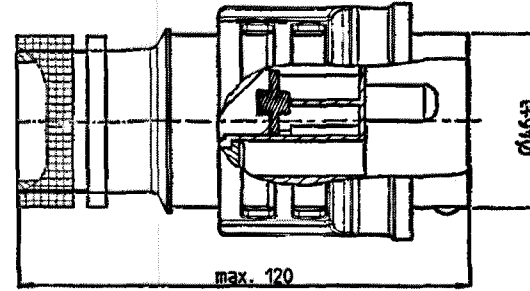
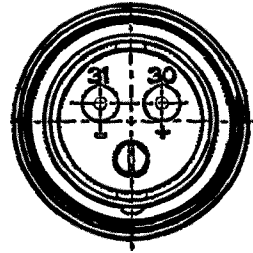


DRG. No. GCF/50/41023

PLUG FOR BOOSTER LEAD

NATO STOCK NO	5935-12-361-1646
USE IN INDUSTRY	DEFENCE VEHICLES
VOLTAGE	24 V
PEAK CURRENT	245 Amp
RATED CURRENT	135
STANDARD	VG 96917 (A VALID CERTIFICATE OR TEST REPORT MUST BE REQUIRED)
ADDITION TO STANDARD	F001 (A VALID CERTIFICATE OR TEST REPORT MUST BE REQUIRED)
NO OF POLES	02
PLUG TYPE	CRIMP CONTACT, SOLDERED PIN CONTACT
COLOR	NATO OLIVE
PROTECTION	IP X4, IP X7, IP 54
MATERIAL	BREAK PROOF METAL, BRONZE, GREEN (RAL 6031-F9)
CABLE	FOR 35 mm ² WIRE MAX. (Ø12 mm)
CABLE OUTLET	CAP NUT, DUAL CABLE OUTLET 180°

SPECIFICATION:-

- Short-term (30 s) current load of 245 A.
- Nominal current of 135 A at a contact size of 35mm².
- Applicable ambient temperature ranges from -46 °C to +85 °C.
- At least 500 cycles of operation.
- Insertion and withdrawal force of the connection ≤ 400 N.
- Withdrawal force of the individual contact ≥ 10 N.
- When plugged in, visible metal parts or rubber sheaths have to be bronze green or black.
- Thread free of lacquer to optimize leak tightness and hold.
- UV resistant.
- Watertight according to ISO 20653 Protection class IPX4 (tightening torque of the cover at least 6 Nm).
- Contact resistance ≤ 0.35 mΩ.
- Insulation resistance ≥ 5000 MΩ.
- Dielectric withstanding voltage U_{eff} = 1500 V (50 Hz).
- Bump and vibration resistance according to VG 95319-2.
- Climate and cold resistance according to VG 95319-2.
- Corrosion and salt spray resistance according to VG 95319-2.
- Tensile force of the crimp connection ≥ 2000 N (crimping tool according to VG 96927-5).
- Current load diagram (derating) according to VG 95319-2.
- Must meet all above parameters covered in the MIL std. VG 96917F001.

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

CABLE FOR BOOSTER LEAD:-

Cables should be extremely flexible, with a high number of very fine strands made of copper wire. They're insulated with synthetic rubber materials, including ethylene propylene diene monomer rubber (EPDM) and neoprene. The outer covering should be relatively soft, abrasion-resistant, and able to handle flexing and abuse. Cables must retain their flexibility at very low temperatures and withstand high temperatures. Cable shall be conforming to international standards IS 9857, BS 6700, IEC 60245, HD 22.6, DIN VDE 0282, BS 6007, ISRI 1926, SABS 1507, IS 473, AS 1995, AS/NZS 5000.1. Working temperature range must be -55°C to 105°C. Flexible & durable cable with excellent resistance to oil, grease, solvents & chemicals, cuts, tears and abrasion, ozone & weather. Sheath Colour should be Black. Flexible Copper Conductors. EPR Insulation/HOFR Sheath 85°C 100 Volts.

Cables must be highly flexible. Cable should be made of flexible Class 6 Copper conductors to BS6360, Paper or PETP tape separator may be provided. Cable should have rated voltage 100 V as a trailing cable, but cables may be used at voltages up to and including 450V rms. Cable may shall have EPR insulation to BS7655 Sheath and HOFR sheath to BS7655. Cables must be adequately protected from mechanical damage.

CROSS SECTIONAL AREA	Max. CONDUCTOR RESISTANCE AT 200 °C	Nom.THICKNESS OF SHEATH	OVERALL DIAMETER	Max. OVERALL DIAMETER	CURRENT RATINGS DUTY CYCLE (%)					CYCLIC CURRENT
					100	85	60	30	20	
mm ²	ohm/Km	mm	mm	mm	AMP					AMP
25	0.78	2	11.1	13	180	195	230	330	402	187

Cable length will be 6 meters (+100 mm or -50 mm according to document 0809106). Both ends of cable will have male plugs according to NATO stock No-5935-12-361-1646.

For cable manufacturing, Document 0809106 will be applicable.

NOTE:- THIS DOCUMENT SUPERSEDES ALL PREVIOUS VERSION DATED 17/08/2021.

