

In-Ex

OWNER'S MANUAL

FOR THE

In-Ex TURFMATE 50 12V SPRAYER



In-Ex
PO Box 1010, 145 Harts Road
Tiritea, Palmerston North
Ph:06 354 6060
Fax:06 355 3199
E-Mail: sales@c-dax.co.nz
www.c-dax.co.nz

In-Ex TURFMATE 50

OWNER'S MANUAL

(Pt.No.2400-6505 Issue 10, Nov 2016)

TABLE OF CONTENTS

INTRODUCTION	3
SPECIFICATIONS	3
ORDER INFORMATION	3
INSTALLATION	5
INSTALLING THE BATTERY	5
TESTING	6
THEORY OF OPERATION	7
OPERATING INSTRUCTIONS	7
RECIRCULATION.....	8
OPERATING HINTS	9
MAINTENANCE	9
TURFMATE PARTS DIAGRAM.....	10
TURFMATE PARTS LIST	11
TURFMATE BOOM PARTS DIAGRAM AND LIST	10
FLOJET SPRAY PUMP RELACEMENT PARTS.....	14

Throughout this manual there are highlighted text boxes containing warnings, cautions and notes.

Warnings are mandatory instructions to prevent serious injury or permanent damage.

Cautions are advisory instructions to ensure reliable operation of the equipment.

Notes are for convenient operation.

INTRODUCTION

The TurfMate was specifically developed for the accurate placement of liquid pesticides and fertilisers on bowling greens or any other area where maintenance of carefully cultured turf is important. Features of the TurfMate include a 50L polyethylene tank, precision 2m boom, unique breakaway system, low voltage 12V pump and accurate pressure gauge. INEX acknowledges the co-operation and assistance of New Zealand Turf Culture Institute.

SPECIFICATIONS (Specifications subject to change without notice)

Tank	50L, non-corrosive, medium density, UV stabilised polyethylene.
Frame	Zinc plated mild steel.
Pump	12 VDC Flojet - 60 PSI, 7.6lpm pump
Wheels	Flat-faced heavy-duty polypropylene (Rear: 50 x 250mm) (Front: 30 x 125mm caster style).
Battery	12 Volt, 10 Amp-hour.
Power Consumption	4.1Amps
Filtration	Triple filter system comprising; fine mesh tank strainer, large capacity 50 mesh suction filter and slotted strainers at each nozzle.
Pressure Gauge	0-145 PSI (0-10 Bar).
Switch	Toggle switch conveniently mounted on handle.
Boom	2m boom with transport stowage position
Gun	Plastic lance style

ORDER INFORMATION

In-Ex TurfMate Pt.No. 1009

WARRANTY

1 WARRANTY AND LIABILITY

Use of the equipment

1.1 You must satisfy yourself as to the suitability of the equipment for your intended use(s) of the equipment.

Your relationship with the retailer

1.2 Where you consider you have a warranty claim (or any other claim) in relation to the equipment, you must contact the retailer who sold you the equipment, not C-Dax directly. The retailer is responsible for liaising with C-Dax in respect of your claim.

Warranty

1.3 C-Dax warrants to the original purchaser that the equipment is sold free from defects in materials and workmanship for a period of 12 months from date of first retail sale (6 months from date of first retail sale if the equipment is sold in the U.K.) subject to the terms set out below.

1.4 C-Dax will at its option repair or replace the defective equipment (or part of the equipment) or notify the retailer of the equipment to refund the purchase price for such defective equipment to you in the event of a breach of this warranty, subject to the terms set out below.

