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# McCONNEL

## TURF DRAINER



Operator & Parts Manual



# IMPORTANT

## VERIFICATION OF WARRANTY REGISTRATION



### DEALER WARRANTY INFORMATION & REGISTRATION VERIFICATION

It is imperative that the selling dealer registers this machine with McConnel Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines go to the McConnel Limited web site at [www.mcconnel.com](http://www.mcconnel.com), log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the McConnel Service Department on 01584 875848.

#### Registration Verification

Dealer Name: .....
Dealer Address: .....
Customer Name: .....
Date of Warranty Registration: ...../...../..... Dealer Signature: .....

#### NOTE TO CUSTOMER / OWNER

*Please ensure that the above section above has been completed and signed by the selling dealer to verify that your machine has been registered with McConnel Limited.*

**IMPORTANT:** During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machines general maintenance procedure.

#### TORQUE SETTINGS FOR HYDRAULIC FITTINGS

HYDRAULIC HOSE ENDS		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
3/8"	31 Nm	22 mm
1/2"	49 Nm	27 mm
5/8"	60 Nm	30 mm
3/4"	80 Nm	32 mm
1"	125 Nm	41 mm
1.1/4"	190 Nm	50 mm
1.1/2"	250 Nm	55 mm
2"	420 Nm	70 mm

PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
3/8"	47 Nm	22 mm
1/2"	102 Nm	27 mm
5/8"	122 Nm	30 mm
3/4"	149 Nm	32 mm
1"	203 Nm	41 mm
1.1/4"	305 Nm	50 mm
1.1/2"	305 Nm	55 mm
2"	400 Nm	70 mm



# WARRANTY POLICY

## WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with McConnel Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

### 1. LIMITED WARRANTIES

1.01. *All mounted machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.*

*All Self Propelled Machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months or 1500 hours. Engine warranty will be specific to the Manufacturer of that unit.*

1.02. *All spare parts supplied by McConnel Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.*

1.03. *The warranty offered by McConnel Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.*

1.04. *This warranty does not extend to any product from which McConnel Ltd's serial number plate has been removed or altered.*

1.05. *The warranty policy is valid for machines registered in line with the terms and conditions detailed and on the basis that the machines do not extend a period of 24 months or greater since their original purchase date, that is the original invoice date from McConnel Limited.*

*Machines that are held in stock for more than 24 months cannot be registered for warranty.*

1.06. *This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.*

1.07. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*

1.08. *Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.*

1.09. *Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which McConnel Ltd cannot be held liable, and may have safety implications.*

1.10. *If in exceptional circumstances a non McConnel Ltd part is used to effect a repair, warranty reimbursement will be at no more than McConnel Ltd's standard dealer cost for the genuine part.*

- 1.11. *Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of McConnell Ltd.*
- 1.12. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
  - 1.12.1. *Hoses, exposed pipes and hydraulic tank breathers.*
  - 1.12.2. *Filters.*
  - 1.12.3. *Rubber mountings.*
  - 1.12.4. *External electric wiring.*
  - 1.12.5. *Bearings and seals*
  - 1.12.6. *External Cables, Linkages*
  - 1.12.7. *Loose/Corroded Connections, Light Units, LED's*
  - 1.12.8. *Comfort items such as Operator Seat, Ventilation, Audio Equipment*
- 1.13. *All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.*
- 1.14. *Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.*

***NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. McConnell Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.***

## **2. REMEDIES AND PROCEDURES**

- 2.01. *The warranty is not effective unless the Selling Dealer registers the machine, via the McConnell web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.*
- 2.02. *Any fault must be reported to an authorised McConnell Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which McConnell Ltd cannot be held liable.*
- 2.03. *Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by McConnell Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.*
- 2.04. *All claims must be submitted, by an authorised McConnell Ltd Service Dealer, within 30 days of the date of repair.*
- 2.05. *Following examination of the claim and parts, McConnell Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnell Ltd and appropriate labour and mileage allowances if applicable.*
- 2.06. *The submission of a claim is not a guarantee of payment.*
- 2.07. *Any decision reached by McConnell Ltd. is final.*

## **3. LIMITATION OF LIABILITY**

- 3.01. *McConnell Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.*
- 3.02. *McConnell Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.*
- 3.03. *Except as provided herein, McConnell Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.*
- 3.04. *No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.*

#### **4. MISCELLANEOUS**

- 4.01. *McConnel Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.*
- 4.02. *If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.*
- 4.03. *Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.*

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*McConnel Limited*



# DECLARATION OF CONFORMITY

*Conforming to EU Machinery Directive 2006/42/EC*

We,

**McCONNEL LIMITED**, Temeside Works, Ludlow, Shropshire SY8 1JL, UK

*Hereby declare that:*

The Product; *Tractor Mounted Turf Drainer*

Product Code; *TDR1, TDR2*

Serial No. & Date ..... Type .....

