

TM 9-8034-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL
1/2-TON, 4x4
INFANTRY LIGHT
WEAPONS CARRIER
M274



HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1957

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual contains instructions for operation and operator's maintenance services for the infantry light weapons carrier, 1/2-ton, 4 x 4, M274.

b. Appendix I contains a list of current references, including supply manuals, forms, technical manuals, and other available publications applicable to the infantry light weapons carrier, 1/2-ton, 4 x 4, M274. Appendix II refers to the maintenance allocation chart. Appendix III lists cleaning and preserving materials required for operator's maintenance.

c. This first edition is published in advance of complete technical review. Any errors or omissions will be brought to the attention of the Chief of Ordnance, Washington 25, D. C., ATTN: ORDFM, using DA Form 468 (Unsatisfactory Equipment Report).

2. Operator's Maintenance Allocation

In general, the prescribed operator's maintenance responsibilities will apply as reflected in the allocation of tools and spare parts in Appendix II and in accordance with the extent of disassembly prescribed in this manual for the purpose of cleaning and lubricating. In all cases where the nature of maintenance is beyond the scope or facilities of the operator, the supporting organizational unit should be informed in order that trained personnel with suitable tools and equipment may be provided or other proper instructions issued.

3. Forms, Records, and Reports

a. *General.* Responsibility for the proper execution of forms, records, and reports rests

upon the officers of all units maintaining this equipment.

b. *Authorized Forms.* The forms generally applicable to units operating and maintaining these vehicles are listed in Appendix I. No forms other than those approved for the Department of the Army will be used. For a listing of all forms, refer to current DA Pam. 310-2. For instructions on the use of these forms, refer to FM 9-10.

c. *Field Report of Accidents.* The reports necessary to comply with the requirements of the Army safety program are prescribed in detail in SR 385-10-40. These reports are required whenever accidents involving injury to personnel or damage to materiel occur.

d. *Report of Unsatisfactory Equipment, Materials, or Publications.* Any suggestions for improvement in design and maintenance of equipment, and spare parts, safety and efficiency of operation, or pertaining to the application of prescribed petroleum fuels, lubricants, and/or preserving materials, or technical inaccuracies noted in Department of the Army publications will be reported through technical channels, as prescribed in AR 700-38 to the Chief of Ordnance, Washington 25, D. C., ATTN: ORDFM, using DA Form 468. Such suggestions are encouraged in order that other organizations may benefit.

Note. Do not report all failures that occur. Report only REPEATED or RECURRENT failures or malfunctions which indicate unsatisfactory design or material. However, reports will always be made in the event that exceptionally costly equipment is involved. See also AR 700-38 and printed instructions on DA Form 468.

Section II. DESCRIPTION AND DATA

4. Description

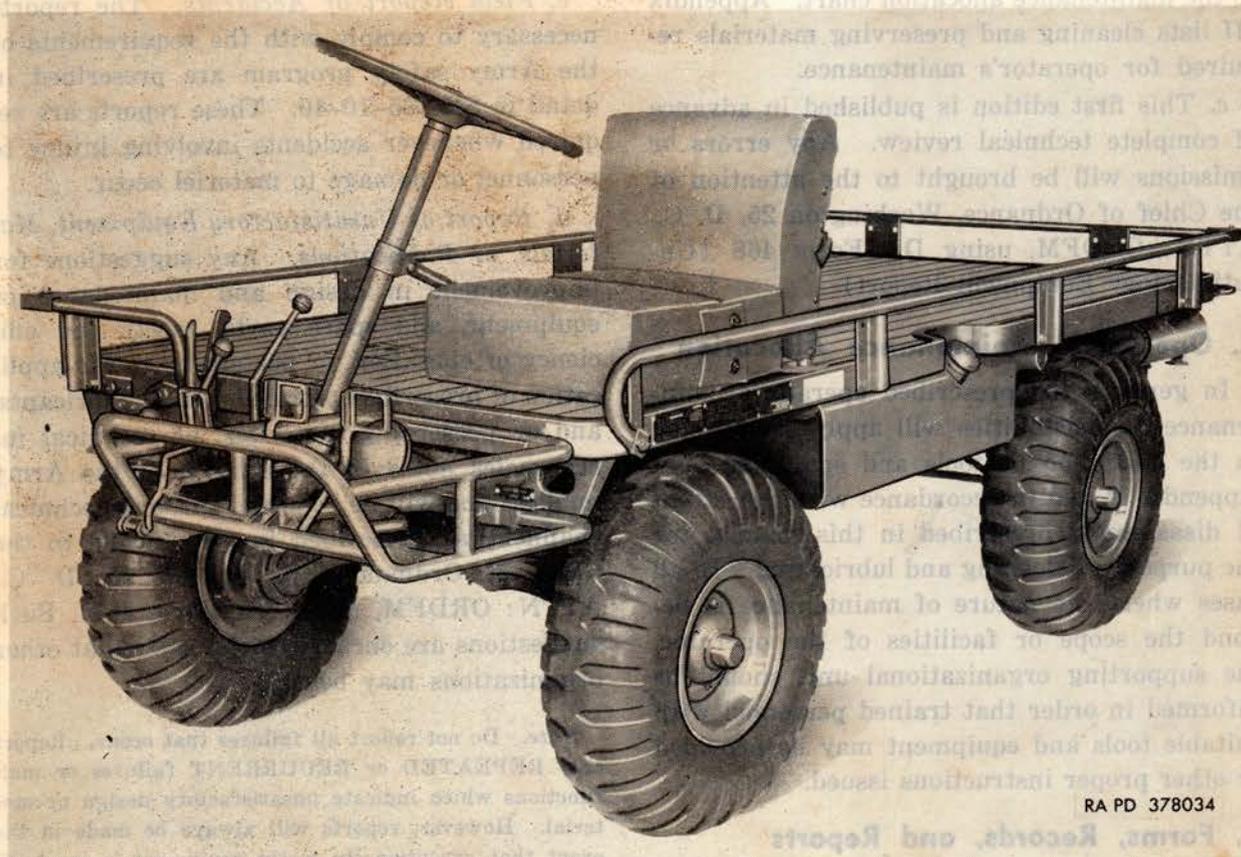
a. This manual contains instructions for the operation and operator's maintenance of the infantry light weapons carrier, $\frac{1}{2}$ -ton, 4 x 4, M274 (figs. 1, 2, and 3), and in addition contains a list of tools, spare parts, and lubricants allocated to support the operator's maintenance services.

b. The carrier is essentially a platform mounted on two axles and four wheels; with a 4-cylinder, 4-cycle, air-cooled, opposed-type gasoline engine under the platform at the rear. There is no spring suspension, shock being absorbed by low-pressure tires. The carrier has a four-wheel drive with three speeds forward and one reverse in the transmission, and a two-speed transfer case. A quick change mechanism allows either two- or four-wheel steer to be used as desired.

c. A handrail is attached to the platform and can be raised to accommodate payload or lowered for shipping and storage. The seat and footrest may be detached and stowed beneath the platform when the vehicle is to be towed when disabled, and for shipping and storage purposes.

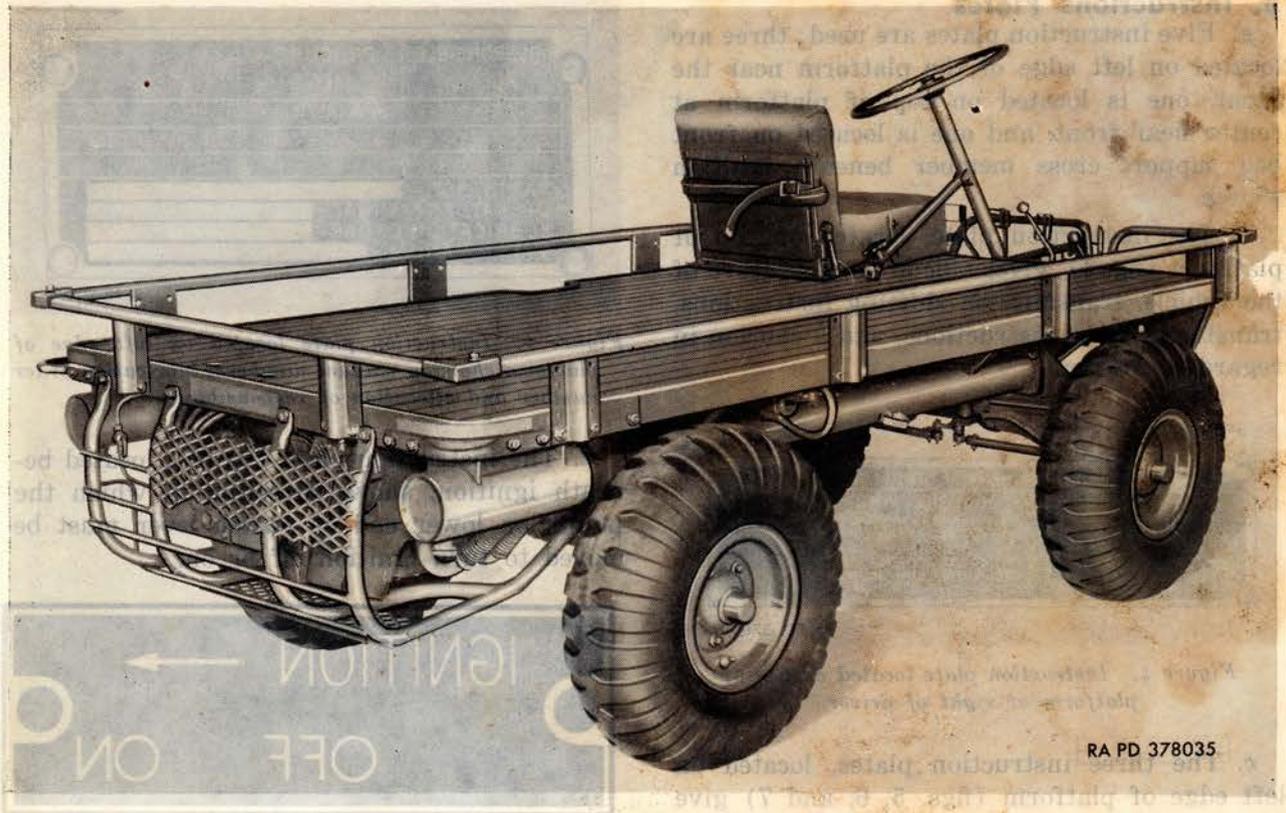
d. The vehicle can be turned on either side or upside down by manpower for ease of maintenance or repair operations.

e. The steering wheel can be moved forward and lowered so that with the vehicle moving in reverse the operator, following on foot, can drive from a standing or crouched position. Fording in water up to the bottom of the accessory drive pulley is safely possible provided low speed and caution are used when entering water.



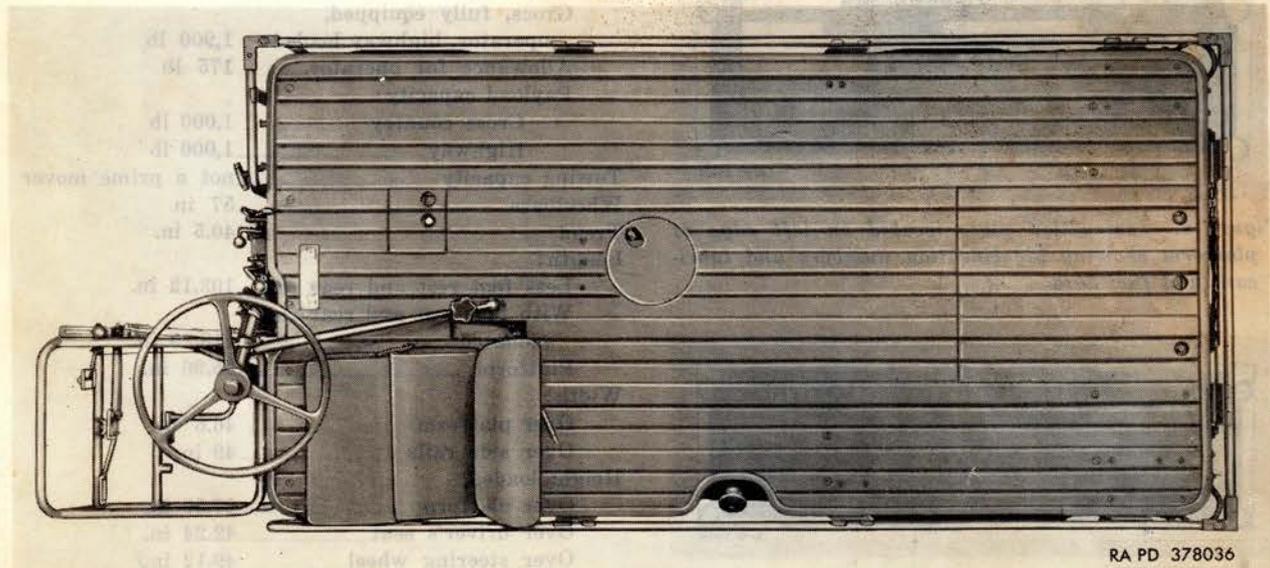
RA PD 378034

Figure 1. Infantry light weapons carrier, $\frac{1}{2}$ -ton
4 x 4, M274—left front view.



RA PD 378035

Figure 2. Infantry light weapons carrier, 1/2-ton
4 x 4, M274—right rear view.



RA PD 378036

Figure 3. Infantry light weapons carrier, 1/2-ton
4 x 4, M274—top view.

5. Instructions Plates

a. Five instruction plates are used; three are located on left edge of the platform near the front, one is located on top of platform at center near front, and one is located on front bed support cross member beneath ignition switch.

b. The instruction plate, located on top of platform (fig. 4), gives official nomenclature of the vehicle, transmission shifting instructions, transfer shifting instructions, and a caution in regard to towing.



