Allis Chalmers

Operator's Manual

TL12

Wheel Loader

S/n 0-2003

Operator's Manual

AC-O-TL12 ERLY

Operating instructions and Field maintenance Manual for TL12 (Gasoline) (Kerosene) TRACTOR LOADER

(PRIOR S/N 2003)

ALLIS-CHALMERS

Allis-Chalmers Corporation and FIAT S.p.A. entered into a joint venture agreement to combine their manufacture, sale and service of construction machinery products throughout the world after January 1, 1974.

In view of the new enterprise, wherever in this publication reference is made to Allis-Chalmers or your Allis-Chalmers dealer, such reference is intended to identify FIAT-ALLIS Construction Machinery, Inc. or your FIAT-ALLIS dealer.

Milwaukee, Wisconsin, U.S.A.

Litho in U.S.A. FORM 3033702-6

SAME AS 1039-9-57

FOREWORD

This Operator's Manual contains the essential operating instructions and routine servicing procedures for the day-to-day care, adjustments, and lubrication of the wheel loader. This manual will enable the operator to accomplish the job the unit has been designed to do and to gain the maximum in trouble-free operation and long life for the TL-12 Tracto-Loader.

The practice of going to your Allis-Chalmers Dealer for all Tracto parts and repair work, other than routine care and adjustments, is encouraged, as the dealers are kept well informed by the factory regarding genuine Tracto parts and advanced methods of servicing Tractomotive products.

The Model TL-12 Tracto-Loader has two distinct features which greatly improve its operation and output. They are:

A. THE HYDRAULIC TORQUE CONVERTER

1. The torque converter, located between the engine and transmission, provides a very flexible hydraulic connection between the engine and the transmission permitting a smooth, shockless flow of power. It prevents stalling of the engine when the unit is overloaded.

2. It means less wheel slippage because the converter automatically adjusts the speed of the wheels to the load.

3. The converter allows the machine to crowd forward into the pile at the same time the bucket is tipping back and raising, without lugging the engine down. This eliminates slipping the clutch to load the bucket. Instead of the operator releasing the clutch when the bucket begins to stall out, releasing the accelerator pedal momentarily will reduce the crowding action. When the bucket starts to raise, depress the accelerator to full throttle.

4. It provides increased life of the clutches because they are engaged at practically no torque.

5. The Torque Converter permits the machine to maneuver safely in close quarters because the machine will stop with the clutch still engaged by releasing the accelerator pedal.

B. A CLUTCH TYPE TRANSMISSION

1. The clutch type transmission, located between the torque converter and the drive shafts to the axles, permits reversing the direction of the unit without shifting gears.

2. It provides mounting of two multiple-disc type clutches. Since one clutch is for forward direction and the other is for reverse, one clutch rests and cools while the other is working. This contributes to longer clutch life.

