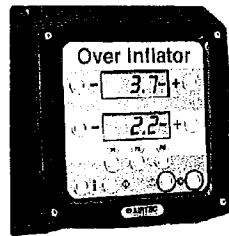
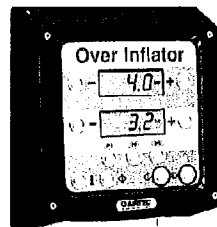


Digital Inflation Equipment



89XDX



89XDZ

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.*

Contents

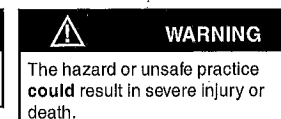
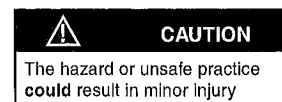
- 1.0 **Introduction**
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1.0 Introduction

1.1 This Manual

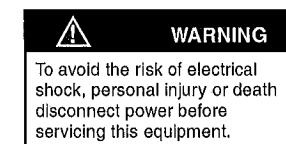
Congratulation on selecting an Airtec Digital Tyre Inflator. This equipment has a number of unique features that are explained in this manual.

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



1.2 Digital Inflation Overview

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



1.3 General Specifications *

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 110-120V 50/60Hz 220-240V 50/60Hz
Current	1A Max
Fuse	Auto Reset 1.1A Nominal
Max Inlet Air Supply	150 psi, 1035 kPa, 10.3 bar
Recommended Inlet Air Supply	10 psi, 70 kPa or 0.7 bar above the maximum set pressure of the unit.
Operating Pressure	
Maximum	145 psi, 1000 kPa, 10.0 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/cm ²

*Note: Specifications may vary for non-standard factory equipment.
Contact service agent for further information.

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.

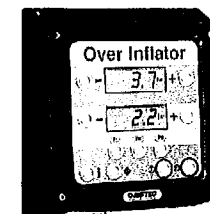
CAUTION
To avoid equipment damage, never exceed the manufacturer's maximum inlet pressure of 150 psi, 1035 kPa or 10.3 bar.

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.

2.0 89XDX / 89XDZ Models

Specifications

Construction	Die Cast Aluminium Enclosure
Degree of Protection	IP 66
Unit Dimensions (Excluding packaging)	269 x 285 x 106mm
Shipping Weight	4.5kg
Flow Rate	1,500 litres/min (89XDX) More than 3,000 litres/min (89XDZ)



89XDX
89XDZ

*Refer to General Specifications for further information.

Installation

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.
7. Connect the power supply, refer to the rating label for the correct power requirements.

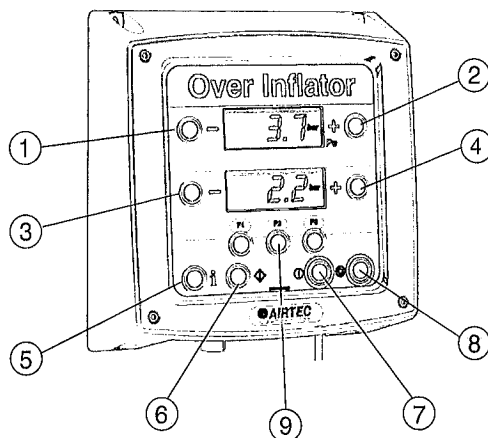
WARNING
Ensure that the product is connected to the correct power and air supply, refer to rating label and general specifications.

CAUTION
If this equipment is being installed on a retail petroleum site consideration must be given to the requirements of German Standard DIN EN 837-1 (Druckmeßgeräte mit Rohrfedern), Ausgabe Februar 1997) or the relevant Hazardous Area standard for your region.

Important:

Ensure air supply line is purged and free from any solids or contaminants prior to hose connection. Failure to do so can cause damage to machine components and may void warranties.

3.0 Operation



3.1 Switch Functions

- ① (-) Reduces the over Inflation set pressure.
- ② (+) Increases the over Inflation set pressure.
- ③ (-) Reduces the actual tyre pressure setting.
- ④ (+) Increases the actual tyre pressure setting.
- ⑤ (i) 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 switch the display will immediately revert back to the default unit of measurement. The pressure can only be set in the default unit of measurement.

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

CAUTION
If this equipment is being installed on a retail petroleum site consideration must be given to the requirements of German Standard DIN EN 837-1 (Druckmeßgeräte mit Rohrfedern), Ausgabe Februar 1997) or the relevant Hazardous Area standard for your region.

3.1 Switch Functions

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 unit displayed on each machine will vary depending on the software that has been requested.

