## **DEUTSCHER TE910**

Ride-on mower.



# Owners Manual

Manufactured by H.F Deutscher. P/L 711 Creswick Rd. Ballarat. 3350.

A PRODUCT OF AUSTRALIA EDITION 3

#### SAFETY INSTRUCTIONS

- 1. Know your controls, Read the owners manual carefully. Learn how to stop the engine quickly in any emergency.
- Do not allow children or people unfamiliar with these instructions to use the mower. Do not carry passengers.
- Make sure the area to be cut is clear of sticks, stones, bones, wire and debris. They could be thrown by the blade.
- Do not mow whilst people, especially children or pets are in the mowing area.
- 5. Never mow across a slope unless the mower is designed for this purpose.
- Exercise extreme caution when on slopes.

Reduce speed on slopes and in sharp turns to prevent overturning or loss of control.

Do not start suddenly when going uphill or downhill

- Stay alert for holes in the terrain and other hidden hazards.
- 8. Use care when pulling heavy loads or using heavy equipment.

Use only approved drawbar hitch point.

Limit loads to those you can safely control.

Do not turn sharply

Use care when backing up.

- 9. Watch out for traffic when crossing or operating near roadways.
- 10. Stop blades rotating before crossing surfaces other than grass.
- When blades are engaged never direct discharge of materials towards by standers or allow anyone near the machine while it is in operation.
- 12. Before leaving the operator's position:
  - a. disengage cutter clutch
  - b. ensure the parking brake is engaged.
  - c.stop the engine and remove the key.
- 13. Stop the engine and disengage the cutter clutch:
  - a. before refuelling
  - b. before clearing blockages.
  - after hitting a foreign object ( inspect the mower for damage and make repairs before restarting and operating the equipment )

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- d. before checking, cleaning or working on the mower.
- e. if the machine starts to vibrate abnormally ( check immediately )
- 14. The mower operator should be in good physical and mental condition and not under the influence of any drug or alcohol which might impair vision, co-ordination or judgement.
- Never mow while barefoot or wearing open sandals or thongs.
   Wear long trousers and heavy shoes.
- 16. It is advisable to wear suitable eye protection when operating the mower.
- 17. Mow only in good daylight.
- 18. Before using the mower always visually inspect to see that the blades, bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades in sets to preserve balance.
- 19. Check all nuts, and screws often, always be sure the mower is in a safe working condition.
- 20. Keep safety devices ( guards and Switches ) in place and in working order.
- 21. Never use the mower unless all guards provided by the manufacturer are in position.
- 22. Ensure any spare parts used comply with the original manufacture's recommendation and specifications
- 23. Replace worn or faulty silencers.
- 24. Keep engine free of grass, leaves or excessive grease. These can be a fire hazard.
- 25. Refuel outdoors only. Do not smoke while refuelling engine. Never remove the cap of the fuel tank or add fuel while the engine is running or engine is hot. Remove the fuel cap slowly to relieve any tank pressure. If petrol is spilled, do not attempt to start the engine but move machine away from the area of the spill and avoid creating any source of ignition until petrol vapours have dissipated.
- 26. Check for fuel leaks while refuelling or using the mower. If a fuel leak is found, do not start or run the engine until the fuel leak is fixed and spilled fuel wiped away.
- 27. Do not operate the mower in a confined space where exhaust fumes ( carbon Monoxide ) can collect.
- 28. Always mount the mower on the opposite side of the discharge shute.
- 29. Start the engine carefully with the cutting clutch disengaged.
- 30. Store the mower in a well ventilated area away from naked flames
- 31. Stop the engine when ever you leave the mower, even for a moment.
- 32. Do not lend or sell the mower with out the Owner's Manual.
- Do not over speed the engine or alter the governor settings. Excessive speed is dangerous and shortens mower life.

#### Specifications:

**Engine:** Different engines fitted, consult engine manual.

Transmission: Eaton Hydrostatic transaxle series 751

A single pedal variable speed transmission enables either forward or reverse motion to be selected by activating a foot

control pedal.

Cutting Head: Fabricated steel cutting desk 2.5mm with twin rotors

Width of cut 910mm (36")

Tyres: Front 13-500-6 Pressure 140 KPA Max ( 20 PSI )

Rear 18-850-8 tubeless 70 KPA Max (10 PSI )

Controls: Throttle Control with fast, slow and choke positions.

