

Aircraft Digital Tire Inflator



89XDH

S P E C I F I C A T I O N S

I N S T A L L A T I O N

O P E R A T I O N

S E R V I C E

Please read this manual before carrying out any installation or service procedures.

Upon Installation pass this manual to the equipment owner.

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1.0 Introduction

1.1 This Manual

Congratulations on selecting a Haltec Aircraft Digital Tire Inflator. This equipment has a number of unique features that are explained in this manual.

Throughout the manual the following symbols will be used, this information is for your safety and to prevent damage to this product.

	CAUTION
The hazard or unsafe practice could result in minor injury	

	WARNING
The hazard or unsafe practice could result in severe injury or death.	

1.2 Digital Inflation Overview

Your Haltec Digital Tire Inflator has a dual pneumatic valve controlled by an electronic circuit that controls the inflation and deflation process.

The process will only commence when there is more than 3psi, 20 kPa or 0.2bar in the tire when the hose is connected.

	WARNING
To avoid the risk of electrical shock, personal injury or death disconnect power before servicing this equipment.	

1.3 General Specifications

WARNING

To avoid the risk of personal injury, especially to the eyes, face or skin DO NOT direct the air stream at any person/s.

WARNING

This equipment is not intended for use by children without adult supervision.

CAUTION

To avoid equipment damage, never exceed the manufactures maximum inlet pressure of 365 psi, 2500 kPa or 25.0 bar.

CAUTION

This equipment has NO user serviceable parts. Only trained, experienced repair personnel employed by an authorised service agent should perform service to this equipment.

Operating Temperature	0°C to + 60°C (without heater) 32°F to 140°F -20°C to + 60°C (with heater) -4°F to 140°F
Relative Humidity	100%
Supply Voltage	11-18Vdc, 8-16Vac 100-120V 50/60Hz 220-240V 50/60Hz
Current	1A Max
Fuse	Auto Reset 2.5A Nominal
Max Inlet Air Supply	365psi, 2500 kPa, 25.0 bar
Recommended Inlet Air Supply	10 psi, 70kPa or 0.7 bar above the maximum set pressure of the unit.
Operating Pressure Maximum	305 psi, 2100 kPa, 21.0 bar
Minimum	5 psi, 35 kPa, 0.3 bar
Accuracy	Up to 0.5% FS
Display Increments	1 psi, 5 kPa, 0.1 bar
Units of Measurement	psi, kPa, bar, kg/cm2

2.0 89XDH Model

Specifications

Construction	Diecast Aluminium Enclosure
Degree of Protection	IP66
Unit Dimensions (excluding packaging)	269 x 285 x 106mm
Shipping Weight	5.6kg

Refer to General Specifications for further information.

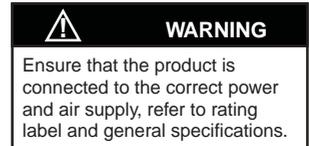


89XDH

Installation

External Mounting

1. Unpack the unit.
2. Hold the unit up on the wall and mark where the four (4) holes are to be drilled.
3. Secure the unit using suitable fasteners.
4. Connect the air supply to the unit.
5. Connect the power supply, refer to the rating label for the correct power requirements.



Internal Mounting

1. Unpack the unit and remove the front panel
2. Drill the four (4) Mounting locations in the backbox to suit up to M6 or 1/4" fasteners.
3. Hold the unit up on the wall and mark where the four (4) holes are to be drilled.
4. Secure the unit using suitable fasteners.
5. Seal these fasteners to maintain the IP rating of the unit.
6. Connect the air supply to the unit.
7. Connect the power supply, refer to the rating label for the correct power requirements.

3.0 Operation

3.1 Switch Functions



Reduces the set pressure.



Increases the set pressure.



Displays an alternative unit of measurement.*

This switch can be programmed to operate in one (1) of the following modes:

Default Unit Mode

Pressing and holding the switch will momentarily display an alternative unit of measurement. When you release the key the display will immediately revert back to the default unit of measurement. The pressure can only be set in the default unit of measurement.

Selectable Unit Mode

Pressing and releasing the switch will display an alternative unit of measurement. The pressure can be set in any of the units of measurement.

* The units displayed on each machine will vary depending on the software that has been requested.



The 'Flat tire only' switch discharges up to five (5) bursts of air. Used to start the inflation process when the pressure in the tire is less than 3 psi, 20 kPa or 0.2 bar.



Stop



WARNING

To avoid the risk of personal injury, especially to the eyes, face or skin DO NOT direct the air stream at any person/s.

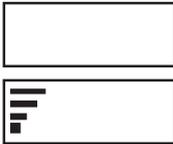


WARNING

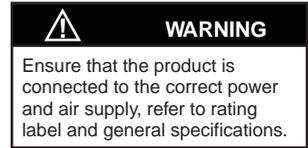
This equipment is not intended for use by children without adult supervision.

