



BOLT ASSEMBLY (6528322)

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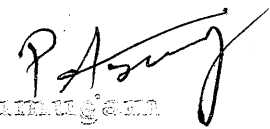
QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	6528322								QAP No: OFT/QAP/M2HB/6528322
Nomenclature	BOLT ASSEMBLY BREECH , OOW50BMG. REQD FOR HB ASSEMBLY (7265636)								
Material	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.								
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
Bolt assembly Breech (Raw material)	General appearance	Non Critical	Visual	100%	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	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 6528322 & Components		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6528322 & Components		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 6528322 & Components		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6528322 & Components		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.

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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	6147463								QAP No: OFT/QAP/M2HB/6147463
Nomenclature	BOLT SUB ASSEMBLY , OOW50BMG. REQD FOR BOLT ASSEMBLY BREECH (6528322)								
Material	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.								
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
Bolt assembly Breech (Raw material)	General appearance	Non Critical	Visual	100%	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	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 6147463 & Components	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted	
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6147463 & Components	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 6147463 & Components	Firm Inspection report	R		
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6147463 & Components	Firm Inspection report	W		
<p>*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.</p>									

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**QUALITY ASSURANCE PLAN
(M2HB GUN IM PHASE)**

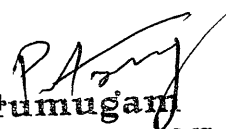
Issue No : 01
Rev No: 00
Date of Issue
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Drg. No. 6528256
Nomenclature BOLT, ALTERNATE FEED, OOW50BMG : REQD FOR BOLT SUB ASSEMBLY (6147463)
Material ALLOY STEEL BAR, ASTM A331 OR A322, GRADE E 4340.

QAP No:
OFT/QAP/M2HB/6528256

Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Bolt, Alternate Feed (Raw material)	General appearance	Critical	Visual	100%	ALLOY STEEL BAR, ASTM A331 OR A322, GRADE E 4340.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%		A) AFTER ROUGH MACHINING, STRESS RELIEVE AT 566°C MINIMUM FOR ONE HOUR. FINISH MACHINE. PREHEAT AT 510°C. TRANSFER TO NEUTRAL SALT BATH OR NEUTRAL ATMOSPHERE AT 802°C TO 829°C. QUENCH IN MARTEMPERING SALT AT 218°C. HOLD FOR 20 MINUTES. (ABOVE IS FOR GUIDANCE ONLY) THE FOLLOWING IS MANDATORY: TEMPER 371°C MINIMUM FOR ONE HOUR MINIMUM TO ROCKWELL C40-46. B) LOCAL INDUCTION HARDEN ZONE "A" (C4, SHEET 7). DOUBLE TEMPER ONE HOUR + ONE HOUR, 204°C- 232°C TO ROCKWELL C53-59. SHEET 7 PROVIDES A SUGGESTED TEST METHOD FOR THE ROCKWELL C53-59 HARDENED ZONE 'A'.	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
In process -As per Drawing 6528256	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%		As per Drawing 6528256	Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%		As per Drawing 6528256	Firm Inspection report	W	

(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.
(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.
(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)										Issue No : 01 Rev No: 00
										Date of Issue / / 2021
Drg . No.	5013529									QAP No: OFT/QAP/M2HB/5013529
Nomenclature	PIN, SHOULDER, HEADLESS , OOW50BMG : REQD FOR BOLT SUB ASSEMBLY (6147463)									
Material	STEEL, ASTM A576: 1075,1080,1090,1095 OR ASTM A686: CLASS W1-8 THRU 10, GRADE 'C' OR ASTM A331 OR A322, 6150.									
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	
Pin, Shoulder, Headless (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A576: 1075,1080,1090,1095 OR ASTM A686: CLASS W1-8 THRU 10, GRADE 'C' OR ASTM A331 OR A322, 6150.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency	
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R		
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R		
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted	
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R		
In process -As per Drawing 5013529	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5013529		Firm Inspection report	R		
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5013529		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.

