OPERATOR'S AND MAINTENANCE MANUAL

White

10 TON—6 x 4 TRUCK

Built For
UNITED STATES ARMY
By
THE WHITE MOTOR COMPANY

Model Number 1064

CONTRACT NUMBER
DA-398-QM-220

U. S. A. REGISTRATION NUMBERS
515,665 through 517,164

THE WHITE MOTOR COMPANY
Cleveland, Ohio

TM 10-1467

WAR DEPARTMENT

Washington, February 3, 1942

TM 10-1467, Maintenance Manual, Truck, 10-Ton, General Service Load Carriers, 6x4, White (Model 1064 Prime Mover) published by the White Motor Company is furnished for the information and guidance of all concerned.

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By order of the Secretary of War:

G. C. MARSHALL,
Chief of Staff

Official:
E. S. ADAMS,
Major General,
The Adjutant General

OPERATOR'S AND MAINTENANCE MANUAL

White

MODEL 1064

10-TON 6 x 4 TRUCK

Truck Serial Numbers

270,711 through 272,210

INTRODUCTION

This manual is presented for the use of the men who drive and repair White 1064 trucks for the United States Army.

It contains maintenance information, general data, specifications, and repair instructions. It is written and illustrated to show the best recommended methods of maintenance, disassembly, and repair.

The material is divided into sections covering related groups of parts, numbered and tabbed to correspond with the tabs on the index section on the right side of this page. Quick reference to any desired section can be made by placing the right thumb on the arrow for the desired section, bending the book back and thumbing page edges until the corresponding numbered arrow turns up. A technical dictionary will be found at the end of section 00.

THE WHITE MOTOR COMPANY

CLEVELAND, OHIO

(Prepared by JAYME STUDIO, Cleveland, Ohio)

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WHITE 10-TON 6 x 4 PRIME MOVER

"BREAKING IN" SPEEDS

The engine of a new truck should not be run faster than 1200 R.P.M. for the first 500 miles. This also applies to engines that have new cylinder liners, pistons or bearings.

The engine should not be raced or over-worked until it has reached its operating temperature and runs smoothly with the hand throttle control button pushed "in".

PREPARING TRUCK FOR USE

RADIATOR

(Filler cap located under hood).

In summer fill radiator with clean pure water until it overflows into overflow pipe. When using anti-freeze solution, allow for expansion of liquids to prevent loss of anti-freeze through overflow pipe.

FUEL TANKS

Be sure that engine is not running. Use caution in filling tanks to allow escape of air through filler spout and to avoid over filling and consequent spilling and waste of fuel oil. The capacity of each fuel oil tank is 75 gal.

ENGINE OIL

Be sure to test with a still engine. Be sure that the oil in the crank case is up to the full mark on the oil level gauge on the lower right side of the engine. Pull out the gauge rod, wipe clean, then insert all the way. When pulled out again, it will give a true reading of the oil level. Capacity of the crankcase 24 qts., dry, 20 qts. wet.

BATTERIES

Be sure that water level is well over the separators and plates. Use only pure distilled water when filling. CAUTION—Do not expose open flame near battery!