Key Switch with off, on, and start positions.

Transmission lever ON for power OFF for neutral and starting

Parking Brake: Hand operated on left hand side.

Cutting Height: Lever on right hand side

Height of cutting positions 30mm - 90mm.

Cutter Drive: Lever located in centre of mower.

To engage cutters pull lever towards seat.

To disengage push lever forward.

General: Length 1820cm

Width 990cm Height 1080cm Weight: 240kg

#### Installing steering wheel:

- 1. Slide the steering wheel over the steering shaft and align the holes.
- 2. Insert a drift punch partially through the holes to maintain alignment and insert the roll pin.
- 3. Drive the roll pin in until flush.

#### PRE-START CHECK:

Your Deutscher mower comes to you tested and ready to operate, with engine and transmission already filled with oil.

- 1. Know your controls.
- Read all safety instructions carefully and know how to stop engine quickly in any emergency.
- 3. Use unleaded petrol. Do not mix oil with petrol.
- 4. Adjust the seat to suit the operator.

#### **OPERATING INSTRUCTIONS**

#### TO START ENGINE:

- 1. Move throttle lever to choke position.
- 2. Move transmission lever to OFF position
- 3. Turn key to start.
- 4. When engine starts shift throttle lever OFF choke position.

#### TO DRIVE AND CUT:

- 1. Select engine speed
- 2. Select cutting height
- 3. Slowly engage cutter drive lever
- 4. Release park brake.

Forward, reverse, and ground speed are controlled by foot pedal.

#### **ENGAGING CLUTCHES**

When engaging the cutter drive lever always operate slowly, do not use a jerking motion. Moving controls too fast could cause excessive strain and premature failure.

#### IMPORTANT:

Engine will not start unless:

- 1. The operator is seated on the mower.
- 2. The transmission lever is in OFF position
- 3. The cutter drive is disengaged.

#### BELT ADJUSTMENTS

#### Main Spindle Belt (B59)

- 1. Place height lever in mid position
- Loosen front nut " A " and tighten rear nut " B " Fig. 1.

#### DO NOT OVER TIGHTEN

#### TRANSMISSION BELT (A25)

- 1. Loosen four engine mounting bolts.
- 2. Slide engine forward in slots.
- 3. Re tighten engine mounting bolts.

### CUTTER SPINDLE BELTS ON DECK (B32) Self adjusting with jockey pulleys.

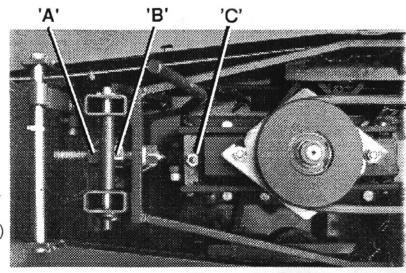


FIG. 1

#### **CLUTCH ADJUSTMENT**

- 1. Loosen nut "C"
- Tighten nut underneath (Half turn should be sufficient) DO NOT OVER ADJUST (Clutch should have .75mm (.030) gap between clutch lining and pulley surface when in brake position)

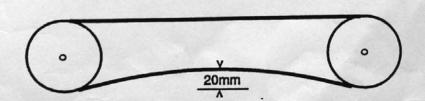
#### BELTS REPLACEMENT

#### To remove main spindle belt (B59)

- 1. Uncouple seat switch wire (bullet connector at rear of seat)
- 2. Remove seat panel.
- 3. Loosen % nut "B" so that main belt is loose
- 4. Loosen four engine mounting bolts.
- 5. Push engine in slots toward rear of mower.
- 6. Both belts can be taken off. engine pulley

#### To replace belt

- 1. Set height lever on cutting deck to mid position
- 2. Slide engine forward in slots till belt is firm,
- 3. Tighten four engine bolts.
- 4. Loosen nut "A" till main drive belt is at correct tension and tighten nut "B".



