ASSEMBLY, CARRYING HANDLE (10208111)

SL.NO	PART NO.	ASSY/COMPONENT	<u>NOMENCLATURE</u>	<u>PAGE</u>
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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	10208111											
Nommenclature	ASSEMBLY, CARR	YING HA	NDLE, OOW50BMC	. REQD FOR HB	ASSEMBLY (7265	5636)			QAP No: OFT/QAP/M2HB/10208111			
Material	AS PER MATERIAL	OFT/QAP/WZHb/10200111										
Component Nomenclature/ operations	Characteristics	racteristics Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by GM/OFT (Review/Witness)	Remarks			
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Assembly, Carrying Handle	Chemical properties	Non Critical	Chemical Lab analysis	100%	AS PER MATERIAL	SPECIFICATION IN THE ASSEMBLY PARTLIST.	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency			
(Raw material)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R				
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	As per Drawi	ng 10208111 & Components	Test report from NABL lab	R				
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawi	As per Drawing 10208111 & Components from NABL lab			Firm will be undertaking 100 % Checks and			
n process	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208111 & Components		Firm Inspection report	R	Pre inspection Report for the same submitted			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawi	ng 10208111 & Components	Firm Inspection report	W				

NAI Accepting and Control Officer

Civilian Technical Officer (Niech) for Principal Impedior CV News Armeniant Throchiras public OFT OF VENGERAME, 1984

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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	10208112				DDVING HANDI I	- OOMEODING			QAP No:			
Nommenclature	Nommenclature CASTING, FRAME, CARRYING HANDLE . FOR : ASSEMBLY, CARRYING HANDLE, OOW50BMG.											
Material	STEEL, AISI 1040, 1											
Component Nomenclature/ operations	menclature/ Characteristics Class Type of check check document Acceptance norms record (Review/Witness											
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Casting, Frame Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%	STEEL, AISI 1	1040, 1045, 1050, 4140, 4340	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency			
materiary	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R				
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	As per Drawing 10208112	ANNEAL; HARDEN AND TEMPER 28-32 HRC.	Test report from NABL lab	R				
In process -As per Drawing 10208112	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208112		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	·As p	er Drawing 10208112	Firm Inspection report	W				

(*) Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT.

Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.

For springs: (i) Trade: Raw material to finished product QA by NAI. (ii) In house: Dimension inspection and Load test on sampling basis by NAI.

NAD ATUMUSAIN
Civilian Technical Officer (Mech)
for Principal Inspector Of Naval Armainent
Tiruchirappalli.

OFT G.DEVENDIRANE, I.O. F.S.

ASST WORKS MANAGER

GOVT. OF INDIA, MIN. OF. DEFENCE

ORDNANCE FACTORY

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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)												
Drg . No.	10208114												
Nommenclature	POST, CARRYING	HANDLE		QAP No:									
Material	OFT/QAP/M2HB/10208114												
Component Nomenclature/ operations	Characteristics	eristics Class Type of check Quantum of check Check Check Acceptance norms Format of check						Remarks					
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R					
Post, Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%	STEE	L, AISI 1040, 1050, 4140, 4340	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency				
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%				R					
In process -As per Drawing 10208114	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208114 Firm Ins			R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be				
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 10208114 Firm Inspection report W				submitted				

(*) Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT. Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.

For springs: (i) Trade: Raw material to finished product QA by NAI. (ii) In house: Dimension inspection and Load test on sampling basis by NAI.

NAI PARTON (Mech)

for Principal Inspector **Of Naval A**rmament Tiruchirappalli. OFT

DEWENDIZANE, LOFE

ASST WORKS MAKAGER

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TIRUCHIRAPPALLI TAMILNADU

	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	10208113											
Nommenclature	CARRYING HANDL	E.FOR	: ASSEMBLY, CARR	YING HANDLE,	OOW50BMG.				QAP No: OFT/QAP/M2HB/10208113			
Material	PLASTIC, MOLDING, THERMOSETTING, SPEC MIL-M-14, SPEC ASTM D5948, TYPE CFI-20, OR EQUIVALENT. COLOR: BLACK ALT: PLASTIC, INJECTION MOLDING THERMAL PLASTIC RESIN, DELRIN 500P BK602.											
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of Check Reference document Acceptance norms Format of record NAI / GM/OFT (Review/Witness) (*)					Remarks			
	General appearance	Non Critical	Visual	100%	DI ACTIC MOI DIN			R				
Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%	ASTM D5948, TY	IG, THERMOSETTING, SPEC MIL-M-14, SPEC PE CFI-20, OR EQUIVALENT. COLOR: BLACK ECTION MOLDING THERMAL PLASTIC RESIN,	Test report from NABL lab	. R	Sample will be drawn and sealed by Inspection Agency			
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%		DELRIN 500P BK602.		R				
In process -As per Drawing 10208113	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208113		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%		As per Drawing 10208113	Firm Inspection report	W	submitted			

(*) Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT. Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.