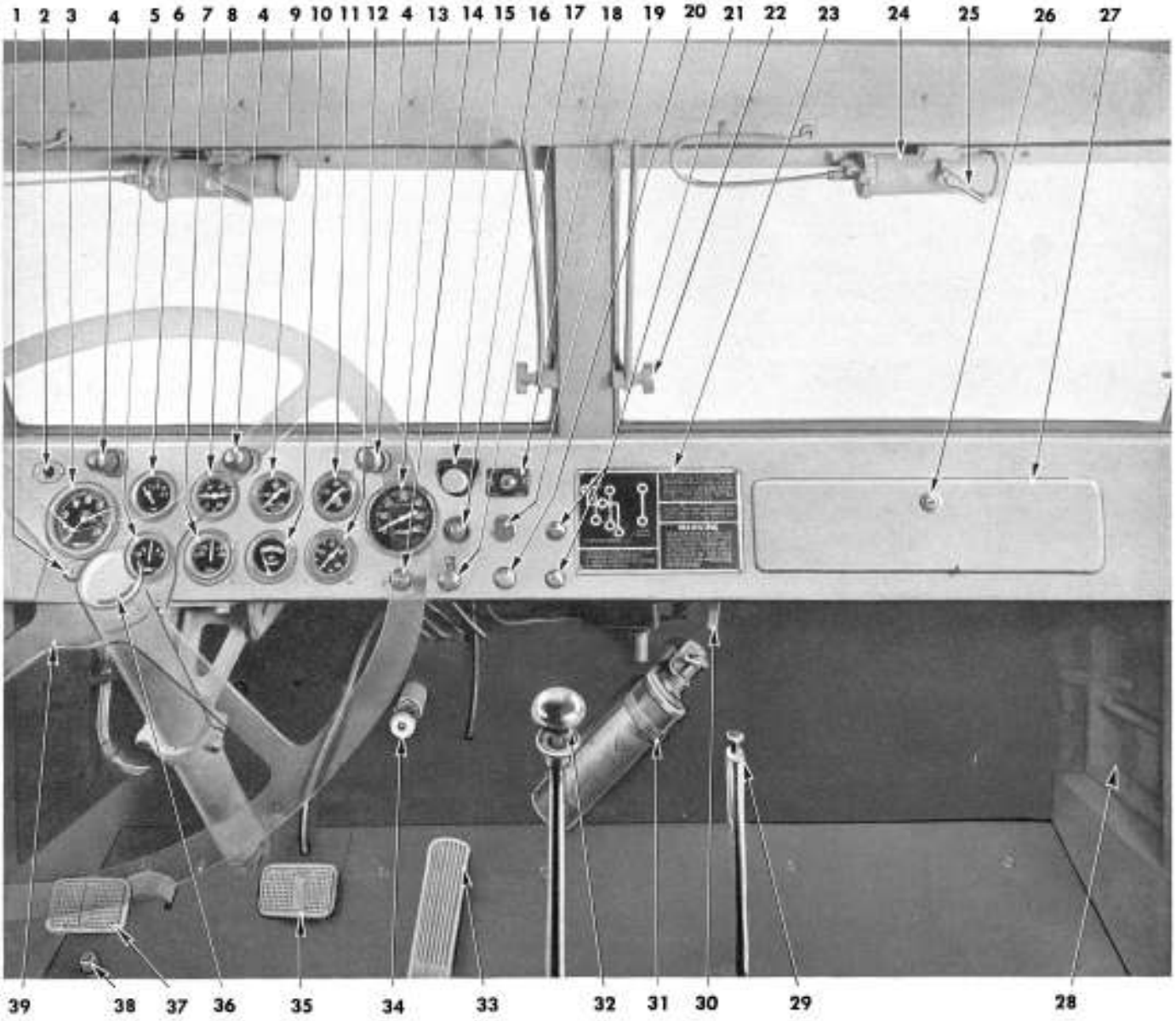
TIRES

Examine tires for cuts, bruises and damaging objects wedged into the grooves of the tread. Make sure they are inflated to the proper pressure.

HOSES, LINES AND CONNECTIONS

Check all water, gasoline and external tubing for leaks that may prove injurious and dangerous.

INSTRUMENTS AND CONTROLS



1—Tachometer Locking Switch
2—Trouble Lamp Cord Socket
3—Tachometer
4—Dash Board Instrument Lights
5—Auxiliary Ammeter
6—Fuel Gauge
7—Ammeter
8—Air Brake Pressure Gauge
9—Engine Temperature Gauge
10—Oil Viscosity Gauge
11—Fuel Oil Pressure Gauge
12—Engine Oil Pressure Gauge
13—Speedometer
14—Hand Throttle Button
15—Flame Thrower Hand Pump
16—Engine Stop Button
17—Lighting Switch Button
18—Fuel Gauge Selector Switch
19—Emergency Shut-off Control Button
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23—Gear Shift Diagram and Caution Plate
24—Windshield Wiper Mechanism
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32—Gear Shift Lever
33—Accelerator Pedal
34—Starter Button
35—Brake Pedal
36—Horn Button
37—Clutch Pedal
38—Head Lamp Beam Foot Switch
39—Steering Wheel

TACHOMETER LOCKING SWITCH

This lock is used to return the maximum speed indicator arm to a zero reading on the tachometer. It is operated with a key supplied with the vehicle.

TROUBLE LAMP CORD SOCKET

This socket is found at the extreme upper left corner of the instrument panel and provides an electrical outlet for the trouble lamp and cord supplied with the vehicle. The lamp can be lighted by merely plugging into the socket.

ENGINE TACHOMETER

This instrument records engine R.P.M. in all transmission speeds. It has two pointers, the white one indicating engine R.P.M. while the engine is running; the red one stopping at the maximum speed at which the engine has been run.

