

Interpret Munitions Markings <u>TLO</u>

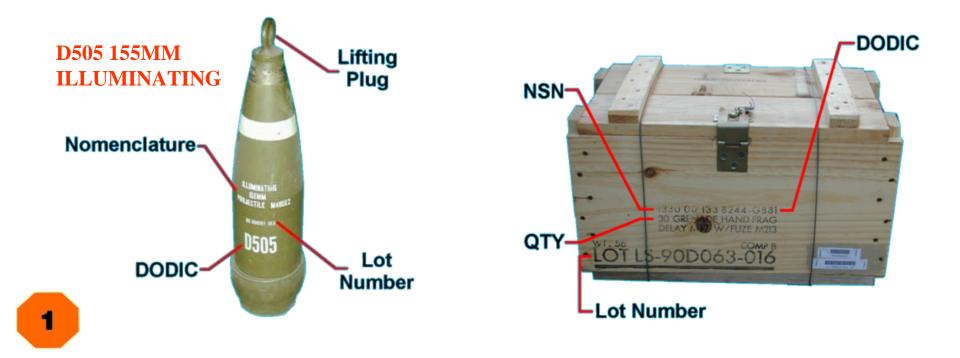


Action:	Identify selected munitions and packaging containers, interpret and identify munitions markings on boxed and palletized munitions.
Conditions:	Given instruction in a contemporary operating environment (COE), applicable references and practical exercise worksheet.
Standards:	Soldiers must correctly answer seventy percent of all questions contained in the practical exercise.



Interpret Munitions Markings







Interpret Munitions Markings General Ammunition Markings



•INERT Ammo

•explosives, incendiary, or toxic materials have been simulated

•EMPTY Ammo

•explosives, incendiary, or toxics have been omitted

•Empty projectiles, bombs

•4 ¼ inch holes 90 degrees apart if size permits
•exceptions are items used in target practice or practice bombs

•Cloth-covered components

•marked with durable, waterproof, sunfast ink

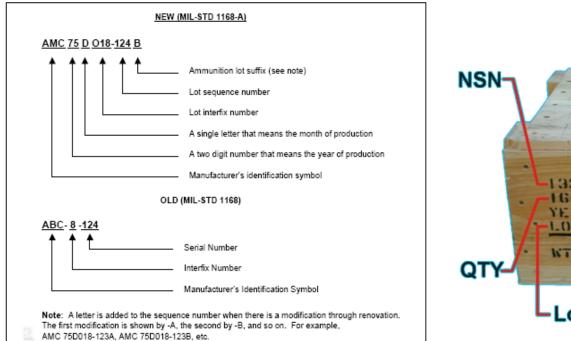
•Mortar propellant increments

•INERT cut through each increment

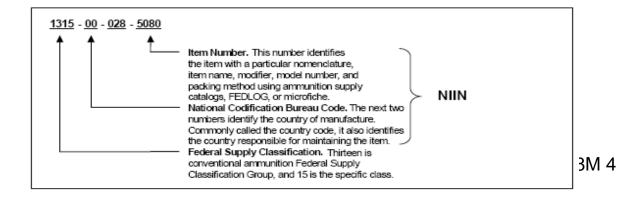


Interpret Munitions Markings <u>**Markings on Munitions Boxes</u></u></u>**





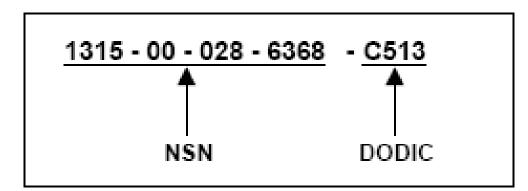


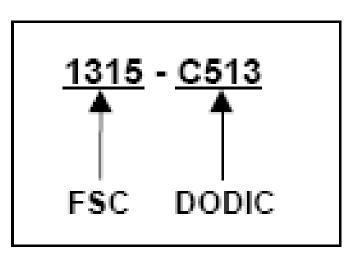




Interpret Munitions Markings Markings on Munitions Boxes (cont)









Interpret Munitions Markings Color Coding



Ammunition is painted to prevent rust and to provide by its color a means of identification or camouflage.



- Color coding system:
 - Indicates primary use
 - Indicates a presence of a hazard



Interpret Munitions Markings Color Coding (cont)



- Primary use color coding:
 - Applied to entire surface as background color
 - Band of color not more than 2 inches wide
 - Disks or squares in appropriate color
 - Data markings in appropriate color



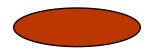
Interpret Munitions Markings Color Coding (cont)



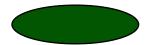
- YELLOW -INDICATES HIGH EXPLOSIVE
- BROWN -INDICATES LOW EXPLOSIVE



GRAY-INDICATES CHEMICAL AMMUNITION



DARK RED-INDICATES A RIOT AGENT FILLER



DARK GREEN-INDICATES TOXIC CHEMICAL FILLER



VIOLET-INDICATES INCAPACITATING AGENT FILLER



Interpret Munitions Markings Color Coding (cont)

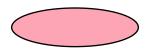




BLACK - INDICATES ARMOR DEFEATING AMMO



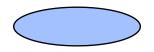
- SILVER-INDICATES COUNTERMEASURE AMMO
- LIGHT GREEN-INDICATES SCREENING AMMO



LIGHT RED-INDICATES INCENDIARY AMMO



WHITE-INDICATES ILLUMINATING AMMO



LIGHT BLUE-INDICATES PRACTICE AMMO



Interpret Munitions Markings Color Coding Exceptions

Type of Ammunition	Body	<u>Markings</u>	Band
High Explosive, (HE), except 20MM	Olive Drab	Yellow	None
High Explosive, (HE), 20MM	Yellow	Black	None
Explosive Binary Munitions	Olive Drab	Yellow	Broken
High Explosvie Plastic (HEP)	Olive Drab	Yellow	Black
High Explosive Anti- Tank (HEAT)	Black	Yellow	None
Antipersonnel and Anti-tank	Olive Drab	Yellow	Yellow Triangles