For springs: (i) Trade: Raw material to finished product QA by NAI. (ii) In house: Dimension inspection and Load test on sampling basis by NAI.

Civilian Technical Offic**Yr (Mech)** for Principal Sympton **Of Neval** Armanaest Turk Sympton Delfi. ASST WORKS MANAGER
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ORDNANCE FACTORY
TIRUCHIRAPPALLITAMILMADU

	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)												
Drg . No.	10208115								/ / 2021				
Nommenclature	LOCK ASSEMBLY,	QAP No:											
Material	AS PER MATERIAL	OFT/QAP/M2HB/10208115											
Component Nomenclature/ operations	Characteristics	Characteristics Class Type of check Quantum of check		Reference document	Acceptance norms	Format of record	Inspection by GM/OFT (Review/Witness)	Remarks					
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R					
Lock Assembly, Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%	AS PER MATERIAL	SPECIFICATION IN THE ASSEMBLY PARTLIST.	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency				
(raw material)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R					
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	As per Drawii	ng 10208115 & Components	Test report from NABL lab	R					
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 10208115 & Components		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and				
n process	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%			Firm Inspection report	R	Pre inspection Report for the same be submitted				
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%			Firm Inspection report	W					

PNA TOTAL COMMENT (MANA)

G.DEVENDIRANE, 1.0.E.S.
ASST WORKS MANAGER
GOVT. OF INDIA, MIN. OF DEFENCE
ORDNANCE FACTORY
TIRUCHIRAPPALL! TAMILAL DIS

	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	10208116											
Nommenclature	TO THE TAIL OF THE											
Material	STEEL, AISI 1040, 1	1045, 105	0, 4140, 4340.						OFT/QAP/M2HB/10208116			
Component Nomenclature/ operations Characteristics Class Type of check Quantum of check Check Quantum of check Check Acceptance norms							Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks			
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Lock, Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%	STEEL, A	NSI 1040, 1045, 1050, 4140, 4340.	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency			
	Mechanical Non properties Critica		Mechanical Lab analysis	100%			Test report from NABL lab	R				
n process -As per Orawing 10208116	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%		As per Drawing 10208116	Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same b			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 10208116 Firm Inspection report			W	submitted			

(*) Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT. Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.

For springs: (i) Trade: Raw material to finished product QA by NAI. (ii) In house: Dimension inspection and Load test on sampling basis by NAI.

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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)												
Drg . No.	. No. 10208117 menclature SPRING LOCK, CARRYING HANDLE, FOR:LOCK ASSEMBLY, CARRYING HANDLE, OOW50BMG.												
Nommenclature	QAP No: OFT/QAP/M2HB/10208117												
Material	STEEL, AISI 1095, 6	Of Man Million 1020011.											
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Remarks						
	General appearance	Non Critical	Visual	100%			Firm Inspection R						
Spring, Lock, Carrying Handle	Chemical properties	Non Critical	Chemical Lab analysis	100%		STEEL, AISI 1095, 6150.	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency				
(Raw material)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R					
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	1 HOUR MINIMUM FOR 6150 STEEL; H	FOR 1095 STEEL; HEAT AT 787°C-816°C, OIL QUENCH. TEMPER 1 HOUR MINIMUM TO HRC 45-50. FOR 6150 STEEL; HEAT AT 843°C-871°C, OIL QUENCH. TEMPER 1 HOUR MINIMUM TO HRC 45-50.		. R	Firm will be undertaking				
In process -As per Drawing 10208117	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208117		Firm Inspection report	R	100 % Checks and Pre inspection Report for the same be submitted				
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 10208117 Firm Inspec			· W					

(*) Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT.

Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.

For springs: (i) Trade: Raw material to finished product QA by NAI. (ii) In house: Dimension inspection and Load test on sampling basis by NAI.