3. It provides direct power from the engine crankshaft through a series of gears to the loader Hydraulic Pump.

4. It contains the internal full-flow transmission-converter filter, eliminating some exterior oil lines.

TABLE OF CONTENTS

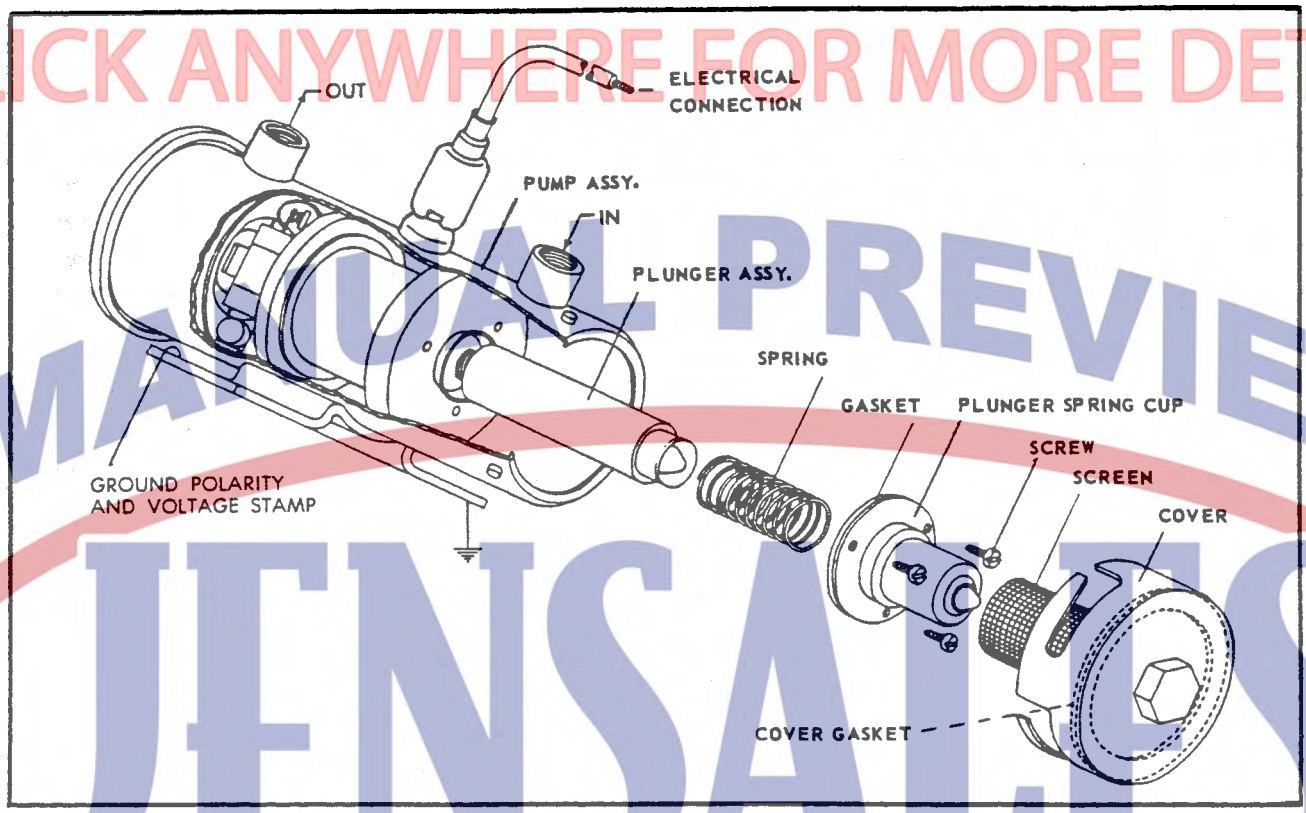

FIG. 31 – ELECTRIC FUEL PUMP

C. ELECTRIC FUEL PUMP

1. General Description

The TL-12 electric fuel pump is for a 6-volt, DC, positive ground system. It is designed with a solenoid coil, which when energized, activates a hollow plunger. The stroke of the plunger is controlled by a set of interrupter points in the electrical circuit and a calibrated plunger spring. This electrical system is sealed in helium and field service or replacement is impractical. If any of the electrical components become inoperative, the complete pump assembly should be replaced.

2. Service

The electric pump screen in the bottom of the pump must be cleaned every 100 hours, or more often if excessive rust or sediment is found anywhere in the fuel system. This can be done by the following steps:

1. Close the shut-off valve under the fuel tank. Remove the bottom pump cover with a wrench applied to the nut on the bottom of the cover.
2. Carefully remove the screen – wash in kerosene or fuel and replace. If the screen is badly distorted or collapsed, it must be replaced.
3. Clean the cover thoroughly with a clean rag soaked in fuel and reinstall, making sure the cover gasket will still seal and prevent leaking. Open the shut-off valve.

Excessive dirt or rust may indicate that the plunger and its components must be cleaned. This can be accomplished by the following steps:

1. Close the shut-off valve and disconnect the gasoline lines and the electrical wire from the pump.
2. Remove two 1/4" capscrews, lockwashers and nuts which secure the pump to a mounting angle.

