

Change No. 1

Headquarters
Department of the Army
Washington DC, 22 February 2011

40-mm Grenade Launchers

1. Change TM 3-22.31, 24 January 2011, as follows:

Remove old pages:

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4-7 through 4-8
A-5 and A-6
None

Insert new pages:

iii through iv
4-7 through 4-8
A-5 and A-6
Insert blank DA Form 7680-R
in back of TM

2. A star (*) marks new or changed material.
3. File this transmittal sheet in front of the publication.

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- Maintain an M320 grenade launcher.
- Install mounting brackets, the leaf sight assembly, and the DNS on the M320 grenade launcher.
- Load, unload, and place the M320 grenade launcher on SAFE.
- Correct malfunctions on an M320 grenade launcher.
- Identify 40-mm ammunition and their purpose.

4-13. As a minimum, the 40-mm grenade launcher skills test must be administered semi-annually for Regular Army units and annually for reserve component (RC) units prior to live-fire qualification with results recorded on DA Form 7680-R.

Note. See Appendix C for conduct of the M320 40-mm grenade launcher skills test.

M320/M320A1 40-mm GRENADE LAUNCHER SCORECARD									
For use of this form, see TM 3-22.31; the proponent agency is TRADOC.									
NAME (First, Last, MI) SFC Joseph Sears					UNIT 2BN 29th INF			DATE (YYYYMMDD) 20100401	
ZERO LEAF SIGHT	DEFILADE		ELEVATION			RATING SCALE			
	RECORD FIRE	TASK NO.	TIME (MIN)	TGT	HIT				
DAY	1	2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TOTAL POINTS <i>(Block 7)</i>	RATING		
			2	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	2	2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	80 - 90	EXPERT	<input type="checkbox"/>	
			2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	70 - 75	FIRST CLASS	<input checked="" type="checkbox"/>	
	3	2	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	60 - 65	SECOND CLASS	<input type="checkbox"/>	
			2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 - 55	UNQUALIFIED	<input type="checkbox"/>	
CBRN	4	2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	GRADER'S INITIALS			DATE (YYYYMMDD)
	5	2	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B Ran			20100401
NIGHT	6	2	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	OIC'S INITIALS			DATE (YYYYMMDD)
TOTAL POINTS <i>(Award 10 points for each hit)</i>					70	JCS			20100401
M320/M320A1 40-mm GRENADE LAUNCHER SKILLS TEST									
NAME Joseph Sears					DATE (YYYYMMDD) 20100401				
STATION 1 MAINTAIN AN M320 GL				GO	NO-GO	STATION 4 CORRECT MALFUNCTION ON M320			
1. CLEARED THE M320.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. KEPT THE WEAPON POINTED AT THE TARGET.			
2. DISASSEMBLED THE M320.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. WAITED 30 SECONDS THEN OPENED THE BREACH.			
3. INSPECTED THE M320.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. REMOVED THE ROUND.			
4. REASSEMBLED THE M320.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. EXAMINED THE PRIMER.			
5. PERFORMED A FUNCTION CHECK.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	STATION 5 ID AMMO			
STATION 2 INSTALL MOUNTING BRACKETS, LEAF SIGHT ASSEMBLY, AND DNS.				GO	NO-GO	1. IDENTIFIED THE M781 TP ROUND.			
1. INSTALLED MOUNTING BRACKETS.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. IDENTIFIED THE M406 HE ROUND.			
2. INSTALLED LEAF SIGHT.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. IDENTIFIED THE M433 HE ROUND.			
3. INSTALLED DNS.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. IDENTIFIED THE M585 STAR CLUSTER ROUND.			
STATION 3 LOAD, UNLOAD, AND PLACE M320 ON SAFE				GO	NO-GO	5. IDENTIFIED THE M583 (WHITE), M661 (GREEN), AND M662 (RED) STAR PARACHUTE ROUNDS.			
1. LOADED.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. IDENTIFIED THE M713 (RED), M715 (GREEN), AND M716 (YELLOW) GROUND SMOKE MARKER ROUNDS.			
2. UNLOADED.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. IDENTIFIED THE M992 INFRARED ILLUMINANT ROUND.			
3. PLACED ON SAFE.				<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. IDENTIFIED THE M1006 NONLETHAL CARTRIDGE.			
						9. IDENTIFIED THE M1029 CROWD DISPERSAL CARTRIDGE.			
GRADER'S INITIALS B Ran			DATE (YYYYMMDD) 20100401		OIC'S INITIALS JCS			DATE (YYYYMMDD) 20100401	