- ⑥ (⬢) The 'Flat Tyre Only' switch discharges up to five (5) bursts of air. Used to start the inflation process when the pressure in the tyre is less than 3 psi, 20 kPa or 0.2 bar.
- ⑦ (⓪) The 'Start' switch. Used to resume normal operation, if the stop switch has been pressed.
- ⑧ (Ⓢ) The 'Stop' switch. Used to Stop the inflation or deflation process. When pressed, 'Stp' will flash on the top LCD.
- ⑨ Preset switch P1, P2 & P3 can be programmed to store any preset pressure setting. To store new preset pressure values press and hold the desired preset switch for 3 seconds, the unit will flash indicating this new pressure has been stored.

Note : The default factory setting for maximum differential pressure between over inflation pressure and actual tyre pressure is 29 psi / 200 kPa / 2 bar.

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 tyre, 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 tyre only' switch to start the inflation process.
- 3.2.3 If the pressure in the tyre is less than 3 psi, 20 kPa or 0.2 bar the process will not commence until the 'Flat tyre only' switch is pressed, refer Section 6.1.
- 3.2.4 The unit will inflate or deflate to the set pressure in the top LCD. Periodically the process will check the tyre pressure and this pressure will be updated in the bottom LCD. Once the overinflation pressure has been reached the unit will beep and flash 2 times.
- 3.2.5 The scroll bar will indicate that the unit is inflating or deflating.
- 3.2.6 Once the overinflation pressure has been reached the unit will automatically deflate the tyre to set value in the bottom LCD. Periodically the process will check the tyre pressure and this pressure will be updated in the bottom LCD. Once the stable final pressure has been reached, the unit will beep (for 5 times) and flash "END" on the top LCD. Bottom LCD will display the final pressure. This will continue until the hose is disconnected, during this time the keypad will be disabled.

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

CAUTION
If this equipment is being installed on a retail petroleum site consideration must be given to the requirements of **German Standard DIN EN 837-1 (Druckmeßgeräte mit Rohrfedern), Ausgabe Februar 1997** or the relevant Hazardous Area standard for your region.

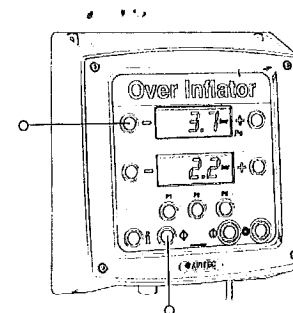
End ^{psi}

32 ^{psi}

Pe


3.3 Volume Adjustment

- 3.3.1 Turn the unit off.
- 3.3.2 Press and hold the decrease and 'Flat Tyre Only' switches, refer to diagram on the right.
- 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 Tyre Only' switch. 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 tyre.	The tyre 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 faceplate.
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.

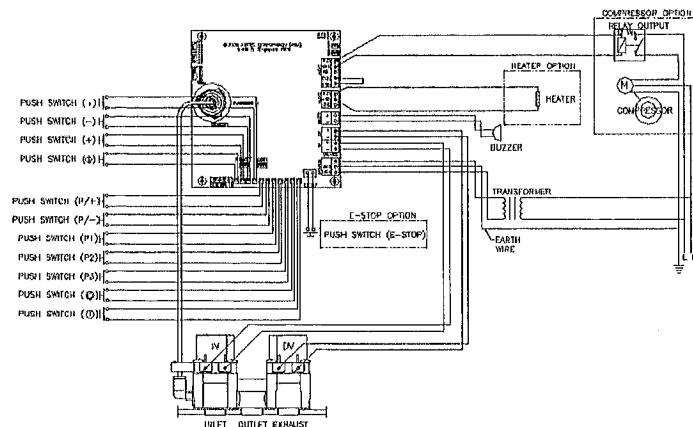
PROBLEM	POSSIBLE CAUSE	SOLUTION
ER1	Unstable pressure, faulty hose connector.	Replace the hose connector.
ER2	Unstable pressure, faulty hose connector. Incorrect supply pressure.	Replace the hose connector. Check the air compressor supply pressure.
	Inflate & Deflate valve connections are reversed.	Check 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 disconnection during inflate cycle	Check the air compressor 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