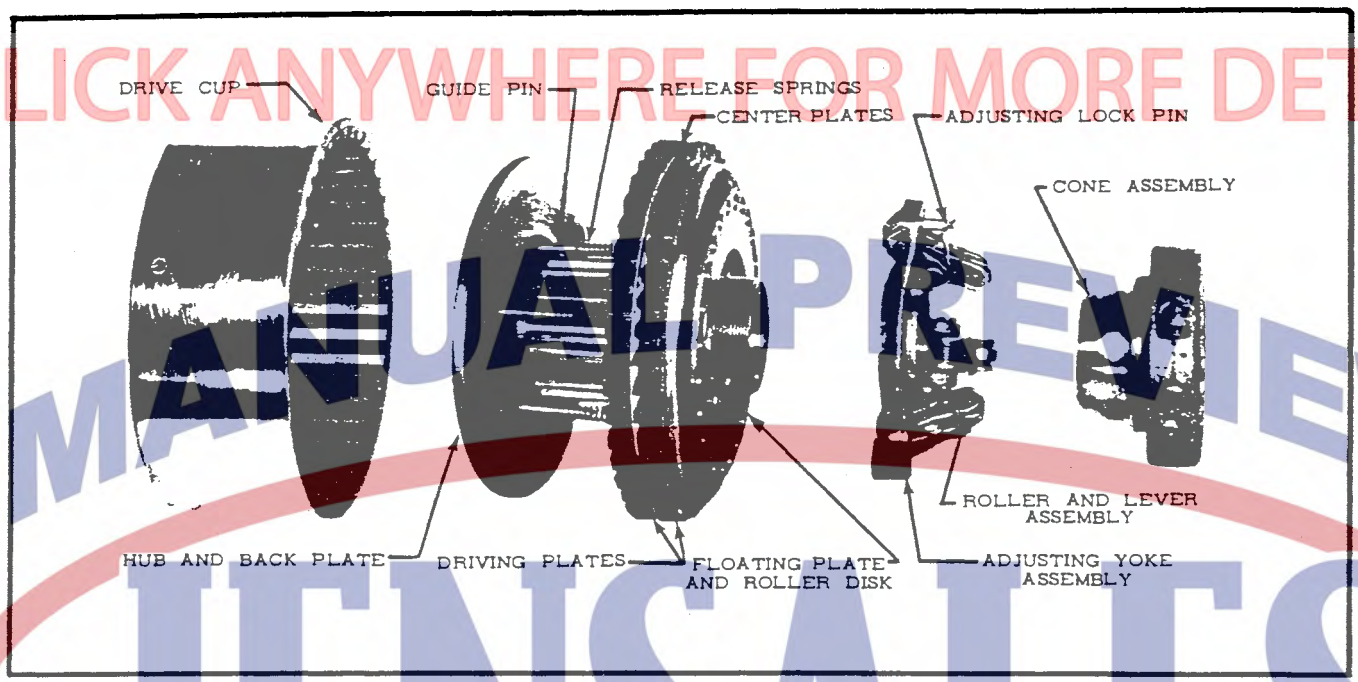

PLATE 235 – FORWARD AND REVERSE CLUTCHES

before adjusting. The machine must not be operated with lever pull less than 35 pounds.

If the driving plates are scored or worn excessively, the linings must be replaced.

The adjusting yoke assembly for either clutch is accessible through two hand hole covers located on the bottom of the clutch housing. The forward clutch is located on the right hand side of the machine and the reverse clutch is located on the left hand side. To adjust either clutch, place the hand lever in the center or neutral position. Remove the hand hole cover, pull out and hold the adjusting lock pin (see Plate 235 above) and turn the adjusting ring only one hole at a time until the required lever pull is obtained. (Ordinarily one to three adjusting holes is sufficient to restore the correct lever pull.) Be sure the adjusting lock pin is securely engaged in the nearest locking hole before starting the engine to test the lever pull after each adjustment.

c. Replacement

Replacement of the driving plates can be accomplished by the following steps:

1. Disconnect cross shaft lever to throw-out yoke.
2. Remove four capscrews and lockwashers from clutch cover and push cover toward the front axle as far as it will go, allowing it to lay on the axle housing.
3. Remove throw-out pivot pin and slide throw-out yoke assembly off splined shafts.
4. Turn adjusting yoke assembly off hub and back plate assemblies.
5. Remove floating plate with roller disc, release springs, all three driving plates and two center plates, from each clutch.
6. Clean drive cup thoroughly with a wire brush before inserting new or relined driving plates.

   NOTE: *Each driving plate must be inserted individually to check for distortion of the drive cup. If the driving plate is hard to start into the drive cup or if the backlash is less than .008" at any point, the drive cup must be replaced.*
7. To reassemble clutch, reverse Steps #1 thru #6. When installing release springs, it is important that the springs sit squarely on pockets machined in the floating plate. If the springs are not straight when the floating plate teeth engage the hub teeth,