Figure 4. Instruction plate located on top of platform at right of driver.

c. The three instruction plates, located on left edge of platform (figs. 5, 6, and 7) give various identification numbers, lubrication data, vehicle dimensions, shipping data, weights, manual numbers, lubrication order number, date of delivery, final inspection mark, allocation of responsibility, and other data.

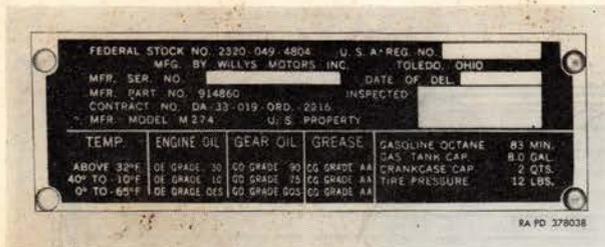


Figure 5. Instruction plate located on left edge of platform showing identification numbers and lubricant and fuel data.

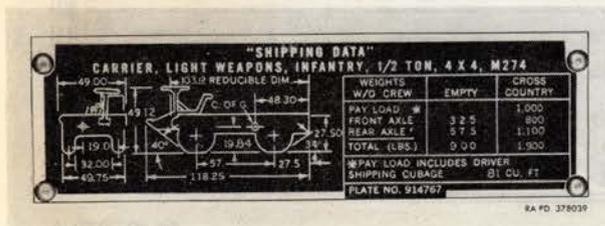


Figure 6. Instruction plate located on left edge of platform showing weights and shipping data.

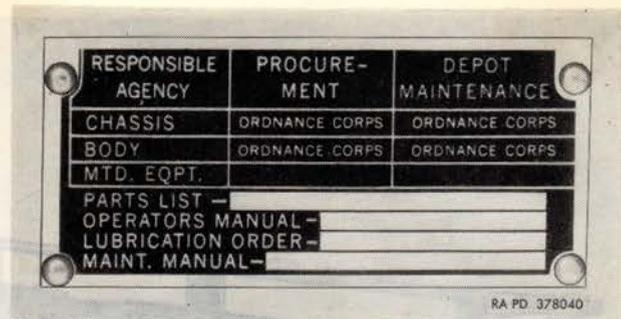


Figure 7. Instruction plate located on left edge of platform showing manual numbers, lubrication order number and allocation of responsibility.

d. The instruction plate (fig. 8), located beneath ignition, shows direction in which the points on lower end of switch lever must be moved to turn ignition off or on.



Figure 8. Instruction plate located beneath switch.

6. Tabulated Data

Model	M274
Weight:	
Curb, fully equipped, less operator	900 lb
Gross, fully equipped, operator, highway loaded	1,900 lb
Allowance for operator	175 lb
Payload capacity:	
Cross country	1,000 lb
Highway	1,000 lb
Towing capacity	not a prime mover
Wheelbase	57 in.
Tread	40.5 in.
Length:	
Less foot rest and rear rail	103.12 in.
With foot rest and rear rail mounted	118.25 in.
Platform	95.96 in.
Width:	
Over platform	46.6 in.
Over side rails	49 in.
Height loaded:	
Over platform	27.50 in.
Over driver's seat	42.24 in.
Over steering wheel	49.12 in.
Lowest operable (over steering wheel)	36.68 in.

Ground clearance:

At front steering arm 12 in.
 Under engine 11.5 in.
 At rear axle 12.25 in.
 Under propeller shaft 15.2 in.

Shipping cubage 81 cu ft

Grade ability:

Side slope 40%
 Longitudinal slope 60%
 Angle of approach 40°
 Angle of departure 34°

Turning radius:

Right 9 ft 2 in.
 Left 9 ft 10 in.

Fording depth (limiting factor, air intake) 18 in.

Fuel tank capacity 8 gal

Minimum octane rating of fuel 83

Fuel consumption:

High gear, 5 mph on highway 17.8 mpg
 High gear, 25 mph on highway 12.8 mpg

Cruising range:

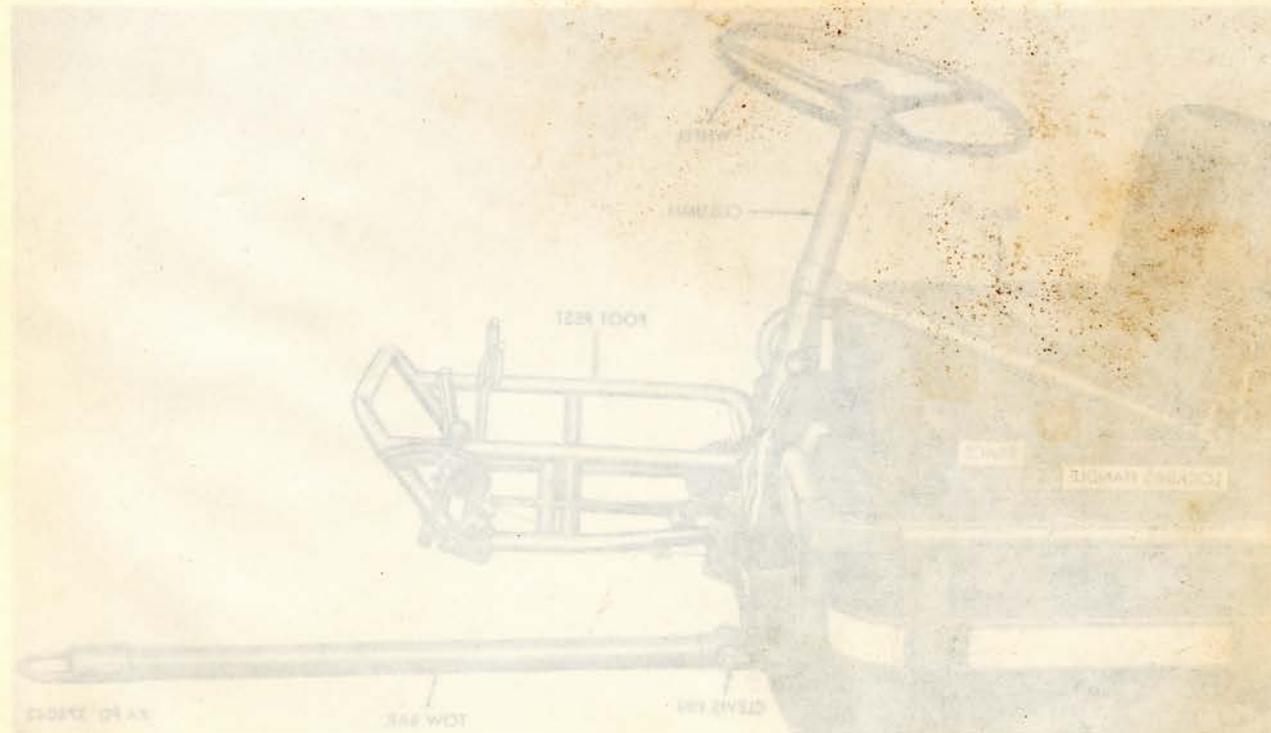
High gear, 5 mph on highway 30.25 hr
 High gear, 25 mph on highway 4.3 hr

Speeds 3 forward, 1 reverse with high and low range.

At 4,300 rpm engine speed		High	Low
		Range	Range
	High	25 mph	13 mph
	Intermediate	14 mph	7 mph
	Low and reverse	8 mph	4 mph

Tires:

Size 7.50 x 10-4 ply
 Pressure 12 psi



CHAPTER 2

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

7. General

This section describes, locates, and illustrates the various controls and instruments provided for the proper operation of the vehicle.

8. Steering Wheel

a. The steering wheel is mounted at upper end of steering column, at front of the vehicle. In order that steering wheel may be convenient for driver, either while driving from the seat or from a standing or crouching position on the ground, the column may be secured in any one of three positions. Figure 9 shows column and wheel in extreme rear position used

in normal driving. Figure 10 shows column and wheel in intermediate position for driving from a standing position. Figure 11 shows the column and wheel in extreme forward position for driving from crouched position.

b. To change position of steering wheel loosen locking handle (fig. 9) on steering column brace and, while holding locking pin (fig. 12) in steering arm out as far as possible, move steering wheel to approximate position desired. Release the locking pin and move column forward or back slightly to allow pin to enter proper hole in lever shaft locking plate. Turn steering wheel until pin projecting from

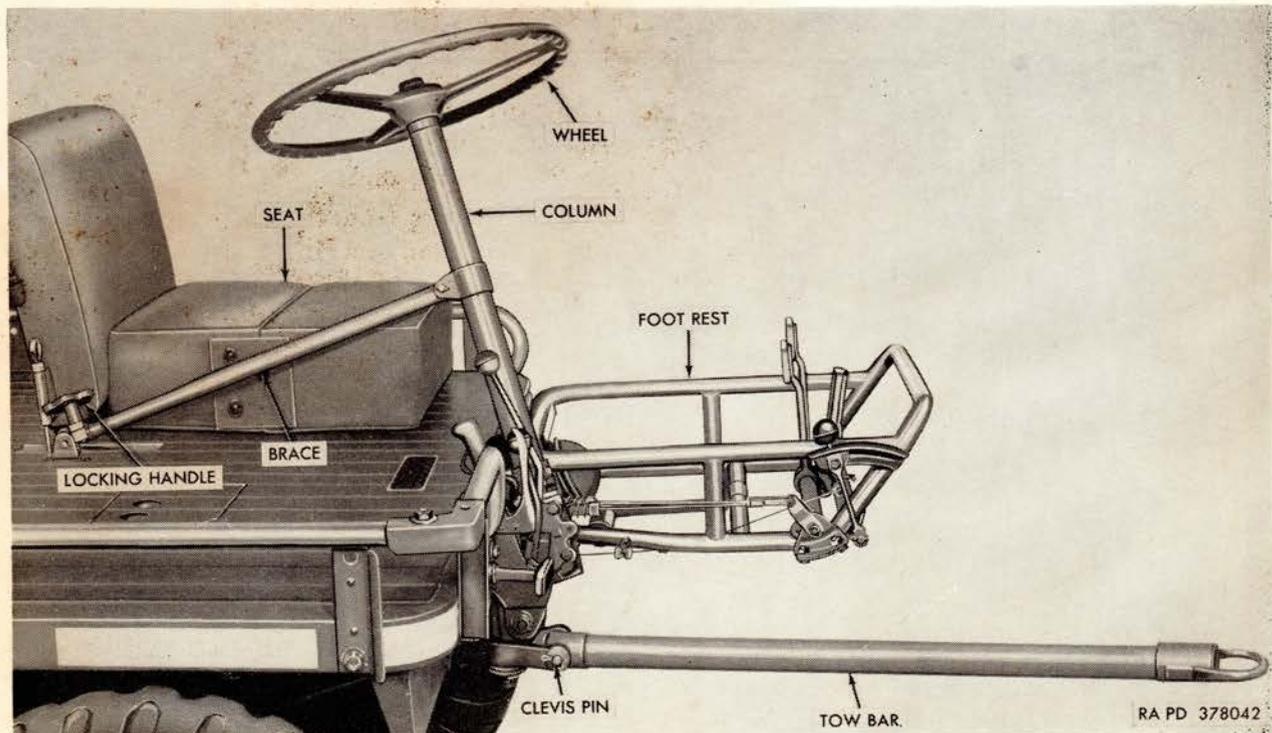


Figure 9. Steering wheel and column in extreme rear position.

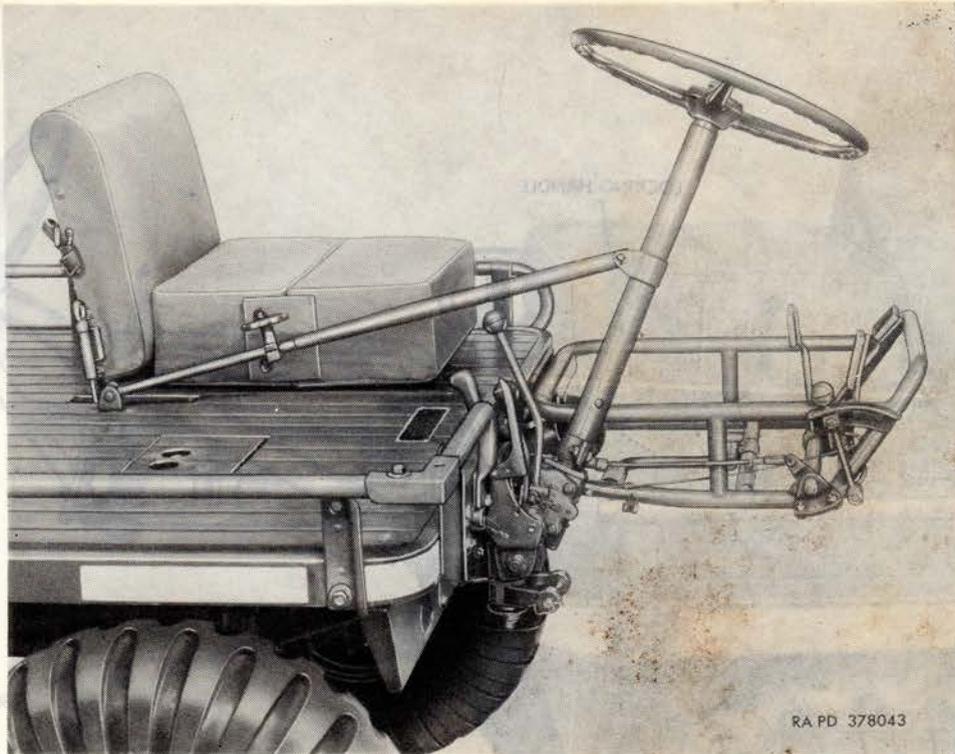


Figure 10. Steering wheel and column in intermediate position.

steering gear housing is aligned with groove in edge of lever shaft locking plate, and tighten locking handle on steering column brace (fig. 9).