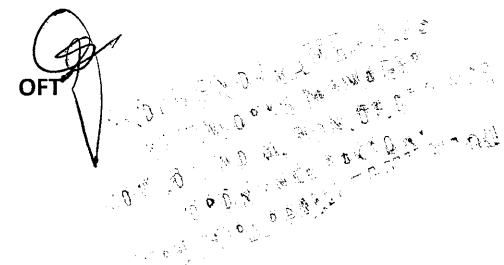
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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drng . No.	5009385								
Nomenclature	PIN, STRAIGHT, HEADLESS , OOW50BMG : REQD FOR BOLT SUB ASSEMBLY (6147463)								
Material	STEEL, ASTM A576: 1095 OR STEEL ASTM A686: CLASS W1-8 THRU 11, GRADE 'C' OR 1075 steel								
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
Pin, Straight, Headless (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A576: 1095 OR STEEL ASTM A686: CLASS W1-8 THRU 11, GRADE 'C' OR 1075 steel		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	SPEC. MIL-H-6875. OIL QUENCH AND TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH 15N 80-83.5)		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5009385	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5009385		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5009385		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.
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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	5152858								QAP No: OFT/QAP/M2HB/5152858
Nomenclature	PLATE , RECOIL , OOW50BMG : REQD FOR BOLT SUB ASSEMBLY (6147643)								
Material	STEEL CMPSN 1075, 1080, 1084 OR 1095 ASTM A576 OR STEEL ASTM A686 CLASS W1-8 THRU 10, GRADE 'C'.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
Plate, Recoil (Raw material)	General appearance	Non Critical	Visual	100%	STEEL CMPSN 1075, 1080, 1084 OR 1095 ASTM A576 OR STEEL ASTM A686 CLASS W1-8 THRU 10, GRADE 'C'.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	HEAT AT 774°C TO 802°C. OIL QUENCH. TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH C55-61.5)		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
In process -As per Drawing 5152858	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5152858		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5152858		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.

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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	6008976								QAP No: OFT/QAP/M2HB/6008976
Nomenclature	EXTENSION ASSEMBLY FIRING PIN , OOW50BMG. REQD FOR BOLT ASSEMBLY BREECH (6528322)								
Material	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.								
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
Extension assembly firing Pin (Raw material)	General appearance	Non Critical	Visual	100%	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	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 6008976 & Components		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6008976 & Components		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 6008976 & Components		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6008976 & Components		Firm Inspection report	W	


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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)								Issue No : 01 Rev No: 00	
								Date of Issue / / 2021	
Drg . No.	5009353							QAP No: OFT/QAP/M2HB/5009353	
Nomenclature	SPRING, HELICAL COMPRESSION, OOW50BMG REQD FOR EXTENSION ASSEMBLY FIRING PIN(6008976)								
Material	WIRE, STEEL, MUSIC ASTM A228								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Spring, Helical Compression. (Raw material)	General appearance	Critical	Visual	100%	WIRE, STEEL, MUSIC ASTM A228		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%	STRESS RELIEVE AT 224°C ± 5°C .FOR 30 Min After Coiling.		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 3.3.1 WITH MIL-PRF-3150 SUPPLEMENTARY OIL.	Test report from NABL lab	R	
In process -As per Drawing 5009353	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 5009353		Firm Inspection report	R	
Load Test	Mechanical properties	Critical	Mechanical Lab analysis	100%	LOAD TEST SHOULD CARRIED OUT AS PER DRAWING 5009353		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 5009353		Firm Inspection report	W	

(*) Note : As per the MoU No: OFT / SRGG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.
(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.
(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.

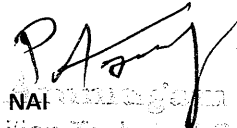

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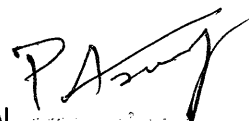
QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	5009382								QAP No: OFT/QAP/M2HB/5009382
Nomenclature	PIN, STRAIGHT, HEADLESS , OOW50BMG REQD FOR EXTENSION ASSEMBLY FIRING PIN(6008976)								
Material	STEEL, ASTM A576: 1095 AUSTENITIC GRAIN SIZE 5 OR FINER, OR STEEL ASTM A686: CLASS W1-8 THRU 9, GRADE 'C'.								
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
Pin, Straight, Headless (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A576: 1095 AUSTENITIC GRAIN SIZE 5 OR FINER, OR STEEL ASTM A686: CLASS W1-8 THRU 9, GRADE 'C'.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	SPEC. MIL-H-6875. OIL QUENCH OR MARQUENCH AND TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH 15N 79.5-86)		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5009382	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5009382		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5009382		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.