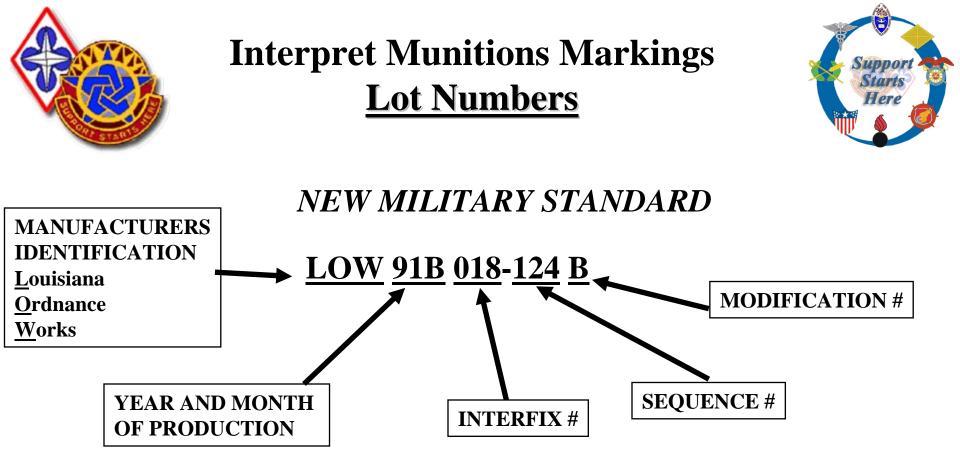




Interpret Munitions Markings Color Coding Exceptions

Type of Ammunition	<u>n</u> <u>Body</u>	<u>Markings</u>	Band		
Incendiary	Light Red	Black	None		
High Explosive Incendiary (HEI)	Yellow	Black	Light Red		
Armor Piercing Incendiary (AP-I)	Black	White	Light Red		
Armor Piercing (AP) (a) with bursting charge (b) without bursting charge	Black Black	Yellow White	None None		
Canister	Olive Drab	White	None		
Flechette Loaded	Olive Drab	White	None		



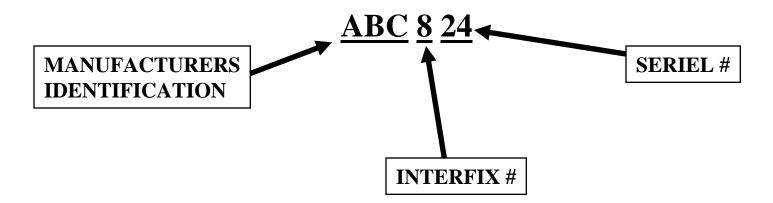




Interpret Munitions Markings Lot Numbers (cont)



OLD MILITARY STANDARD





Interpret Munitions Markings Markings on Actual Munitions



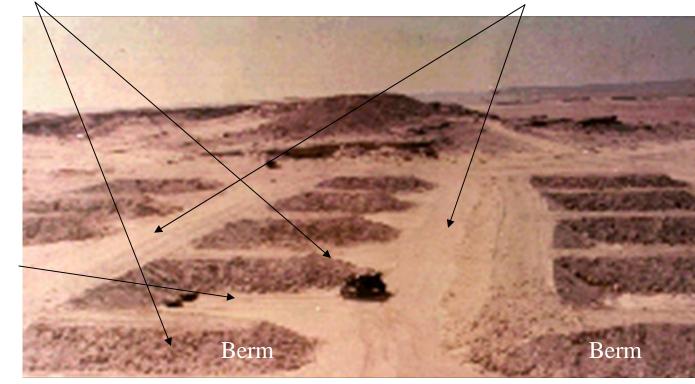
- <u>Weight zones</u>. On artillery rounds,
- <u>Size and type</u>. These numbers tell you the size of the munitions The letter "H" indicates the round is fired from a Howitzer. You may find some with the letter "G" which indicates Gun.
- <u>Nomenclature- model number</u>. The last part of the is the abbreviated nomenclature with a model number (Proj M107).
- <u>Additional information</u>. This information provides additional data about the item.
- <u>Type filler</u>. Immediately below the size is the type filler in the main charge
- <u>DODIC</u>. Only the DODIC will appear on separate loading projectiles,
- <u>Lot number</u>. ALL separate loading projectiles (155mm 8in.) will have the lot number stenciled on it.
- <u>Color-coding</u>. Munitions are color coded for their intended use.



Outdoor Storage Ammunition Pad



Maintenance of Vegetation & Ignitable material



Drainage

Level



Outdoor Storage <u>Propagation</u>

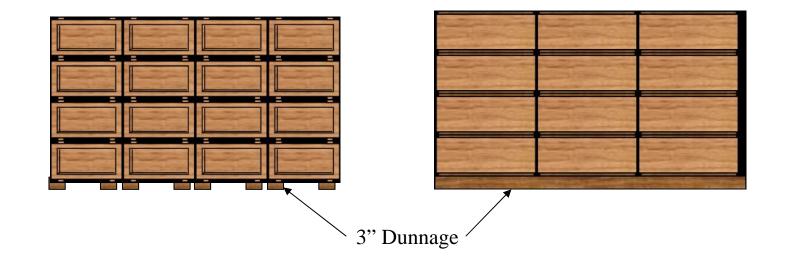






Outdoor Storage Dunnage







- 1. Fuzes primer and boosters
- 2. Pyrotechnics
- 3. Combustible cartridge cases
- 4. Demolition priming devices
- 5. Illuminating ammunition/black powder charges

- 6. Chemical ammunition 11. Demolitions
- 7. Rockets
- 8. Small arms
- 9. Grenades
- 10. Mines

- 12. Fixed and semi-fixed ammunition smallest caliber first
- 13. Separate-loading projectiles
- 14. Bombs



Outdoor Storage MILVAN/Container Storage











Outdoor Storage Magazine Data Card



DESCRIPTION				Α.	С.	Ε.
0.	1.	0.	9. QI	UANTITY	10.	
DATE	DOCUMENT NO.	ACTION/PURPOSE	A. GAIN	B. LOSS	BALANCE	PRINTED NAM



Issue Munitions <u>TLO</u>



Action:	Issue munitions at an ASA
Conditions:	In a contemporary operating environment (COE), various types of munitions to be stored in an open storage pad, DA Form 3020-R, dunnage, banding equipment and materials, safety clothing and equipment, stencil equipment and materials, packaging containers and materials, DA Form 3151-R, and forklifts.
Standards:	Issue to a using unit the correct type and amount of munitions requested from the designated storage location as indicated on the DA Form 3151-R. Complete and check all documentation for accuracy. Perform this task without causing injury to self, other personnel, or damage to the environment, equipment or munitions.