Caution: The locking pin must be in one of the three locking holes, and indicating pin must be aligned with notch in the edge of lever shaft locking plate when the locking handle is tightened. Otherwise the angles to which the wheels can be turned right or left will not be the same.

c. With the driver sitting on seat, clockwise movement of steering wheel turns vehicle to right and counterclockwise movement turns vehicle left. With the driver on the ground in standing or crouching driving position, clockwise movement of steering wheels turns vehicle to left and counterclockwise movement turns vehicle right.

9. Steering Connections

a. The vehicle may be used with either two- or four-wheel steer. To gain access to connections, turn locknut (fig. 13) on the steering access opening lid (fig. 13) (to right of driver's

seat) 180° and remove lid from platform. When using four-wheel steer, the forward end of the steering connecting rod (fig. 14) is connected to rear end of tow bar drag link. When using two-wheel steer, the forward end of the steering connecting rod is connected to an anchor (fig. 15) on right frame tube.

b. To change from two- to four-wheel steering, pull out pin securing front end of steering connecting rod to anchor (fig. 15), swing the end to the left to align with hole through rear end of tow bar link (fig. 14), and insert pin. The pin is held in place by a spring-loaded ball.

c. To change from four- to two-wheel steering, pull out pin securing the front end of steering connecting rod to tow bar drag link (fig. 14), swing the end of the lever to right to align with hole in anchor (fig. 15) and insert pin.

10. Transfer Gear Shift Lever

The transfer gear shift lever (figs. 16 and 17), located at front of platform at driver's right, enables driver to select either a high-speed range for good driving conditions, or a

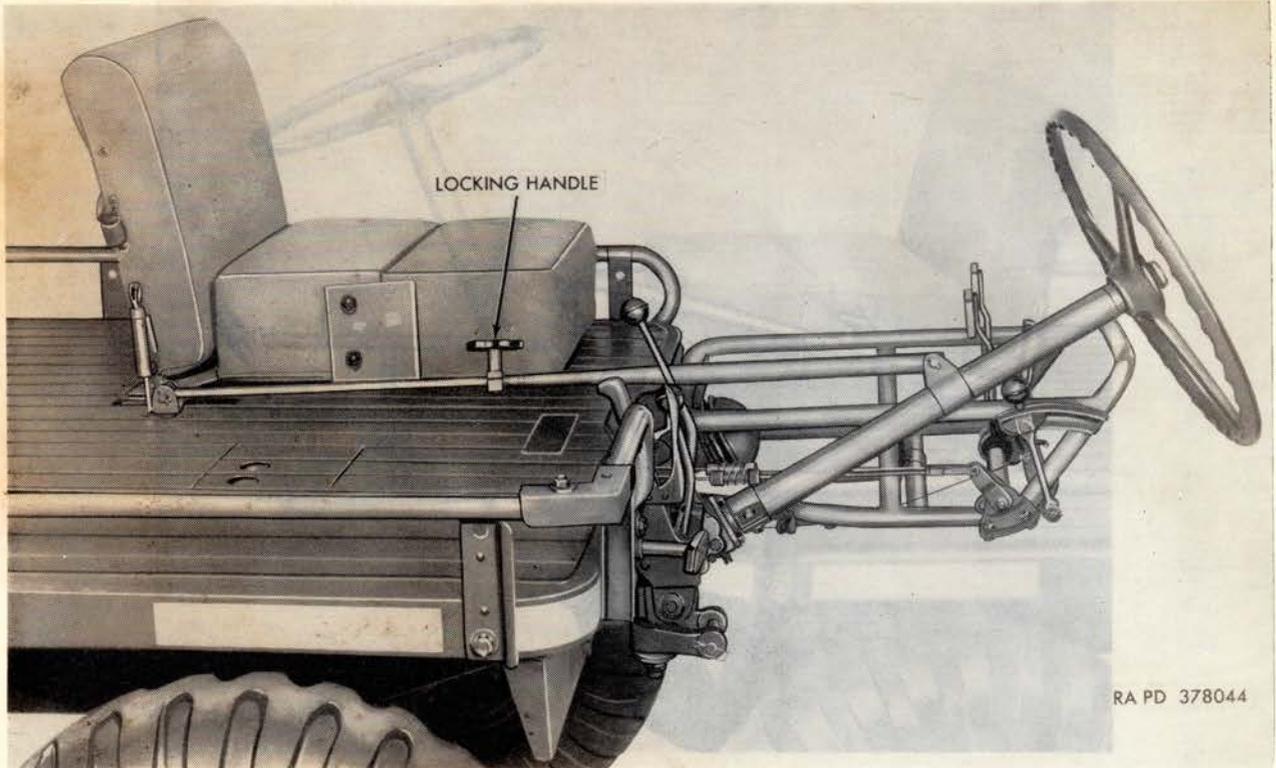


Figure 11. Steering wheel and column in extreme forward position.

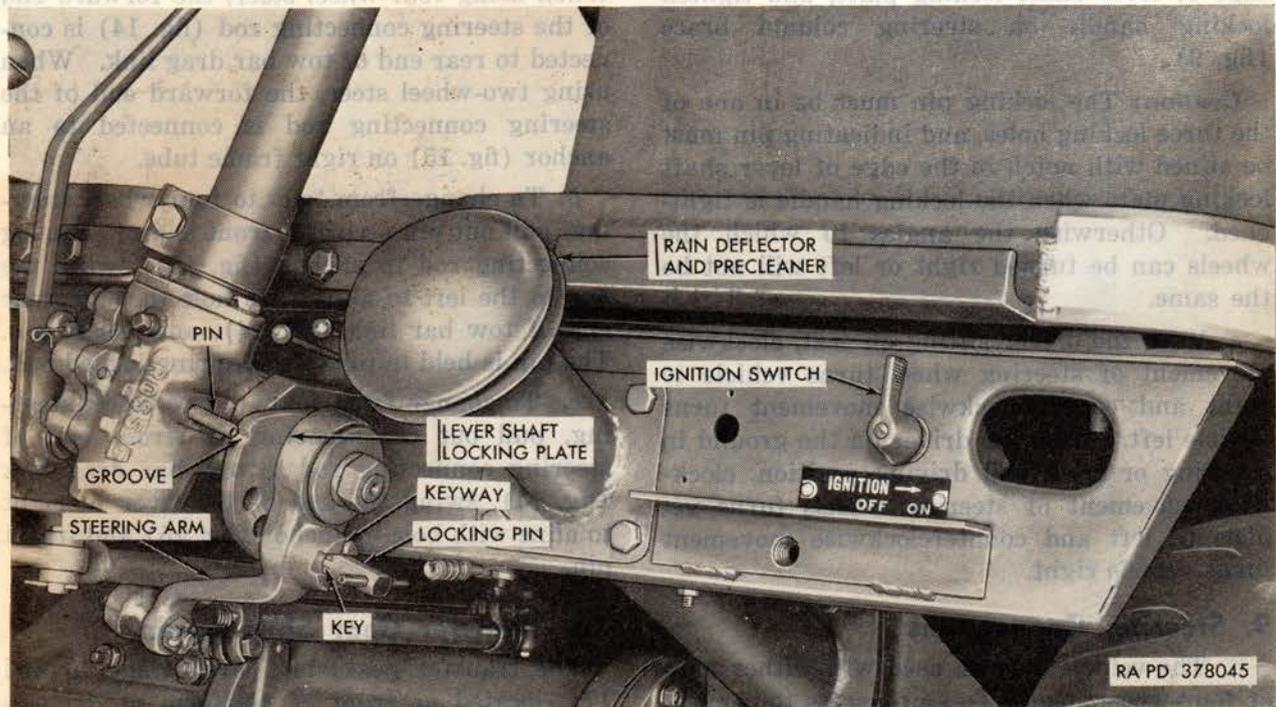


Figure 12. Front end of vehicle with foot rest removed showing steering gear, rain deflector and precleaner, and ignition switch.

low-speed range for rough or hilly driving conditions. The gears are in low-speed range when shift lever is in extreme rear position LOW (fig. 18), in high-speed range when lever is in extreme forward position HIGH and in neutral N when in center position.

Caution: The transfer gears must not be shifted from neutral N position into either HIGH or LOW speed positions, except when vehicle is at a standstill and transmission gear shift lever is in N position.

11. Transmission Shift Lever

The transmission shift lever (figs. 16 and 17), located at front of platform at driver's right, shifts transmission gears into reverse and first, second and third speeds forward. From center position or neutral N (fig. 19) movement to left and forward shifts gears into reverse "R." Movement to left and rear shift gears into first or low 1. Movement to right and forward shifts gears into second 2. Movement to right and rear shifts gears into third or high 3.

12. Hand Brake

(figs. 16 and 17)

The hand brake is used to prevent movement of vehicle while parked. To apply brake, push forward firmly on handle, allowing finger grip to float so that pawl engages toothed sector and holds brake in applied position. To release brake, grasp finger grip and handle, squeeze

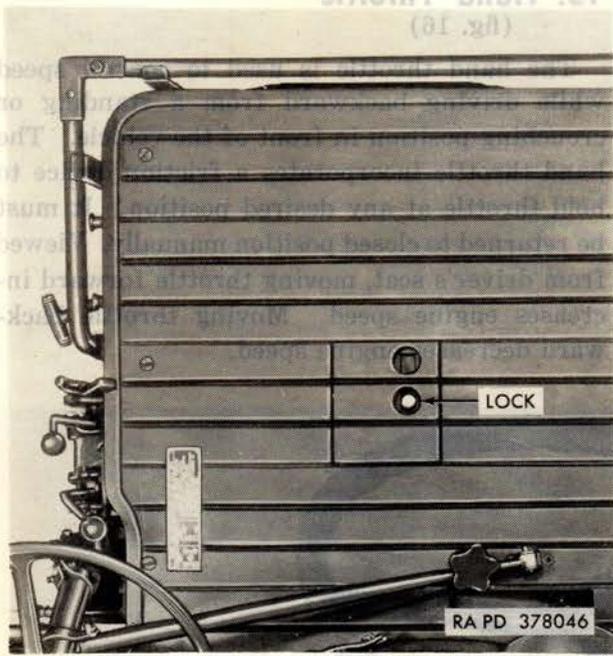


Figure 13. Steering access opening lid showing lock.

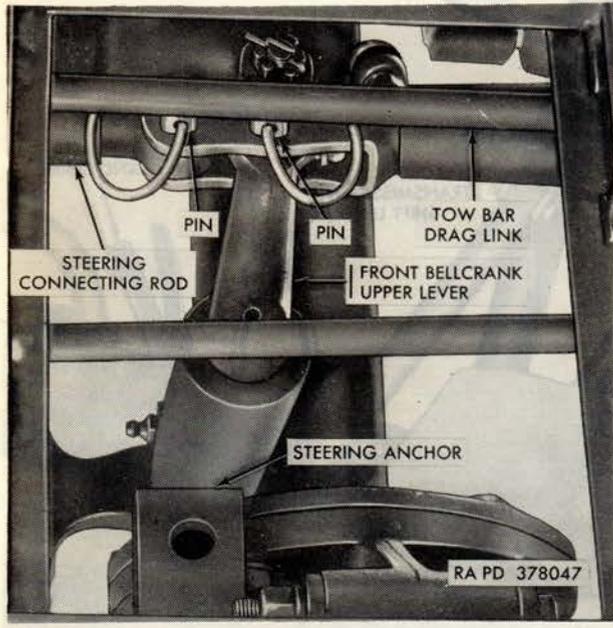


Figure 14. Two- and four-wheel steering connections steering access opening lid removed and four-wheel steering connected.

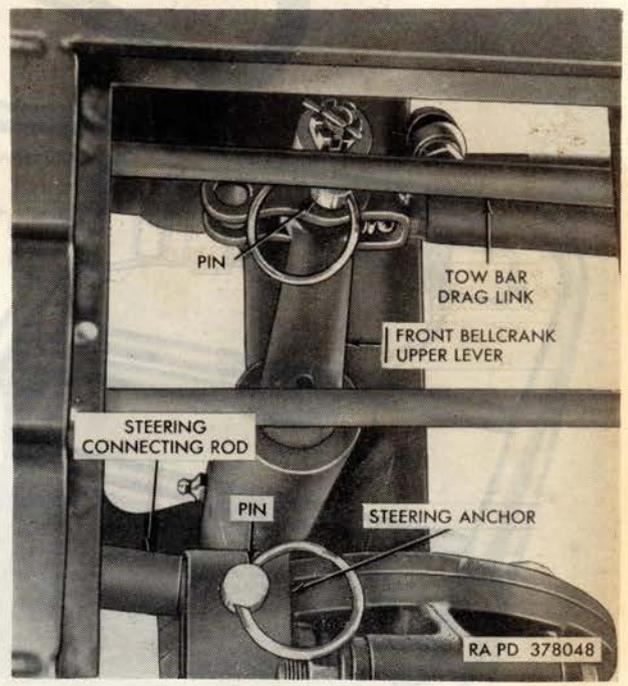


Figure 15. Two- and four-wheel steering connections steering access lid removed and two-wheel steering connected.

grip to handle to disengage pawl from sector, and allow entire assembly to move backward to disengaged or release position. The hand brake can be used while driving from any one of the three driving positions.

13. Brake Pedal

(fig. 16)

The brake pedal is operated by the right foot and is used to slow or stop vehicle. Pushing pedal forward applies brake. When foot pressure on pedal is released, a spring pulls pedal back into brake-released position.

14. Clutch Pedal

(fig. 16)

The clutch pedal is operated by left foot while sitting on seat, and is used to disengage

clutch for gear shifting. Pushing pedal forward releases or disengages clutch. When foot pressure on pedal is released, a spring forces clutch back into engagement. To secure smooth engagement of clutch, pressure on clutch pedal must be released gradually.

