

3 INCH GUN, M-7

ON

GUN MOTOR CARRIAGE, M-10

NOTE: This errata sheet is published to correct the original mimeograph form File W-275 - 282, Destroyer Section, Weapons Department, Tank Destroyer School, Camp Hood, Texas, 6 March, 1943.

Mimeograph form File W-275 - 282 as originally published should be corrected as indicated on this errata sheet.

Weapons Department  
Tank Destroyer School  
Camp Hood, Texas  
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DESTROYER SECTION  
WEAPONS DEPARTMENT  
TD SCHOOL  
Camp Hood, Texas

May 1, 1943

SUBJECT: Changes in 3" Gun M-7 Manual dated March 6, 1943.

TO : All concerned.

1. The following changes in 3" Gun M-7 Manual dated March 6, 1943 should be annexed and annotated on all of the above mentioned manuals:

Page #1 - A. General. - Last line - change MILES to MILS.

Page #2 - Par. G., 9. - Delete speed figures on M-10 A1, add: M-10 A1, 26 MPH at 2600 RPM'S. 28 MPH maximum speed.

Page #3 - Par. I, 1, a. - change number of blocks per track to 73.

Page #3 - Par. J, 2, b., (1) - Delete (See figure #2).

Page #7 - Par. A. General. Line #10 - change weights of projectiles from 13 to 14.5 lbs. to 12.8 to 14.91 lbs.

Page #8 - Par. 8, a - add: (4) Field of vision - 12° 19'. Par. 4, a - add: Dual cylindered.

Page #10 - Par. 1 - Armament - add: 1 Tripod, Machine Gun, Cal. .50, M3.

Page #11 - Par. 5 - Sighting etc. - change Telescope T 60 to telescope M-51.  
Par. 6 - Miscellaneous - after 1 compass (Hull) delete "on wall in front of Driver" - add "on turret top".

Page #16 - Line T.M. - change "Hull Ring" to TRAVERSING RACK.

Page #19 - Par. 2 - add: The DETENT RELEASE PLUNGER TOOL is not an item of

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Page #16 - Line T.M. - change "Hull Ring" to TRAVERSING RACK.

Page #19 - Par. 2 - add: The DETENT RELEASE PLUNGER TOOL is not an item of issue.

Page #21 - Par. 7 - add: The COVER ASSEMBLY TOOL is not an item of issue.

Page #35 - Par. IV, A. Description - change "Chambered" to "Chamfered".

Page #45 - Par. XII, B. Description - change "touched" to "curved".

Page #50 - Delete GUIDE GROOVE and arrow.

Page #58 - Change GUIDE LUGS to COCKING LUGS.

Page #62 - Change DISPLACING CAM to DISPLACING CAMMING SURFACE. - Change OPERATING CAM to OPENING CAMMING SURFACE. - Change OPERATING CAM SPRING AND PLUNGER GUIDE to OPERATING CAM POSITIONING SPRING AND PLUNGER.

Page #63 - (1), Par. XXIII, A., 1. - change DISPLACING CAM to DISPLACING CAMMING SURFACE. (2), Par. XXIII, A., 2. - change OPERATING CAM to OPENING CAMMING SURFACE.

Page #71 - AUTOMATIC CLOSING OF THE BREECH. Last line should read: "The upward movement of the BREECHBLOCK is stopped by the BREECHBLOCK CRANK ARM striking the rear face of the BARREL. - FIRING - Lines #3 and #7 - change SOLENOID CORE RETRACTING SPRING to FIRING MECHANISM RETRACTING SPRING.

Page #75 - Line #1 - change OPERATING CRANK LUG TO OPERATING CRANK OPENING LUG.  
Line #1 - change OPERATING CAM to OPENING CAMMING SURFACE.

Page #80 - Par. B - add: Capacity each cylinder - 20 pints.

Page #81 - Add: See OFSB 6-G-130 December 15, 1942. 1. CLOSING SPRING CHAIN lubricate daily. 2. TRAVERSING RACK lubricate daily with engine oil.

Page #85 - Par. D. - 1. Weight of A.P.C. M-62-- 29 lbs. 2. Weight of H.E. M-42-27 lbs. 3. Bursting radius H.E. M-42 - 15 yards.

Page #105 - (section II) thru page 115 - delete - use attached Excerpt from FM 18-15, (tentative) section II, training for placing in action.

SECTION II

TRAINING FOR PLACING IN ACTION

78. SCOPE. - a. This section covers that part of training for placing the destroyer in action applicable to tank destroyer units and is not found in other manuals.

b. Organizations not equipped with the 3-inch Gun Motor Carriage, M-10 may use this manual as a guide in the preparation of a drill suitable to their particular equipment.

79. COMPOSITION. - a. A destroyer squad consists of a destroyer commander, gunner assistant gunner (loader), assistant driver, and driver.