Issue Munitions <u>Definition</u>



"Issue of Munitions" is defined as the "Transfer of ammunition stocks from an ammunition storage area.



Issue Munitions <u>Ammunition Condition</u> Codes



ACC A-SERVICEABLE (ISSUABLE WITHOUT QUALIFICATION)

E-1. New, used, repaired, or reconditioned materiel that is serviceable and issuable to all units without limitations or restrictions. This includes materiel with more than six months shelf life remaining.

E-2. Normal incidental requirements for additional packaging, packing, marking, and so forth that can be accomplished at the time of issue (without requiring added resources, manpower, or delays) do not constitute a restriction.

ACC B-SERVICEABLE (ISSUABLE WITH QUALIFICATION)

E-3. New, used, repaired, or reconditioned materiel that is serviceable and issuable for its intended purpose; however it is restricted from issue to specific units, activities, or geographical areas by reasons of its limited usefulness or short-service life expectancy. This includes materiel with three through six months shelf life remaining.

E-4. Normal incidental requirements for additional packaging, packing, or marking, and so forth that can be accomplished at the time of issue (without requiring any added resources, manpower, or delays) do not constitute a restriction. This includes items restricted to or from a specific mission. **ACC C–SERVICEABLE (PRIORITY OF ISSUE)**

E-5. Items that are serviceable and issuable to selected customers, but that must be issued before conditions A and B materiel to avoid loss as usable assets. Includes materiel with less than three months shelf life remaining.



Issue Munitions <u>Ammunition Condition</u> <u>Codes (cont)</u>







Issue Munitions Priority of Issue





Priority 3. Acceptable substitutes from excess stocks. Coordinate approval of substitution with requesting officer.Priority 4. Oldest munitions of type being issued.Priority 5. All other stocks.



Issue Munitions Actions When Unit Arrives



- 1. Vehicles go to the vehicle holding area (VHA).
- 2. Unit representative takes DA Form 581 to storage point office.
- 3. Unit vehicles (empty) in the VHA are inspected.
- 4. Vehicles not meeting standards are rejected, those that meet standards are cleared for entry into the storage point for loading.





Issue Munitions Actions (cont)

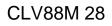
Stock Control

- 1. Review DA Form 581
- 2. Verifies ammunition condition codes *

Issuing Checker

- 1. Escorts unit vehicles
- 2. Locates ammunition to be issued
- 3. Directs loading and tie-down
- 4. Performs joint inventory









Issue Munitions Safety



You will have direct contact with the stocks being issued. If there is ever any question as to the serviceability of stocks you are issuing, it is your responsibility to take your suspicions to one of your superiors. Unserviceable ammunition has cost lives before don't let it happen because you failed to make a report.



Issue Munitions <u>DA Form 581</u>



		AMMUN	AND TURN-IN OF	1	Issue Turn-in	-	DOCUMENT	NO 121-0009	1	5. PAG	~ 6		IENT SERIAL NO	47
7. SENOTO 8. REQUEST FROM ASP 1-505th Arty Bn Ft Knox, KY Ft Knox, KY				30 May 13e REQUES James R 14e APPROV							12 DODAAC 13 DODAAC 14 K4ABC SIGNATURE			
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1	A071	1305-00-926-39		ca.	1,600	FTX	NIS							
2	H557	1349-00-021-4/	Rocket, HE,66mm 491 AT, M72A2	n ea	10	FTX	NIS				-	<u> </u>		
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DA FORM 581. AUG 89

EDITION OF MAY 64 IS OBSOLETE



Issue Munitions DA Form 581 (cont)



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			WYXYXY		14s APPROM	ED BY		OD. DAO		9157	140	SIGN	ATURE				
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Issue Munitions DA Form 581 (cont)



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15 ITEM	18 DOCIC	17. NSN	18 NOMENCLATURE	19 Ui	20. QTY. REDUESTED/ TURNED IN	21 TEC	22. ACTION CODE	23 OTY. ISSUED RECEIVED		24 OT/SERIAL I	NO	25	PC	26 DSTED BY	27 DATE		
1		NSN	Case ctg, fired brass, 5.56mm	1ь	15.9	FTX	TIR										
2		NSN	Launcher, rocket M72A2, expended	1	10	FTX	TIR										
3		NSN	Primer block, M72A2, expended	ea	10	FTX	TIR										
			LAST ITEM														
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EDITION OF MAY 64 IS OBSOLETE



Receive Munitions <u>TLO</u>



Action:	Receive shipment of munitions at an Ammunition Supply Activity.
Conditions:	In a contemporary operating environment (COE), and given: packaged or unpackaged munitions, transport vehicles, safety clothing and equipment, packaging materials and containers, tie- down straps, pencil, DA Form 3020-R, DA Pam 710-2-2, MHE, banding equipment and materials, stencil equipment and materials, dunnage, orange paint, applicable munitions drawings, and steel toe shoes.
Standards:	Properly receive, segregate, check for serviceability, inventory, repack, and receipt munitions. Correctly complete, sign, date, and return DA Form 3151-R to stock control. Annotate the quantity received on DA Form 3020-R. Perform this task error free and without causing injury to self, other personnel, damage to the environment or equipment.



Receive Munitions <u>Definitions</u>



"The term, receipt, refers to a shipment of ammunition received from an ASP (Ammunition Supply Point), a CSA (Corps Storage Area), or a TSA (Theater Storage Area), or directly from a port, depot, or manufacturing plant. Receipt must not be confused with unit turn-in.



Receive Munitions



Stocks received by an ammunition supply unit are recorded on stock records, reported to the appropriate DMC, which notifies an ammunition unit in advance of a scheduled incoming shipment.

Unscheduled emergency resupply shipments may arrive at any time.

The unit must be in close coordination with the DMC to ensure notification is received.

Once notified, the unit selects storage locations and makes plans to unload and store the ammunition.