15. Hand Throttle

(fig. 16)

The hand throttle is used to control speed while driving backward from a standing or crouching position in front of the vehicle. The hand throttle incorporates a friction device to hold throttle at any desired position. It must be returned to closed position manually. Viewed from driver's seat, moving throttle forward increases engine speed. Moving throttle backward decreases engine speed.

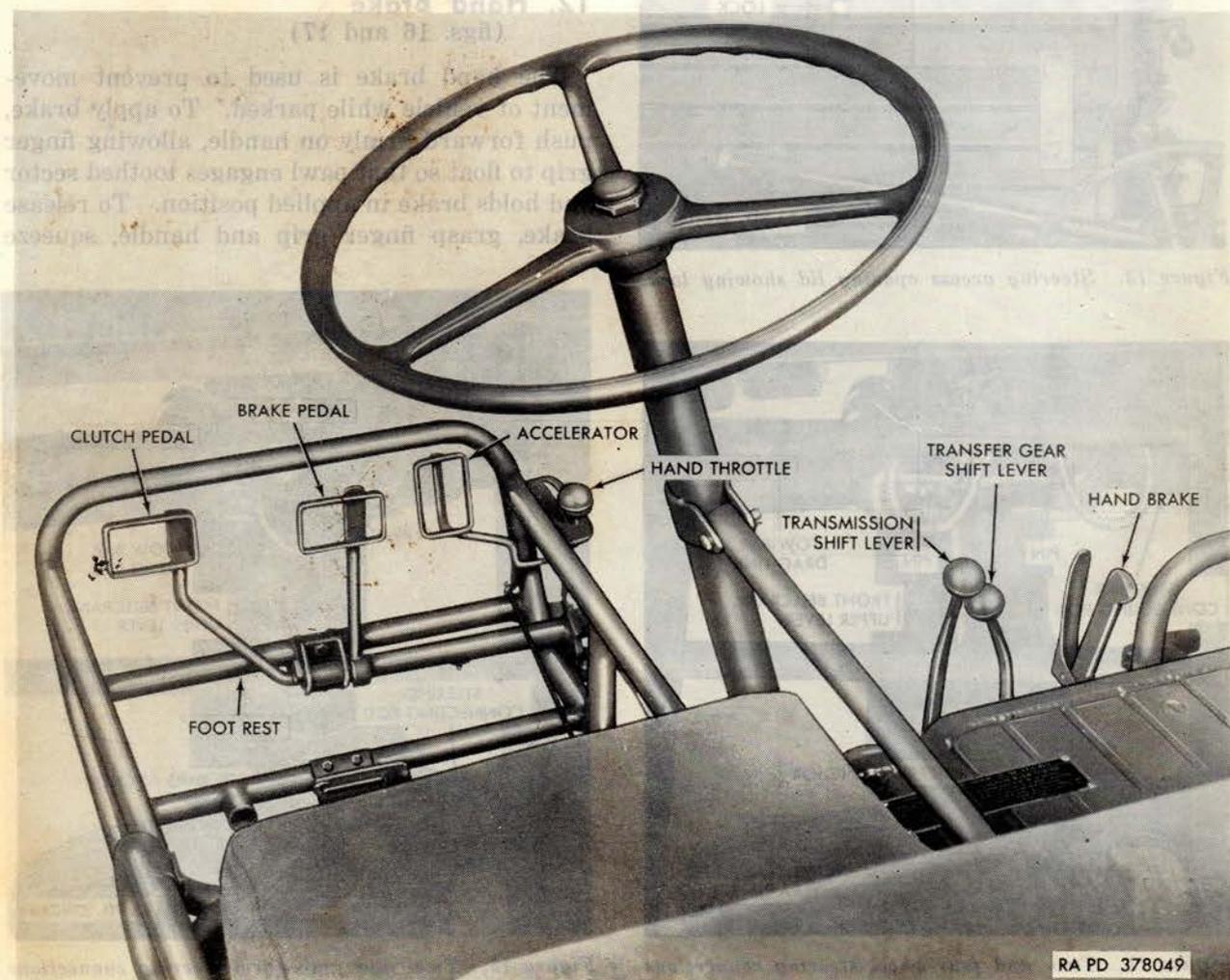


Figure 16. Vehicle controls from driver's position when seated.

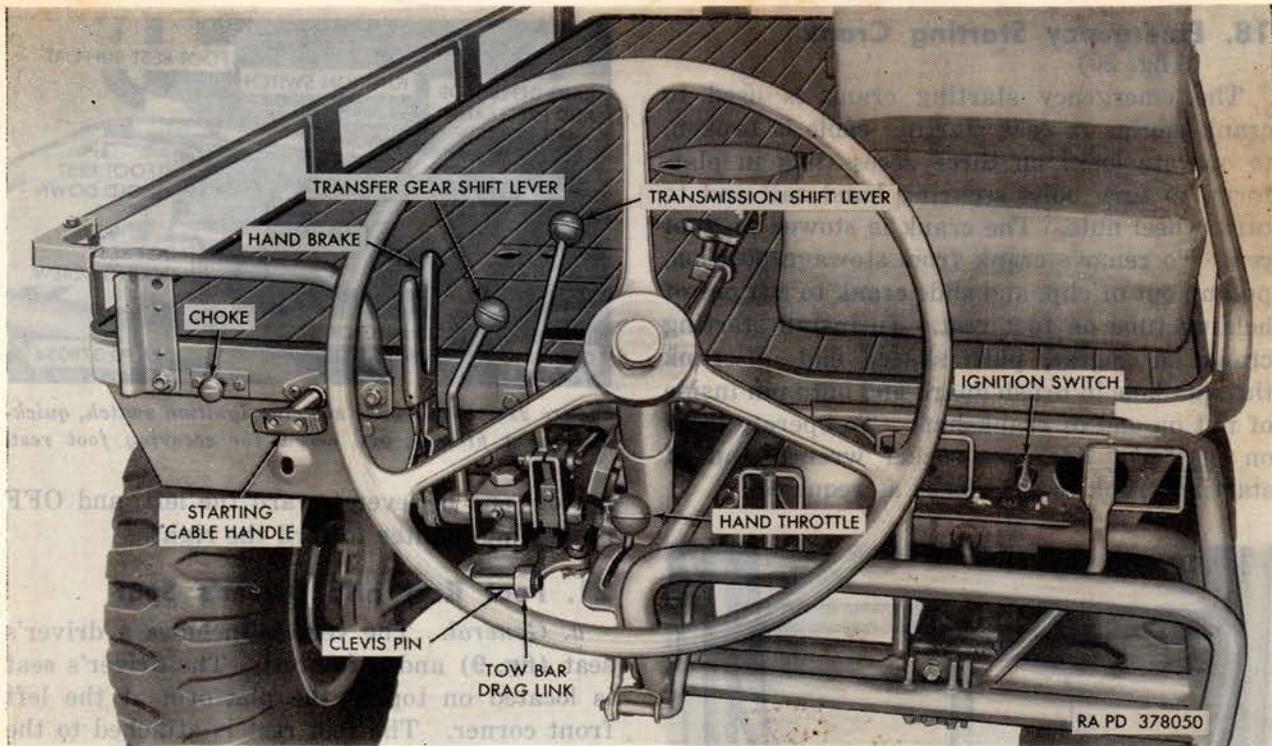


Figure 17. Controls as seen from standing position while driving vehicle backward.

16. Accelerator (fig. 16)

The accelerator is used by foot to control speed while driving from the seat. Moving accelerator forward increases engine speed. Releasing pressure on accelerator decreases engine speed. A spring returns accelerator to closed position when pressure is released. The accelerator may also be operated by hand while driving from a standing or crouching position.

17. Starting Cable

The starting cable handle (fig. 17) is located at front edge of platform near right corner. The cable runs from the handle, through a tube to a sheave inside a housing attached to rear axle, thence to a sheave inside flywheel housing, the assembly serving to rotate engine crankshaft for starting purposes. To operate, grasp handle and pull cable quickly forward to the limit of its travel. This turns crankshaft several revolutions. Allow handle to slowly return to its original position, permitting cable to rewind on the spring-loaded sheave.

Caution: Do not let go of starting cable handle when it is pulled forward because rapid rewind by sheave may cause cable to snap and break.

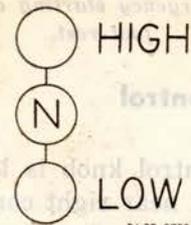


Figure 18. Shifting diagram for transfer gear shift lever.

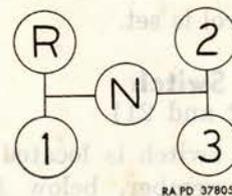


Figure 19. Shifting diagram for transmission shift lever.

18. Emergency Starting Crank (fig. 20)

The emergency starting crank is used to crank engine in case starting cable is broken, to operate locks on three access lids in platform, to turn bolts securing hand rail and to turn wheel nuts. The crank is stowed on foot rest. To remove crank from stowage position, pull up out of clip, and slide crank to left out of holding tube on foot rest. To install starting crank on engine, push slotted end of crank through hole in brush guard and onto pin inside of nut on end of crankshaft. To operate locks on platform lids, use socket wrench end of starting crank to turn locks as required.

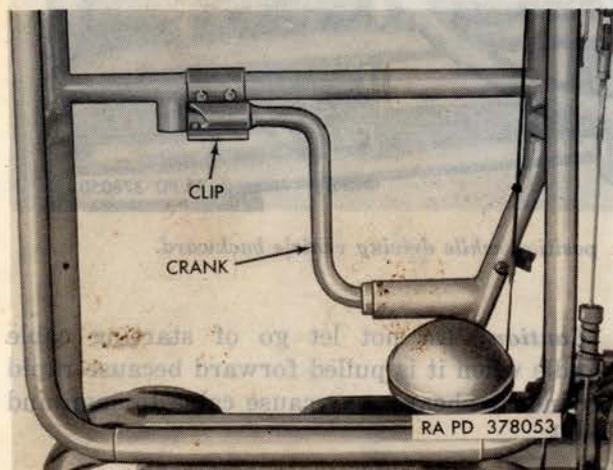


Figure 20. Emergency starting crank stowed on foot rest.

19. Choke Control (fig. 17)

The choke control knob is located at front edge of platform near right corner. It is connected to choke valve of carburetor by a wire, and operates the valve for starting purposes. Pulling choke wire forward, or out, closes choke valve; and pushing wire to rear, or in, opens valve. A friction device is incorporated to automatically hold choke valve at any opening for which control is set.

20. Ignition Switch (figs. 12 and 21)

The ignition switch is located on front bed support cross member, below front edge of platform, at about the center of front of seat. The switch is turned ON by moving pointer on

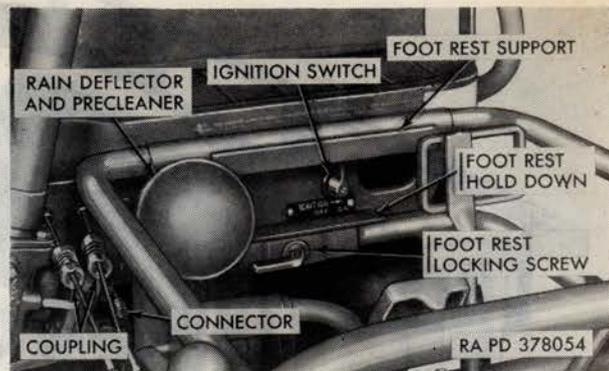


Figure 21. Front view showing ignition switch, quick-disconnect fittings, and screw for securing foot rest.

bottom end of lever toward the left, and OFF by moving pointer toward the right.

21. Foot Rest and Driver's Seat

a. *General.* The vehicle includes a driver's seat (fig. 9) and a footrest. The driver's seat is located on top of the platform at the left front corner. The foot rest is attached to the front of the vehicle at the left side in front of the seat. The foot rest includes accelerator, brake pedal, clutch pedal, and hand throttle. Both units may be easily removed from operating position on the vehicle, but are ordinarily not detached except when the vehicle is to be shipped, stored, or towed as disabled. In these cases, they are grouped and stowed under the platform on the right frame tube.

b. *Driver's Seat* (figs. 9 and 22).

- (1) *Removal.* Pull up seat back latch and unhook from seat back. Pull seat back up out of holes in platform and seat cushion and remove seat cushion.
- (2) *Installation.* Position seat cushion on top of platform at left front corner, with two holes in flap on back lower edge of cushion aligned with holes in platform. Push the two extensions of seat back frame through holes in cushion flap and into holes in platform. To secure seat back, pull up latch and hook into socket on right edge of back.

c. *Foot Rest* (fig. 21).

- (1) *Removal.* Separate clutch, brake, and throttle controls at connectors. To separate a connector, push sleeve at one end toward sleeve at other end

against pressure of spring. This will uncover socket in connector and ball end of cable. Lift ball end of cable out of socket and allow sleeve to snap back into its original position. Unscrew foot rest locking screw. Lift front end of foot rest to clear foot rest holddown, and lift rest out of foot rest support, being careful not to damage rain deflector and precleaner.

- (2) *Installation.* Work foot rest over deflector and precleaner and position upper rear foot rest tube in foot rest support on front edge of platform. Lower front end of foot rest until lower rear foot rest tube is below foot rest holddown with foot rest locking screw alined with nut in front bed support cross member. Secure foot rest by tightening locking screw. Connect throttle, brake, and clutch controls at connectors. To connect a connector, push sleeve on open end of connector toward sleeve on other end against pressure of spring. This

will uncover socket and slot. Position ball and cable of control in socket and slot of connector and release sleeve.

d. Stowing Driver's Seat and Foot Rest.

- (1) Separate the two halves of seat cushion by unlocking four fasteners, two on each side of cushion. Position front half of cushion against pedals in front end of foot rest (fig. 23).