PAI Arumugam
Chaman Technical Omcer (Mech)

G.DEVENDIRANE, I.O.F.S.

OASST WORKS MANAGER
GOVT. OF INDIA, MIN. OF DEFENCE
ORDNANCE FACTORY
TIRUCHIRAPPALLI TAMIL NADU

	QUALITY ASSURANCE PLAN										
				(M2HB G	UN IM PHASI	Ε)			Date of Issue / / 2021		
Drg . No.	10208119										
Nommenclature	RIVET, LOCK ASSE		QAP No:								
Material	OFT/QAP/M2HB/10208119										
Component Nomenclature/ operations	Characteristics	Characteristics Class Type of check Quantum of check document		Acceptance norms	Format of record	Inspection by GM/OFT (Review/Witness) (*)	Remarks				
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R			
Rivet, Lock Assembly, Carrying Handle (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%		STEEL, AISI 1018, 1020		R	Sample will be drawn and sealed by Inspection Agency		
(tan maconal)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R			
n process -As per Drawing 10208119	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208119		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be		
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%		As per Drawing 10208119	submitted				

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(ii) In case of hard ware items, NAI, Trichy will review the reports, if required.

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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	10208118											
Nommenclature	PIN, SPRING, STRA		QAP No: OFT/QAP/M2HB/10208118									
Material	SPRING STEEL 1050-1095 ALT: MS16562-122											
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Remarks					
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Pin, Spring, Straight (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%		SPRING STEEL 1050-1095 ALT: MS16562-122	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency			
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R				
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%		BLACK PHOSPHATE	Test report from NABL lab	R				
In process -As per Drawing 10208118	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 10208118		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same b submitted			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%		As per Drawing 10208118	Firm Inspection report	W				

*Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause 3(c) sub clause (i) NAI, Trichy may do Surveillance audit of the reports, if applicable. (ii) In case of hard ware items, NAI, Trichy will review the reports, if required.

G.DEVENDIRANE, I.O.E.S.
ASST. WORKS MANAGER
GOVT. OF INDIA, MIN. OF. DEFENCE
ORDNANCE FACTORY
HIRAPPATTY AND MANAGER

	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	91333A160											
Nommenclature	LOCKNUT, 5/16-18,		QAP No: OFT/QAP/M2HB/91333A160									
Material	BLACK ULTRA-CORROSION-RESISTANT COATED STEEL WITH NYLON INSERT.											
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Remarks						
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Locknut, 5/16-18, Nylon Insert.	Chemical properties	Non Critical	Chemical Lab analysis	100%		ROSION-RESISTANT COATED STEEL TH NYLON INSERT.	Test report from NABL lab	R	Sample will be drawn and sealed by Inspection Agency			
(Raw material)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%				R				
In process	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 91333A160		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 91333A160 Firm Inspection report			W	submitted			

*Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause 3(c) sub clause (i) NAI, Trichy may do Surveillance audit of the reports, if applicable. (ii) In case of hard ware items, NAI, Trichy will review the reports, if required.

Coman Technical Officer (Mach)

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	QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)											
Drg . No.	91434A135											
Nommenclature	TOTAL TOTAL ACCEPTED A CAPPAINO HANDLE COMEDIAC											
Material	OFT/QAP/M2HB/91434A135											
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by GM/OFT (Review/Witness) (*)	Remarks			
	General appearance	Non Critical	Visual	100%			Firm Inspection report	R				
Washer,Flat, 5/16 Narrow. (Raw material)	Chemical properties	Non Critical	Chemical Lab analysis	100%		STEEL	Test report from NABL lab	R .	Sample will be drawn and sealed by Inspection Agency			
(Raw Material)	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R				
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per	Drawing 91434A135	Test report from NABL lab	. R				
In process	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 91434A135		Firm Inspection report	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted			
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per	Drawing 91434A135	Firm Inspection report	W				

*Note: As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause 3(c) sub clause (i) NAI, Trichy may do Surveillance audit of the reports, if applicable. (ii) In case of hard ware items, NAI, Trichy will review the reports, if required.

NAI Arumugam (
Civilian Technical Officer (Mech)

for Principal Inspector at Naval Armament Tiruchirappalli.

ASST WORKS MANAGER GOVT OF INDIA, MIN.OF. DEFENCE ORDMANCE BACTORY SUCHIRAPPANA