Liability

- 1.5 Except for the warranty set out in clause 1.2 above, all warranties and representations (including those expressed or implied by law) in respect of the equipment or advice relating to the equipment provided to you by C-Dax are excluded to the extent permitted by law.
- 1.6 Notwithstanding anything else in this manual, C-Dax's maximum liability to you (in the event that such liability exists) in respect of any breach of warranty, any matter set out in this manual, or for defective equipment or advice relating to the equipment provided is limited at C-Dax's option to:
- (a) repairing or replacing the equipment (or part of the equipment); or
 - (b) notifying the retailer of the equipment to refund the price for the equipment paid by you.
- 1.7 Notwithstanding anything else in this manual, in no event will C-Dax be liable, whether in contract, tort (including negligence) or otherwise:
- (a) where you have altered or modified the equipment, misused or misapplied the equipment, or the equipment has been subjected to any unusual, excessive or non-recommended use, service or handling (including as set out in this manual);
 - (b) where the equipment is not transported, stored, handled or used in accordance with any directions given by C-Dax (or the retailer) to you (including as set out in this manual);
 - (c) where the equipment:
 - (i) has been subject to neglect, accident or hireage, or the damage arises from fair wear and tear, battery damage or chemical attack;
 - (ii) has been built to a customer's specifications; or
 - (iii) has been dismantled, repaired or serviced other than by an authorised service agent of C-Dax;
 - (d) for loss or damage caused by any factors beyond C-Dax's control; or
 - (e) for any loss of profit or revenue, or for any special, indirect, incidental or consequential damage, loss or injury of any kind suffered by you.
- 1.8 Where C-Dax elects to repair or replace the equipment it will use reasonable endeavours to do so as soon as practicable but will not be liable for any delay in doing so.
- 1.9 You agree that the transactions entered into between you and the retailer (and C-Dax) are for the purposes of trade and that, having regard to all relevant circumstances of the transactions, it is fair and reasonable that the provisions of the Consumer Guarantees Act 1993 (NZ) do not apply to those transactions to the fullest extent permitted by law.

INSTALLATION

For transport purposes, the TurfMate units are sent disassembled – hence some assembly by the user is required. The following parts are included:

- | | |
|---|--|
| Handle Assembly
Battery Charger
Front Wheel Assembly
Battery
Rear Axle
Front Wheel and Boom Mount
Rear Wheel (x2) | Tank and Frame Assembly
Owner’s Manual
Battery Cable
Nuts and Bolts etc.
Boom Assembly
Nozzle Assembly’s (x4) |
|---|--|

1. Slide the rear axle through the tube located on frame underneath the tank. Attach the rear wheels to this axle by sliding the wheels on to it while ensuring an M12 washer is located both sides of each wheel. Keep the wheels in position by fixing a split pin to each end of the axle.
2. Attach the handle assembly to the tank using the four M5 x 25 Screws provided.
3. Attach the boom mount to the frame by sliding the non-capped end through the frame. Secure to the frame using the M8 x 40 screw, nut and washer supplied.
4. Mount the front wheel assembly to the boom mount using the M10 nuts and washers supplied. Ensure the washers lie either side of the boom mount.

INSTALLING THE BATTERY

The standard battery fitted is a sealed lead-acid type rated at 12 Volts 10 Ampere-Hours. The battery is shipped in a charged state. For maximum life the battery must be serviced in accordance with the following instructions. Failure to comply with these instructions will result in premature failure of the battery.

Charging:

Charge the battery with a current as described in the table below, continuously for not more than 4 hours. **The supplied charger has a charging current of 2700mA and is a manual charger so must be monitored during the charging process.** The battery charger should be disconnected when the charging has been completed (battery charger light goes green). Spray switch must be in the ON position in order for the charging circuit to be completed.

PHYSICAL SPECIFICATION					
Nominal Voltage		12V			
Nominal Capacity (20HR)		10AH			
Dimension	Length	151 ± 1mm (5.95 inches)			
	Width	65 ± 1mm (2.56 inches)			
	Container Height	111 ± 1mm (4.37 inches)			
	Total Height (with Terminal)	117 ± 1mm (4.61 inches)			
Weight		Approx 3.30kg (7.28lbs)			
Terminal Type		T2			

ELECTRICAL SPECIFICATION					
Rated Capacity	20 hour rate (500mA)	10.00AH	Constant-Voltage Charge	Cycle	Initial Charging Current less than 3.6A. Voltage 14.4V-15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	10 hour rate (930mA)	9.3AH			
	5 hour rate (1.70A)	8.5AH			
	1 hour rate (6.20A)	6.2AH			
Capacity affected by Temperature	15minute rate (19.6A)	4.9AH	Standby	No limit on Initial Charging Current Voltage 13.5V-13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C	
	40°C (104°F)	103%			
	25°C (77°F)	100%			
	0°C (32°F)	86%			

TURFMATE INSTALLATION CONT.