Receive Munitions<u>MHE</u>



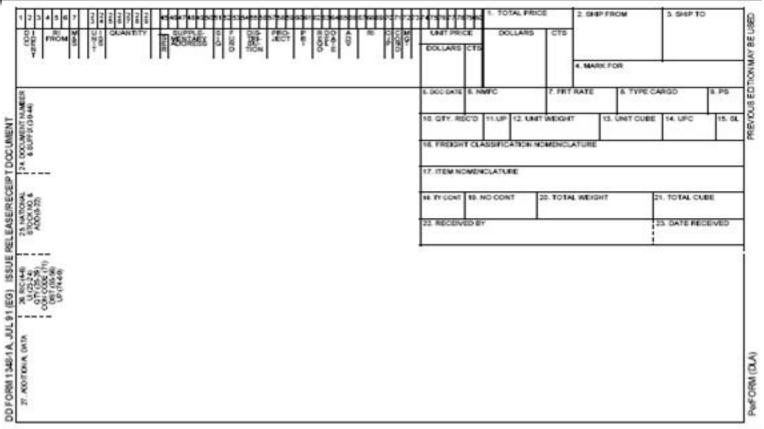


Conduct a detailed inventory of received ammunition



Receive Munitions <u>Forms</u>





DD Form 1348-1A, Issue Release Document Prepared by the shipper, an accountable document used to complete the shipment



Receive Munitions <u>Forms (cont)</u>



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. мо	DE 9. PA	ск	10. TR	ANSPORTA	TION	NCC	ONTR	OLN	0.	11.	CONSIGNEE		12. PRI	13.	RDD 14	PROJ	15.1	DATES	HPD	16.ET#	4	17. TI	RACC
8. C	ARRIER		19. FLI	IGHT-TRUC	к- v с	DY-D	OC N	0. 2	0. RE	F 21.	REMARKS						22.	PIECES		23. W E	IGHT	24. C	UBE
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DD Form 1384, Issue Release Document Prepared by shipper, provides vital data concerning the shipment. Stays with ammunition during shipment.



Receive Munitions <u>Forms (cont)</u>



DESCRIPT	TION			А.	c.	Ε.
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DATE	DOCUMENT NO.	ACTION/PURPOSE	A. GAIN	B. LOSS	BALANCE	PRINTED NAME
			-			
EODM	3020-R, AUG 89	MAGAZINE	ATA CAR	D		Continued on Rever

DA Form 3020-R:Prepared for each lot and stack of ammunition stored during receiving operations



Inventory Munitions <u>TLO</u>



Action:	Inventory Munitions at an Ammunition Support Activity.
Conditions:	In a contemporary operating environment (COE), a clipboard, pencil, partially prepared DA Form 2000-3 and DA Form 3020-R and munitions items to be inventoried.
Standards:	All munitions must be correctly counted and information recorded on DA Form 2000-3. Student will correctly annotate the inventory on DA Form 3020-R, sign and date as the recorder or counter.



Inventory Munitions <u>Why Inventories</u>



- Know exactly how much of each DODIC and lot number you have on hand.
- Know exactly where all your stocks are located at any given moment.
- Know the exact condition code for each lot of ammunition.



Inventory Munitions Types of Inventories



- Scheduled Wall to Wall
- Scheduled Cyclic
- Damaged Warehouse
- Special



Inventory Munitions <u>Inventory Team</u>



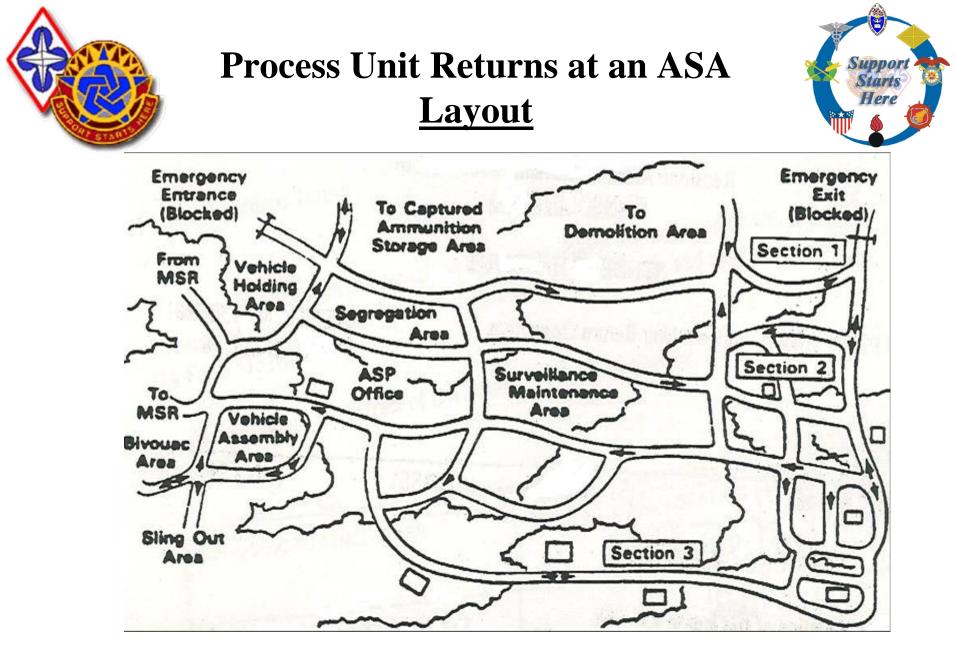
- Counter
 - Counts all ammunition DODIC, NSN, Lot#, Condition Code and Quantity
 - Reports the quantities of pallets, packages and rounds in each package to the Recorder
 - Signs and dates all Count Cards/Sheets
- Recorder
 - Records all count information as the Counter reports it
 - Double checks all count card/sheet data with that on the package being inventoried, to ensure that the correct item is being inventoried
 - Posts the final counts on the Magazine Data Card (DA Form 3020-R) and returns the card to the stack
 - Signs and dates all Count Cards/Sheets
- Inventory Supervisor