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***Figure 4-4. Example completed DA Form 7680-R (M320/M320A1 40-mm Grenade Launcher Scorecard).**

- Execute risk reduction controls selected by the commander by developing and implementing supporting leader level controls. Apply risk management procedures to each.

Individual

A-1. All Soldiers must understand how to use the CRM process to enhance mission success and to reduce or eliminate loss.

A-2. During implementation of the CRM process, Soldiers—

- Support commanders and leaders in the rapid identification and communication of hazards and associated risks that may impact on the mission.
- Provide immediate feedback to the leader as the mission progresses and hazards are encountered. Use short written messages, hand and arm signals, or radio transmissions to communicate first-hand information to leaders.
- In extreme situations, act alone or make risk decisions within the context of orders.

DA FORM 7566 (COMPOSITE RISK MANAGEMENT WORKSHEET)

A-3. DA Form 7566 (*Composite Risk Management Worksheet*, Figure A-1) provides a starting point to logically track the CRM process. It can be used to document risk management steps taken during planning, preparation, and execution of training and combat missions.

A-4. See Table A-5 for instructions on completing DA Form 7566.

Table A-5. Worksheet instructions

ITEM	INSTRUCTION
1 through 4	Self-explanatory.
5	Subtask relating to the mission or task in Block 1.
6	Hazards—Identify hazards by reviewing METT-TC factors for the mission or task. Additional factors include historical lessons learned, experience, judgment, equipment characteristics and warnings, and environmental considerations.
7	Initial Risk Level—Factors include historical lessons learned, intuitive analyses, experience, judgment, equipment characteristics and warnings, and environmental considerations. Determine the initial risk for each hazard by applying the risk assessment matrix. Enter the risk level for each hazard.
8	Controls— For each hazard, develop one or more controls that will eliminate the hazard or reduce the risk of a hazardous incident. Specify who, what, where, why, when, and how for each control. Enter controls.
9	Residual Risk Level—Determine the residual risk for each hazard by applying the risk assessment matrix. Enter the residual risk level for each hazard.
10	How to Implement—Decide how each control will be put into effect or communicated to the personnel who will make it happen (written or verbal instruction; tactical, safety, garrison SOPs; rehearsals). Enter controls.
11	How to Supervise (Who)—Plan how each control will be monitored for implementation (continuous supervision, spot-checks) and reassess hazards as the situation changes. Determine if the controls worked and if they can be improved. Pass on lessons learned.
12	Was Control Effective—Indicate “Yes” or “No.” Review during AAR.
13	Overall Risk Level—Select the highest residual risk level and circle it. This becomes the overall mission or task risk level. The commander decides whether the controls are sufficient to accept the level of residual risk. If the risk is too great to continue the mission or task, the commander directs development of additional controls or modifies, changes, or rejects the COA.
14	Risk Decision Authority—Signed by the appropriate level of command.

COMPOSITE RISK MANAGEMENT WORKSHEET
 For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK		2a. DTG BEGIN		2b. DTG END		3. DATE PREPARED (YYYYMMDD)	
4. PREPARED BY							
a. LAST NAME			b. RANK		c. POSITION		
5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?
Additional space for entries in Items 5 through 11 is provided on Page 2.							
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)							
<input type="checkbox"/> LOW <input type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH							
14. RISK DECISION AUTHORITY							
a. LAST NAME		b. RANK		c. DUTY POSITION		d. SIGNATURE	

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ITEMS 5 THROUGH 12 CONTINUED:

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?