5. Fix the boom frame to the boom mount by sliding through the bracket and fixed using the M8 x 40 screw, nut and washer supplied. Assemble the boom by pressing the button latch on each arm and sliding the arm into the boom frame (See the parts diagram for further detail).
6. Assemble the nozzle tips and filters by placing inside each of the boom's nozzle bodies.
7. Attached to the tank is a small plastic bag containing a rubber washer and orifice plate. Take these items and place inside the red bypass tap. Connect this tap to the fitting at the top of the tank.
8. Connect the two hose ends via the quick coupler.
9. Please read the battery information in this manual before recharging the battery.
10. Once the battery has been charged, take off the pump cover and place the battery in the recess moulded into the tank. Connect the black wire from the switch to the negative (-) terminal on the battery. Connect the red wire from the switch to the positive (+) terminal on the battery. Join the female 2-pin connector from the switch to the male connector on the pump. Screw the pump cover back on.

NOTE

The Turfmate is supplied with a handgun and 5m of delivery hose, when the gun and hose is not being used, simply wrap the hose around the handle hook and store the lance in the lance holder mounted to the side of the tank.

TESTING

Plug the battery lead into the pump lead, place water in the tank and switch on the pump using the remote switch on the handle. Note that the pump primes more efficiently by removing the checkvalve. Reconnect once the fluid has passed through the pump.

Check for nozzle blockages, air in the inlet hosing (between tank and pump), and water leaks. Tighten hose clamps and other plumbing fittings as required. When the pump is turned off there should be no drips from the nozzles.

The pressure gauge may not return to zero with the pump is switched off. The non-drip checkvalves on the boom do not open unless the pressure in the boom is above 5 to 7 PSI (0.35 to 0.5 Bar), so with the pump off, some pressure may still be in the tubing from pump to boom.

THEORY OF OPERATION

Spray fluid is prepared and placed in the tank via the lid opening and strainer basket. Foreign matter is trapped in the strainer mesh for disposal after the tank has been filled.

When the pump is switched on power is applied to the pump motor from the battery. When the pump operates, fluid is drawn through the filtered suction line into the pump head.

With each rotation of the pump motor, fluid is forced via valves into a high-pressure chamber in the pump head. Fluid exits from the chamber via a check valve and passes into the boom or spray nozzle.

OPERATING INSTRUCTIONS

Application Rate

Achieving the correct chemical application rate to the turf is only possible when the operator knows:

- a) Nozzle spacing
- b) Flow rate per nozzle and
- c) Forward speed of sprayer

The above parameters have been used to establish the following Performance Data chart. This chart shows application rate of spray solution in litres per 1,000 square metres (1196 square yards) and area covered by the 50 litre tank in square metres at each forward speed and nozzle flow rate.

Performance Data Chart

Average Flow Rate per Nozzle (litres/minute)	Application Rate at each Forward Speed (L/1000m ² at km/hour)				Area Covered by 50 litre Tank (m ² at km/hour)			
	2	3	4	5	2	3	4	5
0.95	57	38	28.5	22.8	880	1320	1754	2190
0.90	54	36	27.0	21.6	930	1390	1850	3210
0.85	51	34	25.5	20.4	980	1470	1960	2450
0.80	48	32	24.0	19.2	1040	1560	2080	2600
0.75	45	30	22.5	18.0	1110	1670	2220	2780
0.70	42	28	21.0	16.8	1190	1780	2380	2970

1. Put water in the tank, switch on pump, and measure the volume of liquid from each nozzle in one minute. The total volume collected divided by the number of nozzles is the Flow Rate per Nozzle in litres per minute.
2. Calculate the forward speed of sprayer by measuring time taken to walk 20 metres:
 20 metres in 36 seconds is 2 km/hr
 20 metres in 24 seconds is 3 km/hr
 20 metres in 18 seconds is 4 km/hr
 20 metres in 14.4 seconds is 5 km/hr
3. Determine application rate of spray solution to turf by using the above chart.
 e.g. If the average flow rate is 0.9 litres/minute and the forward speed is 3 km/hour, the application rate is 36 litres per 1,000 square metres. (36 litres per 1,000 square metres is equivalent to 3.6 litres per 100 square metres or 360 litres per hectare).
4. Determine chemical required per tank by calculating the recommended chemical application rate per metre then multiplying that figure by the area (in metres) covered per tank as shown in the chart.
 e.g. Average nozzle flow rate is 0.9 litres/minute and the forward speed 3 km/hour will result in 1,390 square metres sprayed. If say Banvine is used at 40ml per 100 square metres (0.4 x 1,390ml) or 556ml is required per tank.

RECIRCULATION

The Turfmate can recirculate the spraying fluid and allow the pump to prime fully before spraying commences. The recirculated flow, which is returned to the tank, provides a degree of agitation of the tank contents.