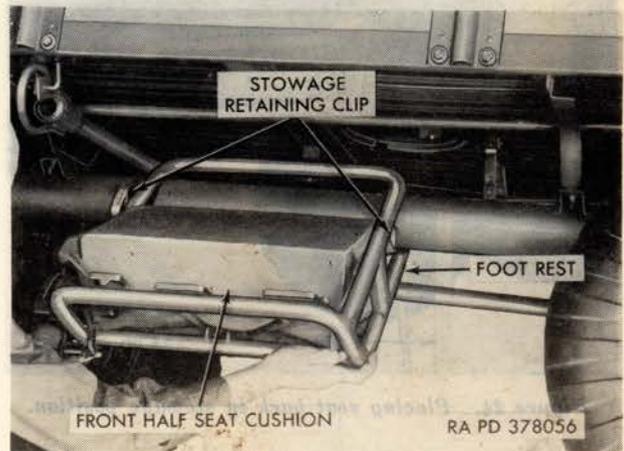


Figure 23. Placing foot rest and front half of seat cushion in stowage position.

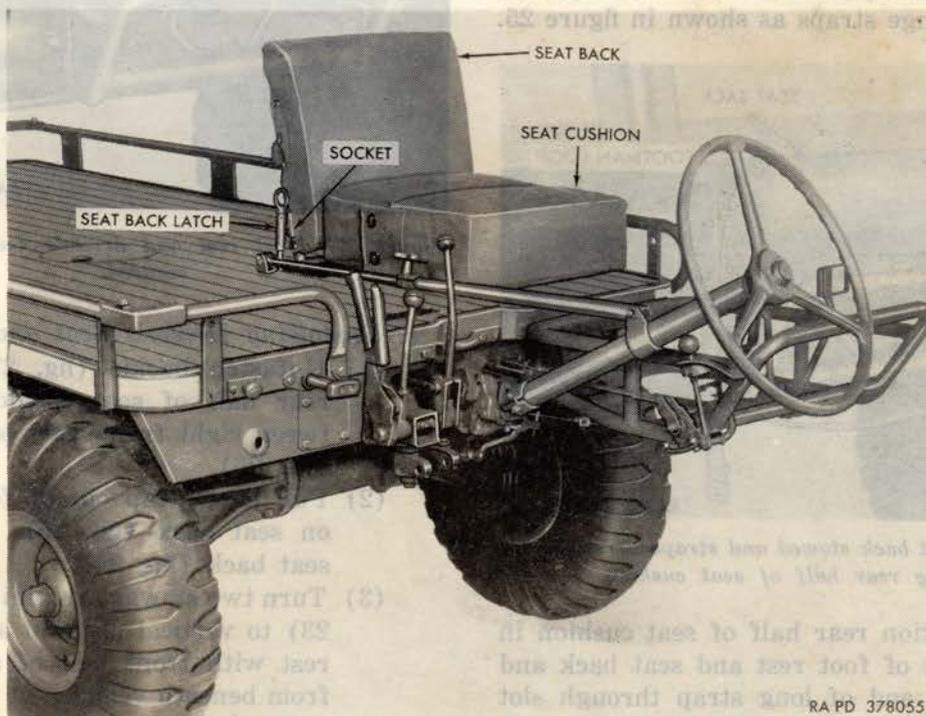


Figure 22. Front view of vehicle with seat installed.

- Turn the two stowage retaining clips on right frame tube to vertical position and slide foot rest with front half of seat cushion over tube between clamps (fig. 23). Pull out clips, turn 90 degrees and hook over vertical tubes of foot rest (fig. 24).

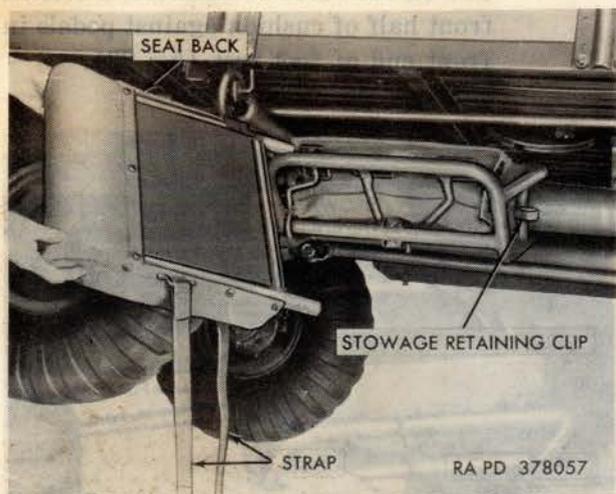


Figure 24. Placing seat back in stowage position.

- Loosen strap attached to seat back and push seat back between foot rest and platform (figs. 24 and 25). Push long strap through footman loop, and arrange straps as shown in figure 25.

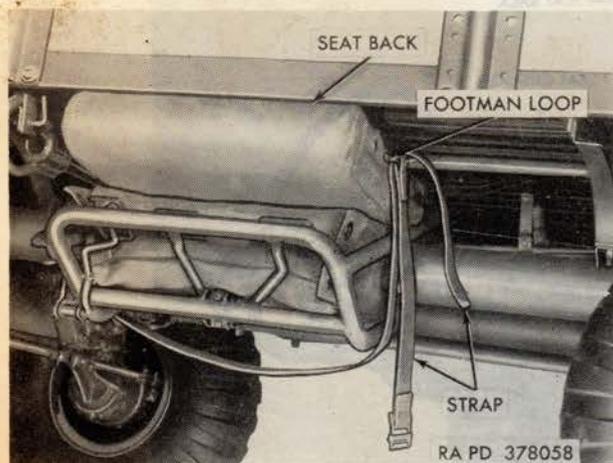


Figure 25. Seat back stowed and straps arranged for securing rear half of seat cushion.

- Position rear half of seat cushion in front of foot rest and seat back and push end of long strap through slot in holddown flap of cushion (fig. 26).

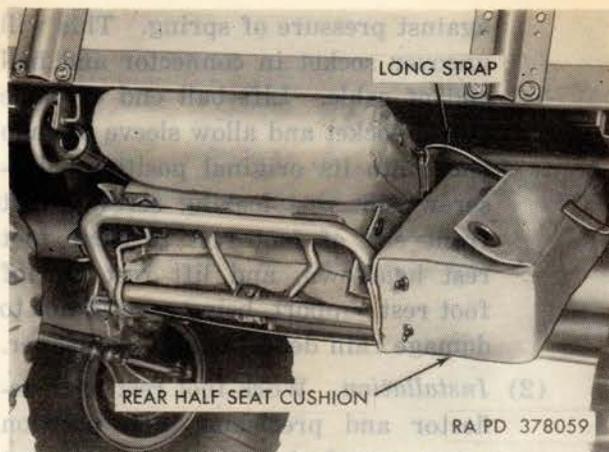


Figure 26. Stowing rear half of seat cushion, showing arrangement of straps.

Push cushion into installed position (fig. 27) and tighten straps with buckle.

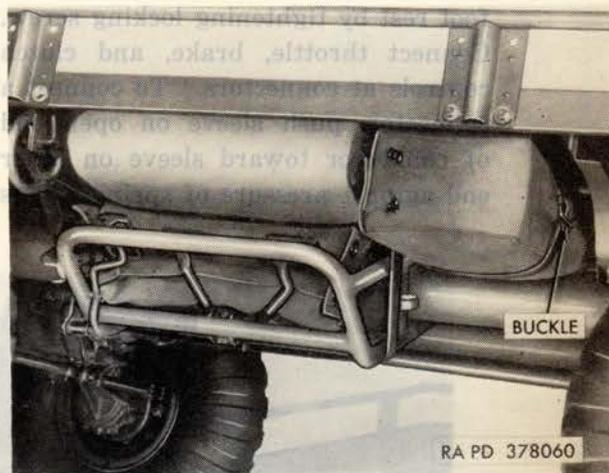


Figure 27. Foot rest and driver's seat stowed and secured.

c. Unstowing Driver's Seat and Foot Rest.

- Unfasten buckle (fig. 27) and pull rear half of seat cushion from between right frame tube and platform (fig. 26).
- Pull long strap out of footman loop on seat back (fig. 25), and remove seat back (fig. 24).
- Turn two stowage retaining clips (fig. 23) to vertical position and pull foot rest with front half of seat cushion from beneath vehicle.
- Remove front half of seat cushion

from foot rest, position against rear half of cushion, fasten the two halves together with four fasteners, two on each edge.

22. Tow Bar

a. The tow bar is used as a tongue when vehicle requires towing. When not in use, tow bar is stowed beneath and across platform forward of rear wheels (fig. 28). The rear end of bar is held in a tube fastened to platform, and front end is held by tow bar locking washer and screw.

b. To install tow bar in towing position on tow bar bellcrank, loosen locking screw (fig. 28), turn locking washer 180°, and pull tow bar from beneath platform. Tighten screw on washer. Remove locking pin from clevis pin (fig. 17) in tow bar bellcrank, and remove clevis pin. Position tow bar on tow bar bellcrank as shown in figure 9, push clevis pin through tow bar and bellcrank, and secure with locking pin.

c. To stow tow bar, remove locking pin from clevis pin (fig. 17) securing tow bar on tow bar bellcrank, and remove clevis pin and tow bar. Install clevis pin in bellcrank and secure with locking pin. Loosen tow bar locking screw (fig. 28) and turn locking washer so long end is down. Slide rear end of tow bar into tube under left side of platform, position loop of

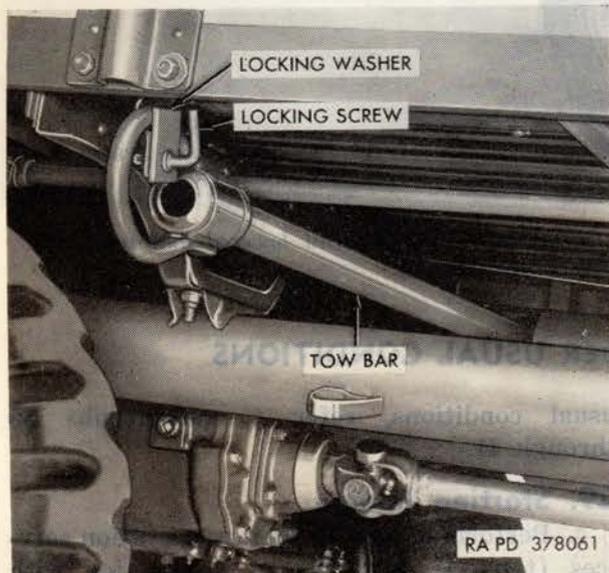


Figure 28. Tow bar in stowed position.

tow bar on bracket under right side of platform, turn long end of locking washer up against loop, and tighten locking screw.

23. Fuel Shutoff

(fig. 29)

The fuel shutoff is located at rear of vehicle, beneath platform, near left side in front of engine guard tube. The fuel is turned on when the handle is parallel to valve body and tubing, as shown in figure 29. Fuel is shut off when handle is at right angles to valve body.

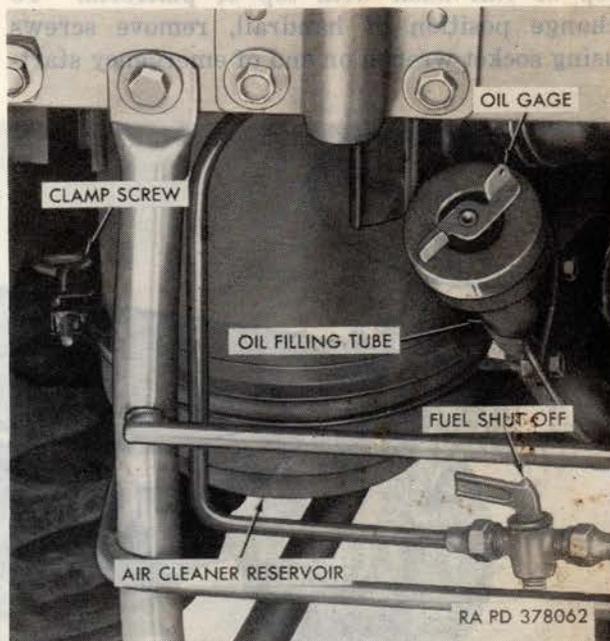


Figure 29. Fuel shutoff, oil gage, and air cleaner.

24. Oil Gage

(fig. 29)

The oil gage is located at rear of vehicle, below platform, to right of air cleaner. The gage consists of a metal gage rod attached to under side of cap for oil filling tube. The gage rod is graduated and marked EMPTY and FULL.

25. Hour Meter

(fig. 30)

The hour meter is located on top of crankcase accessory case, behind fan drive pulley. The meter is driven by the engine and shows the number of hours engine has been operated.

26. Fuel Gage

The fuel gage consists of a metal gage rod attached to under side of fuel tank filler cap. It is located on the upper left corner of fuel tank and may be seen in figure 31.

27. Handrail

(fig. 31)

The handrail is secured to edge of platform by integral lockwasher screws. Two sets of screw holes are provided. Use of the lower set positions top of rail four inches above top of platform, while use of upper set positions top of rail flush with top of platform. To change position of handrail, remove screws using socket wrench on end of emergency start-

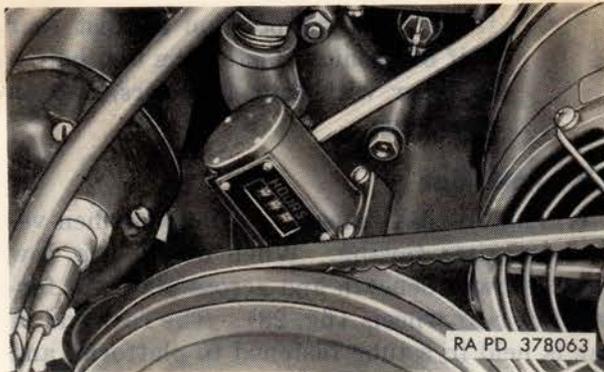


Figure 30. Hour meter.