80. TO FORM THE SQUAD. - Destroyer commander places himself three paces to the front (or rear) of the right track of the vehicle, facing to the front, and commands: IN FRONT (REAR) FALL IN. The other members form, at double time, in line at close intervals on the commander's left in the following order, right to left: destroyer commander, gunner, assistant gunner (loader), assistant driver, and driver.

81. TO CALL OFF. - The command is: CALL OFF. The gunner calls off, "One"; assistant gunner (loader), "Two"; assistant driver, "Three", and the driver, "Four".

82. TO POST THE SQUAD. - a. The command is: POSTS. Members of the squad

81. TO CALL OFF. - The command is: CALL OFF. The gunner calls off, "One"; assistant gunner (loader), "Two"; assistant driver, "Three", and the driver, "Four".

82. TO POST THE SQUAD. - a. The command is: POSTS. Members of the squad take posts at a run as follows: destroyer commander in the turret to the right of the tube and forward from the breech, gunner in the turret to the left of the tube and forward from the breech, assistant gunner (loader) in the turret behind the gunner to left rear of the tube, assistant driver in right front seat, and driver in left front seat. (Note: Directions mentioned for positions within turret refer to the gun and not the vehicle, unless otherwise specifically indicated).

b. At the command, POSTS, the destroyer commander will mount over the front of the destroyer on the right side, taking his post after supervising the mounting of the crew. The gunner will mount over the front of the destroyer, closing the right hatch and proceeding immediately to his post. The assistant gunner (loader) will mount over the front of the destroyer, closing the left hatch and proceeding immediately to his post. The assistant driver will mount over the right side of the destroyer, entering his compartment through the right

hatch and takes his post. If the hatch is closed, he enters his compartment through the turret. The driver mounts the destroyer over the left side, enters his compartment through the left hatch, and takes his post. If the hatch is closed, he enters his compartment through the turret.

83. PREPARE FOR ACTION. - The command is: PREPARE FOR ACTION.

a. Duties of the members are:

- (1) Destroyer commander. -
  - (a) Removes muzzle cover.
  - (b) Supervises the work of the crew.
  - (c) Causes squad members to done interphone sets.
  - (d) Helps check recoil mechanism (recoil oil level should be checked at least once a day).
  - (e) Inspects panoramic sight and mounts and installs sight when indirect fire is ordered.
  - (f) Checks bore sight and adjustment of panoramic sight and mount.
  - (g) Inspects materiel.
  - (h) Acknowledges report from assistant driver.
  - (i) Reports, "Destroyer correct. \_\_\_\_ rounds of ammunition. \_\_\_\_ tanks of fuel" to section leader.
  - (g) Inspects materiel.
  - (h) Acknowledges report from assistant driver.
  - (i) Reports, "Destroyer correct. \_\_\_\_ rounds of ammunition. \_\_\_\_ tanks of fuel" to section leader.
  - (j) Observes to flanks and front.
- (2) Gunner. -
  - (a) Unlocks the piece travel lock and left turret lock.
  - (b) Opens turret sight port.
  - (c) Checks recoil mechanism (recoil oil level should be checked at least once a day).
  - (d) Inspects telescope sight and mount and installs telescope.
  - (e) Installs sight filter, if necessary.
  - (f) Checks sight mount indices.
  - (g) Inspects and tests firing mechanism, manually and electrically.
  - (h) Reports to assistant gunner, "Fire mechanism correct".
  - (i) Checks elevating mechanism.

- (j) Checks traversing mechanism and traverses piece to the front.
- (k) Reports to assistant driver, "Gun correct. \_\_\_\_ rounds on hand".
- (l) Observes to left flank and rear.
- (3) Assistant gunner (loader). - (a) Removes breech cover.
- (b) Checks bore and reports to gunner, "Bore correct".
- (c) Cocks gun.
- (d) Connects solenoid jack.
- (e) Connects interphone jacks for gunner and commander.
- (f) Checks battery switches to make certain switches are on.
- (g) Recocks gun.
- (h) Checks ammunition in sponsons.
- (i) Unlocks right turret lock.
- (j) Reports ammunition to gunner, "\_\_\_\_ rounds on hand".
- (k) Opens breech fully and relatches handle.
- (l) Stands by to load on fire order.
- (m) Observes to right flank of gun and rear.
- (4) Assistant driver. - (a) Closes hatch if open, inserts and
- (k) Opens breech fully and relatches handle.
- (l) Stands by to load on fire order.
- (m) Observes to right flank of gun and rear.
- (4) Assistant driver. - (a) Closes hatch if open, inserts and adjusts periscope.
- (b) Inspects radio.
- (c) Inspects interphone controls.
- (d) Receives gunner's report.
- (e) Reports gunner's and driver's report to commander, "Gun correct. \_\_\_\_ rounds on hand. \_\_\_\_ tanks of fuel".
- (f) Listens on radio net for orders.
- (g) Observes to right front, front, and left front.
- (5) Driver. - (a) Closes hatch if open, inserts and adjusts periscopes.
- (b) Inspects engine for operation. Reads gages.
- (c) Throttles engine (s) to turn at 800 r.p.m.
- (d) Gives assistant driver fuel report using interphone line, "\_\_\_\_ tanks of fuel".