To recirculate fluid perform the following steps:

- Open the recirculate valve.
- Switch the pump on.
- Allow pump to run until all air is expelled from the pump suction line.
- Close recirculate valve to begin spraying.

NOTE

Pump will not purge air from sprayboom until recirculate valve is closed and fluid is pumped through the boom, this may take a short period of time and it is recommended this be done before spraying commences on target areas.

OPERATING HINTS

Pressure Gauge

The pressure gauge will indicate any variation in flow rates. If the pressure reading is suddenly higher than normal then nozzle flow rate has been reduced by a slight blockage or kinked hose. If pressure is lower than normal, either the battery charge is low, the pump is faulty or there is a leak in the hosing or fittings. Air should not be in the hosing. If air is present, check the fittings between the tank and pump.

The nozzles may wear eventually after many years but in turf spraying, especially at the low pressures used, nozzle wear will not cause major pressure fluctuations.

Nozzles

Be wary of blockages or of any distortion in the spray pattern. The bayonet nozzle cap aligns the nozzle and retains both nozzle and slotted filter. Routinely check these filters, removing the cap by twisting half a turn clockwise.

Checkvalves

The non-drip checkvalves (located inside or under nozzle cap) should eliminate dripping. If dripping continues after pump shutoff, unscrew the collar on the checkvalve and ensure that the diaphragm is sound and that there is no debris.

Pump

If a slight leak develops from between the pumphead components, gently tighten the pumphead screws. If however, the leak persists or if a leak is observed from between the pumphead and the motor itself, cease operation immediately and have the pump serviced.

CAUTION

Do not run the pump dry unnecessarily

MAINTENANCE

Keep the sprayer in good condition. Cleanliness and maintenance are essential for safe and trouble free operation.