Manufactured in; *United Kingdom*

Complies with the required provisions of the Machinery Directive 2006/42/EC  
The machinery directive is supported by the following harmonized standards;

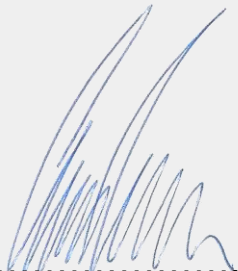
- BS EN ISO 12100 (2010) Safety of machinery – General principles for design – Risk assessment and risk reduction.
- BS EN 349 (1993) + A1 (2008) Safety of machinery - Minimum distances to avoid the entrapment with human body parts.
- BS EN ISO 14120 (2015) Safety of machinery - Guards general requirements for the design and construction of fixed and movable guards.
- BS EN 4413 (2010) Hydraulic fluid power. Safety requirements for systems and their components.

McCONNEL LIMITED operates an ISO 9001:2008 quality management system, certificate number: FM25970.

This system is continually assessed by the;

British Standards Institution (BSI), Beech House, Milton Keynes, MK14 6ES, UK  
BSI is accredited by UK Accreditation Service, accreditation number: UKAS 003.

The EC declaration only applies if the machine stated above is used in accordance with the operating instructions.

Signed  ..... *Responsible Person*  
*CHRISTIAN DAVIES on behalf of McCONNEL LIMITED*

Status: *General Manager*

Date: *January 2018*

# CONTENTS

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## **Operation Section**

General Information	2
Safety Information	3
Introduction	4
Specifications	4
Tractor Requirements	5
Attachment & Removal	5
Machine Operation	6

## **Parts Section**

Turf Drainer Assembly Drawing	8
Turf Drainer Assembly Parts Listing	9



## GENERAL INFORMATION

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Always read this manual before fitting or operating the machine – whenever doubt exists contact your dealer or the McConnel Service Department for advice and assistance.

### **Use only McConnel Genuine Service Parts on McConnel Equipment and Machines**

**DEFINITIONS** – *The following definitions apply throughout this manual:*

#### **WARNING**

An operating procedure, technique etc. which can result in personal injury or loss of life if not observed carefully.

#### **CAUTION**

An operating procedure, technique etc. which can result in damage to either machine or equipment if not observed carefully.

#### **NOTE**

An operating procedure, technique etc. which is considered essential to emphasis.

#### **LEFT AND RIGHT HAND**

This term is applicable to the machine when attached to the tractor and is viewed from the rear – this also applies to tractor references.

## MACHINE & DEALER INFORMATION

<i>Record the Serial Number of your machine on this page and always quote this number when ordering parts. Whenever information concerning the machine is requested remember also to state the make and model of tractor to which the machine is fitted.</i>	
<b>Machine Serial Number:</b>	<b>Installation Date:</b>
<b>Machine Model details:</b>	
<b>Dealer Name:</b>	
<b>Dealer Address:</b>	
<b>Dealer Telephone No:</b>	
<b>Dealer Email Address:</b>	

## SERIAL PLATE

The machine is fitted with a Serial Number Plate stating the manufacturers name, machine, serial number and weight – when ordering parts or requesting advice please quote the machine name and serial number as stated on the plate.



**All machines and attachments that are fitted to tractors have the potential to be dangerous, it is therefore imperative that all operators of this machine are fully conversant with all aspects of both tractor and machine operation before attempting to use it.**

### **Safety Precautions**

- ▲ NEVER permit inexperienced personnel to operate this machine without supervision.
- ▲ NEVER allow anybody to ride on the machine or tractor whether in transport or work.
- ▲ NEVER work under the machine when it is suspended on the tractors hydraulic lift.
- ▲ NEVER allow persons near the tractor or machine when working.
- ▲ ALWAYS keep guards in place (where applicable), they are there for your safety.
- ▲ ALWAYS keep nuts and bolts tight and check the security of mounting pins.
- ▲ ALWAYS keep check chains tight.
- ▲ ALWAYS stop operation when persons approach the immediate vicinity of the machine.

## INTRODUCTION

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Primarily designed for the Horticultural and Groundcare markets, the McConnel Turf Drainer is a three-point linkage mounted machine that produces continuous 6mm slits in the ground up to a depth of 305mm to reduce compaction and increase drainage; the ground surface is restored to its previous condition by means of a hydraulically dampened rear roller.

Available in single or twin leg versions the machine is suitable for use on tractors of 16HP and above for single leg and 35HP and above for twin leg. Attachments are available for this machine to pull cables or plastics up to 32mm diameter.