#### TO REMOVE TRANSMISSION BELT:

- 1. Uncouple seat switch wire (bullet connector at rear of seat),
- 2. Remove seat panel,
- 3 . Loosen % nut "B" so that main belt is loose, (refer Fig 1.)
- 4. Remove fan cover ( at rear of mower )
- 5. Loosen four engine mounting bolts,
- 6. Push engine in slots toward rear of mower,
- 7. Gear box belt can now be taken off engine pulley,
- 8. Loosen two front bolts on fan cowling,
- 9. Remove bolt from rear fan cowling support bracket
- Extract belt from under the rear cowling support bracket and raise over the outside of cowling.

#### TO REPLACE TRANSMISSION BELT:

- Place transmission belt over outside of cowling and under the rear bracket
- 2. Belt can then be fitted to transmission and engine pulleys,
- 3. Re- tighten and refit the three cowling bolts,
- Readjust engine to tighten transmission belt first, and then adjust cutter belt.

#### **CUTTER SPINDLE BELTS:**

- 1. Uncouple seat switch wire (bullet connector at rear of seat)
- Remove seat panel
- 3. Loosen nut "B" and remove main drive belt from pulley (refer Fig 1)
- 4. Remove belt covers.
- 5. Place clutch lever to engaged position
- 6. Remove four "R" clips.
- 7. Remove clutch bars.
- 8. Loosen 2 -% nuts on brake plate and turn plate sideways ½ turn to allow clearance for belts to go through. **DO NOT LOOSEN %" NUTS**
- 9. Replace belts and re- assemble.

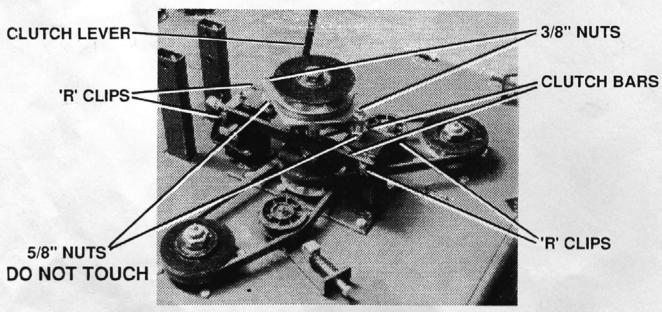


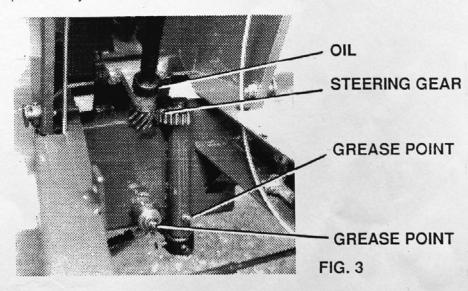
FIG. 2

#### LUBRICATION CHART

ENGINE	As per engine manual supplied
TRANSMISSION	As per instructions in this manual
GREASE KING PINS	20 Hours
GREASE FRONT AXLE PIVOT SHAFT Fig. 3.	20 Hours
GREASE VERTICAL STEERING GEAR SHAFT Fig.3.	20 Hours
GREASE CUTTER SPINDLES & CLUTCH SPINDLE .Fig.4.	20 Hours
GREASE CONTROL PEDAL	20 Hours
GREASE CUTTER DECK WHEELS	20 Hours
GREASE FRONT WHEELS	50 Hours
GREASE STEERING GEARS. Fig.3.	20 Hours ( Smear with grease )
OIL STEERING WHEEL SHAFT. (top & bottom) Fig.3.	20 Hours ( Oil )

#### **GENERAL LUBRICATION**

Lubricate, using clean engine oil, tie rod ball ends, all connecting rod pivot points, throttle and transmission cables and deck wheel pivots every 20 hours



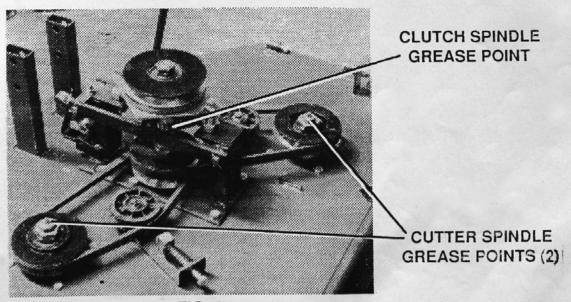


FIG. 4

#### MAINTENANCE:

Air Cleaner: Service air cleaner every 25 hours under normal conditions. Under dusty conditions every 4 hours ( Refer engine manual )

Engine cooling fins & screen: This engine is air cooled. Keep the blower screen, fins on flywheel, cylinder head and block, free from grass or dirt or grease. Check every eight hours. Clogged fins and screen block air flow, causing overheating, which may result in serious damage to the engine. Remove blower housing and clean regularly.