				GUN CARRIAGE FACTORY, JABALPUR			
2023		NAME	DATE	ASSY. No.	DHANUSH CCES ITEMS		WEIGHT (KG)
DRAWN		Alkh	31.3.23	REF. DRG. No.			REF. ONLY
CHECKED		Suraj	01/2/23	MATERIAL			
REV	AMENDMENTS	SIGN	DATE	APPROVED			
SURFACE TREATMENT		SCALE		NTS		BOOSTER LEAD FOR DHANUSH GUN	
GENERAL TOLERANCE ACCORDING TO IS 2102-1993						DRG. No.	GCF/50/41023
						SHEET	A3



**155MM/45CAL ELECTRONICALLY UPGRADED GUN
SYSTEM
"DHANUSH"**

**QUALITY ASSURANCE PLAN/ACCEPTANCE TEST
PROCEDURE
OF
BOOSTER/JUMPER LEAD GCF-50-41023**

**GUN CARRIAGE FACTORY
A GOVT. OF INDIA ENTERPRISES, MINISTRY OF DEFENCE
(A UNIT OF ADVANCED WEAPONS AND EQUIPMENT
INDIA LTD)**

QAP NO-GCF/QC/100/QAP/155MM/45CAL/DHANUSH/BOOSTER/JUMPER LEAD GCF-50-41023/OCT/2021/01

**155MM/45CAL ELECTRONICALLY UPGRADED GUN
SYSTEM
“DHANUSH”**

**QUALITY ASSURANCE PLAN/ACCEPTANCE TEST
PROCEDURE
OF
BOOSTER/JUMPER LEAD GCF-50-41023**


REVIEWED BY

(NILESH SOLANKY)
WM/QC

PREPARED BY

(DANISH ANSARI)
JWM/QC

APPROVED BY


(SANJAY SHRIVASTAVA)
AGM/Q

RESTRICTED

QUALITY ASSURANCE PLAN/ACCEPTANCE TEST PROCEDURE OF
BOOSTER/JUMPER LEAD GCF-50-41023/DHANUSH



1. **MATERIAL DETAILS:**

S.N.	Material
a)	Chemical composition and mechanical properties are according to the given standard. And its Chemical composition and mechanical properties NABL accredited/Gov. approved lab reports for all items/components from which the same are manufactured/formed/integrated is to be attached herewith.

2. **DIMENSIONS:**

Dimensions	Instrument to be used for measurement of dimension	Observed dimensions	Remark
All dimensions must compliance with drawing and should be in the tolerance limits. Note: i. General tolerance according to IS standard.	General engineering instrument		

3. **PRACTICAL TRIAL WITH DHANUSH GUN SYSTEM (OR WITH ITS SUB-ASSY) AFTER THE SAID ITEM/COMPONENTS/SUB-ASSEMBLY RECEIVED AT GCF.**

S.N	Remark to be filled by concerned section	Signature by concerned head of section

4. **LIST OF DOCUMENTS TO BE SUBMITTED BY FIRM ALONG WITH SUB ASSY/COMPONENT/ ITEM:**

- Dimensional acceptance check sheet – 100%.
- NABL Accredited lab report / government approved lab report to be attached with QAP for all items/components used in this assembly.

REVIEWED BY

(NILESH SOLANKI)
WM/QC

(PREPARED BY)

(DANISH ANSARI)
JWM/QC

RESTRICTED

QUALITY ASSURANCE PLAN/ACCEPTANCE TEST PROCEDURE OF BOOSTER/JUMPER LEAD GCF-50-41023/DHANUSH	
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- c) Chemical composition and mechanical properties NABL accredited/Gov. approved lab reports for all items/components from which the same are manufactured/formed/integrated.
- d) Heat treatment NABL Accredited/Gov. approved report with specified hardness as mentioned in standard along with graph, representing HT cycle, if applicable.
- e) NABL / government approved NDT certificated report to be attached herewith, if the same test is mentioned.
- f) Surface treatment report, if applicable.
- g) Surface Coating conformation certificates for all sub-assy, if applicable.
- h) Fabrication report along with SR report, if applicable.
- i) Copies of invoice /Purchases order of all raw materials/Standard items pertaining to said item/components/sub-assy are to be attached herewith this QAP/ATP by the firm in hard copy.

5. IMPORTANT NOTES:

- a) Handling according to standard V6-1, if the same mentioned in the drawing.
- b) Use rust preventative (W11-217-1) after integration, location specified in drawing; if applicable.
- c) If any query arise pertaining to dimensions, standards (viz. mechanical properties, chemical composition, Heat treatment etc) or any other aspects which are mentioned in QAP but the same is mismatched with actual drawings/standards, then the firm should intimate GCF with detail explanation .The commencement of bulk production only be initiate after the proper clarification received from GCF, Jabalpur.
- d) Test piece of adequate size of any sub-assy may asked by the GCF for verification in respect of its Chemical compositions, mechanical properties, NDT or any other aspects if requested.
- e) MID section (GCF) has a responsibility to perform all necessary inspection before issuing to concerned section (GCF).
- f) ***Final authority of acceptance is based on the Practical trial report.***
- g) All necessary mark/punch/patter should be compliance with drawing, if applicable.

6. LIST OF DOCUMENTS PROVIDED BY GCF TO FIRM ALONG WITH THIS QAP/ATP. ISENUMERATED BELOW:

- a) A copy of drawing no. GCF-50-41023

REVIEWED BY

(NILESH SOLANKI)
WM/QC

(PREPARED BY)

(DANISH ANSARI)
JWM/QC