(e) Observes to front and left flanks.

b.. Posts, halted. - Having prepared the destroyer for action, members of the squad take posts as follows:

(1) Destroyer commander. - In a position on or near his seat.

(2) Gunner. - Immediately to the left of breech.

(3) Assistant gunner (loader). - At rear of breech.

(4) Assistant driver. - On his seat.

(5) Driver. - On his seat.

c. Posts, matching. - Same.

84. DUTIES OF THE MEMBERS OF THE GUN SQUAD DURING MARCHES. - When prepared for action during the march, members observe definite sectors for both air and ground attack. These sectors are:

a. Destroyer commander. - General observation of surrounding terrain and sky, picking likely positions and choosing routes of movement.

b. Gunner. - To rear, right rear, and right flank of vehicle, both ground and air.

c. Assistant gunner (loader). - To rear, left rear, and left flank of vehicle, both ground and air.

d. Assistant driver. - To right front, front, and left front of vehicle, both ground and air.

e. Driver. - Road ahead, and for short distances to right and left of the road, keeping sharp lookout for any evidence of mines, barricades, etc., and constantly picking good points at which the vehicle could leave the road.

f. Assistant gunner (loader). - To rear, left rear, and left flank of vehicle, both ground and air.

g. Assistant driver. - To right front, front, and left front of vehicle, both ground and air.

85. STAND BY. - The command is: STAND BY. All members of the squad observe sectors as in paragraph 84 and remain alert. The driver stops the vehicle in the best available concealment or cover, keeps engine(s) running at proper idling speed, and makes a quick check of the condition of the vehicle.

86. DUTIES IN FIRING. - Duties of the members of the squad in firing are:

a. Destroyer commander. - Is responsible for proper performance of duties, execution of commands, and all safety precautions. Assumes independent command in the absence of higher authority. Fires the piece at the command of the gunner by manual device when the solenoid fails.

b. Gunner. - Lays piece for direct firing and fires the piece.

c. Assistant gunner (loader). - Secures the ammunition and loads the piece.

d. Assistant driver. - Supervises communication as directed by commander.

e. Driver. - Observes to front, keeps engine(s) running at 800 r.p.m. and moves destroyer as directed.

87. DETAILED DUTIES IN FIRING (DIRECT LAYING). - a. Destroyer commander. -

- (1) Selects primary, alternate, and supplementary positions.
- (2) Responsible for fire discipline.
- (3) Selects target and proper ammunition.
- (4) Issues fire order.
- (5) Fires gun manually if necessary.
- (6) Observes fire.
- (7) Adjusts fire by sensing.
- (8) Causes destroyer to be moved to alternate or supplementary position when necessary.
- (9) Shifts fire to new target when original target has been hit.
- (10) Insures that casualties are replaced when possible.

b. Gunner. - (1) Identifies target and reports to commander, "Check" when identified position when necessary.

- (9) Shifts fire to new target when original target has been hit.
- (10) Insures that casualties are replaced when possible.

b. Gunner. - (1) Identifies target and reports to commander, "Check" when identified.

- (2) Lays gun on target with proper range and lead.
- (3) Fires the gun electrically.
- (4) In manual firing, causes gun to be fired by reporting to the commander, "Ready, Fire".
- (5) Directs the driver through interphone as to proper shifting of the vehicle in shifts over 800 mils.
- (6) Assumes command if destroyer commander is a casualty.

c. Assistant gunner (loader). - (1) Loads the piece.

- (2) Calls, "Clear", when clear of the recoil and taps gunner on back.
- (3) Prepares the ammunition and when firing H.E. shell, sets the fuze.
- (4) Reports ammunition status.
- (5) Clears empty shell cases from floor during lulls in firing.

- d. Assistant driver. - (1) Observes to front through periscope.
- (2) Operates radio as directed by commander.
- (3) Responsible that commander receives all orders from higher headquarters promptly.
- (4) Takes place of any member who is a casualty.
- (5) Relieves the driver when he is fatigued.

- e. Driver. - (1) Observes to left through periscope.
- (2) Keeps engine(s) running at 800 r.p.m. and observes instruments.
- (3) Takes over assistant driver's duties if he replaces a casualty.
- (4) Keeps commander informed of fuel supply.