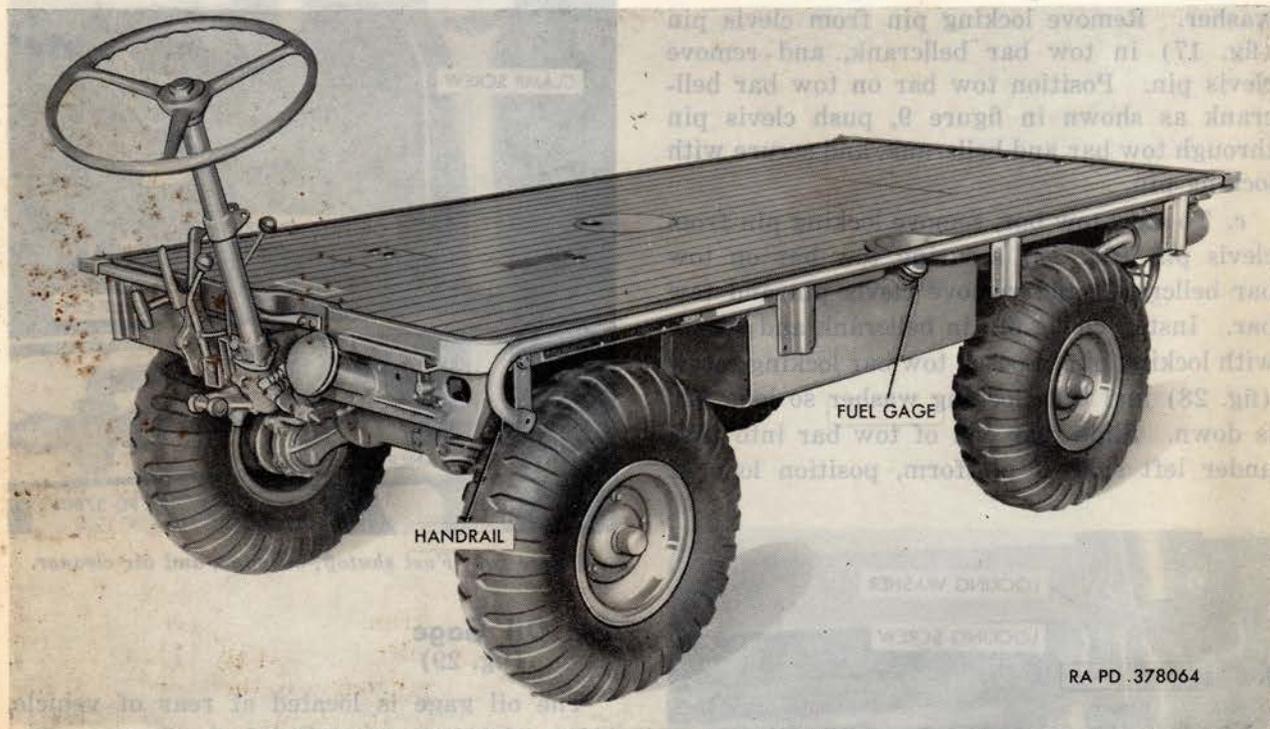


Figure 31. Infantry light weapons carrier, 1/2-ton, 4 x 4, M274 with handrail lowered and seat, foot rest and steering column brace removed.

Section II. OPERATION UNDER USUAL CONDITIONS

28. General

This section contains instructions for the mechanical steps necessary to operate the infantry light weapons carrier, 1/2-ton, 4 x 4, M274 under conditions of moderate temperature and humidity. For operation under un-

usual conditions, refer to paragraphs 35 through 41.

29. Starting Engine

a. Perform prescribed before-operation services (table II, par. 55) in conjunction with starting and warming up the engine.

b. Be sure the transmission and transfer gear shift levers are in neutral (figs. 18 and 19).

c. Open the fuel line shutoff valve (fig. 29).

d. Turn the ignition switch to ON position.

e. Pull out the choke (fig. 17) to obtain proper fuel-air mixture (not necessary if engine is warm), grasp the starting cable handle, and rapidly pull out length of the cable. Allow starting cable to rewind slowly. Continue to crank engine by pulling out on handle until engine starts.

Caution: Do not let go of starting cable handle when it is pulled forward because rapid rewind by sheave may cause cable to snap and break.

f. As engine warms up, push in on choke until it is fully closed.

30. Operating Vehicle from Driver's Seat

a. *Driving Vehicle Forward.*

(1) With engine warmed up and operator in driver's seat, push down on clutch pedal to disengage clutch.

(2) Move transfer gear shift lever into HIGH or LOW position (fig. 4) as required.

Caution: The transfer gears must not be shifted from neutral N position into either HIGH or LOW speed positions, except when vehicle is at a standstill and transmission gear shift lever is in N position.

(3) Release the brake.

(4) Move transmission gear shift lever to the left and rear into 1 speed position (fig. 4).

(5) Push down on accelerator to increase engine speed and slowly release clutch pedal to engage clutch.

(6) As vehicle speed increases, release the accelerator; push down on clutch pedal; and move transmission gear shift lever forward, to the right, and forward into 2 speed position. Push down on accelerator to increase engine speed and slowly release clutch pedal to engage clutch.

(7) As vehicle speed increases, release accelerator, push down on clutch pedal, and move transmission gear shift

lever straight to rear into 3 speed position. Push down on accelerator to increase engine speed and slowly release clutch pedal. After transmission is in 3 (high gear) position, regulate speed as required by use of accelerator.

(8) To shift into a lower speed, release accelerator, push down on clutch pedal, move transmission gear shift lever into next lower speed position, and slowly release the clutch.

b. *Driving Vehicle Backward.* To drive vehicle backward, follow instructions given in a(1) through (5) above except that transmission gear shift lever is moved to the left and forward into R speed position.

31. Stopping Vehicle

a. Release the accelerator and apply brake until vehicle has nearly stopped.

b. Push down on clutch pedal and move transmission and transfer shift levers into neutral N positions and stop vehicle.

c. Apply hand brake and lock in position.

d. Turn ignition switch to OFF position.

32. Operating Vehicle From Crouching Position at Front

Move steering wheel and column into extreme forward position (fig. 11) as directed in paragraph 8b. The clutch and brake pedals operate the same as when driving from the seat except that they must be operated by hand. The hand throttle is used to control speed as desired. The transfer shift lever (par. 10), transmission shift lever (par. 11), and hand brake (par. 12) operate the same as when driving from seat. However, with steering wheel lowered, and driver facing what is normally the front of the vehicle and the top of steering wheel, the action of steering wheel is reversed. Clockwise rotation of steering wheel turns vehicle to left, and counterclockwise rotation turns vehicle to right (par. 8c).

33. Operating Vehicle From Standing Position at Front

When operating from a standing position at the front, the steering wheel is in intermediate position (par. 8). Otherwise operations are

the same as when operating from a crouching position (par. 32).

34. Towing the Vehicle

Caution: Towing vehicle with gears engaged, for other purposes than starting engine, may turn engine crankshaft at a dangerous over-speed and cause engine failure.

a. Towing to Start Engine.

- (1) Put vehicle in two-wheel steer (par. 9c).
- (2) Install tow bar in towing position (par. 22b).
- (3) Check to see that fuel line shutoff valve is open (par. 23).
- (4) Turn ignition switch ON (par. 20).
- (5) Place the transfer gear shift lever in HIGH position, and transmission gear shift lever in 3 position (pars. 10 and 11).
- (6) With the clutch disengaged, start tow-

ing and as soon as both vehicles have reached operating speed, gradually let in the clutch. When engine starts, shift transmission gear shift lever into neutral N position and stop the vehicles. Shift transfer gear shift lever into neutral N position, and apply hand brake.

- (7) Disconnect and stow tow bar (par. 22c).

b. Towing a Disabled Vehicle.

- (1) Put vehicle in two-wheel steer (par. 9c) remove foot rest (par. 21) and disconnect steering gear by pulling out locking pin (fig. 12) and turning 90° to lock key in keyway with locking pin handle in vertical position.
- (2) Install tow bar in towing position (par. 22b).
- (3) See that transmission and transfer gear shift levers are in N positions (pars. 10 and 11).

Section III. OPERATION UNDER UNUSUAL CONDITIONS

35. General Conditions

a. In addition to the operating procedure described for usual conditions, special instructions of a technical nature for operating and servicing this vehicle under unusual conditions are contained or referred to herein. In addition to the normal operator-maintenance service, special care in cleaning and lubrication must be observed where extremes of temperature, humidity, and terrain conditions are present or anticipated. Proper cleaning, lubrication, and storage and handling of fuels and lubricants not only insure proper operation and functioning, but also guard against excessive wear of the working parts and deterioration of the materiel.

b. TM 21-305 prescribes special driving instructions for operating wheeled vehicles under unusual conditions.

Caution: It is imperative that the approved practices and precautions be followed. A detailed study of this manual is essential for use of this materiel under unusual conditions.

c. Refer to paragraph 44 for lubrication under unusual conditions.

d. When chronic failure of materiel results from subjection to extreme conditions, report of the condition should be made on DA Form 468 (par. 2).

36. Extreme Cold-Weather Conditions

a. General Problems.

- (1) Extensive preparation of materiel scheduled for operation in extreme cold weather is necessary. Generally, extreme cold will cause lubricants to thicken or congeal, crack insulation and cause electrical short circuits, prevent fuel from vaporizing and properly combining with air to form a combustible mixture for starting, and will cause the various construction materials to become hard, brittle, and easily damaged or broken.
- (2) For description of operations in extreme cold, refer to FM 31-70, FM 31-71, and TM-9-2855.

Caution: It is imperative that the approved practices and precautions be followed. TM 9-2855 contains in-

formation which is specifically applicable to this vehicle as well as to all other vehicles. It must be considered an essential part of this manual, not merely an explanatory supplement to it.

b. *Winterization Equipment.* TM 9-2855 contains general information on winterization equipment and processing.

c. *Fuels and Lubricants (Storage, Handling, and Use).* Refer to TM 9-2855 for detailed instruction on storage, handling, and use.

37. Extreme Cold-Weather Operation

a. *General.* The driver must be very cautious when placing the vehicle in motion after a shutdown. After warming up the engine thoroughly, place transmission in first gear and transfer in low range and drive vehicle slowly about 100 yards, being careful not to stall the engine. This will heat lubricants, tires, and brakes sufficiently to obtain normal operation.

b. *At Halt or Parking.*

- (1) When preparing a vehicle for shutdown periods, place control levers in neutral position to prevent them from possible freezing in an engaged position.
- (2) Clean all parts of the vehicle of snow, ice, and mud as soon as possible after operation. Refer to table II for detailed after-operation procedures. If covers are not installed, be sure to protect all parts of the engine and engine accessories against entrance of loose, drifting snow during the halt.
- (3) Refuel immediately in order to reduce condensation in the fuel tank. Prior to refueling, open fuel tank drain and drain off any accumulated water.
- (4) Correct tire inflation pressure is prescribed in paragraph 6.

38. Operation in Extreme Hot-Weather Conditions

a. *General.* Continuous operation of the vehicle at high speeds, long hard pulls, or in low gear ratios on steep grades or in soft terrain, may cause the vehicle to overheat. Avoid the continuous use of low gear ratios whenever possible. Halt the vehicle for a cooling-off

period whenever necessary and the tactical situation permits.

b. *At Halt or Parking.*

- (1) Do not park the vehicle in the sun for long periods, as the heat and sunlight will shorten the life of the tires. If possible, park vehicle under cover to protect it from sun, sand, and dust.
- (2) Cover inactive vehicles with paulins if no other suitable shelter is available. Where entire vehicle cannot be covered, protect engine against entry of sand.
- (3) Correct tire inflation pressure is prescribed in paragraph 6.
- (4) Vehicles inactive for long periods in hot humid weather are subject to rapid rusting and accumulation of fungi growth. Make frequent inspections and clean and lubricate to prevent excessive deterioration.

39. Operation on Desert or in Extreme Dust Conditions

Observe the precautions given in extreme hot-weather conditions (par. 38) and in addition frequently inspect and service engine oil filter, carburetor, air cleaner, breathers, and vents.

40. Operation on Unusual Terrain

a. *General.*

- (1) Select a gear ratio low enough to maintain engine speed without causing the wheels to spin. Vehicles must be placed in transfer low range before attempted operation on ice, snow, or in deep mud, to maintain vehicle momentum through or over difficult terrain. As soon as vehicle is returned to normal driving conditions, place transfer in high range.
- (2) Skidding and the loss of steering and traction are the chief difficulties encountered on icy roads. When rear end skidding occurs, instantly turn front wheel in the same direction that the rear end is skidding. Decelerate the engine and do not declutch. Apply brakes very gradually.

b. *Recommended Tire Pressures.* Recommended tire pressures are 12 psi.

c. *After-Operation Procedures.* Remove accumulations of ice, snow, and mud from under the platform, steering knuckles and arms, brake, transmission breather, air cleaner, and electrical connections.

Caution: Exercise care when removing such accumulations in order to prevent damage to the affected parts.

41. Fording Operations

a. *General.* In fording, vehicles may be subjected to water of varying depth. Factors to be considered are spray-splashing precautions, normal fording capabilities, and accidental complete submersion.

b. *Normal Fording.* Fording of bodies of water up to maximum vehicle fording depth of 18 inches is based on the standard vehicle with normal waterproofing protection provided for critical units when manufactured, but without deep-water fording kit. Observe the following precautions:

- (1) Do not exceed the known fording limits of the vehicle (par. 6).
- (2) The engine must be operating at maximum efficiency before attempting to ford.
- (3) Shift transmission and transfer into

lowest speed positions. Speed up engine to overcome the possibility of a stall. Enter the water slowly. Should the engine stall, it may be started in the usual manner (par. 29).