#### WARNING.

Before using always visually inspect to see that blades, blade bolts and nuts are in safe operating condition. Check all nuts bolts and screws often.

#### TO CHANGE BLADES:

- 1. Set throttle control on stop and disconnect spark plug wire.
- 2. Unscrew special brass nut and remove curved washer.
- 3. Blade and bolt are taken out from underneath
- 4. Inspect bolt for wear, and replace if nescessary

Replace by reverse proceedure, make sure blade is fitted underneath disc. Screw on brass nut until level with top of bolt and ensure that the off set of the nut is facing out.

# OFFSET NUT CURVED WASHER BLADE BOLT

#### TRANSMISSION:

Your ride on mower is fitted with an Eaton Series 751 Hydrostatic Transmission. This transmission houses an integral pump, and axle motors with planetary gears using state of the art materials to provide a strong, long lasting compact drive package.

#### 1. Pre start check.

Your transmission comes to you tested and ready to operate and filled with oil. Before operating the mower:

- check around the unit to ensure there are no external leaks.
- 2. Check the oil level in the expansion tank. (This tank IS NOT a reservoir) There should be a maximum of 10mm of oil in the tank when cold.

#### Operating instructions.

Prior to starting engine always ensure:

- 1. The drive control is in OFF position
- 2. The parking brake is engaged.

#### During operation:

- 1. Increase speed control gradually with foot pedal in both forward and reverse.
- 2. Do not go from forward to reverse with out first stopping the mower.

#### Should Engine fail

In the event of an engine failure, and you need to push the mower to another location, always place transmission lever in OFF position, this allows free wheeling.

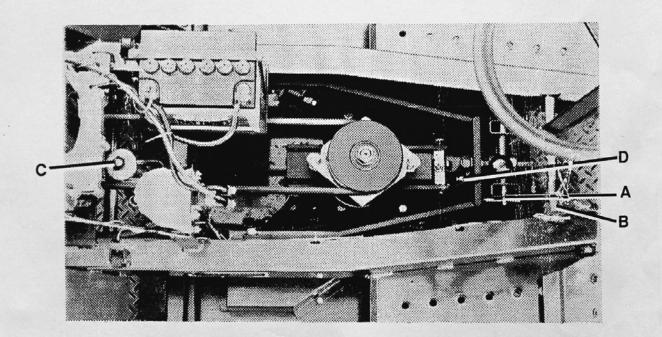
#### IMPORTANT

If the mower is pushed or towed without placing the transmission lever in the OFF position, premature failure to the hydraulic system could result.

#### TO REMOVE CUTTER HEAD:

- 1. Uncouple seat switch wire (bullet connector at rear of seat )
- 2. Remove seat panel.
- 3. Raise cutter head to highest position,
- 4. Uncouple the two wires from safety switch "D" at front of cutting deck
- 5 . Remove %(16mm) locating rod "A"
- 6. Remove 1/2 (12.7mm) pin "B"
- 7. Unscrew rear locating Nut "C",
- 8. Move transmission lever to "OFF" position,
- 9. Remove belt from pulley
- 10. Lift chassis clear of deck and wheel mower backwards.

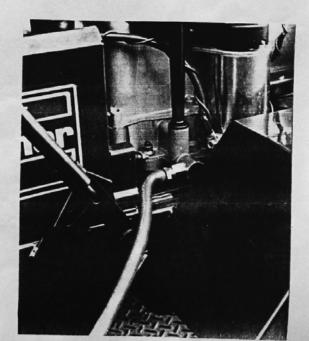
**NOTE:** Blades can be changed with out removing deck. R.H. cutter blades are accessible through chute. L.H cutter blades can be replaced if front of mower is elevated about 12" ( 300mm)



#### CHANGING ENGINE OIL

Refer engine manufacture's instructions:

- 1. Start and run engine for a period to warm the oil,
- Fit a drain tube to the drain fitting,
- 3. Open the drain fitting two turns only and allow the oil to drain completely,
- 4. Re-tighten the drain fitting and refill the sump with oil.



