

# TEEJET 744E

## INSTALLATION MANUAL

**AUTO BOOM SECTION CONTROL**  
for TJ744E with 5 sections



***TeeJet***<sup>®</sup>  
**TECHNOLOGIES**

A Subsidiary of  **Spraying Systems Co.**<sup>®</sup>

# Table of Contents

MATRIX WITH TJ744E SPRAYER CONTROL	1
------------------------------------	---

---

## INTRODUCTION TO TJ744E - ABSC 2

Principle of Operation .....	2
------------------------------	---

Required Parts .....	2
----------------------	---

## INSTALLING THE TJ744 ABSC KIT 4

Connecting to Power .....	4
---------------------------	---

Battery Cable (Option) .....	4
------------------------------	---

## SYSTEM CHECK 5

Check AUTO mode: .....	5
------------------------	---

<i>TJ744E Switch box:</i> .....	5
---------------------------------	---

<i>Matrix:</i> .....	5
----------------------	---

Check MANUAL mode: .....	5
--------------------------	---

<i>Matrix:</i> .....	5
----------------------	---

<i>TJ744E Switch Box:</i> .....	5
---------------------------------	---

---

## **MATRIX™ with TJ744E SPRAYER CONTROL**

---

This installation manual covers installation of Matrix with TeeJet 744E Sprayer Control (with 5 sections). We have endeavoured to deliver a fault free product. To ensure optimal use of the equipment, we ask you to pay great attention when reading this manual. Regarding responsibility for use of the product, we refer to our sales and delivery terms - especially paragraph 7, which follows:

Product usage.

7.1 Any use of the product is at the sole risk of the buyer. The buyer is therefore not entitled to any form for compensation caused by, for example, any of the following:

- Disturbance to/from any electronic services or products that do not confirm to the standards for CE marking,
- Missing or poor signal coverage or a succession hereof from external transmitters/receivers, used by the buyer,
- Functional faults, which apply to or from a PC-program or PC-equipment, not delivered by the seller.
- Faults that may arise from the buyers negligence to react to warnings and fault messages from the product, or which can be traced to negligence and/or absent constant control of the work carried out in comparison to the planned job.

7.2 When implementing any new equipment the buyer must take great care and pay attention. Any doubts as to correct operation/use should result in contacting TeeJet Technologies.

Kind regards,

**TeeJet Technologies**

Mølhavevej 2

9440 Aabybro

Denmark

Tel. +45 9696 2500

Fax +45 96962501

[www.teejet.com](http://www.teejet.com)

## INTRODUCTION TO TJ744E - ABSC

The Matrix is a combined Guidance and Automatic Boom Section Control (ABSC) device that features control of up to 15 boom sections. The Matrix connects in parallel to the existing wiring loom to the section valves.

### Principle of Operation

The Matrix controls the section valves according to the GPS position as well as the GPS guidance to avoid overlaps or skips.

The Matrix controls the section valves in automatic mode. The section switches should be set to off unless the operator wants to override the auto mode and thus force spraying.

The Matrix monitors the section switches that control the valves in manual mode. The master switch can be used both in automatic mode and in manual mode.

### Required Parts

To add Automatic Boom Section Control to a TJ744 Sprayer Control kit, the following part numbers are required:

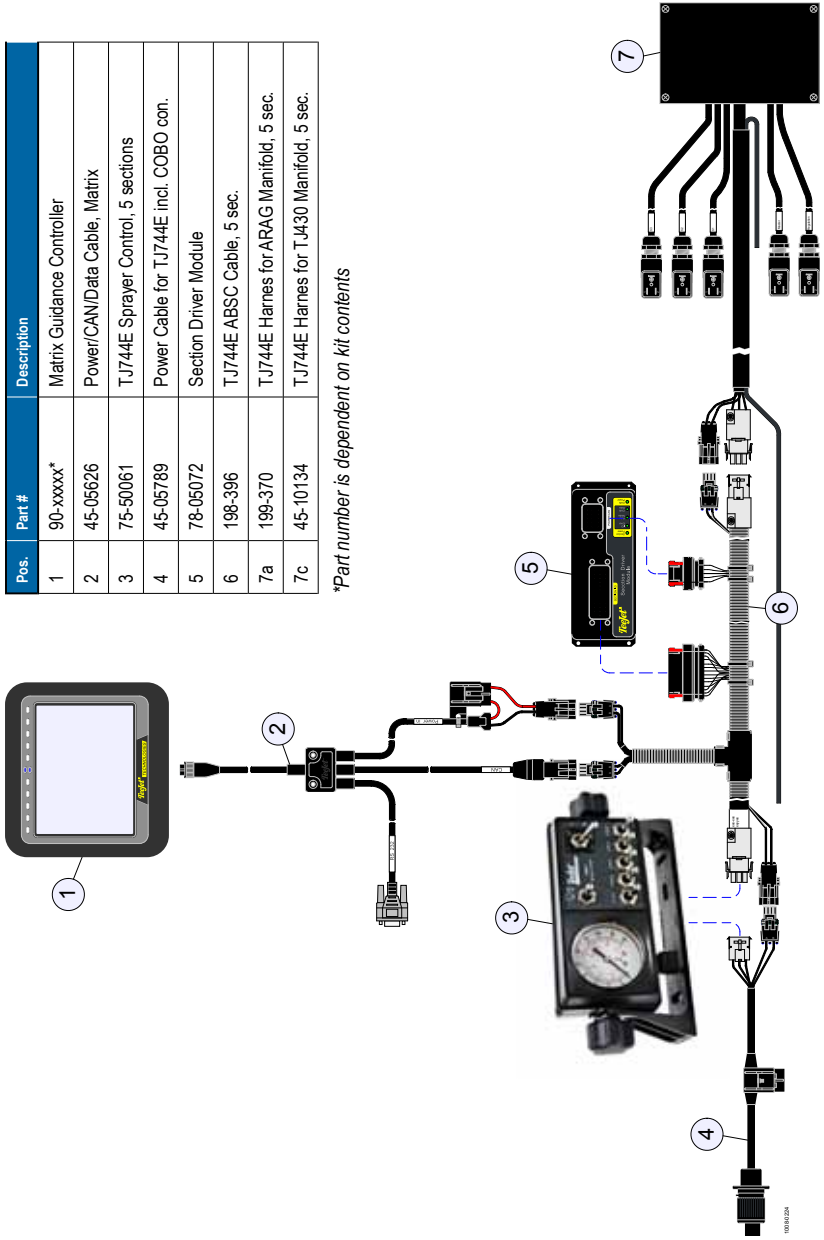
Item	Part Number	Description	Quantity
A	90-xxxxx*	Matrix Guidance Controller Kit.....	1
B	198-396	TJ744 ABSC Cable, 5 Section.....	1
C	45-05626	Power/CAN/Data Cable, Matrix .....	1