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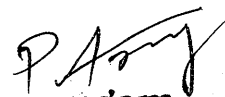
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Drg . No.	6008946							QAP No: OFT/QAP/M2HB/6008946	
Nomenclature	EXTENSION, FIRING PIN , OOW50BMG : REQD FOR EXTENSION ASSEMBLY FIRING PIN								
Material	STEEL, ASTM A331: 4130, 4140.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Extension, Firing Pin (Raw material)	General appearance	Critical	Visual	100%	STEEL, ASTM A331: 4130, 4140.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%	INDUCTION HARDEN LENGTHS-H-AND-K-TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH A74.5-78)		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 6008946	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 6008946		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 6008946		Firm Inspection report	W	
<p>(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.</p> <p>(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.</p> <p>(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.</p>									


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	5504062								QAP No: OFT/QAP/M2HB/5504062
Nomenclature	SWITCH, BOLT, OOW50BMG : REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, ASTM A322 OR A331 , 4140, 4340.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
SWITCH, BOLT (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A322 OR A331 , 4140, 4340.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	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 5504062	HEAT AT 838°C TO 860°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH C45-51	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5504062	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5504062		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5504062		Firm Inspection report	W	
<p>(*) 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 <u>out sourced</u> 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.</p>									



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 05.09.2021
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 05.09.2021

QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	6009718								
Nomenclature	LEVER, COCKING, OOW50BMG REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	ALLOY STEEL BARS, HOT WROUGHT, ASTM A322, GRADES 4340 ALLOY STEEL BARS, COLD FINISHED , ASTM A331, GRADES 4340 ALT: ALLOY STEEL, SHEET AND STRIP, ASTM A506, GRADES 4340. ALLOY STEEL, PLATES, ASTM A829, GRADES 4340 ALLOY STEEL, SHEET, STRIP, PLATE AMS 6359 (GRADE 4340) ALLOY STEEL, SHEET, STRIP, PLATE, AMS 6454 (GRADE 4340)								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Lever, Cocking (Raw material)	General appearance	Critical	Visual	100%	ALLOY STEEL BARS, HOT WROUGHT, ASTM A322, GRADES 4340 ALLOY STEEL BARS, COLD FINISHED , ASTM A331, GRADES 4340 ALT:	ALLOY STEEL, SHEET AND STRIP, ASTM A506, GRADES 4340.	Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			ALLOY STEEL, PLATES, ASTM A829, GRADES 4340 ALLOY STEEL, SHEET, STRIP, PLATE AMS 6359 (GRADE 4340)	Test report from NABL lab	
	Mechanical properties	Critical	Mechanical Lab analysis	100%	ALLOY STEEL, SHEET, STRIP, PLATE, AMS 6454 (GRADE 4340)	Test report from NABL lab	R		
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%	As per Drawing 6009718	HEAT AT 815°C - 843°C. OIL QUENCH. DOUBLE TEMPER AT 215°C FOR TWO HOURS PLUS ONE HOUR TO HARDNESS SPECIFIED RH C 52-59.	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 6009718	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 6009718		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 6009718		Firm Inspection report	W	

(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.
 (ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.
 (iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	7161300								QAP No: OFT/QAP/M2HB/7161300
Nomenclature	LOCK, ACCELERATOR STOP, OOW50BMG REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, AMS-QQ-S-700: 1065; ASTM A684; 1085 OR 1095, SOFT TYPE ANNEALED; OR ASTM A322 OR A331, 4130								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
Lock, Accelerator Stop (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, AMS-QQ-S-700: 1065; ASTM A684; 1085 OR 1095, SOFT TYPE ANNEALED; OR ASTM A322 OR A331, 4130		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%		FOR 1065,1085, 1095 STEEL HEAT AT 815°C TO 843°C. FOR 4130 STEEL HEAT AT 843°C TO 871°C. OIL QUENCH. TEMPER 1 HOUR MINIMUM TO RHA 74-78. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY EXCEPT TEMPERING TIME SHALL NOT BE REDUCED BELOW THAT SPECIFIED.	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 7161300	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 7161300		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 7161300		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.


