oK	

Rug-Rel Rep



ACCEPTANCE TEST PROCEDURE

DOC Name ATP **PART NUMBER** 0313-000-274

IN VEHICLE CREW CONSOLE

DP231

REV	SH No.	PREPD.
A	35	Shruti B R
Ver	No. OF SH	APPRD.
1.0	41	Athif Allam

DATE 23/01/25 DATE

TEST DATA RECORD SHEET - 9

10.2" DISPLAY TEST (Ubuntu)

Project : DP231

Date: 6+103 2025

DUT : In Vehicle Crew Console

Serial No.: 尺0274009

Test Condition:

Display test

Display	test:	The second second	Observed Value	Remarks
SI No	Test Description	Specifica variate	a) 1.	
1	Resolution	1920 x 1080	012	
2	Touch	Checking the interact with a device or system through physical touch	OK	

Rug-Rel Rep



ACCEPTANCE TEST PROCEDURE ATP

DOC Name

PART NUMBER 0313-000-274

DATE

23/01/25 DATE

IN VEHICLE CREW CONSOLE

DP231

REV	SH No.	PREPD.
A	36	Shruti B
Ver	No. OF SH	

TEST DATA RECORD SHEET – 10

EMERGENCY BUTTON TEST (Ubuntu)

Project : DP231

Date: 7/3/2025

DUT : In Vehicle Crew Console Serial No.: R0274009

Test Condition:

SI No	Test Description	Observed Value	Remarks
1	Press the EMG.OFF button, observe that the state in the terminal block shows"EMG.OFF_0 ON".	OK	
2	Release the EMG.OFF button, observe that the state in the terminal block shows"EMG.OFF_0 OFF".	6K	
3	Press the EMG.STOP button, observe that the state in the terminal block shows"EMG.STOP_2 ON".	OK	
4	Release the EMG.STOP button, observe that the state in the terminal block shows"EMG.STOP_2 OFF".	OK	

Rug-Rel Rep