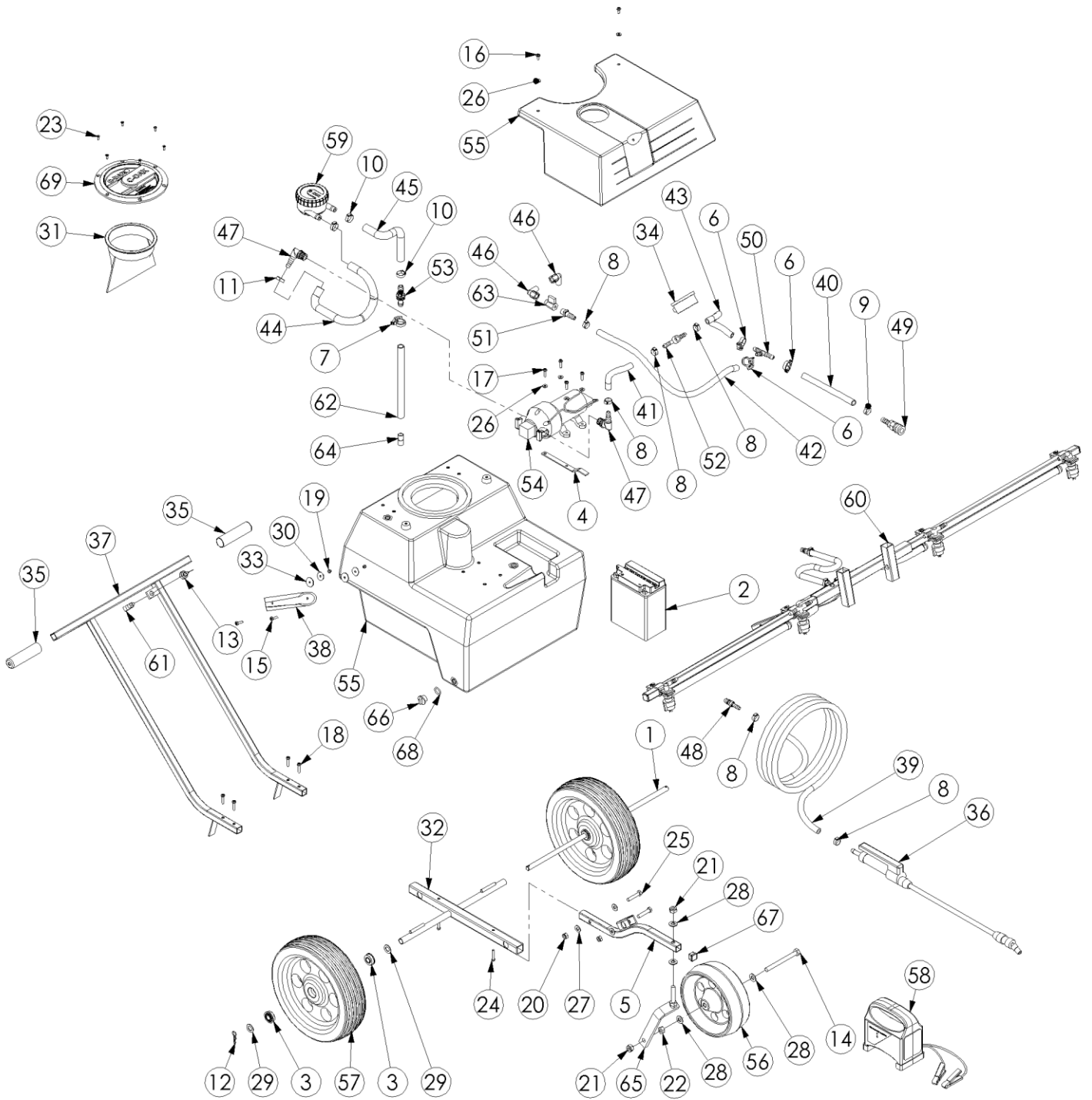
Cleaning

Flush unit out after use with a mild detergent solution. Leave fresh water in the pump system for storage. The boom may need thorough flushing after using wettable powders. Remove the nozzle caps at either end of the boom and pump about 20 litres of clean water through the boom.

Filters

Check the filters regularly and clean/replace if necessary.

TURFMATE PARTS DIAGRAM



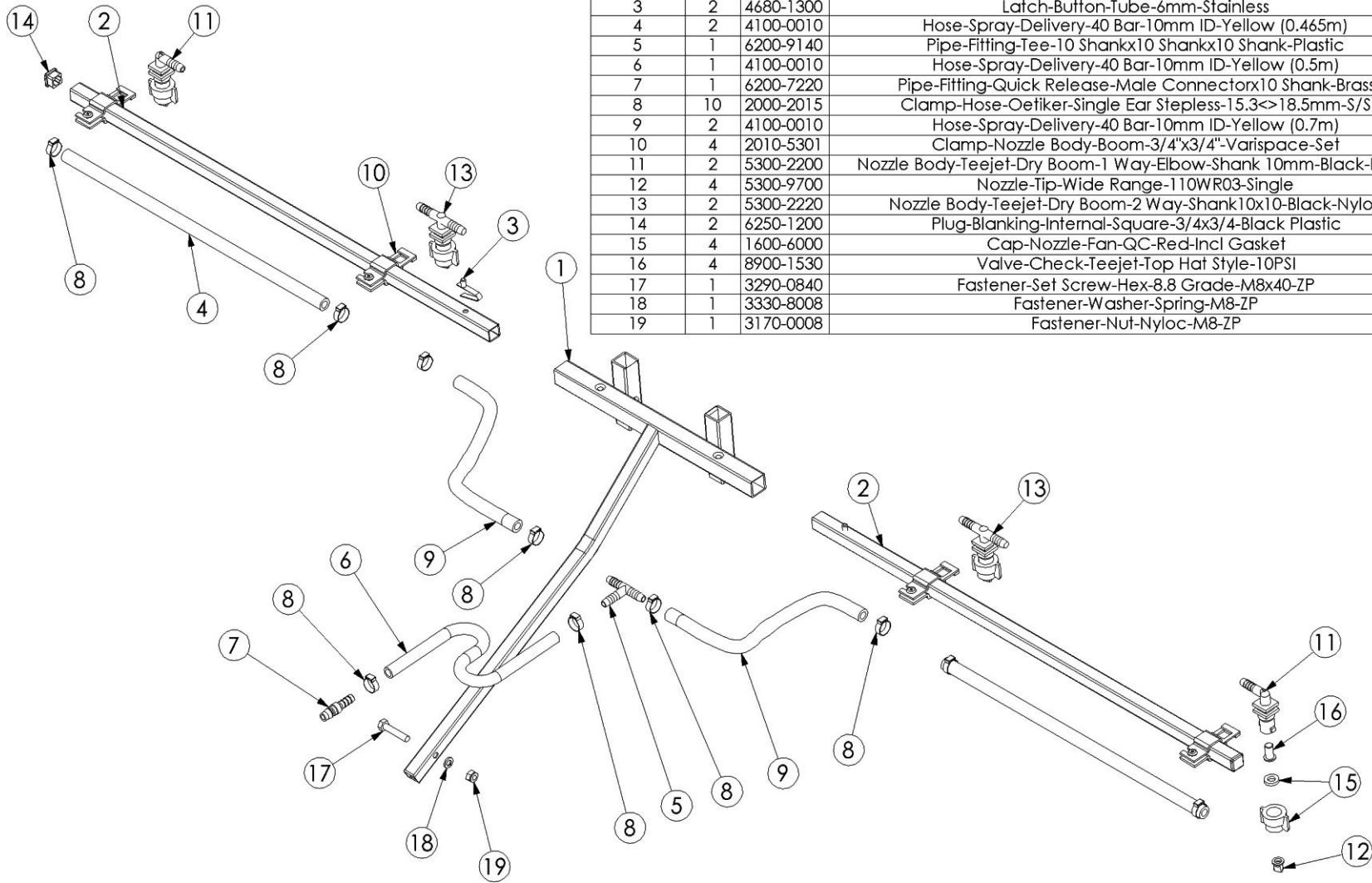
***FOR BREAKDOWN OF TURFMATE BOOM SEE PAGE 14.**