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	7161301								QAP No: OFT/QAP/M2HB/7161301
Nomenclature	STOP, ACCELERATOR, OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, ASTM A322 OR A331: 6150,8645 OR 8650.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
Stop Accelerator (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A322 OR A331: 6150,8645 OR 8650.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%		HEAT AT 843°C TO 871°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH A73.5-77.	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 7161301	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 7161301		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 7161301		Firm Inspection report	W	
Note : Process audit on Protective Finish and Traceability of Raw materials to Final Product (Man,Material,Machine and Methods)									
* As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021									

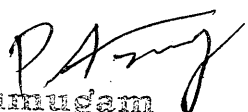
(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT. Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis. For springs: (i) Trade : 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
 STOP, ACCELERATOR, OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)
 STEEL, ASTM A322 OR A331: 6150,8645 OR 8650.
 HEAT AT 843°C TO 871°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH A73.5-77.
 MIL-STD-171
 Finish 5.3.1.2 (or) 5.3.2.2
 As per Drawing 7161301
 As per Drawing 7161301

QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00 Date of Issue / / 2021
Drg . No.	5504067								QAP No: OFT/QAP/M2HB/5504067
Nomenclature	SEAR, OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, ASTM A304: 4140H.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Sear (Raw material)	General appearance	Critical	Visual	100%	STEEL, ASTM A304: 4140H.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%		HEAT AT 843°C TO 871°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH A75.5-78.5	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5504067	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%		As per Drawing 5504067	Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%		As per Drawing 5504067	Firm Inspection report	W	
<p>(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.</p> <p>(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.</p> <p>(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.</p>									


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)								Issue No : 01 Rev No: 00	
								Date of Issue / / 2021	
Drg . No.	5351220							QAP No: OFT/QAP/M2HB/5351220	
Nomenclature	SLIDE SEAR, OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	ALLOY STEEL, SHEET AND STRIP, ASTM A506, GRADES 6150, 4340, 4140; ALLOY STEEL BARS, COLD FINISHED, ASTM A331, GRADES 6150, 4340, 4140. ALT.MATL: ALLOY STEEL BARS, HOT WROUGHT, ASTM A322, GRADES 6150, 4340, 4140. ALLOY STEEL PLATES, ASTM A829, GRADES 6150, 4340, 4140. ALLOY STEEL SHEET STRIP PLATE, AMS 6359 (GRADE 4340); ALLOY STEEL SHEET, STRIP, PLATE AMS 6395 (GRADE 4140); ALLOY STEEL SHEET, PLATE STRIP , SAE AMS 6455 (GRADE 6150)								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
Slide Sear (Raw material)	General appearance	Non Critical	Visual	100%	ALLOY STEEL, SHEET AND STRIP, ASTM A506, GRADES 6150, 4340, 4140; ALLOY STEEL BARS, COLD FINISHED, ASTM A331, GRADES 6150, 4340, 4140. ALT.MATL: ALLOY STEEL BARS, HOT WROUGHT, ASTM A322, GRADES 6150, 4340, 4140. ALLOY STEEL PLATES, ASTM A829, GRADES 6150, 4340, 4140. ALLOY STEEL SHEET STRIP PLATE, AMS 6359 (GRADE 4340); ALLOY STEEL SHEET, STRIP, PLATE AMS 6395 (GRADE 4140); ALLOY STEEL SHEET, PLATE STRIP , SAE AMS 6455 (GRADE 6150)	Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency	
	Chemical properties	Non Critical	Chemical Lab analysis	100%		Test report from NABL lab	R		
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%		Test report from NABL lab	R		
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	FOR 6150: HEAT AT 843°C TO 871°C. OIL QUENCH. TEMPER FOR 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH C45-51) FOR 4340: HEAT AT 815.5°C TO 843°C. OIL QUENCH. TEMPER FOR 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH C45-51)	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted	
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab		R
In process -As per Drawing 5351220	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5351220		Firm Inspection report		R
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5351220		Firm Inspection report		W

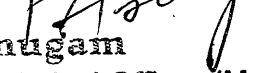
(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause No. 3(b), Sub clause (i) is applicable for In-House manufacturing and inspection by GM/OFT. Sub clause (ii) is applicable for out sourced components. JRI will be done by NAI & OFT on sampling basis.
For springs: (i) Trade : Raw material to finished product 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)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	7312078								QAP No: OFT/QAP/M2HB/7312078
Nomenclature	PIN, COCKING, LEVER, OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, ASTM A108, 1045 OR ASTM A322 OR A331, 4140.								
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
Pin, Cocking Lever (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, ASTM A108, 1045 OR ASTM A322 OR A331, 4140.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	HEAT AT 838°C TO 860°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM AT 399°C MINIMUM TO HARDNESS SPECIFIED RH A71.5-75		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 7312078	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 7312078		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 7312078		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.