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Figure A-1. Sample DA Form 7566 (Composite Risk Management Worksheet)

M320/M320A1 40-m m GRENADE LAUNCHER SCORECARD										
For use of this form, see TM 3-22.31; the proponent agency is TRADOC.										
NAME (First, Last, MI)					UNIT			DATE (YYYYMMDD)		
ZERO LEAF SIGHT	DEFILADE		ELEVATION			RATING SCALE				
	RECORD FIRE	TASK NO.	TIME (MIN)	TGT	HIT	MISS	TOTAL POINTS <i>(Block 7)</i>	RATING		
DAY	1	2	1	<input type="checkbox"/>	<input type="checkbox"/>	2	80 - 90	EXPERT	<input type="checkbox"/>	
			1	<input type="checkbox"/>	<input type="checkbox"/>		70 - 75	FIRST CLASS	<input type="checkbox"/>	
	2	2	1	<input type="checkbox"/>	<input type="checkbox"/>	2	60 - 65	SECOND CLASS	<input type="checkbox"/>	
			2	<input type="checkbox"/>	<input type="checkbox"/>		0 - 55	UNQUALIFIED	<input type="checkbox"/>	
	3	2	1	<input type="checkbox"/>	<input type="checkbox"/>	2				
			2	<input type="checkbox"/>	<input type="checkbox"/>					
CBRN	4	2	1	<input type="checkbox"/>	<input type="checkbox"/>	GRADER'S INITIALS		DATE (YYYYMMDD)		
	5	2	1	<input type="checkbox"/>	<input type="checkbox"/>					
NIGHT	6	2	1	<input type="checkbox"/>	<input type="checkbox"/>	OIC'S INITIALS		DATE (YYYYMMDD)		
TOTAL POINTS <i>(Award 10 points for each hit)</i>										
M320/M320A1 40-m m GRENADE LAUNCHER SKILLS TEST										
NAME					DATE (YYYYMMDD)					
STATION 1 MAINTAIN AN M320 GL				GO	NO-GO	STATION 4 CORRECT MALFUNCTION ON M320				
1. CLEARED THE M320.				<input type="checkbox"/>	<input type="checkbox"/>	1. KEPT THE WEAPON POINTED AT THE TARGET.				
2. DISASSEMBLED THE M320.				<input type="checkbox"/>	<input type="checkbox"/>	2. WAITED 30 SECONDS THEN OPENED THE BREACH.				
3. INSPECTED THE M320.				<input type="checkbox"/>	<input type="checkbox"/>	3. REMOVED THE ROUND.				
4. REASSEMBLED THE M320.				<input type="checkbox"/>	<input type="checkbox"/>	4. EXAMINED THE PRIMER.				
5. PERFORMED A FUNCTION CHECK.				<input type="checkbox"/>	<input type="checkbox"/>					
STATION 2 INSTALL MOUNTING BRACKETS, LEAF SIGHT ASSEMBLY, AND DNS.				GO	NO-GO	STATION 5 ID AMMO				
1. INSTALLED MOUNTING BRACKETS.				<input type="checkbox"/>	<input type="checkbox"/>	1. IDENTIFIED THE M781 TP ROUND.				
2. INSTALLED LEAF SIGHT.				<input type="checkbox"/>	<input type="checkbox"/>	2. IDENTIFIED THE M406 HE ROUND.				
3. INSTALLED DNS.				<input type="checkbox"/>	<input type="checkbox"/>	3. IDENTIFIED THE M433 HE ROUND.				
						4. IDENTIFIED THE M585 STAR CLUSTER ROUND.				
						5. IDENTIFIED THE M583 (WHITE), M661 (GREEN), AND M662 (RED) STAR PARACHUTE ROUNDS.				
						6. IDENTIFIED THE M713 (RED), M715 (GREEN), AND M716 (YELLOW) GROUND SMOKE MARKER ROUNDS.				
						7. IDENTIFIED THE M992 INFRARED ILLUMINANT ROUND.				
						8. IDENTIFIED THE M1006 NONLETHAL CARTRIDGE.				
						9. IDENTIFIED THE M1029 CROWD DISPERSAL CARTRIDGE.				
STATION 3 LOAD, UNLOAD, AND PLACE M320 ON SAFE			GO	NO-GO						
1. LOADED.			<input type="checkbox"/>	<input type="checkbox"/>						
2. UNLOADED.			<input type="checkbox"/>	<input type="checkbox"/>						
3. PLACED ON SAFE.			<input type="checkbox"/>	<input type="checkbox"/>						
GRADER'S INITIALS			DATE (YYYYMMDD)		OIC'S INITIALS			DATE (YYYYMMDD)		