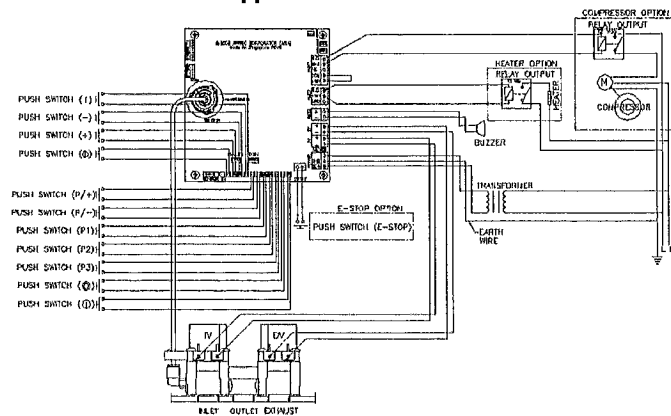
Part Number	Description
Hose Chucks - Open Type	
91.0213	Clip on Heavy Duty Hose Chuck 1/4" BSP Female
91.0210	Hold on Twin Chuck 1/4" BSP Female
22.0000	Hose Coupling Cover
Hose Kit	
61.0001	10m Grey Hose fitted with Standard Coupling and Heavy Duty Hose Chuck, Open Other colours available on request
Accessory Pack	
61.0101	Includes 1 x 10m Hose Kit, 2 x Heavy Duty Hose Chucks and 1 x Hose Coupling Cover
93.0800	Manifold Kit - 4 way 1/2" x 1/4"
94.5049	Vented Slide Valve 1/2"
94.0951	Non Return Valve, 1/4" BSP M/F
41.0702	Beeper, suits 89XD Models
45.1042	Piezo Switch
45.1050	Mechanical Switch
97.5058	Clip-On Core Retracting Tool
97.5258	Lock-On Core Retracting Tool
Valves	
95.1004	Filter Washers 1/4"
95.1514	Filter Washers 1/2"
96.1024	Valve Assembly 1/4" Less Fittings
95.1026	Valve Diaphragm to suit 1/4" and 1/2" Valves
96.1038	Valve Assembly 1/2" Less Fittings

6.0 Wiring Diagrams

Applicable for XDX



Applicable for XDZ



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

CAUTION
If this equipment is being installed on a retail premises also consideration must be given to the requirements of German Standard DIN EN 837-1 (Druckmelßgeräte mit Rohrfedern), Ausgabe Februar 1997) or the relevant Hazardous Area standard for your region.

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.

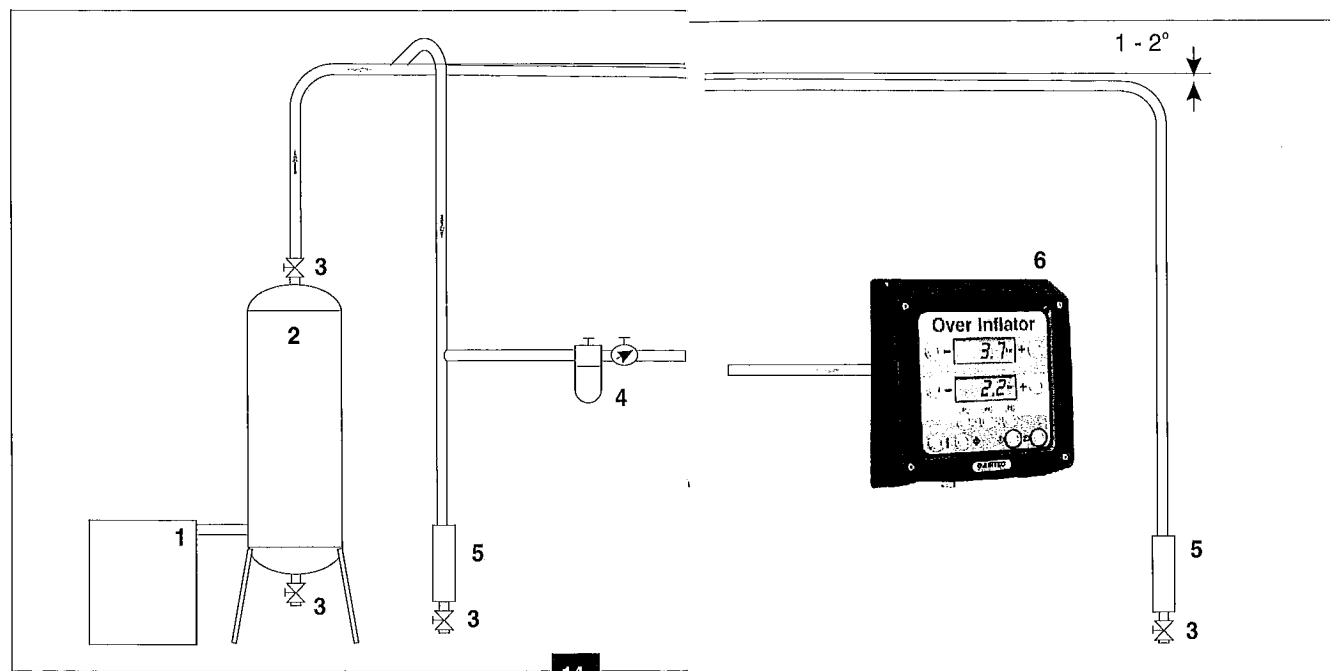
WARNING
To avoid the risk of electrical shock, personal injury or death disconnect power before servicing this equipment.