Process Unit Returns at an ASA <u>TLO</u>



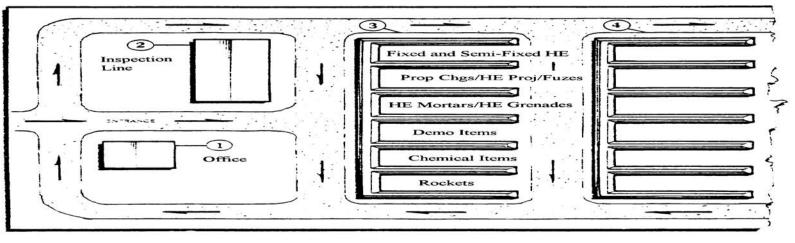
Action:	Process unit returns at an ASA
Conditions:	In a contemporary operating environment (COE), packaged or unpackaged munitions, safety clothing and equipment, packaging containers and materials, tiedown straps, pencil, steel toe shoes, DA Form 3020-R, DA Form 3151-R, appropriate munitions handling equipment (MHE) and materials, banding equipment and materials, stencil equipment and materials, orange paint, and applicable munitions drawings.
Standards:	Properly receive, segregate, check for serviceability, inventory, repack, remark, and account for the unit's ammunition turn in. Correctly complete, sign, date and return DA Form 3151-R to stock control. Annotate the unit's munitions turn in on DA Form 3020-R. Perform this task error free and without causing injury to self, other personnel, damage to the environment or to any equipment.





Process Unit Returns at an ASA Segregation Area





*Office: Processing of records, and reports.

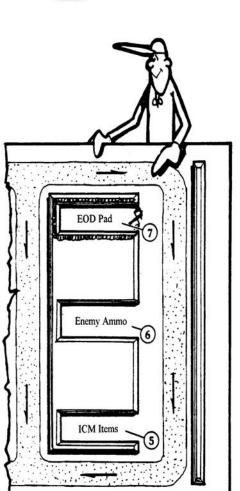
*Inspection Line: Used for the segregation, inspection, and replacing of munitions returned by units.

*Serviceable Storage Module: Barricaded Cells designated for the storage of specific types of munitions. Off-loaded serviceable munitions, place in appropriate pad.

*Unserviceable Storage Module: Barricaded Cells designated for the storage of specific types of munitions. Off-loaded unserviceable munitions, place in appropriate pad.



Process Unit Returns at an ASA Segregation Area (cont)



*ICM Storage Cell: Improved Conventional Munitions items require separate storage, and be isolated from other types of munitions.

*Enemy Ammo Storage Cell: Combat situations require separate and isolated storage area cell pads.

*EOD Storage Cell: Used for the storage of munitions that have been classified as unsafe or hazardous, pending destruction by authorized personnel. This cell must be fenced and gated, locked and secure to prevent unauthorized personnel from entering.





Process Unit Returns at an ASA <u>DA 581</u>



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Acco ASP		ble Officer N7BAA/AK4001	WBJJFF/WK4FD4 lst Bn, 16th INF APC 09046			loop	5.02		13 6417 2134 DAO 2134	13		ATUME		
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3	G889	1330-00-782-554	Grenade, Hand, 40 Frag M26A2		36				LS 13-2	24				
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				2134	2** •									



Process Unit Returns at an ASA <u>DA 3151-R</u>



FOR USE	AMMUNITION STORES SUP OF THIS FORM, SEE DA FAMPHUET 710 NT AGENCY IS DCSLOG.	H2-2."	AUTHO 7138-				18 M	: A¥ 87
FROM:	S4 1-505th Arty Bn, Ft Kno	1944 (M) 194	ASP	OF AC		' .		
TO:	ASP Ft. Knox, KY	** 		E NO, 23456		-		
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NSN D		LOT N	D. ACC	LOCAT	NON	PLTS	ROUNDS	INIT
	anna anna an	· ····		FROM	TO	BXS		
	-00-926-3930-A071 5.56mm Ball	LC10-	5	A -1	1	2 BX	3,360	
	-00-724-8081-8568 40mm HE	PN07-	13 .	B-1		2 BX	72	
	-00-133-8244-G881 1, Hd, FRAG	FT87-	21 A	C-1		1 'BX	30	
	****	OFHING	FOLLOW	Sec	xxx	xxxxx		cox
					Γ			
-		+	1		T			
COM	IKS PLETED BY ASP PERSONNEL I	IAW DA F	AM 710	-2-2				
DATE: 7138	SIGNATURE OF ISSUING CHEC	CKER	DATE: 7138				CEIVING CI	

AMMUNITION STORAGE SLIP

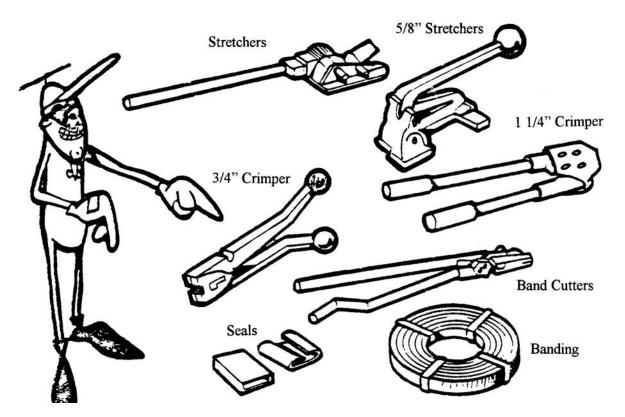
- *Used as a backup document to the DA Form 581
- *Given two copies by operations prior to processing units documents.
- *As munitions are processed enter required information in the columns provided for true accountability:
- (1) Type
- (2) Serviceability
- (3) Quantity
- (4) Location

DA FORM 3151-1 APRIL 1976



Process Unit Returns at an ASA <u>Rebanding Tools & Materials</u>







Process Unit Returns at an ASA <u>Safety Equipment</u>





- 1. Work gloves.
- 2. Safety toe protectors or steel toed safety shoes.
- 3. Goggles or face shield.



Process Unit Returns at an ASA <u>Remarking Tools</u>





Tools and materials used for remarking outer packing.

- 1. Stencil Brush.
- 2. Stencil cutting machine.
- 3. Stencil paper.
- 4. Stencil ink/ Spray paint.