TURFMATE PARTS LIST

Item No.	QTY.	e9 part no	e9 description
1	1	1082-8530	Axle-Turf & Garden 53L-520LG-SS
2	1	1130-2400	Battery-Electrical-Sealed Lead Acid-12V10AH-151Lx65Wx111H
3	4	1140-3000	Bearing-Ball-Pressed Metal Case-1 1/8"ODx1/2"IDx7/16"W-ZP
4	1	1300-8000	Bracket-Support-Pump Cover-Turf & Garden 53L-ZP
5	1	1300-8600	Bracket-Turf & Garden-Gooseneck-ZP
6	3	2000-0015	Clamp-Hose-Herbi-F-Ratchet-15.0<>17.1mm-Black-Nylon
7	1	2000-0017	Clamp-Hose-Herbi-G-Ratchet-16.9<>19.1mm-Black-Nylon
8	6	2000-2014	Clamp-Hose-Oetiker-Single Ear Stepless-14.5<>7.0mm-S/S
9	1	2000-2015	Clamp-Hose-Oetiker-Single Ear Stepless-15.3<>18.5mm-S/S
10	2	2000-2017	Clamp-Hose-Oetiker-Single Ear Stepless-16.6<>19.8mm-S/S
11	2	2000-2019	Clamp-Hose-Oetiker-Single Ear Stepless-19.4<>22.6mm-S/S
12	2	2050-7350	Clip-R Type-Pin-2mm-ZP
13	1	2250-8200	Cover-Switch-Water Proof Boot-Toggle Lever-Rubber-Black
14	1	2840-1110	Fastener-Bolt&Nut-Hex-8.8 Grade-M10x110-ZP
15	2	3090-0520	Fastener-Machine-Screw-Pan-M5x20-Phillips-Stainless
16	2	3110-0512	Fastener-Machine-Screw-Pan-M5x12-Pozi-ZP
17	4	3110-0520	Fastener-Machine-Screw-Pan-M5x20-Pozi-ZP
18	4	3110-0525	Fastener-Machine-Screw-Pan-M5x25-Pozi-ZP
19	2	3130-0105	Fastener-Nut-Nyloc-M5-Stainless
20	2	3170-0008	Fastener-Nut-Nyloc-M8-ZP
21	2	3170-0010	Fastener-Nut-Nyloc-M10-ZP
22	1	3180-0010	Fastener-Nut-Plain-M10-ZP
23	6	3270-8012	Fastener-Self Tap-Screw-CSK-8Gx1/2"-Pozi-Stainless
24	2	3290-0530	Fastener-Set Screw-Hex-8.8 Grade-M5x30-ZP
25	2	3290-0840	Fastener-Set Screw-Hex-8.8 Grade-M8x40-ZP
26	6	3310-6005	Fastener-Washer-Flat-M5-ZP
27	3	3310-6008	Fastener-Washer-Flat-M8-ZP
28	4	3310-6010	Fastener-Washer-Flat-M10-ZP
29	4	3310-6012	Fastener-Washer-Flat-M12-ZP
30	2	3310-9210	Fastener-Washer-Flat-3/16"x7/8"x1.5-Grade 304-Stainless
31	1	3400-1110	Filter-Basket-D150-Mesh
32	1	3500-7300	Frame-Turf & Garden-Gardenmate 50-ZP
33	2	3700-9210	Gasket-Washer-5x25x1.6-Black-Neoprene
34	1	3750-3500	Gauge-75mm-Bottom Mount-140PSI-10Bar-1/4BSPT-G/Filled
35	2	3865-3800	Grip-Handle-7/8"-PVC-Black-Plastic
36	1	4000-6020	Hand Gun-Teejet-Trigger Jet X18-Shank 10mm
37	1	4050-8500	Handle-Turf & Garden-50L-ZP
38	1	4080-3905	Holder-Handgun-INEX Turf & Garden-Gas Tube-150LG-BLACK-MDPE
39	1	4100-0008	Hose-Spray-Delivery-40 Bar-8.5mm ID-Yellow (5m)
40	1	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.15m)
41	1	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.7m)
42	1	4100-0008	Hose-Spray-Delivery-40 Bar-8.5mm ID-Yellow (0.51m)
43	1	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.2m)
44	1	4100-0013	Hose-Spray-Delivery-40 Bar-13mm ID-Yellow (0.4m)