(4) All normal fording should be at speeds which will avoid forming a bow wave. Avoid using the clutch if possible because frequent use while submerged may cause the clutch to slip. The brake will usually be lost but in some cases may grab after emergence. Applying the brake a few times after dry land has been reached will help dry out the brake lining.

(5) If accidental complete submersion occurs, the vehicle will be salvaged, temporary preservation applies as outlined in paragraph c below and then sent to the organizational maintenance unit as soon as possible for necessary permanent maintenance.

c. *After-Fording Operations.* At the earliest opportunity, check the engine oil level and check for presence of water in the crankcase. Heat generated by driving will evaporate or force out most water which has entered at various points. Refer to paragraph 46 for maintenance operations after fording.

CHAPTER 3 OPERATOR'S MAINTENANCE SERVICE

INSTRUCTIONS

Section I. LUBRICATION

42. Lubrication Chart

The lubrication chart (figs. 32 and 33) prescribes cleaning and lubricating procedures as to locations, intervals, and proper materials for this vehicle. Lubrication which is to be performed by ordnance maintenance personnel is listed on the lubrication chart in the NOTES.

Caution: If vehicle has been turned on its side or back to be lubricated, return vehicle to normal position and remove spark plugs. Hand crank engine 10 to 15 times to expel any oil that may have accumulated in engine cylinders. Install spark plugs.

43. General Lubrication Instructions Under Usual Conditions

a. General. Any special lubricating instructions required for specific mechanism or parts are covered in the pertinent section.

b. Usual Conditions. Service intervals specified on the lubrication chart are for normal operation and where moderate temperature, humidity, and atmospheric conditions prevail.

c. Points of Application.

- (1) Lubricating fittings and oilholes are shown in figures 34 and 35 and are references to the lubrication chart. Wipe these devices and the surrounding surfaces clean before and after lubricant is applied.
- (2) A $\frac{3}{4}$ -inch red circle should be painted around all lubricating fittings and oilholes.

d. Reports and Records

- (1) Report unsatisfactory performance

of prescribed petroleum fuels, lubricants, or preserving materials, using DA Form 468.

- (2) Maintain a record of lubrication of the vehicle on DA Form 461.

44. General Lubrication Instructions Under Unusual Conditions

a. Unusual Conditions. Reduce service intervals specified on the lubrication chart, i.e., lubricate more frequently, to compensate for abnormal or extreme conditions, such as high or low temperatures, prolonged periods of high speed operation, continued operation in sand or dust, immersion in water, or exposure to moisture. Any one of these operations or conditions may cause contamination and quickly destroy the protective qualities of the lubricants. Intervals may be extended during inactive periods commensurate with adequate preservation.

b. Changing Grade of Lubricants. Lubricants are prescribed in lubrication chart key (fig. 33) in accordance with three temperature ranges: above $+32^{\circ}$ F., $+40^{\circ}$ to -10° F., and from 0° to -65° F. Change the grade of lubricants whenever weather forecast data indicate that air temperatures will be consistently in the next higher or lower temperature range or when sluggish starting caused by lubricant thickening occurs. No change in grade will be made when a temporary rise in temperature is encountered.

c. Maintaining Proper Lubricant Levels. Lubricant levels must be observed closely and necessary steps taken to replenish in order to maintain proper levels at all times.

KEY

LUBRICANTS	EXPECTED TEMPERATURES			FOR ARCTIC OPERATION refer to TM9-2855	INTERVAL	
	above +32°F	+40°F to -10°F	0°F to -65°F			
OE—OIL, lubr, engine	OE 30	OE 10	OES		OES—OIL, lubr, engine, sub-zero	D—Daily W—Weekly
GO—LUBRICANT gear, universal	GO 90	GO 75	GOS		M—Monthly	
GAA—GREASE, lubr, automotive and artillery	GAA	GAA	GAA		GOS—LUBRI- CANT, gear, uni- versal sub-zero	A—Annually 160—160 Hours
PL—OIL, lubr, preservative	PL (Med)	PL (Special)	PL (Special)			

NOTES

CAUTION: If vehicle has been turned on its side or back to be lubricated, return vehicle to normal position and remove spark plugs. Hand crank engine ten to fifteen times in order to expel any oil that may have accumulated in engine cylinders. Install spark plugs.

1. **AIR CLEANERS AND BREATHERS**—(Oil bath type). Daily replenish to bead level with OE, crankcase grade. Monthly, clean oil reservoir and refill with OE as above. Disassemble, clean all parts, refill with OE as above whenever crankcase oil is changed. For desert or extremely dusty operation, disassemble, clean all parts and refill with OE once every operating day or more frequently if required. (Baffle type) For normal operation, clean, reoil at indicated intervals with OE. For desert or extremely dusty operation, clean and reoil once every operating day or more frequently if required.
2. **CRANKCASE**—Drain crankcase every 160 hours. Drain only when hot after operation. Remove sump assembly and clean. REFILL TO FULL mark on gage. Run engine a few minutes to fill oil passages, stop engine, recheck oil level and correct if necessary.
3. **OIL FILTER**—Every 160 hours, while crankcase is being drained, remove, clean and inspect element, clean inside of case, install element.
4. **GEAR CASES**—Drain annually. Drain only when hot after operation. Fill to level plug before operation. Clean transmission vent weekly after operation in mud or water.
5. **OIL CAN POINTS**—Weekly, lubricate brake, clutch, throttle disconnects and cables, hand throttle, shifting control rods and support brackets, steering locking and sector joint, storage clips, access door locks, clamp screw towbar, steering column brace, towbar bellcrank and towbar drag link with PL.
6. **LUBRICATED AT TIME OF DISASSEMBLY BY ORDINANCE PERSONNEL**—Starter cable.

RA PD 378066

Figure 33. Lubrication chart—back.

any other points required in accordance with paragraph 41c.

b. If the vehicle has been in deep water for a considerable length of time or was sub-

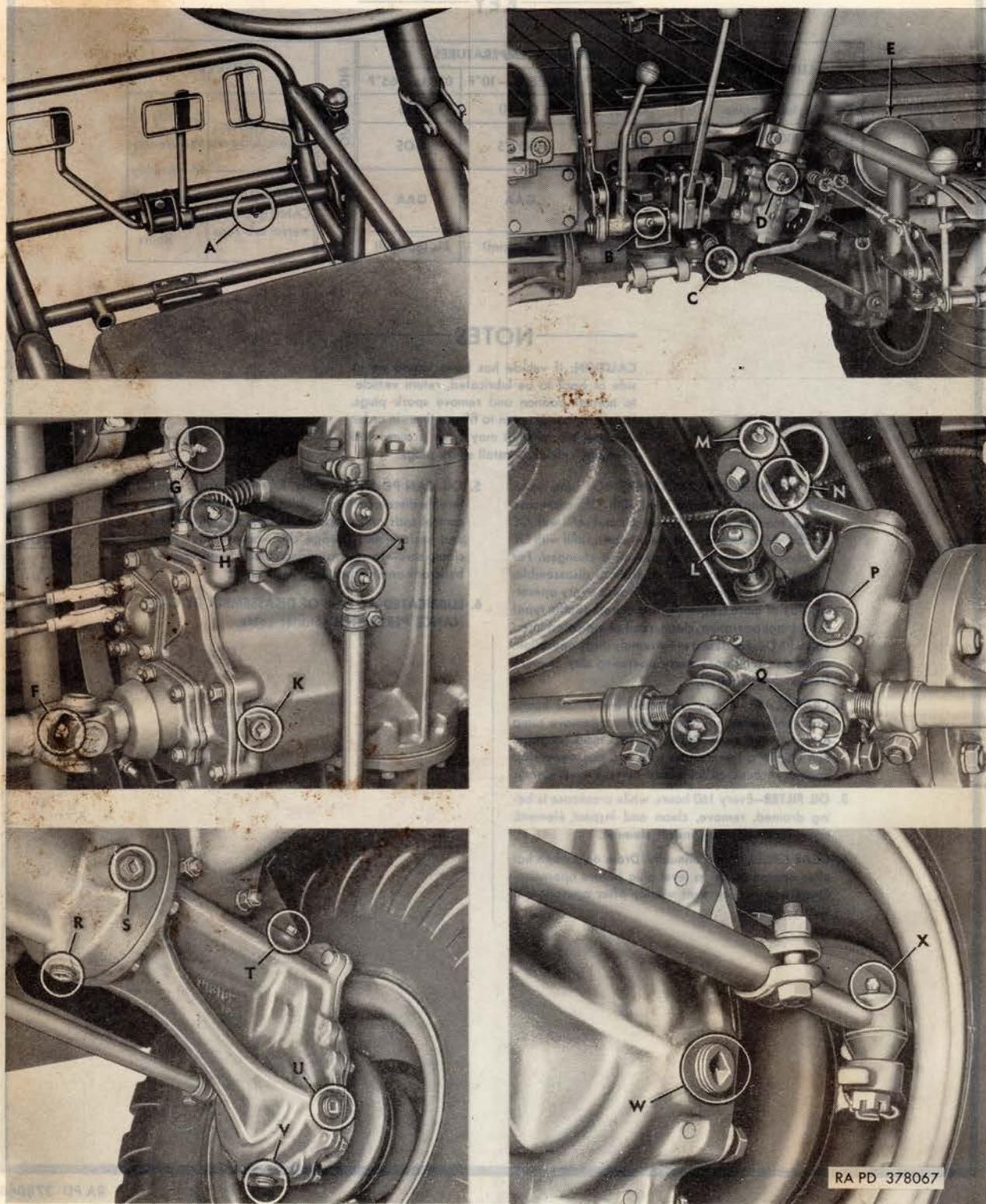


Figure 34. Lubrication points A to X.

merged beyond its fording capabilities, precautions must be taken as soon as practicable to avoid damage to the engine and other vehicle components as follows:

- (1) Perform a complete lubrication service regardless of time interval (par. 42).
- (2) When engine oil is drained, check for presence of water or sludge; if found, flush the engine with preservative engine oil PE-30. Before putting in new oil, remove, clean and install filter element.

Note. If preservative engine oil is not available, engine lubricating oil OE-30 may be used.

- (3) Operation in bodies of salt water increases the rapid accumulation of rust and corrosion, especially on unpainted surfaces. It is most impor-

tant to remove all traces of salt water and salt deposits from every part of the vehicle. For assemblies which have to be disassembled, dried, and relubricated, perform these operations as soon as the situation permits. Regardless of the temporary measures taken, the vehicle must be delivered as soon as practicable to organizational maintenance unit.

47. Lubrication After Operation Under Dusty or Sandy Conditions

After operation under dusty or sandy conditions, clean and inspect all points of lubrication for fouled lubricants and relubricate as necessary.

Note. A lubricant which is fouled by dust and sand acts as an abrasive mixture and causes rapid wear of parts.

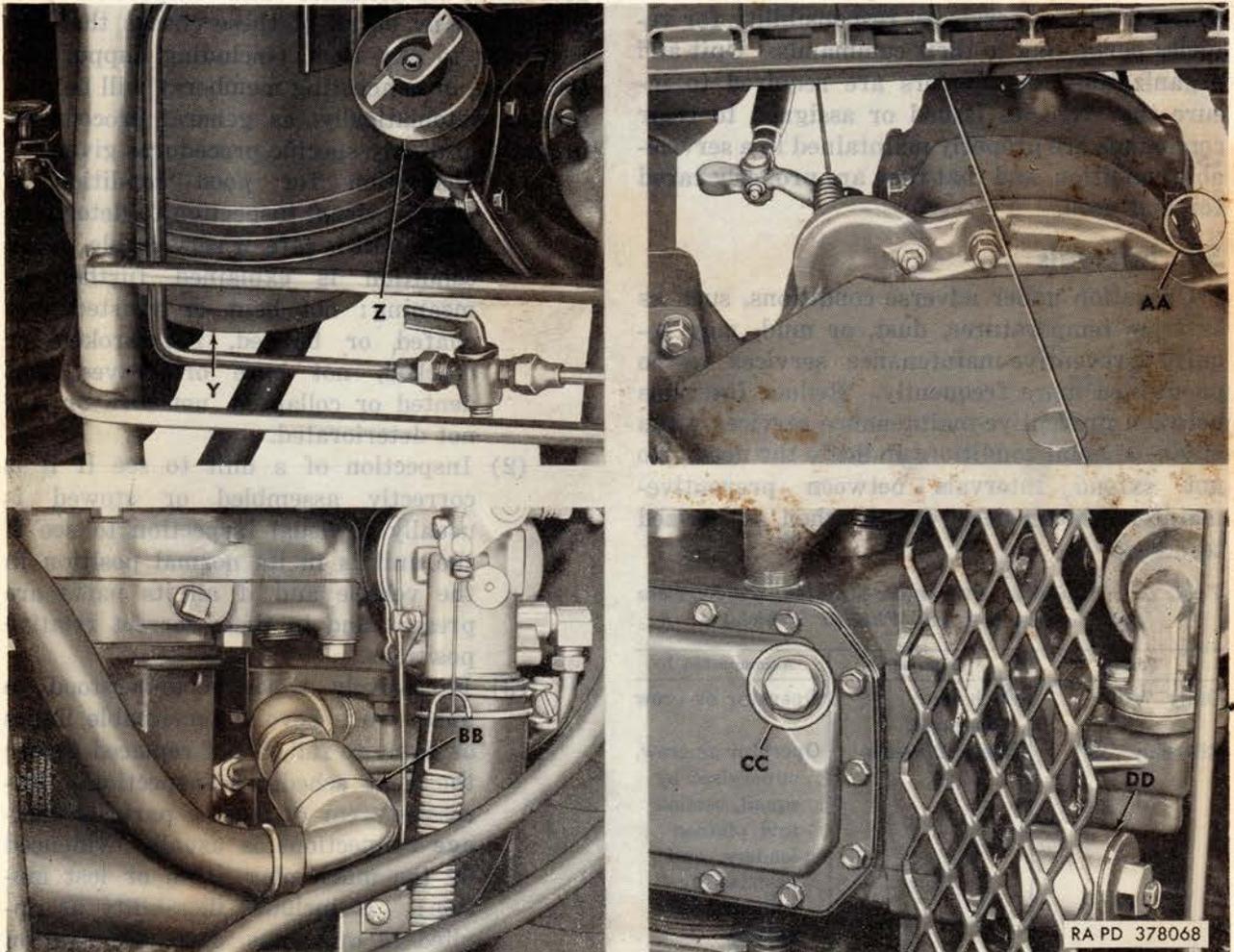


Figure 35. Lubrication points Y to DD.