DASH BOARD INSTRUMENT LIGHTS

Three of these lights are located immediately above the row of instruments and gauges on the left side of the instrument panel. They are so designed as to throw light only in a downward direction onto the instrument panel.

AUXILIARY AMMETER

This ammeter indicates whether or not the "B" battery (which is used only for starting) is being charged or discharged.

FUEL GAUGE

Registers the amount of fuel in each tank when the engine is running. "F" indicates full, "½" indicates half full, and "E" indicates empty. The capacity of each of the two tanks is 75 gallons.

AMMETER

This instrument indicates either the amount of current being drawn from the batteries, or the rate at which current is being supplied to the batteries by the generator. The generator begins charging when the truck reaches a speed of approximately 9 M.P.H. and shows a positive "plus" reading on the ammeter. The charging rate increases with the truck speed until a maximum of 25 to 27 amperes is reached at 25 M.P.H. At speeds below 9 M.P.H., or when lights and other electrical units draw more current than the generator supplies, the needle of the ammeter will move to the negative or "minus" side, indicating that the battery is discharging.

AIR BRAKE PRESSURE GAUGE

This gauge shows the air pressure stored in the air brake reservoirs. The truck should never be put into motion with this gauge showing less than 50 pounds pressure, as the brakes will not operate properly on less.

ENGINE TEMPERATURE GAUGE

This indicates in degrees Fahrenheit the temperature of the liquid in the cooling system. The normal operating temperature is between 160° and 180°. If the temperature approaches the boiling point (212°), investigate the cause of overheating at once. Continuing to operate an overheated engine may result in serious damage.

OIL VISCOSITY GAUGE

This gauge indicates the relative viscosity (or body) of engine oil. The reading of this gauge (at normal operating temperature) will indicate the need of changing to a heavier or lighter oil.

FUEL OIL PRESSURE GAUGE

This gauge indicates the pressure in the fuel lines of the fuel oil being injected into the engine.

ENGINE OIL PRESSURE GAUGE

This gauge indicates the pressure at which oil is being forced through the lubricating system of the engine. At a speed of 40 M.P.H. a normal reading of this gauge should be a minimum of 26 pounds. If the oil pressure should fall considerably below this during operation of the truck, stop the engine immediately and investigate the cause of the pressure failure.

SPEEDOMETER

The main dial indicates the speed in miles per hour at which the truck is being driven. The upper row of figures in the center of the dial record the total miles the truck has been driven. The lower row is a trip mileage gauge and can be reset by hand for mileage calculations.

HAND THROTTLE CONTROL BUTTON

This button regulates the speed of the engine in starting and is used when engine tests are being made with the truck at a standstill. The hand throttle is never used to control the speed of vehicle in motion.

FLAME THROWER HAND PUMP

This hand pump builds up pressure, injecting fuel oil into the flame thrower located on the intake manifold. It is used only in extreme cold weather in assisting to preheat intake air for quick starting of the engine.

ENGINE STOP BUTTON

Inasmuch as the Diesel engine does not require a sparking system for ignition of the fuel, the engine is stopped by pushing in the engine stop button. This operates an electrical solenoid switch cutting off the fuel supply and stopping the engine immediately.

PANEL LIGHT SWITCH BUTTON

This push and pull switch is used for turning on and off the panel lights.

WINDSHIELD WIPER CONTROLS

Dual windshield wipers are controlled by separate switches. The wiper is turned on by turning the knob to the left. The amount the control knob is turned regulates the speed of the wiper action. To stop the windshield wiper, turn the knob to the right.

WINDSHIELD WIPERS

There are two separately operated air pressure type wipers used. They are controlled as described before.

WINDSHIELD QUADRANT THUMB SCREW

A quadrant and thumb screw control is provided at each side to permit opening the windshield. By tightening the thumb screws the windshield may be locked in any desired position.

WIPER HAND OPERATING LEVER

Each windshield wiper is equipped with a hand operating lever to insure its use against pressure failures.

PACKAGE COMPARTMENT

A package compartment for storing small articles, such as flashlight or this Maintenance Manual, is built into the right hand side of the instrument panel. It is equipped with a lock.

VENTILATOR CONTROLS

Push the upper cowl ventilator control forward to open and pull it rearward to close. Side cowl ventilators are opened by pulling control lever backward and closed by pushing forward. Cab roof ventilators are pulled down to open and pushed up to close.

HAND BRAKE LEVER

Whenever the truck is parked, this lever should be pulled up as far as possible. It operates a four shoe disc type brake on the propeller shaft. Before moving the truck, release the latch on the hand brake lever and release the mechanism.