Process Unit Returns at an ASA <u>Hazardous and Incompatible</u> <u>Munitions</u>



- Identify the ammunition.
- Check for loose rounds.
- Check for opened boxes and containers.
 - Inspect for missing safety devices.
 - Identify items in extremely hazardous conditions.
- Check for compatibility of items.
- Check open containers to make sure that items are the same as indicated on the box.
- Open damaged containers and inspect the ammunition for serviceability.
- Make sure marked empty containers are in fact empty.



Process Unit Returns at an ASA <u>Segregation</u>





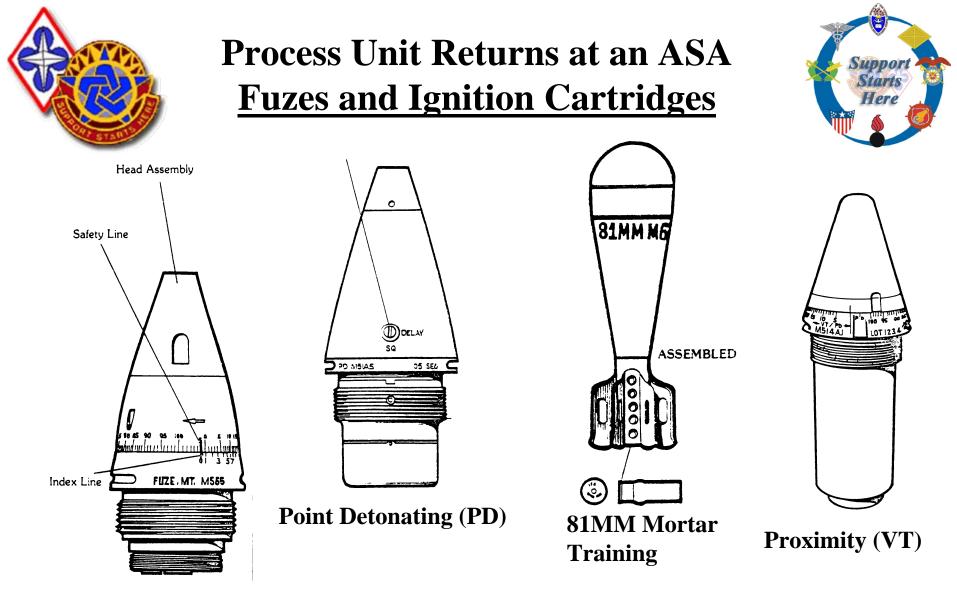
- 1. Serviceability.
- 2. Type.
 - WP
 - HE
- 3. Lot number (located on front of box and on each end)
- 4. National stock number (13 digit number located across the front of box).
- 5. DODIC (located at end of NSN and on each end of box).



Process Unit Returns at an ASA Grenades



Safety pin must be inserted through both sides of safety lever and through fuze body Safety pin should have angular crimp or diamond crimp to prevent removal Safety pin pull ring present **HNS**P TNT Safety clip is additional safety device



Mechanical Time (MT)



Process Unit Returns at an ASA <u>Unserviceable Munitions</u>



- 1. Repacked in suitable containers and marked as to contents.
- 2. Tag with DD Form 1575 (suspended tag material), or DD Form 1577 (unserviceable tag-material).
- 3. Attach to outside of box.
- 4. Transfer to unserviceable storage area.
- 5. Repack loose serviceable munitions in original containers



Process Unit Returns at an ASA <u>Items Match DA 3151-R</u>



AMMUNITION STORES SLIP for set string training, set 610 9-38 to a sources to up the Sets Army Franking and Districe Domains	0153-0598	2 JUN80
It BN, 16th INF	NAME OF ACTIVITY	
TO: ASP # 1	VEHICLE NO. 47K120	
	SP4 William	lones
		TOTAL INIT
1315-00-935-6031-6256 (ARTRIDGE, 81 MM: HE, M374, 100)	3 FROM TO BXS 2-27 AREA 5	15
1		
10		}
1315-00-935-6031-6254 1315-00-935-6031-6254	M374 2	
9 13/15-00-935-6031-6254 3 CARTRIDGE, BI MM. HE 10/10	P 2:27	EI MM
	-	M374
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	EM DESCRIPTION	
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CUTER COTER NASTH NOPT 27)	
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	~~~~~	

If you find an item of ammunition that is not listed on the DA Form 3151-R, see your supervisor. He/she will advise you as to the markings required on the boxes, and the information to be added on the DA Form 3151-R.



#### Process Unit Returns at an ASA Completion of DA 3151-R



CLV88M 59

LARTRINGE, 81 MM : HE, M374,	100 2-27		1	SEC AREA	5	15	
1315-00-935-6031-6256			FROM		BXS	TOTAL ROUNDS	INI
NSN-DODIC NOMENCLATURE	LOT NO.	ACC	LOC	ATION	PLIS		Tierre

Example above, shows the unit turning in 15 rounds of the item.

During the inspection, 3 rounds were found unserviceable, and the ammunition

Inspector reclassified them as ACC "J"

1315-00-935-6031-6156 6ARTRIDGE, 81 MM : HE, M374,	100 2-27 107 2-27	Ŝ		AREA	i	3	
	+	┨───		466	\$4	1512	
NSN-DODIC NOMENCLATURE	LOT NO.	۱ I	LOCA	TION	PLIS	TOTAL	INIT

To complete the transaction, the unit driver date and sign in the "Signature of the Issuing Checker" block. You date and sign the "Signature of Receiving Checker" block.

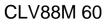
DATE	SIGNATURE OF	~~~		
Z JUN 80	SIGNATURE OF ISSUINC		SIGNATURE OF RECEIVIN	
DA FORM 315		ZUNA		
		AM 3151, 1 JUL 66 WHI	CH MAY BE USED UNTIL EXHAL	ISTED
	DRIVER		<b>X</b> ⁻	
	SIGNS	ĸ	YOU SIGN	



#### Storage Compatibility Groups <u>TLO</u>



Action:	Identify compatibility groups
Conditions:	In a contemporary operating environment (COE) given ammunition of different compatibility groups
Standards:	Be able to identify which compatibility groups ammunition falls in and which groups are safely compatible for storage together.