3.2 Inflation & Deflation

- 3.2.1 Set the desired pressure, refer to Section 3.1 for the function of each switch.
- 3.2.2 Connect the hose to the tire, ensure the hose is connected securely. Air leaks will cause an error message to be displayed, refer to Section 4.0.
If confirmation button is programmed press the 'flat tire only' switch to start the inflation process.
- 3.2.3 The pressure in the tire will be displayed on the bottom LCD.



- 3.2.4 The unit will inflate or deflate the tire to the set pressure (Top LCD). Periodically the process will check the tire pressure and display the pressure on the bottom LCD.
- 3.2.5 If the pressure in the tire is less than 3 psi, 20 kPa or 0.2 bar the process will not commence until the 'Flat Tire only' switch is pressed, refer Section 4.0.
- 3.2.6 The scroll bar will indicate that the unit is inflating or deflating, bottom LCD only.
- 3.2.7 When the set pressure is reached the display will flash and the unit will beep five (5) times. This will continue until the hose is disconnected, during this time the keypad will be disabled.



3.3 Volume Adjustment

- 3.3.1 Turn the unit off.
- 3.3.2 Press and hold the decrease and 'Flat Tire Only' switches, refer to Section 3.1.
- 3.3.3 Turn the unit on, VOL will be displayed.
- 3.3.4 Adjust the volume using the increase and decrease switches, refer to Section 3.1.
- 3.3.5 To store the setting press the 'Flat Tire Only' switches. Further changes can be made by repeating the above procedure.

4.0 Troubleshooting

The following chart has been prepared to assist with diagnosis of faults.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No display.	No power supply.	Check power supply.
The inflation process does not Commence, even when the pressure is set and the hose is connected to the tire.	The tire is deflated below 3 psi, 20 kPa or 0.2 bar. The hose connector is faulty.	Press  Replace the hose connector.
The display will not move or is stuck on a particular value.	The switch is damaged.	Replace the switch.
The unit deflates very slowly.	The silencer plug on the valve block is blocked.	Remove and clean the silencer plug.
The unit no longer beeps.	The beeper is damaged.	Replace the beeper.
The inflation process commences but does not complete.	Low or nil supply pressure.	Check the air compressor supply pressure.

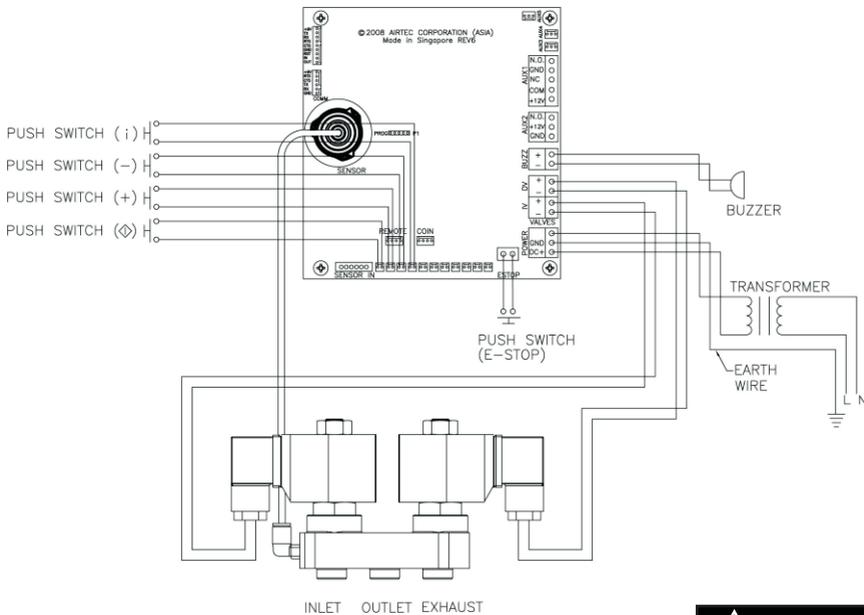
4.0 Troubleshooting, cont.

PROBLEM	POSSIBLE CAUSE	SOLUTION
ER1	Unstable pressure, faulty hose connector.	Replace the hose connector.
ER2	Unstable pressure, faulty hose connector. Incorrect supply pressure. Inflate & Deflate valve connections are reversed.	Replace the hose connector. Check the air compressor supply pressure. Check the valve connections on the PCB.
ER3	Low or nil supply pressure.	Check the air compressor supply pressure.
ER4	Initial or final pressure is too high, exceeding the maximum pressure by more than 20 psi, 140 kPa or 1.4 bar.	Disconnect hose connector, reset processor by switching off the power for a minimum of 5 seconds. If error message reappears replace PCB, refer Section 7.0.
ER5	Low supply voltage.	Check power supply. The message will clear when the correct voltage is restored.
ER6	Programme or PCB error.	Reset machine by switching off the power for a minimum of 5 seconds. If error message reappears replace PCB, refer Section 7.0.
ER7	Insufficient supply pressure Loose hose connection	Check the air compressor supply pressure Check hose connection.
ER8	Calibration error.	Unit requires calibration, contact your local distributor or service agent.
ER9	Calibration error.	Reset machine by switching off the power for a minimum of 5 seconds. If error message reappears replace PCB, refer Section 7.0.
ERP	Unstable supply pressure Hose connection during inflate cycle.	Check supply pressure. Check hose connection.
ERU	Short circuitry on valve connection	Check and dry up the valve connection
ERb	Short circuitry on buzzer connection	Check and dry up the buzzer connection