FIRE EXTINGUISHER

A pump type fire extinguisher is mounted on the center of the cowl kick pad. A spring type clamp lock must be opened to remove the extinguisher. After opening the clamp, the unit is easily pulled off the mounting bracket. To operate the extinguisher, turn the handle to the left, then use it like a pump. Best results will be obtained by directing the extinguisher stream at the base of the flames. To extinguish burning liquids, the stream should be directed above the surface of the liquid or against the inside of the container. All drivers should be familiar with the removal and operation of the fire extinguisher. It should be kept filled at all times.

GEAR SHIFT LEVER

The gear shift lever permits the selection of transmission speeds (gear ratios). The transmission has five speeds forward, and one in reverse. The reverse gear can be engaged only when the lever is pushed all the way to the right.

ACCELERATOR PEDAL

Controls the road speed of the truck by regulating the amount of fuel passing through the fuel distributor.

STARTER FOOT SWITCH

This button operates a switch engaging the starter and cranking the engine. It connects two batteries in parallel when pressed in with the foot, supplying 24 volts to the starting motor.

LIGHTING SWITCH BUTTON

This switch controls all external lights on the vehicle. The second and third positions or "stops" can only be obtained by pushing down the small button on the top of the switch. There are four stops and their positions produce the following action in the truck lighting system:

POSITION 1—Button pushed fully in—All lights off.

POSITION 2—Knob pulled out to first stop. This lights blackout marker lights and blackout tail lights.

POSITION 3—Blackout marker lights, also blackout driving light. Tail marker lights and stop light.

POSITION 4—Same as position 3.

FUEL GAUGE SELECTOR SWITCH

This right and left toggle switch enables the operator to gauge the fuel in either tank. Caution should be exercised by the driver to switch tanks when one of them is running low of fuel. This practice will eliminate the complete emptying of one tank and the necessity of priming the engine.

EMERGENCY SHUT OFF CONTROL BUTTON

This manually operated control pulls an emergency shut off valve located in the fuel line between the fuel pumps and the fuel distributor head. It should never be used except in cases of extreme emergency, as the valve must be reset after being used.

BRAKE PEDAL

Pressing on this pedal applies the air brakes on all six wheels. Do not drive with your foot on this pedal as this partially applies the brakes and results in rapid wear of the brake lining.

CLUTCH PEDAL

The clutch pedal provides the means of engaging and disengaging the engine from the transmission, to permit shifting the transmission gears. Depressing (or pushing) the clutch pedal disengages the engine.

CAUTION: Resting the foot on the pedal while driving will cause clutch facings and the clutch release bearing to wear rapidly.

HEAD LAMP BEAM FOOT SWITCH

This switch is included in the cab of all units to provide head lamp beam control for those trucks converted to standard head lamps.

STEERING WHEEL

Cast in one piece of reinforced shock-absorbing plastic. It is of large size to allow for easy steering.

HORN BUTTON

Located in the center of the steering wheel and connected to dual horns.

WARNING BUZZER (NOT SHOWN)

This instrument buzzes continuously until reservoir air brake pressure is at a safe working pressure. NEVER OPERATE TRUCK WHILE THE BUZZER IS SOUNDING!

DRIVING INSTRUCTIONS

CAUTION: Before the day's run it is important to check the following points to be sure the truck is ready for proper operation:

1—Check the radiator water level and add water if necessary.

2—Check the fan belt tension and adjust if necessary.

3—Check the engine oil level and if necessary add enough oil to bring the level to the full mark on the oil gauge.

4—Inspect all fuel lines for leaks.

5—See that there is an adequate supply of fuel in both fuel tanks. CAUTION: Never fill tank while engine is running, or near an open flame.

6—Check all tires (including the spares) and see that they are inflated to the proper air pressure, and are not damaged by cuts or bruises.

7—Test the lights and the horn.

8—Test brakes for air supply and operation.

HOW TO START THE ENGINE:

1—Set the transmission shift lever into neutral position.

2—Set the brakes with the hand brake lever.

3—Open the hand throttle about ½" when starting in cold weather.

4—Push down the clutch pedal.