### Storage Compatibility Groups <u>Codes</u>



### **A B C D E F G H J K L N S**

Ammunition and or explosives are considered "compatible" if they can be stored or transported together without significantly increasing the:

•Probability of an accident

•Magnitude of the effects of such an accident

Official compatibility codes found in the Joint Classification System



#### Storage Compatibility Groups <u>Storage Principles</u>



- 1. Ideal storage generally is not feasible
- 2. Ammunition and explosives may not be stored together with dissimilar materials
- 3. Assigned to compatibility groups based on the similarity of characteristics, properties, and accident effects potential
- 4. ammunition and explosives may be mixed in storage, provided they are compatible
- 5. Ammunition and explosives in substandard or damaged packaging will be stored separately



#### **Storage Compatibility Groups Storage Compatibility Mixing Chart**



Storage Compatibility Mixing Chart

Crown				D	-	F		ЦЦ		Lν	1	N	c .
Group	A	В	С	U	E	F	G	н	J	К	L	N	S
А	Х	Z											
В	Z	Х	Z	Z	Z	Z	Z					Х	Х
С		Z	Х	Х	Х	Z	Z					Х	Х
D		Z	Х	Х	Х	Z	Z					Х	Х
Е		Z	Х	Х	Х	Z	Z					Х	Х
F		Z	Z	Z	Z	Х	Z					Z	Х
G		Z	Z	Z	Z	Z	Х					Z	х
Н								Х					Х
J									Х				Х
К										Z			
L													
Ν		Х	Х	Х	Х	Z	Z					Х	х
S		Х	Х	Х	Х	Х	Х	Х	Х			Х	Х



#### Storage Compatibility Groups <u>Storage Compatibility Mixing Chart</u> (cont)



1 "X" indicates that these groups may be combined in storage, otherwise, mixing is either prohibited or restricted according to note #2.

² "Z" indicates that, when warranted by operational considerations or magazine nonavailability and when safety is not sacrificed, logical mixed storage of limited quantities of some items of different groups may be approved. These relaxations involving mixed storage shall be approved by the MACOM and are not considered waivers. However, DA shall determine which items within Group K may be stored together and which must be stored separately. Group K requires not only separate storage from other groups but may also require separate storage within the group.

³ Compliance with compatibility criteria is not required for mission essential or operationally necessary quantities of explosives in Class/division 1.4 or 6.1 (excluding toxic chemical munitions); up to 100 lbs. NEW Class/division 1.3; and up to 50 lbs. NEW Class/Division (04)1.2. See paragraph 5–1b for Q-D requirements and additional information concerning small quantities of explosives.

⁴ Equal numbers of separately packaged components of complete rounds of any single type of ammunition may be stored together. When so stored, compatibility is that of the assembled round; for example, WP filler in Group H, HE filler in Groups D, E, or F, as appropriate.

⁵ Ammunition items without explosives that contain substances properly belonging to another U.N. hazard class may be assigned to the same compatibility group as items containing explosives and the same substance, and be stored with them.

⁶ DA may authorize ammunition designated "practice" by National Stock Number (NSN) and nomenclature to be stored with the fully loaded ammunition it simulates.

⁷ The MACOM may authorize the mixing of compatibility groups, except items in Groups A, K, and L, in quantities not exceeding 1,000 lbs. NEW per storage site. This is independent of note #2 and the exception found in paragraph 4-4b.

⁸ For purposes of mixing, all items must be packaged in approved storage/shipping containers. Items shall not be opened for purposes of issuing unpackaged munitions in storage locations. Outer containers may be opened in storage locations for inventorying; for removing munitions still inside an approved inner package in limited amounts, and for magazines storing only hazard division 1.4 items, unpacking, inspecting, and repacking the hazard division 1.4 ammunition.

⁹ Articles of compatibility Groups B and F shall each be segregated in storage from articles of other compatibility groups by means which are effective in preventing propagation of those articles.

¹⁰ If dissimilar HD 1.6, SCG N munitions are mixed together and have not been tested to ensure nonpropagation; the mixed munitions are considered to be HD 1.2, SCG D for purposes of transportation and storage. When mixing SCG N munitions with SCGs B through G, see chapter 5, paragraph 5-2f through 5-2i about changing quantity-distance (QD) class/divisions.

¹¹ For storage purposes, fuzes assigned to SCG D are also compatibile with fuzes assigned to SCG B.



# Captured Ammunition <u>TLO</u>



Action:	Conduct CEA Operations
Conditions:	CEA has been discovered and you have the ability to obtain all necessary equipment/resources to process and transport the CEA.
Standards:	Process and transport CEA if required to ASA IAW SOP and safe ammunition handling procedures.



#### Captured Ammunition Conduct Deliberate Mission Planning



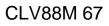
- 1. Ensure all key leaders are involved in the planning process.
- 2. Ensure soldiers are trained
- 3. EOD support
- 4. Coordinate transportation and packaging requirements
- 5. Medical
- 6. Linguist support.
- 7. Security support
- 8. Convoy route from CEA site to storage facility
- 9. Safe disposal area
- 10. Communications plan
- 11. Recon if possible
- 12. Conduct risk assessment
- 13. Catastrophic event plan.



#### Captured Ammunition On-Site Execution



- 1. Establish a security perimeter.
- 2. Conduct communications check with higher command and medical support.
- 3. Safety briefing
- 4. EOD inspection
- 5. Trained personnel supervise the packaging and loading of the CEA
- 6. Inspect blocking, bracing and securing munitions
- 7. Conduct Convoy briefing
- 8. Notify higher headquarters





#### Captured Ammunition Cautions and Guidance



- Improvised Explosive Devices (IED) and Unexploded Ordnance (UXO) are not classified as CEA
- EOD personnel on-site
- SURVEY THE AREA!
- Take booby trap precautions
- Do not use any radio or broadcasting devices
- Take precautions against static electricity
- Wear Personal Protective Equipment (PPE)
- Handle carefully
- No smoking within 50 feet
- Turn vehicle engines off
- Fire extinguisher in vehicle
- White phosphorus/incendiary munitions
- Limit personnel
- Excess vehicles located in a designated parking area
- Medical and supervisory personnel
- Beware of snakes and insects
- Clear path for loading



#### Captured Ammunition Categorization



Extremely Unsafe Ammo:

- Handling and transportation is not recommended
- Conducted by or under the direct supervision of EOD
- Transportation requirements determined by EOD
- Do not transport items from other ammo transportation categories