Section II. PREVENTIVE-MAINTENANCE SERVICE

48. General

The purpose of preventive-maintenance services is to detect first signs of electrical and mechanical failures of assemblies in the vehicle, and to insure that appropriate corrective action is taken before expensive and time consuming repairs or replacements are required. The system of preventive-maintenance services is based on frequent inspections and services accomplished by operators, company, battalion, or regimental maintenance personnel under active supervision by all commanders and leaders.

49. Responsibility

AR 750-5 charges operators and crew chiefs with personal responsibility for assigned vehicles. Squad, section, and platoon leaders are charged with supervisory responsibility for vehicles pertaining to their commands. Unit and organization commanders are required to insure that vehicles issued or assigned to their commands are properly maintained in a serviceable condition, and that they are properly cared for and used.

50. Intervals

Operation under adverse conditions, such as extreme temperatures, dust, or mud, may require preventive-maintenance services to be performed more frequently. Reduce intervals between preventive-maintenance services when environmental conditions indicate the need. Do not extend intervals between preventive-maintenance services, except when authorized to do so.

Table I. Outline of Preventive-Maintenance Services for Tactically Used Wheeled Vehicles

Service	Interval	Accomplished by
Daily "A"	Each day operated	Operator or crew
Biweekly "B"	Every 2 weeks	Operator or crew, supervised by squad, section and platoon leaders, and assisted by company or battery mechanics

51. Outline

The system of preventive-maintenance services for tactically used wheeled vehicles is outlined in table I. "A" and "B" services, as outlined, are designated as operator's maintenance services.

52. General Procedure for All Services and Inspections

a. The following general procedures apply to the operator's preventive maintenance services and to all inspections and are just as important as the specific procedures.

b. Inspections to see if items are in good condition, correctly assembled or stowed, secure, not excessively worn, not leaking, and adequately lubricated apply to most items in the preventive-maintenance and inspection procedures. Any or all of these checks that are pertinent to any item (including supporting, attaching, or connecting members) will be performed automatically, as general procedures, in addition to any specific procedures given.

- (1) Inspection for good condition is usually visual inspection to determine if the unit is safe or serviceable. Good condition is explained further as meaning: not bent or twisted, not chafed or burned, not broken or cracked, not bare or frayed, not dented or collapsed, not torn or cut, not deteriorated.
- (2) Inspection of a unit to see if it is correctly assembled or stowed is usually a visual inspection to see if the unit is in its normal position in the vehicle and if all its parts are present and in their correct relative positions.
- (3) Excessively worn is understood to mean worn beyond serviceable limits or likely to fail, if not replaced before the next scheduled inspection. Excessive wear of mating parts or linkage connections is usually evidenced by too much play (lash or lost motion). It includes illegibility as applied to markings, data and caution plates, and printed matter.

c. Where the instruction, "tighten," appears in the procedures, it means tighten with a wrench, even if the item appears to be secure.

d. Any special cleaning instructions required for specific mechanisms or parts are contained in the pertinent section. General cleaning instructions are as follows:

- (1) Use dry-cleaning solvent or mineral spirits paint thinner to clean or wash grease or oil from all parts of the vehicle.
- (2) A solution of one part grease-cleaning compound to four parts of dry-cleaning solvent or mineral spirits paint thinner may be used for dissolving grease and oil from engine blocks, chassis, and other parts. Use cold water to rinse off any solution which remains after cleaning.

e. General precautions in cleaning are as follows:

- (1) Dry-cleaning solvent or mineral spirits paint thinner is flammable and should not be used near an open flame. Fire extinguishers should be provided when this material is used. Use only in well-ventilated places.
- (2) This cleaner evaporates quickly and has a drying effect on the skin. If used without gloves, it may cause cracks in the skin and, in the case of some individuals, a mild irritation or inflammation.
- (3) Avoid getting petroleum products, such as dry-cleaning solvent or mineral spirits paint thinner, engine fuels, or lubricants on rubber parts as they will deteriorate the rubber.
- (4) The use of Diesel fuel oil, gasoline, or benzene (benzol) for cleaning is prohibited.

f. Nameplates, caution plates, and instruction plates made of steel, rust rapidly. When plates are found in a rusty condition, they should be thoroughly cleaned and heavily coated with an application of clear lacquer.

53. Daily "A" Preventive-Maintenance Services

Each vehicle will be inspected each day that it is operated. This service is divided into four parts, as indicated in *a* through *d* below.

a. Before-Operation Service. This is a brief service to ascertain that the vehicle is ready for operation; it is mainly a check to see if conditions affecting the vehicle's readiness have changed since the last after-operation service.

b. During-Operation Service. This service consists of detecting unsatisfactory performance. While driving, the driver should be alert for any unusual noises or odors, abnormal instrument readings, steering irregularities, or any other indications of malfunction of any part of the vehicle.

c. At-the-Halt Service. This service consists of investigating any deficiencies noted during operation and repeating part of the before-operation service.

d. After-Operation Service. This is the basic daily service for tactical vehicles. It consists of correcting, so far as possible, any operating deficiencies to insure immediate readiness.

54. Biweekly "B" Preventive-Maintenance Services

a. These services supplement the daily "A" preventive-maintenance services and are applied as indicated in table II and *b* below. They provide for cleaning the vehicle more thoroughly and for servicing certain items that do not require daily attention.

b. The biweekly "B" service is applied to wheeled vehicles once in 2 weeks by the operator or crew under supervision of the squad, section, and platoon leaders. When necessary, operator will be assisted by company or battery mechanics.

55. Specific Procedures for Operator or Crew

Table II gives the specific procedures to be performed on the vehicle by the operator or crew in each of the daily and biweekly services. An X in a column means that the procedure opposite it should be performed at the interval designated by the column in which it appears.

CHAPTER 4

DESTRUCTION OF MATERIEL TO PREVENT ENEMY USE

56. General

a. Destruction of the 1/2-ton 4 x 4 infantry light weapon carrier M274, when subject to capture or abandonment in the combat zone, will be undertaken by the using arm only when, in the judgment of the unit commander concerned, such action is necessary in accordance with orders of, or policy established by, the army commander.

b. The information which follows is for guidance only. Of the several means of destruction, those most generally applicable are:

Mechanical—Requires axe, pick mattock, sledge, crowbar, or similar implement.

Burning —Requires gasoline, oil, or other flammables.

Gunfire —Includes artillery, machine guns, rifles, rifle grenades, and launchers using antitank rockets. Under some circumstances hand grenades may be used.

In general, destruction of essential parts, followed by burning will usually be sufficient to render the weapons carrier useless. However, selection of the particular method of destruction requires imagination and resourcefulness in the utilization of the facilities at hand under the existing conditions. Time is usually critical.

c. If destruction to prevent enemy use is resorted to, the weapons carrier must be so badly damaged that it cannot be restored to a usable condition in the combat zone either by repair or cannibalization. Adequate destruction requires that all parts essential to the operation of the materiel, including essential spare parts,

be destroyed or damaged beyond repair. However, when lack of time and personnel prevents destruction of all parts, priority is given to the destruction of those parts most difficult to replace. Equally important, the same essential parts must be destroyed on all like materiel so that the enemy cannot construct one complete unit from several damaged ones.

d. If destruction is directed, due consideration should be given to:

- (1) Selection of a point of destruction that will cause greatest obstruction to enemy movement and also prevent hazard to friendly troops from fragments or ricocheting projectiles which may occur incidental to the destruction by gunfire.
- (2) Observance of appropriate safety precautions.

57. Method No. 1—Destruction by Burning

a. Using an axe, pick mattock, sledge, or other heavy implement, smash all vital elements such as carburetor, magneto, fuel pump, spark plugs, and controls. If time permits, and a sufficiently heavy implement is available, smash the engine cylinder head and block, and transmission.

b. *Slash Tires.* If tires are inflated exercise care to prevent injury should the tire blow out while being slashed. Whenever practicable, it is usually preferable to deflate tires before slashing.

c. Remove the drain plug from the fuel tank or puncture the tank as near the bottom as possible, collecting gasoline for use as outlined in *e* below.

d. Explosive ammunition, if available nearby, should be removed from packing or other protective material. Place ammunition on and about the vehicle so that it will be fully exposed to the fire and in such locations that the greatest damage will result from its detonation.

e. Pour gasoline and oil over the entire vehicle. Ignite by any appropriate means. If available, use an incendiary grenade fired from a safe distance, a burst from a flame thrower, or a combustible train of suitable length to ignite the combustible. Take cover immediately.

Caution: Cover must be taken without delay since an early explosion of the explosive ammunition, if present, may be caused by the fire. Due consideration should be given to the highly flammable nature of gasoline and its vapor. Carelessness in its use may result in painful burns. Elapsed time: about 4 minutes.

58. Method No. 2—by Mechanical Means

Perform the operations as indicated in paragraph 57a and b. Also puncture the fuel tank in several places.

59. Method No. 3—Destruction by Gunfire

a. Puncture fuel tank.

b. Destroy the vehicle by gunfire using artillery, machine guns, rifles, rifle grenades, or launchers using antitank rockets. Fire on the vehicle aiming at the engine, transmission, axles, wheels, and tires. Although one well-placed direct hit may destroy the vehicle, several hits may be required for complete destruction.

Caution: Firing artillery at ranges of 500 yards or less should be from cover. Firing rifle grenades or antitank rockets should be from cover. Elapsed time: about 3 minutes.

APPENDIX I

REFERENCES

1. Military Publication Indexes

DA Pamphlets 310-1, -2, -3, -4, -5, -7, -29, and DA Pamphlet 108-1 should be consulted frequently for latest changes or revisions of reference material given in this appendix, and for new publications pertinent to major item materiel on technical manual being prepared.

2. Supply Manuals

The following Department of the Army supply manuals pertain to this materiel:

a. Destruction to Prevent Enemy Use.

Land Mines and Components; SM 9-5-1345
 Demolition Explosives and SM 9-5-1370
 Related Items; and Ammu- SM 9-5-1375
 nition for Simulated Artillery, Booby Traps, Hand Grenade, and Land Mine Fire.

b. Maintenance and Repair.

Abrasives, Adhesives, Pre- ORD 3 SNL K-1
 servatives, Recoil Fluids,
 Special Oils and Related
 Items.

3. Forms

The following forms pertain to this materiel. (Refer to DA Pam 310-2 for index of blank forms.)

Standard Form 91, Operator's Report of Motor-Vehicle Accident (Card)
 Standard Form 94, Statement of Witness
 DA Form 9-75, Daily Dispatching Record of Motor Vehicles
 DA Form 461, Preventive Maintenance Service and Inspection for Wheeled and Half Tracked Vehicles
 DA Form 468, Unsatisfactory Equipment Report
 DA Form 1089, Claim for Personal Property
 DD Form 110, Vehicle and Equipment Operational Record

DD Form 313, U. S. Government Operator's Permit

DD Form 317, Preventive Maintenance Service Due (Sticker)

DD Form 518, Accident Identification Card

4. Other Publications

The following publications contain information pertinent to major item materiel and associated equipment:

a. Decontamination.

Decontamination _____ TM 3-220

Defense Against CBR Attack _____ FM 21-40

b. Destruction to Prevent Enemy Use.

Explosives and Demolition _____ FM 5-25

c. General.

Basic Arctic Manual _____ FM 31-70

Driver's Manual _____ TM 21-305

Instruction Guide: Operation

and Maintenance of Ord-

nance Materiel in Extreme

Cold (0° to -65° F.). _____ TM 9-2855

Lubrication Order (Pertinent LO 9-8034-10
 to Vehicle).

Motor Transportation, Opera- FM 25-10
 tions.

Mountain Operations _____ FM 70-10

Operations in the Arctic _____ FM 31-71

Ordnance Maintenance and FM 9-10
 General Supply in the Field.

Precautions in Handling AR 850-20
 Gasoline.

Prevention of Motor Vehicle AR 385-55
 Accidents.

Reports of Accidents _____ SR 385-10-40

d. Maintenance and Repair.

Abrasives, Cleaning, Preserv-

ing, Sealing, Adhesive, and

Related Materials Issued

for Ordnance Materiel. _____ TM 9-850

Lubrication _____ TM 9-2835

Maintenance Responsibilities AR 750-5
 and Shop Operation.

APPENDIX II

MAINTENANCE ALLOCATION CHART

Note. The Maintenance Allocation Chart for this vehicle will be found in TM 9-8034-20, Appendix II.

The cleaning and preserving material listed below is required for operator's maintenance of the vehicle and will be stocked on an "as required" basis at organizational level.

APPENDIX III

BASIC ISSUE ITEMS AND TOOL LIST

1. Information pertaining to repair parts and tools authorized to accompany the materiel is not available and will be included in a future change to or revision of this manual.

2. The cleaning and preserving material listed below is required for operator's maintenance of the vehicle and will be stocked on an "as required" basis at organizational level.