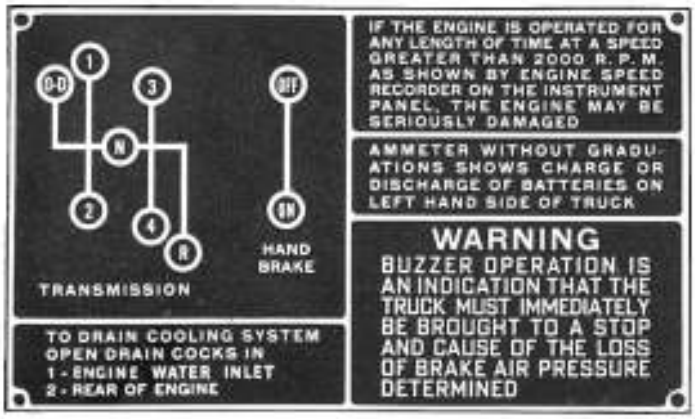
5—Push in on the starter button located under the instrument panel and against the front wall of the cab cowl.

6—Adjust the hand throttle until the engine attains an even idling speed. Then after making sure the shifting lever is in neutral position, gradually release the clutch pedal.

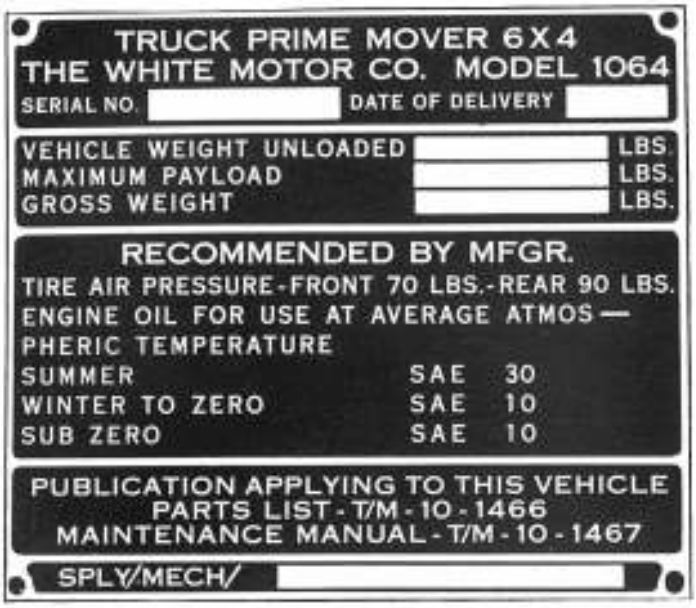
HOW TO OPERATE THE TRUCK:

1—Start the engine.

2—Disengage the clutch by pushing the clutch pedal downward.



GEAR SHIFT DIAGRAM AND CAUTION PLATE



CAPACITY PLATE

3—Move the transmission shifting lever into first speed position.

4—Release the hand brake.

5—Release the clutch pedal slowly and push down on the accelerator pedal the amount necessary for the engine to overcome the load and put the truck in motion.

6—As the truck gains speed, release the accelerator pedal and push down the clutch pedal at the same time.

7—Move the transmission shift lever into neutral and then into the next higher speed.

8—Push down the accelerator pedal and release the clutch pedal as before until the speed of the truck has increased enough for the next shift.

9—Repeat these operations until the transmission is in proper gear for the load.

TO SHIFT THE TRANSMISSION TO A LOWER GEAR WHILE THE TRUCK IS IN MOTION:

1—Push in the clutch pedal and release the accelerator pedal.

2—Move the transmission shift lever into a neutral position.

3—Release the clutch pedal and accelerate the engine to synchronize the engine and truck speeds.

4—Push in the clutch pedal and move the shift lever into the lower speed position.

5—Release the clutch pedal and accelerate the engine at the same time. NOTE: For easier and faster operation, it is a good practice to use the same transmission speed going down hill as would be required in climbing the same hill.

TO BRING THE TRUCK TO A STOP:

1—Release the accelerator pedal and apply the brakes by depressing the brake pedal.

2—When the forward speed of the truck has decreased to almost the idling speed of the engine, push in the clutch pedal.

3—When the truck has come to a complete stop, shift the transmission into neutral, release the clutch pedal and apply the hand brake.

TO STOP THE ENGINE:

1—Press and hold in the engine stop button so marked on the instrument panel. CAUTION: Do not use the emergency engine stop button for this action.

TO SHIFT THE TRANSMISSION INTO REVERSE:

1—Stop the truck, then push in the clutch pedal.

2—Move the gear shift lever into a neutral position, then lift on the round sleeve latch with the fingers while moving the gear shift lever as far to the right as possible, then rearward into reverse gear position. It is impossible to put the shift lever into this position unless the sleeve latch is pulled upward.

3—Release the clutch pedal and accelerate the engine at the same time and in the same manner as starting the truck forward.