CONDUCT OF A RECORD FIRE

ZEROING IS PERFORMED ON STATION 1 OF THE 40-mm GRENADE LAUNCHER RANGE. WHEN AT THIS STATION, THE GRENADE LAUNCHER ZEROES THE WEAPON (DNS AND LEAF SIGHT) BY FIRING FROM A PRONE SUPPORTED FIRING POSITION. AFTER THE GRENADE LAUNCHER HAS ZEROED THE WEAPON, HE RECORDS THE ZERO DATA FOR FUTURE REFERENCE.

DAY RECORD FIRE

TASK	STATION	TIME IN MINUTES	ROUNDS	TYPE OF AMMUNITION	TARGET(S) AND RANGE(S)
1	2	2	3	TP	Window facade at 100m
					Small bunker at 125m
2	3	2	3	TP	Two-man bunker at 175m
					Automatic weapon position at 200m
3	4	2	3	TP	Troops in open emplacement at 250m
					Troops in open 350m
4	3	2	3	TP	Two-man bunker at 175m
5	3	2	3	TP	Automatic weapons position at 200m (CBRN)

NIGHT RECORD FIRE

TASK	STATION	TIME IN MINUTES	ROUNDS	TYPE OF AMMUNITION	TARGET(S) AND RANGE(S)
6	3	2	3	HE	Automatic weapons position at 200m

CONDUCT OF A 40-mm GRENADE LAUNCHER SKILLS TEST

BEFORE PERFORMING LIVE FIRE, SOLDIERS TAKE THE 40-mm GRENADE LAUNCHER SKILLS TEST. THIS EXERCISE IS USED TO DETERMINE THE GRENADE LAUNCHER'S PROFICIENCY ON DRY-FIRE TASKS ASSOCIATED WITH THE M320 40-mm GRENADE LAUNCHER. USING FIVE STATIONS, SOLDIERS MUST DEMONSTRATE PROFICIENCY ON THE FOLLOWING TABLE:

- MAINTAIN AN M320 GRENADE LAUNCHER.
- INSTALL MOUNTING BRACKETS, THE LEAF SIGHT ASSEMBLY, AND THE DNS ON THE M320 GRENADE LAUNCHER.
- LOAD, UNLOAD, AND PLACE THE M320 GRENADE LAUNCHER ON SAFE.
- CORRECT MALFUNCTIONS ON AN M320 GRENADE LAUNCHER.
- IDENTIFY 40-mm AMMUNITION AND THEIR PURPOSE.

NOTES:

1. TRAINERS NEED NOT CONDUCT THIS EXAMINATION ON A RANGE; IT MAY BE CONDUCTED INDOORS IF FACILITIES ARE AVAILABLE.
2. THE SKILLS TEST IS ADMINISTERED USING TASKS, CONDITIONS, STANDARDS, ADMINISTRATIVE GUIDELINES, AND PERFORMANCE CHECKLISTS.
3. COMMANDERS MAY ADD TO, BUT NOT DELETE FROM, TASKS ON THE SKILLS TEST. ONCE BASIC PROFICIENCY HAS BEEN ATTAINED, COMMANDERS CAN INCLUDE SPECIAL CONDITIONS, SUCH AS CBRN OR LIMITED VISIBILITY.
4. SEE APPENDIX C OF TM 3-22.31 FOR MORE INFORMATION.