5.0 Spare Parts & Accessories

Part Number	Description
41.0702	Beeper, suits 89XD Models
45.1042	Piezo Switch
45.1050	Switch, S/S c/w Molex Connector, Dia 19mm
91.5050	Hose Chuck, High Pressure, 1/8" NPT
96.1041	Valve Block, High 37.5bar, 1/4" NPT, Aluminium, N/P

6.0 Wiring Diagram



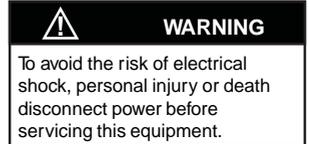
WARNING

Ensure that the product is connected to the correct power and air supply, refer to rating label and general specifications.

7.0 Component Replacement

7.1 PCB

- 7.1.1 To remove the existing PCB, open the unit.
- 7.1.2 Disconnect the switches from the connector.
- 7.1.3 Unplug all other connections on the PCB.
- 7.1.4 Remove the sample tube from the valve block.
- 7.1.5 Remove the 4 screws that retain the PCB.
- 7.1.6 To install the replacement PCB remove the clear protective film over the LCD.
- 7.1.7 Connect the sample tube to the valve block.
- 7.1.8 Replace the 4 screws that retain the PCB in position.
- 7.1.9 Reconnect the switch connector and all other connections.



8.0 Policy / Warranty

Your Haltec Digital Inflation Equipment is covered under warranty for 12 months from the date of invoice, subject to the following conditions:

- 8.1 Products
Subject to change without notice. Haltec Corporation is not responsible for inadvertent typographical errors or omissions.

- 8.2 Returned Goods
No return goods will be accepted unless authorized in writing by Haltec Corporation. All return goods must be shipped prepaid to the factory, and are subject to a restocking charge. Special items are not returnable.

- 8.3 Warranty
Except where the product has been damaged by misuse, faulty installation, unauthorised repairs, incorrect maintenance or accidental damage, Haltec will at its own discretion repair or replace the defective product (or pay for the cost of repair or replacement).

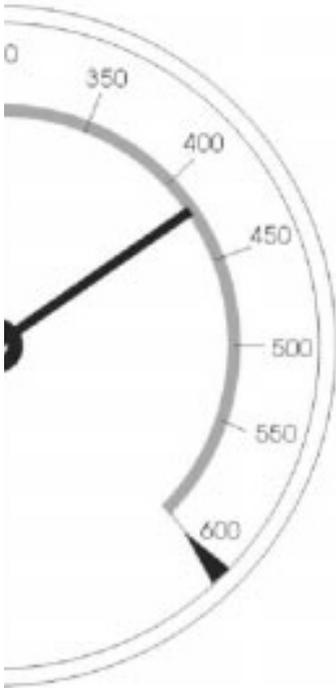
Warranty **does not** include air hoses, hose connectors (hose chucks) or membrane keypads.

Haltec Corporation expressly excludes all other warranties expressed or implied, including without limitation the implied warranties of merchantability and fitness for any other purpose. Haltec Corporation further excludes liability for consequential and incidental losses including but not limited to the loss of profits which may arise out of the breakdown or failure of any product.

9.0 Certificate of Conformance

This unit model, XDH is being calibrated against our Dwyer digital test pressure gauge, serial no : **21111160007**. Details of the XDH unit are provided below.

The Dwyer digital gauge was calibrated on 15 Jul 2014 by Caltek Pte Ltd with certificate no : **CMS 2957-14**.



Manufacturer

Airtec Corporation (Asia) Pte Ltd
67 Ubi Crescent #01-02
Singapore 408560

Model No : XDH- _____

Product Serial No : _____

PCB Serial No : _____

Date : _____



Note:

- The calibration certificate of the Dwyer digital test pressure gauge can be issued upon request.
- An accuracy test report will be provided separately.

10.0 Glossary & Conversions

Units of Measurement

Psi	Pounds per square inch
kPa	Kilopascals
bar	Barometric
atm	Atmospheres
kg/cm²	Kilograms per square centimetre
IP	International Protection Rating
CFM	Cubic Feet per minute
LPM	Litres per minute
PCB	Printed Circuit Board
Sample Tube	Connects the valve block & PCB
LCD	Liquid Crystal Display

Conversions

1 psi =	6.8947 kPa
	0.0689479 bar
	0.06890459 atm
	0.0703069 kg/cm ²

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Haltec Corporation reserves the right to change specifications, modify designs and discontinue items without incurring obligation and whilst every effort is made to ensure descriptions, specifications and other information in this manual is correct, no warranty is given in respect thereof and the company shall not be liable for any error therein.

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