#### TRANSMISSION MAINTENANCE:

Your transmission is fitted with an internal oil filter (Part No. E106202.) In the first 12 months of operation the filter should be changed every six months and then every twelve months. A premium hydraulic oil (Castrol Hyspin AWH68) is used for normal temperature conditions.

If oil other than the above is used, premature failure of the system will occur.

If the colour of the hydraulic oil becomes milky, it is possible that a water contamination exists and the oil must be changed immediately.

FILLING WITH OIL:

To top up, add oil through expansion tank.

When filling after oil change remove small bolt from side plug, screw pump connector into hole (5/16 UNF) and pump hydraulic oil (approx 1.8 litres) until oil shows in the expansion tank.

5/16 Bolt

Cover Plate

Remove pump conection and replace bolt.



To drain oil, remove cover plate at end. Of transmission and let drain for approximately 20 minutes and replace cover plate.

#### **EXPANSION TANK:**

This is not a reservoir and should not be filled above the recommended level (10mm in bottom of tank when cold) This is designed to allow the oil stored in the transaxle to expand during operation especially in warm weather conditions. Overfilling will cause leakage at the expansion tank.

#### TROUBLE SHOOTING INFORMATION.

SYMPTOM	CORRECTIVE CHECKS.
1. Neutral is hard to find.	Inspect external control linkage
Transmission will not drive in either direction	Release park brake.  Check V-belt drive to transmission Inspect external control linkage. Ensure transmission lever is in the ON position Ensure transmission cable is not broken Ensure the transmission is filled with oil.
3. Transmission is slipping under load	Ensure the transmission is filled with hydraulic oil The oil is aerated. The system is overheating, check the cooling fan.

Your Eaton transmission should only be dismantled and serviced by qualified technicians. **BERENDSEN FLUID POWER** has parts and service centres through out Australia. For additional information and / or assistance Phone Toll Free 1800-814-411 anywhere in Australia to contact your nearest Berendsen Service Centre.

#### SERVICE REPAIR INSTRUCTIONS:

#### TO REASEMBLE CUTTER SPINDLE

- 1. Press bottom bearing (R28) into housing (T453)
- 2. Press housing with bottom bearing fitted onto spindle
- 3. Insert spacer tube
- 4. Wipe top bearing and housing with an oil solvent.
- Apply LOCTITE to top bearing housing and press bearing firmly into housing.
- Fit spacer washer, pulley and lock together with lock nuts.
   ( Do not grease until LOCTITE is cured )

#### TO RE ASSEMBLE MAIN SPINDLE (P/N 611) INTO HOUSING (P/N.T621)

- 1. Press bottom bearing (R28) level with end of spindle
- 2. Screw in bolt and washer (T607 & DD111)
- 3. Wipe top bearing and housing with an oil solvent.
- Apply LOCTITE to top bearing housing and press spindle, spacer, and bearing into housing.
- 5. Place housing in press upside down and ensure bottom bearing is pressed firmly down.
- 6. Fit cap (T622)
- Slide on pulley (T600) Hold spindle in vice and lock together with lock nuts.

( Do not grease until LOCTITE is cured. )

#### DEUTSCHER MOWER WARRANTY POLICY

#### LIMITED WARRANTY

Deutscher Mowers P/L will warrant the repair or replacement, free of charge, any parts of the mower, that are defective in materials or workmanship or both, for a period of:

#### 24 months from the date of purchase.

This does not cover normal ware, abuse or incorrect service procedure of the mower (according to owners manual). the warranty repair, must be carried out by an Approved Deutscher Dealer, with only Genuine Deutscher Parts used as replacements.

Deutscher have the right to inspect and retain Warranted Parts at its discretion.

Transportation of mower to and from dealer, and freight charges of parts are not covered by this warranty.

This warranty does not cover the engine fitted to your mower as it is covered by a separate manufacturers warranty.

For your nearest engine dealer, Phone:-Briggs & Stratton 1800 650 042 Honda 1800 809 327

FOR YOUR RECORDS:

Model of Mower:	
Carial Number	
Seriai Number:	
Date purchased: /	/
Mower purchased from:	

Note: The Model, serial number and purchase date are required before any claims can be considered.