8.0 Compressed Air Systems

The information in this section is designed to provide some basic information about compressed air systems and the use of electronic inflation equipment.

Compressed air systems contain oil and water, it is important to filter and drain these from the system. The water is generated by condensation and oil can be carried into the line from the compressor. A basic system is illustrated below. The components of this system are as follows:

- 1 Air Compressor
- 2 Air Receiver Tank
- 3 Valves
- 4 Filter & Regulator
- 5 Condensate Drain (Water Trap)
- 6 Electronic Tyre Inflator



Each system and installation of electronic inflation equipment is different however it is imperative with any system that the drain valves (No. 3) are opened routinely to remove water that has been collected.

Immediately prior to the tyre inflator (No. 6) a regulator (No. 4) should be fitted. This should be set to 10 psi, 70 kPa or 0.7 bar above the maximum set pressure of the unit. This will prevent excessive pressure being supplied to the unit and the resulting error message ER4, refer to Section 4.0 Troubleshooting.

Also prior to the tyre inflator a filter (No. 4) should be fitted. This filter should remove all solid materials such as scale caused by corrosion inside the pipe and reservoir. Contaminants may have an adverse effect on the internal components of the system due to blockage and corrosion.



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

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CAUTION

To avoid equipment damage, never exceed the manufacturer's maximum inlet pressure of 150 psi, 1035 kPa or 10.3 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.



WARNING

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



CAUTION

If this equipment is being installed on a retail petroleum site consideration must be given to the requirements of German Standard DIN EN 837-1 (Druckmeßgeräte mit Rohrfedern), Ausgabe Februar 1997) or the relevant Hazardous Area standard for your region.

9.0 Warranty

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

- 9.1 Except where the product has been damaged by misuse, faulty installation, unauthorised repairs, incorrect maintenance or accidental damage Airtec will at it's discretion repair or replace the defective product (or pay for the cost of repair or replacement).
- 9.2 Warranty **does not** cover air hoses, hose connectors (hose chucks), membrane keypads, retractable reels and built-in compressors.

Airtec Corporation (Asia) Pte Ltd expressly excludes all other warranties, express or implied, including without limitation the implied warranties of merchantability and fitness for any other purpose. Airtec Corporation (Asia) Pte Ltd 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.

Note : All faulty PCBs that are within the warranty period are to be returned to factory for assessment and repairs. PCBs which are found to be burnt due to water damage will not be covered under any warranty.

10.0 Initial Verification Certificate

Compliance Statement

This equipment before its release is checked and tested, and is calibrated on test equipment that has a traceable accuracy that exceeds EC-Directive 86/217/EEC and managed under ISO9001 requirements.

This equipment also complies to the relevant sections of EC-directive 86/217/EEC (tire pressure gauges for motor vehicles and BS EN 12645:1999 (pressure gauges: Apparatus for inspection of pressure and/or inflation of tires for motor vehicles) applicable to digital equipment.

In addition this equipment complies where relevant to the following EC-directives:

2004/108/EC (EMC Directive)
2006/95/EC (Low Voltage Directive)

This compliance has been verified and tested by accredited laboratories to the following standards:

Emission:
AS/NZ CISPR 14.1:2003
AS/NZ 61000.3.3:1998
CISPR14.1:2000 Inc A1:2001
CISPR14.1:2005 Inc A1:2008 & C1:2009
CISPR 14.2:2006
EN 55014.1:2000 Inc A1:2001
EN 55014.1:2006
EN 55014.1:2007
EN 61000-3-2:1995 Inc A13:1999
EN 61000-3-2:2006
IEC 61000-3-3:1994
EN 61000-3-3:1995 Inc A1:1998, A1:2001, A2:2002, & A3:2006,

Immunity:
CISPR 14.2:1997 Inc A1:2001,
CISPR 14.2:1997 Inc A1:2006 & A1:2008
CISPR 14.2:2003
EN 55014.2:1997 Inc A1:2001
EN 55014.2:1997 Inc A1:1998, A2:2002 & A3:2007
EN 61000-3-3:1995 Inc A1:2001

Further testing and approval information is available upon request



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

Model

☐ 89XDX
☒ 89XDZ

Product Serial No. 08-605401

PCB Serial No. 21122A 600346

Date 11-9-2014

Signature *[Signature]*

11.0 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
Faceplate	Membrane keypad
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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Airtec Corporation (Asia) Pte Ltd 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.

R1 (8 Apr 2013) A9-2

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