45	1	4100-3013	Hose-Suction-Wire Reinforced-13mm ID-Clear Plastic
46	2	6200-2310	Pipe-Fitting-Elbow-1/4BSPMx1/4BSPF-Polypropylene
47	2	6200-2980	Pipe-Fitting-Flojet-Elbow-10 ShankxQuad Port Pump-Nylon
48	1	6200-7210	Pipe-Fitting-Quick Release-Male Connectorx8.5 Shank-Brass
49	1	6200-7270	Pipe-Fitting-Quick Release-Valve-Stopx10 Shank-Brass
50	1	6200-9140	Pipe-Fitting-Tee-10 Shankx10 Shankx10 Shank-Plastic
51	1	6200-9340	Pipe-Fitting-Teejet-Straight-10 Shankx1/4NPTM-Plastic
52	1	6200-9350	Pipe-Fitting-Teejet-Tee-10 Shankx1/4NPTFx10 Shank-Plastic
53	1	6200-9470	Pipe-Fitting-Thru Tank-Straight-13x13 Shankx1/2&1/4BSPM-Plastic
54	1	6800-5000	Pump-Flojet-Triplex-12 Volt-7.6LPM-Quad Ports
55	1	7500-3750	Rota-Tank & Pump Cover-53L-Spray-NATURAL/RED-MDPE
56	1	7500-9200	Rota-Wheel-8inch-Black-MDPE
57	2	7500-9220	Rota-Wheel-12inch-Black-MDPE
58	1	8427-1600	Sub-Battery Charger Assembly-Turf & Garden
59	1	8427-3500	Sub-Filter Assembly-C-Dax U Filter
60	1	8427-9400	Sub-Turfmate G2-Boom
61	1	8450-2410	Switch-Electrical-Toggle-SPST-250V-16Amp
62	1	8840-8413	Tube-Transluscent-13MM-100PSI (0.23m)
63	1	8900-1110	Valve-Ball-1/4BSPFx1/4BSPM-Tee Handle-Brass
64	1	8900-4600	Valve-Lid Vent-D150
65	1	9440-4500	Yoke-Jockey Wheel-Turfmate-ZP
66	1	6200-6260	Pipe-Fitting-Plug-Thumb Screw-3/8BSPM-Black-Plastic
67	1	6250-1200	Plug-Blanking-Internal-Square-3/4x3/4-Black Plastic
68	1	5450-2220	O'Ring-Imperial-1/8"x5/8"-N70
69	1	8427-6000	Sub-Lid & Ring Assembly-D150-In-Ex Vented-Nylon-Black