88. DETAILED DUTIES IN FIRING (INDIRECT LAYING).

- a. Destroyer commander. - (1) Lays gun as directed by platoon leader.
- (2) Selects or identifies aiming point and refers to it.
- (3) Records referred deflection.
- (4) Follows fire commands as received.
- (5) Informs assistant gunner (loader) what ammunition charge and fuze are required.
- (6) Traverses gun under direction of gunner.
- (7) Informs assistant gunner (loader) of required quadrant elevation.
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- (6) Traverses gun under direction of gunner.
- (7) Informs assistant gunner (loader) of required quadrant elevation.
- (8) Elevates or depresses gun to center quadrant bubble.
- (9) Measures the elevation.
- (10) Measures the minimum elevation when ordered.
- (11) Reports the minimum elevation when ordered.
- (12) Fires gun as directed by platoon leader.
- b. Gunner. - (1) Assumes command if destroyer commander is a casualty.
- (2) Moves to panoramic sight and centers sight bubble.
- (3) Identifies aiming point.
- (4) Directs commander in traversing piece.
- (5) Sets or changes the deflection and applies the deflection difference.
- (6) Calls, "Ready".
- (7) Measures the deflection and records base deflection when ordered.

- c. Assistant gunner (loader). - (1) Prepares gunner's quadrant for use.
  - (2) Loads gun when given ammunition charge and fuze.
  - (3) Sets quadrant at required elevation.
  - (4) Sets quadrant on leveling plates and tells commander when bubble is centered.
  - (5) Removes quadrant from leveling plates, and when clear of recoil calls, "Clear", and taps commander on back.
  - (6) Reports ammunition status to commander.
- d. Assistant driver. - (1) Operates radio as directed by commander.
  - (2) Responsible that commander receives all orders from higher headquarters.

e. Driver. - (1) Places destroyer as directed by platoon leader and sets brakes.

- (2) Stops engine(s).
- (3) Dismounts and camouflages destroyer.

89. TO MOVE TO AN ALTERNATE OR SUPPLEMENTARY POSITION.

a. Destroyer commander. - (1) Orders gun locked to right front, inboard, or where desired.

- (2) Orders gun left loaded or unloaded as desired.

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a. Destroyer commander. - (1) Orders gun locked to right front, inboard, or where desired.

- (2) Orders gun left loaded or unloaded as desired.

- (3) Directs driver to move in desired direction.

b. Gunner. - Traverses gun to position ordered by commander.

- (2) Locks piece travel lock and left turret lock.

c. Assistant gunner (loader). - (1) Clears empty shell cases from floor.

- (2) Unloads gun if so ordered by commander.

- (3) Locks right turret lock.

d. Assistant driver. - (1) Operates radio as directed by commander.
 

- (2) Responsible that commander receives all orders from higher headquarters.

e. Driver. - (1) Prepares to move vehicle on orders from commander.

- (2) On order to move, inquires, "Are turret locks engaged?"

90. TO EXECUTE MARCH ORDER. \* The command is: MARCH ORDER. The duties of the members of the squad are:

a. Destroyer commander. - (1) Supervises work of crew.

- (2) Inspects gun to see that tube is unloaded and inboard.
- (3) Checks that piece is locked in traveling position.
- (4) Checks both turret locks.
- (5) Reports to next higher commander, "Destroyer march order. \_\_\_\_ rounds. \_\_\_\_ tanks fuel".
- (6) Directs driver to move in proper direction.

b. Gunner. - (1) Places gun in traveling position and locks piece travel lock.

- (2) Locks left turret lock.
- (3) Orders assistant gunner (loader) to lock right turret lock.
- (4) Closes sight port.
- (5) Removes sight filter.
- (6) Reports to assistant driver, "March order, \_\_\_\_ rounds on hand".

c. Assistant gunner (loader). - (1) Checks bore to see that it is clear and reports, "Bore correct".

- (2) Disconnects solenoid jack.
- (3) Locks right turret lock.
- (4) Disposes of empty shell cases.
- (5) Replaces and secures ammunition in ready racks.
- (6) Disconnects solenoid jack.
- (3) Locks right turret lock.
- (4) Disposes of empty shell cases.
- (5) Replaces and secures ammunition in ready racks.
- (6) Replaces breech cover.
- (7) Reports to gunner, " \_\_\_\_ rounds on hand".

d. Assistant driver. - (1) Unlocks hatch.

- (2) Removes periscope and places it in container.
- (3) Opens hatch.
- (4) Reports to commander, "Destroyer march order".
- (5) Listens on radio.
- (6) On alert to use available small arms.

e. Driver. - (1) Unlocks hatch.

- (2) Removes periscope and places it in container.
- (3) Reports to assistant driver, " \_\_\_\_ tanks fuel".
- (4) Checks fuel and lubricant gages.
- (5) Opens hatch.
- (6) On order to move, inquires, "Are turret locks engaged?"
- (7) Moves out as directed upon receiving, "Turret locks engaged".