SERIAL NUMBER LOCATION LIST

The following list will give direction in locating serial numbers for different units of the truck.

AIR FILTERS—Stamped in plate on bottom shell of filter housing.

AXLE, FRONT—Stamped on rear of left side of axle between spring plate and spindle.

AXLE, REAR, (REARWARD)—Stamped on top of right axle shaft housing to right of differential housing.

AXLE, REAR, (FORWARD)—Stamped on top of left axle shaft housing to left of differential housing.

AIR COMPRESSOR—Stamped in plate on side of air compressor crankcase.

BATTERY—Embossed on connecting strap between cells.

CHASSIS—Stamped in left outside side rail of frame, above spring shackle.

CLUTCH—Stamped in plate on flywheel ring.

ENGINE—Stamped in plate on left side of engine directly beneath oil filters.

FUEL PUMP—Stamped in plate on side of fuel pump housing.

GENERATOR—Stamped in plate on side of housing.

RADIATOR—Stamped in plate on top center of tank.

STARTING MOTOR—Stamped in plate on side of housing.

TRANSMISSION—Stamped in plate on left side of housing.

VOLTAGE REGULATOR—Stamped in plate on front of case mounted on cowl inside cab.

LUBRICATION

Correct periodic lubrication performed in accordance with the approved Preventive Maintenance schedule will aid materially in minimizing wear and will result in smoother and quieter truck operation as well as longer intervals between adjustments and parts replacements.

LUBRICATION CHART

The standardized lubrication chart on Page 10 shows the lubrication points as viewed from above the chassis. These points are grouped in such manner that complete lubrication of the truck may be performed in a systematic method.

The items to be lubricated are grouped in Frames A, B, C and D. Frame A indicates all items to be lubricated from BELOW the vehicle with CHASSIS GREASE. Frame B shows all the points to be lubricated also from BELOW the vehicle with LUBRICANTS OTHER THAN CHASSIS GREASE. Frame C lists those items which are located under the hood. Frame D covers the remaining points reached from the front, rear or either side of the truck.

LUBRICANTS

The lubricants shown in the lubrication chart are those available to the Motor Transport service and known by the designations noted. They are to be used according to the predominating temperatures shown.

LUBRICATION INTERVALS

Correct periodic lubrications calls for applying the proper lubricant at the right place whenever it is needed. There is no better time for determining when lubrication is necessary than during the regular PM (Preventive Maintenance) inspections.

NOTE—The mileage recommendations shown on the lubrication chart are for normal operating conditions only. If it is evident, during inspection, that any point has been exposed to water, dust or conditions that have contaminated or removed the lubricant, lubrication is necessary.

STANDARDIZED NUMBERING SYSTEM

The items are listed to conform with the standardized numbers assigned by the Motor Transport Division for each particular lubrication point. For example, a lubrication point such as spring shackle is always identified by number 1 on any make truck. If the truck does not have a part to which a number has been assigned, that item is omitted from the chart. For that reason, some numbers are missing from this chart.

CHART FOOTNOTES

An asterisk (*) beside a number on the lubrication chart means that in order to lubricate that item, it must be disassembled. V signifies that the item has a vent which must be cleaned when the unit is lubricated.

TOOLS

The tools listed are all that will be necessary to complete the lubrication job for items shown in the Daily, 250 miles (or Weekly), and 1000 miles (or Monthly) columns. It is assumed that all tools necessary for disassembly and complete overhaul will be available at the 6000 mile (or Semi-Annual) period.

DETAILED LUBRICATION INSTRUCTIONS

For details on lubricating each point, refer to the instructions beginning on Page 10. These instructions are listed to conform with the standardized numbers.

THINGS TO REMEMBER

The following suggestions should be noted carefully before lubricating:

1—Lubricate preferably AFTER vehicle has been washed.

2—Clean lubricators before applying grease gun.

3—Clean dirt from around filler or level plugs before removing.

4—Keep lubricants in clean dispensers.

5—Rubber parts should not be lubricated with oil as deterioration will result.

6—It is recommended that the front axle be jacked up, if possible, before lubricating front axle points. This removes the load from the bearing surfaces and allows lubricant to penetrate into crevices not ordinarily reached.

7—Do not overfill units as excessive oil will leak out and cause damage to parts. Do not fill above level plugs or marks. Extensive damage may result from overfilling enclosed housings and gear cases, due to overheating.

8—Avoid overfilling of water pump housing.

9—After lubricating each point, wipe off excess lubricant as it can serve only to collect dirt.