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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	6008959								QAP No: OFT/QAP/M2HB/6008959
Nomenclature	EXTRACTOR ASSEMBLY SMALL ARMS CARTRIDGE , OOW50BMG. REQD FOR BOLT ASSEMBLY BREECH (6528322)								
Material	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.								
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
Extractor assembly, Small arms Cartridge (Raw material)	General appearance	Non Critical	Visual	100%	AS PER MATERIAL SPECIFICATION IN THE ASSEMBLY PARTLIST.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	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 6008959 & Components		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6008959 & Components		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 6008959 & Components		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 6008959 & Components		Firm Inspection report	W	

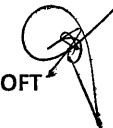
*Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause 3(c) sub clause (i) NAI, Trichy may do Surveillance audit of the reports, if applicable.
(ii) In case of hard ware items, NAI, Trichy will review the reports, if required.

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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	5009523								
Nomenclature	SPRING, HELICAL COMPRESSION, OOW50BMG : REQD FOR EXTRACTOR ASSEMBLY SMALL ARMS CARTRIDGE (6008959)								
Material	WIRE, MUSIC, STEEL ASTM A228								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI / GM/OFT (Review/Witness) (*)	Remarks
Spring, Helical Compression. (Raw material)	General appearance	Non Critical	Visual	100%	WIRE, MUSIC, STEEL ASTM A228		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	STRESS RELIEVE AT 224°C ± 5°C .FOR 30 Min After Coiling.		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 3.3.1 WITH MIL-PRF-3150 SUPPLEMENTARY OIL TREATMENT	Test report from NABL lab	R	
In process -As per Drawing 5009523	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5009523		Firm Inspection report	R	
Load Test	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	LOAD TEST SHALL APPLY AFTER SPRING HAS BEEN COMPRESSED SOLID FIVE(5) TIMES.		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5009523		Firm Inspection report	W	
<p>(*) 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.</p>									


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)								Issue No : 01 Rev No: 00	
								Date of Issue / / 2021	
Drg . No.	5504065							QAP No: OFT/QAP/M2HB/5504065	
Nomenclature	EXTRACTOR ,OOW50BMG. REQD FOR EXTRACTOR ASSEMBLY SMALL ARMS CARTRIDGE (6008959)								
Material	STEEL, ASTM A331 OR A322: 4140,4340 FOR CASTING: STEEL, MIL-S-22141; IC 4140, IC 4340. TENSILE TEST SHALL NOT APPLY. INSPECTION SHALL BE IN ACCORDANCE WITH CLASS 1, GRADE A OF MIL-STD-2175.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Extractor (Raw material)	General appearance	Critical	Visual	100%	STEEL, ASTM A331 OR A322: 4140,4340 FOR CASTING: STEEL, MIL-S-22141; IC 4140, IC 4340. TENSILE TEST SHALL NOT APPLY. INSPECTION SHALL BE IN ACCORDANCE WITH CLASS 1, GRADE A OF MIL-STD-2175.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%		HEAT AT 843°C - 871°C IN NEUTRAL ATMOSPHERE. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH C49-55.	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5504065	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 5504065		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 5504065		Firm Inspection report	W	
<p>(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.</p> <p>(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.</p> <p>(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.</p>									


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)								Issue No : 01 Rev No: 00	
								Date of Issue / / 2021	
Drg . No.	6009732							QAP No: OFT/QAP/M2HB/6009732	
Nomenclature	EJECTOR, SMALL ARMS CARTRIDGE ,OOW50BMG. REQD FOR EXTRACTOR ASSEMBLY SMALL ARMS CARTRIDGE (6008959)								
Material	STEEL, ASTM A576 OR ASTM A108: 1075 TO 1084; ASTM A322 OR ASTM A331: 4140. INVESTMENT CASTING: STEEL, MIL-S-22141; IC 6150. TENSILE TEST SHALL NOT APPLY. INSPECTION SHALL BE IN ACCORDANCE WITH CLASS 2, GRADE A OF MIL-STD-2175.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Ejector, Small Arms Cartridge (Raw material)	General appearance	Critical	Visual	100%	STEEL, ASTM A576 OR ASTM A108: 1075 TO 1084; ASTM A322 OR ASTM A331: 4140. INVESTMENT CASTING: STEEL, MIL-S-22141; IC 6150. TENSILE TEST SHALL NOT APPLY. INSPECTION SHALL BE IN ACCORDANCE WITH CLASS 2, GRADE A OF MIL-STD-2175.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%		<p>WROUGHT MATERIAL: HEAT AT 774°C - 802°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH A 73.5 - 77. CASTING: HEAT AT 816°C - 843°C. OIL QUENCH. TEMPER ONE HOUR MINIMUM TO HARDNESS SPECIFIED RH A 73.5 - 77.</p>	Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 6009732	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 6009732		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 6009732		Firm Inspection report	W	
<p>(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.</p> <p>(ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.</p> <p>(iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.</p>									