#### Captured Ammunition Categorization (cont)



Unsafe Ammo:

- May be stored
- Route: gentle curves and be fairly smooth
- Limit speed
- Minimum crew
- Minimal handling
- Not be transported in tactical vehicles
- No personnel in cargo area
- Trailer prepared for transportation of CEA
- Pull with enclosed armored vehicle
- Do not use pivot or neutral steering
- Do not transport items from other ammo transportation categories
- Route selection



#### Captured Ammunition Categorization (cont)



SAFE Ammo:

- Evaluated by qualified ammunition inspectors prior to issue for use
- Tactical truck may be used to move the small arms ammunitions
- Do not transport items from other ammo transportation categories



#### Captured Ammunition Vehicle Selection



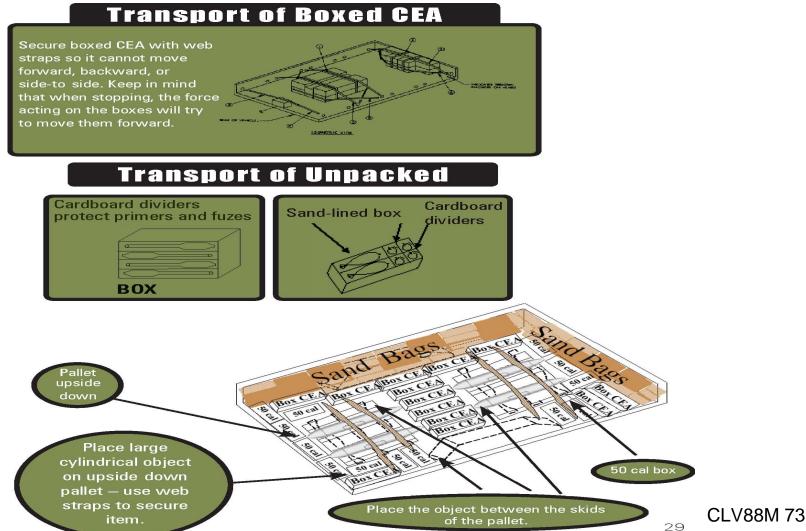
Prime Movers:

- Armored vehicles
- M113 family of vehicles (FOV)..
- The Bradley Fighting Vehicle (BFV) certified to safely tow only one trailer
- Field Artillery Ammunition Supply Vehicle (FAASV)may be used
- Do not use the Abrams or M88
- Do Not use any tactical wheeled Army motor vehicle



### Captured Ammunition Preparation and Loading







# Maintain Combat Load (CL) <u>TLO</u>



Action:	Maintain a units Combat Load	
Conditions:	In a contemporary operating environment (COE), identify procedures to properly maintain a units ammunition combat load.	
Standards:	Properly identify and maintain ammunition combat load.	



### Maintain Combat Load (CL) <u>Total Ammunition Management System</u> (TAMIS)

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# Maintain Combat Load (CL) <u>Types of Combat Load</u>



### **To-Accompany-Troops (TAT)**

- Can be carried by or accompanies the soldier
- Can be uploaded on a combat vehicle
- Can be uploaded on organic transportation

### Non-TAT

- Cannot accompany the soldier.
- Cannot be loaded in or on unit combat vehicles.
- Cannot be loaded on unit transport vehicles.



# Maintain Combat Load (CL) Calculate Combat Load



- HQDA G3 generates standard factors to support the Army Combat Load requirements.
- Units modify calculation based on mission and weapons density changes.
- Using TAMIS (Requirements Module) the ACOMs, ASCCs & DRUs express their Combat Load requirements to HQDA G-3 for validation. (TAMIS sub-module).
- Units auto-generate and store ABL e581 in TAMIS (under development).
- Recall e581 & electronically submit.



## Maintain Combat Load (CL) <u>Combat Load Basis</u>



- Munitions DODICS/Quantities.
- War Requirements (WARREQ).
- TRADOC Munitions Combat Load Study.
- New munitions developments.
- Weapon Systems/Personnel.
- MTOE.
- Basis of Issue Plan (BOIP).
- Commander's Input.



# Maintain Combat Load (CL) <u>CL Accountability</u>



#### CL not on-hand

- DA Form 581 prepared based on approved ABL.
- DA Form 581 document number posted to the property book.
- Listed on property book by DODIC.
- Property book shows ABL items as "on-request".

### CL on-hand

- Items on-hand posted to the property book.
- Will not be used for training.
- Items will be inventoried monthly.
- Any ABL not on-hand still handled IAW procedures above.



## Maintain Combat Load (CL) <u>Required Supply Rate</u>



Required Supply Rate - is defined as the amount of ammunition, expressed in rounds per weapon per day, estimated to be required to sustain operations of any designated forces without restriction for a specified period of time



## Maintain Combat Load (CL) <u>Controlled Supply Rate</u>



Controlled Supply Rate - is the rate of ammunition consumption that can be supported, considering supplies, transportation, and facilities available, for a given period.



# Maintain Combat Load Controlled Supply Rate Terms



Stockage objective Safety level Balance on hand Due ins Due outs Weapon density Distribution time





# Maintain Combat Load Controlled Supply Rate Calculations



### Determine if a CSR is required using the formula

- If the balance on hand minus the due outs is greater than the safety level no CSR is required.
- If the balance on hand minus the due outs is less than the safety level a CSR is required.
- You can never issue out of the safety level without the Theater Commanders approval.

### **Determine the CSR using the formula**

- The (balance on hand minus the safety level) divided by the (weapon density and number of days to next resupply and distribution in the theater).
- CSRs are always rounded down and expressed in rounds per weapon per day.



# Maintain Combat Load Controlled Supply Rate Calculations



Balance on hand is 500,000 rounds, safety level is 200,000 rounds. Due outs for the next thirty days is 400,000 rounds. The weapon density is 100 weapons and no due ins are scheduled until 30 days from now.

BOH 500,000 minus D/OUTs 400,000 = 100,000 SL is 200,000 Yes a CSR is required. CSR formula is:

 $\frac{BOH \ 500,000 \ \text{minus SL } 200,000}{(WD \ 100 \ x \ DTR \ 30)} = \frac{300,000}{3,000} = 100 \ CSR$