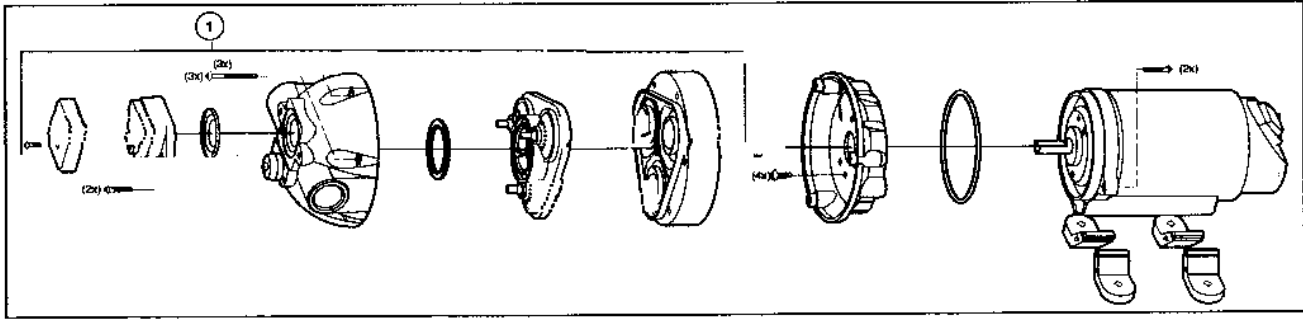
Turfmate Boom Exploded Diagram and Parts List



Item No.	QTY.	e9 part no	e9 description
1	1	1900-8500	Centre-Boom-Turfmate G2-ZP
2	2	1072-5500	Arm-Boom-Turfmate G2-ZP
3	2	4680-1300	Latch-Button-Tube-6mm-Stainless
4	2	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.465m)
5	1	6200-9140	Pipe-Fitting-Tee-10 Shankx10 Shankx10 Shank-Plastic
6	1	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.5m)
7	1	6200-7220	Pipe-Fitting-Quick Release-Male Connectorx10 Shank-Brass
8	10	2000-2015	Clamp-Hose-Oetiker-Single Ear Stepless-15.3<>18.5mm-S/S
9	2	4100-0010	Hose-Spray-Delivery-40 Bar-10mm ID-Yellow (0.7m)
10	4	2010-5301	Clamp-Nozzle Body-Boom-3/4"x3/4"-Varispace-Set
11	2	5300-2200	Nozzle Body-Teejet-Dry Boom-1 Way-Elbow-Shank 10mm-Black-Nylon
12	4	5300-9700	Nozzle-Tip-Wide Range-110WR03-Single
13	2	5300-2220	Nozzle Body-Teejet-Dry Boom-2 Way-Shank10x10-Black-Nylon
14	2	6250-1200	Plug-Blanking-Internal-Square-3/4x3/4-Black Plastic
15	4	1600-6000	Cap-Nozzle-Fan-QC-Red-Incl Gasket
16	4	8900-1530	Valve-Check-Teejet-Top Hat Style-10PSI
17	1	3290-0840	Fastener-Set Screw-Hex-8.8 Grade-M8x40-ZP
18	1	3330-8008	Fastener-Washer-Spring-M8-ZP
19	1	3170-0008	Fastener-Nut-Nyloc-M8-ZP

FLOJET SPRAY PUMP RELACEMENT PARTS

The following replacement parts for the 12V Flojet 7.6 L/Min pump are available from any INEX dealer:

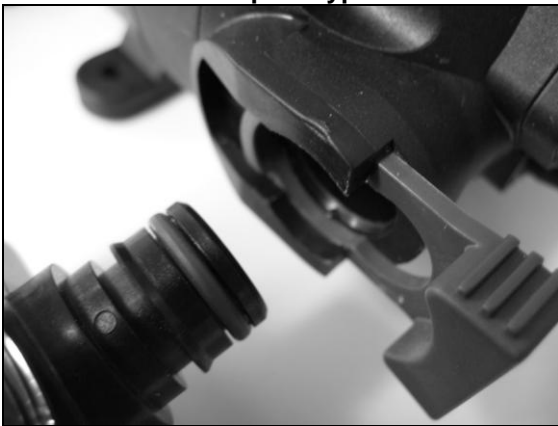


NOTE

Please select the correct hose connection type for your pump

The below pictures show the quadport type (Left hand photo) and threaded type (Right hand photo). The threaded type is no longer available for ordering and should be replaced with a quadport type. When replacing a threaded pump head with a quadport type you will require replacement quadport hose fittings in addition to the pump head.

Quadport Type:



Screw Type:



ITEM	PART NO.	DESCRIPTION
1	6800-5160	Pumphead Kit (includes pressure switch) To Suit Quadport Type
	6800-5000	Replacement Pump Quadport Type
	6200-2980	Pipe-Fitting-Flojet-Elbow-10-13mm ShankxQuad Port Pump-Nylon
	6200-3020	Pipe-Fitting-Flojet-Straight-10-13mm ShankxQuad Port Pump-Plastic