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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)									Issue No : 01 Rev No: 00
									Date of Issue / / 2021
Drg . No.	5009273								QAP No: OFT/QAP/M2HB/5009273
Nomenclature	PIN, EJECTOR, OOW50BMG: REQD FOR EXTRACTOR ASSEMBLY SMALL ARMS CARTRIDGE (6008959)								
Material	STEEL, CARBON; SAE 1141, 1151, ASTM A108. ALT. MATL: AISI 4140 ASTM A322, A331								
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
Pin Ejector (Raw material)	General appearance	Non Critical	Visual	100%	STEEL, CARBON; SAE 1141, 1151, ASTM A108. ALT. MATL: AISI 4140 ASTM A322, A331		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Non Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Non Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Non Critical	Mechanical Lab analysis	100%	HARDEN AND TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH 15N 84-87). LOCALLY TEMPER LENGTH "A" TO RH 15N 72 MAX.		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Non Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 5009273	Dimensions Specified in the Inspection report of the component	Non Critical	Dimensional measurement	100%	As per Drawing 5009273		Firm Inspection report	R	
Final Inspection	General appearance	Non Critical	Visual and Dimensional Checks	100%	As per Drawing 5009273		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.


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QUALITY ASSURANCE PLAN (M2HB GUN IM PHASE)								Issue No : 01 Rev No: 00	
								Date of Issue / / 2021	
Drg . No.	7310080							QAP No: OFT/QAP/M2HB/7310080	
Nomenclature	PIN, FIRING ,OOW50BMG :REQD FOR BOLT ASSEMBLY BREECH (5428322)								
Material	STEEL, ASTM A322 OR A331: 4340, 8642 OR 8740.								
Component Nomenclature/ operations	Characteristics	Class	Type of check	Quantum of check	Reference document	Acceptance norms	Format of record	Inspection by NAI or their authorised Rep. (Review/Witness) (*)	Remarks
Pin, Firing (Raw material)	General appearance	Critical	Visual	100%	STEEL, ASTM A322 OR A331: 4340, 8642 OR 8740.		Firm Inspection report	R	Sample will be drawn and sealed by Inspection Agency
	Chemical properties	Critical	Chemical Lab analysis	100%			Test report from NABL lab	R	
	Mechanical properties	Critical	Mechanical Lab analysis	100%			Test report from NABL lab	R	
Heat Treatment	Mechanical properties	Critical	Mechanical Lab analysis	100%	HEAT AT 816°C TO 843°C. OIL QUENCH. TEMPER 1 HOUR MINIMUM TO HARDNESS SPECIFIED (RH A 73.5-77)		Test report from NABL lab	R	Firm will be undertaking 100 % Checks and Pre inspection Report for the same be submitted
Protective Finish	General appearance	Critical	Visual and Dimensional Checks	100%	MIL-STD-171	Finish 5.3.1.2 (or) 5.3.2.2	Test report from NABL lab	R	
In process -As per Drawing 7310080	Dimensions Specified in the Inspection report of the component	Critical	Dimensional measurement	100%	As per Drawing 7310080		Firm Inspection report	R	
Final Inspection	General appearance	Critical	Visual and Dimensional Checks	100%	As per Drawing 7310080		Firm Inspection report	W	

(*) Note : As per the MoU No: OFT / SRCG / M2HBGun / MoU /01 Dt: 20.09.2021, Clause no. 3(a), Sub clause (ii) & (iii) the following is applicable.

- (ii) For springs manufactured In-house (OFT) - Dimension inspection, Load Testing on sampling basis.
- (iii) For springs procured from vendors - from raw material to finished product QA by NAI, Trichy.

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