## SPECIFICATIONS

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<b>Machine Specification</b>	<b>Single Leg Build</b>	<b>Twin Leg Build</b>
Machine Width	1.24m (4'1")	1.24m (4'1")
Machine Length	1.22m (4'0")	1.22m (4'0")
Machine Height	0.91m (3'0")	0.91m (3'0")
Machine Weight	70kg	80kg
Blades (No.)	1	2
Bullet (diameter)	38mm (1½")	38mm (1½")
Working Depth (maximum)	305mm (12")	305mm (12")

## TRACTOR REQUIREMENTS

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### **Tractor Linkage Type**

Three-point linkage

### **Power Requirement**

16HP minimum for single leg machines

35HP minimum for twin leg machines

## ATTACHMENT & REMOVAL

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### **Attaching the Machine**

- Connect the draft link arms of the tractors three-point linkage to the 'A' frame of the machine and secure with pins provided.
- Adjust length of top link to secure the top of the 'A' frame.
- Lift machine on the three-point linkage so the blade bullet is approximately 75mm (3") clear of the ground.
- Tighten check chains / stabiliser bars to both centralise the machine behind the tractor and prevent sideways movement.
- Adjust turn buckle on tractor linkage to ensure the main cross beam of the machine is horizontal.

### **Removing the Machine**

- Select a firm level site on which to remove the machine.
- Lower machine to the ground.
- Adjust top link to release pressure from pin, and disconnect.
- Detach draft link arms of tractor from frame.
- Drive tractor slowly away from the machine.

## MACHINE OPERATION

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- Set leg of compression roller to a height setting that will give the required working depth.
- Adjust hydraulic dampener on roller for correct pressure to suit turf conditions.
- If greater penetration force is required due to soil conditions, adjust the top link to angle the rear of the machine towards the ground.
- Lower machine to the ground ready for operation.
- Drive slowly forward in a straight line controlling the depth of the trainer via the three-point linkage.

NOTE: It is recommended that the machine is worked at a minimum slit depth of 100mm (4"); working at depths shallow than this may cause excessive damage to the turf surface. The maximum working depth of the machine is 305mm (12").



*For best performance ...*

**USE ONLY GENUINE McCONNEL SERVICE PARTS**

*To be assured of the latest design improvements purchase your  
'Genuine Replacements' from the 'Original Equipment Manufacturer'*

**McCONNEL LIMITED**

*Through your local Dealer or Stockist*

**Always quote:**

- ***Machine Type***
- ***Serial Number***
- ***Part Number***

*Design improvements may alter some of the parts listed in this manual –  
the latest part will always be supplied when it is interchangeable with an earlier one.*



# TURF DRAINER

# McCONNEL

Models: DABTD1, DABTD2

REF.	QTY.		PART No.	DESCRIPTION
			● <b>DABTD1</b>	<b>TURF DRAINER - SINGLE LEG BUILD</b>
			● <b>DABTD2</b>	<b>TURF DRAINER - TWIN LEG BUILD</b>
2	1	1	1951264	FRAME
3	1	1	0431105	R CLIP
4	2	2	1900029	BOTTOM HITCH PIN
5	3	4	0431204	LINCH PIN
	1	2	<b>DABTD1X</b>	<b>LEG ASSEMBLY - comprising of:</b>
6	1	2	1951251	BLADE ARM RH
7	1	2	1951252	BLADE ARM LH
8	1	2	1951263	DISC HUB
9	1	2	1951001	BEARING
10	1	2	9213166	BOLT
11	11	22	9163006	NYLOC NUT
12	3	6	9313065	BOLT
13	3	6	9163005	NYLOC NUT
14	1	2	1951254	BLADE
15	2	4	1951013	BLADE SPACER PLATE
16	6	12	9213186	BOLT
17	2	4	1951012	SCRAPER DISC
18	7	14	9313044	BOLT
19	7	14	9163004	MYLOC NUT
20	2	4	1951256	U BOLT
21	5	10	9163007	NYLOC NUT
22	1	2	1951003	BUSH
23	1	2	1951004	BUSH
24	1	2	1951257	CARRIER PLATE RH
25	1	2	1951258	CARRIER PLATE LH
26	2	4	1951005	SPACER (LONG)
27	2	4	1951006	SPACER (SHORT)
28	4	8	9313066	BOLT
29	1	2	1951007	DAMPER
30	1	2	1951259	ROLLER ARM HOUSING
31	1	2	1951260	ROLLER ARM
32	1	2	1951008	PIN
33	1	2	1951009	SCRAPER (ROLLER)
34	1	2	1951010	ROLLER
35	1	2	9213407	BOLT
36	1	2	1951261	COULTER
37	1	2	0901121	GREASE NIPPLE
38	2	2	0100206	SPRING WASHER
39	2	2	0111006	UNF NUT
40	2	2	9100107	PLAIN WASHER
41	2	2	1900033	BOTTOM LINK PIN c/w NUT & S/WASHER
42	2	4	9100106	PLAIN WASHER
43	1	1	1900028	TOP HITCH PIN
44	2	4	1951017	ROLLER BUSH







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