*\*Part number is dependent on kit contents*

Figure 1-1: System Diagram

Pos.	Part #	Description
1	90-xxxxx*	Matrix Guidance Controller
2	45-05626	Power/CAN/Data Cable, Matrix
3	75-50061	TJ744E Sprayer Control, 5 sections
4	45-05789	Power Cable for TJ744E incl. COBO con.
5	78-05072	Section Driver Module
6	198-396	TJ744E ABSC Cable, 5 sec.
7a	199-370	TJ744E Harness for ARAG Manifold, 5 sec.
7c	45-10134	TJ744E Harness for TJ430 Manifold, 5 sec.

\*Part number is dependent on kit contents

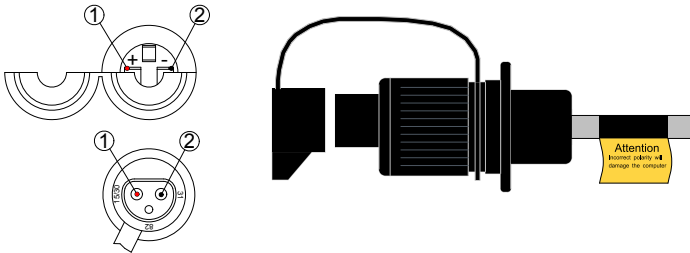


## INSTALLING THE TJ744 ABSC KIT

Connect the automatic boom section kit as shown on the system overview diagram, *Figure 1-1*. The kit includes all necessary connectors to get electrical contact with the TJ744E system.

### Connecting to Power

*Figure 1-2: Connecting to Power*



Pos.	Description
1	+12V (15/30)
2	Ground (31)

### Battery Cable (Option)

The power supply must be strong enough to operate the valves. The total current will depend on the type of valve used.

If a power connector (socket) is not available in the tractor cabin, an optional battery cable can be used (PN 96ET14).



## SYSTEM CHECK

After connecting the power connector, it is time to make a system check. To check the system, it is necessary to have full GPS signal. To obtain full GPS signal, the vehicle must be placed outside.

### Check AUTO mode:

#### *TJ744E Switch box:*

Section switches should be in the OFF position when working in Automatic mode. The Master switch will control the sprayer and should be ON to enable automatic switching of the sections.

#### *Matrix:*

- Turn the Guidance controller to ON
- Encode the number of sections and the width of each (Refer to the Matrix user manual)
- Wait for GPS signal
- Set the mode to AUTO
- Drive forward (> 2 km/h)
- Observe that all valves open
- Check that the valves closes when the Master switch is set to OFF

### Check MANUAL mode:

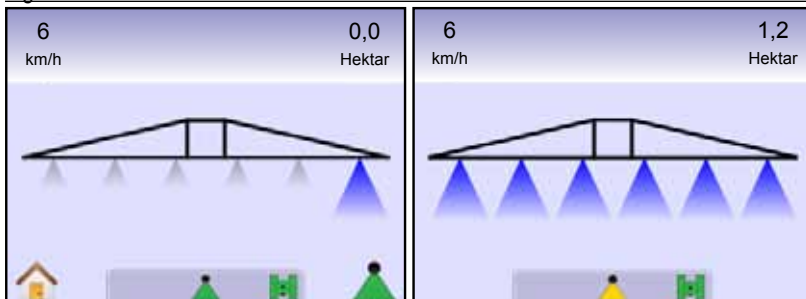
#### *Matrix:*

- Set the ABSC mode to MANUAL
- Check in the 'Boom Section Control Screen' (Matrix) that the section icons turn off and on according to the valve/switch status

#### *TJ744E Switch Box:*

- Set the section switches to ON
- Set the Master switch to ON
- Observe that all valves are open

Figure 1-3: Matrix Boom Section Control Screen



# TEEJET 744E


## INSTALLATION MANUAL

---

This installation manual covers installation of Matrix with TeeJet 744E Sprayer Control (with 5 sections).



Mølhavevej 2  
9440 Aabybro, Denmark  
Tel: +45 96962500 • Fax: +45 96962501  
[www.teejet.com](http://www.teejet.com)

A Subsidiary of  *Spraying Systems Co.*<sup>®</sup>

020-053-UK  
© TeeJet Technologies 2010