DYNATEK DATALOG
Exhaust Gas Temperature Monitor Option
PART NO. DEGT-2

The DATALOG Exhaust Gas Temperature Monitor Option allows recording of EGT on eight cylinders simultaneously. The EGT data is available on an easy to read graph printed out by the DATALOG after the completion of a run.

This EGT kit consists of:

2 Four Channel Thermocouple Amplifier boxes
1 Analog Expansion Harness
8 'K' type thermocouples
8 weld-on thermocouple fittings with ferrules
2 Adhesive Velcro patches
8 yellow thermocouple plug pairs
4 small tie wraps

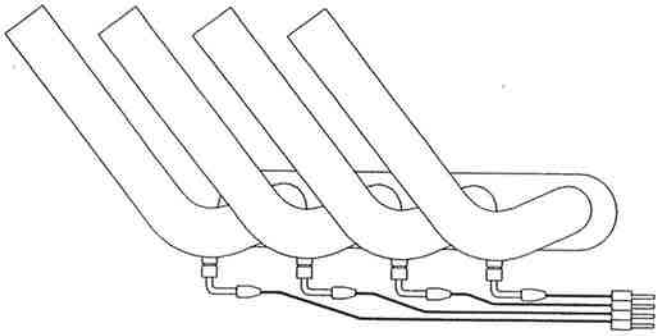
The EGT kit is easy to hook up. Refer to the included wiring diagram during the installation.

1. Locate the eight weld-on fittings in the kit. In most installations it is desirable to cut off the unused bottom thread on the fitting (the one that does not go into the compression nut). This allows for a more compact installation. Weld the fittings onto the exhaust pipe 3 to 4 inches from the cylinder head.

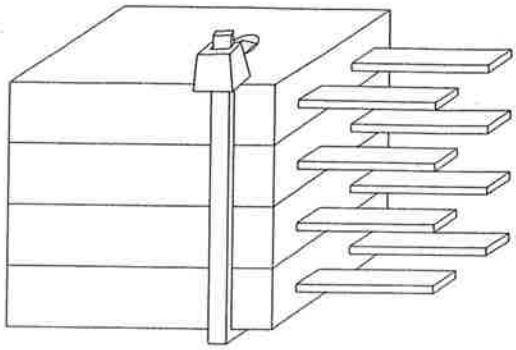
2. After welding, drill a 3/16" hole (or 1/4" hole if you have 1/4" thermocouples) through the weld on fitting and into the exhaust pipe. The installed fitting makes a good drill guide for this operation. If available, clear the finished hole with another drill bit 3 to 5 thousandths larger than 3/16" (or 1/4") to size the hole slightly larger than the thermocouples. This will allow easier removal of the thermocouples after they have been in the pipe for a while.

3. Bundle the thermocouple wires together with tie wraps and route them toward one end of the header. For a clean installation, use the yellow thermocouple plugs ganged together at the end of the header. The male side of the plug should be used on the thermocouple side of the connection and the female on the Amplifier side. Cut the thermocouple wires to an equal length at the end of the header where you want to install the yellow plugs. Thermocouples have a red and a yellow wire inside the stainless braid. Strip the thermocouple braid back enough to expose the red and yellow inner wires. Strip the red and yellow wires back about 1/4". Disassemble the yellow plugs to expose the inside wire clamp screws. Assemble the plugs onto the wires. NOTE - The red wire goes to the (-) terminal on the plug and the yellow wire goes to the (+) terminal on the plug. Once the thermocouple plugs have been installed, the four male plugs can be tie wrapped together using

the small white tie wraps provided with this kit. The assembled header assembly should resemble the following diagram:



TIE WRAP WIRES TOGETHER
ATTACH MALE PLUGS NEAR END OF HEADER



TIE WRAP PLUGS TOGETHER TO MAKE
A CONVENIENT JUNCTION BLOCK
(ALLOWS FOR EASY HEADER REMOVAL)

4. The thermocouple wires now need to be extended to the Thermocouple Amplifier location. The Thermocouple Amplifier should be mounted near the Datalog. The wiring harness between the Datalog and the Amplifier boxes should not be extended from it's factory length. The thermocouple wires can be extended any length from the header area to the Amplifier boxes. This extension can be done with the remaining thermocouple wire that was trimmed from the thermocouples or it can be done with standard copper wiring or jacketed copper cable. In any case, attach the female thermocouple plugs to the extension wire and route the extensions to the Thermocouple Amplifier box location.

5. Locate the Analog Expansion Harness included with this kit. Find the connector on the Expansion Harness labeled 'AUX'. Plug this connector onto the Datalog Interface Harness, into the mating connector also labeled 'AUX'. Find the connectors on the Analog expansion harness labeled 'TACH'. These connectors plug in line on the tach circuit attached the Datalog Interface Harness (see diagram). Locate the connector on the Expansion Harness labeled 'EXP1'. Plug the EXP1 connector into the side of the Thermocouple Amplifier labeled channel 5 through 8. Plug the EXP2 connector into the side of the Thermocouple Amplifier labeled channel 9 through 12.

6. Remove the four screws which secure the lid on the Thermocouple Amplifier box and remove the lid. The thermocouple wire ends need to be inserted into the terminal block located on the end of the circuit board. The terminal block is labeled for each channel with the appropriate colors of the thermocouple wire. A small slotted screw driver can be used to depress the levers on the terminal block to open the spring jaws which hold the wires.

Connect the thermocouples to the channels as follows:

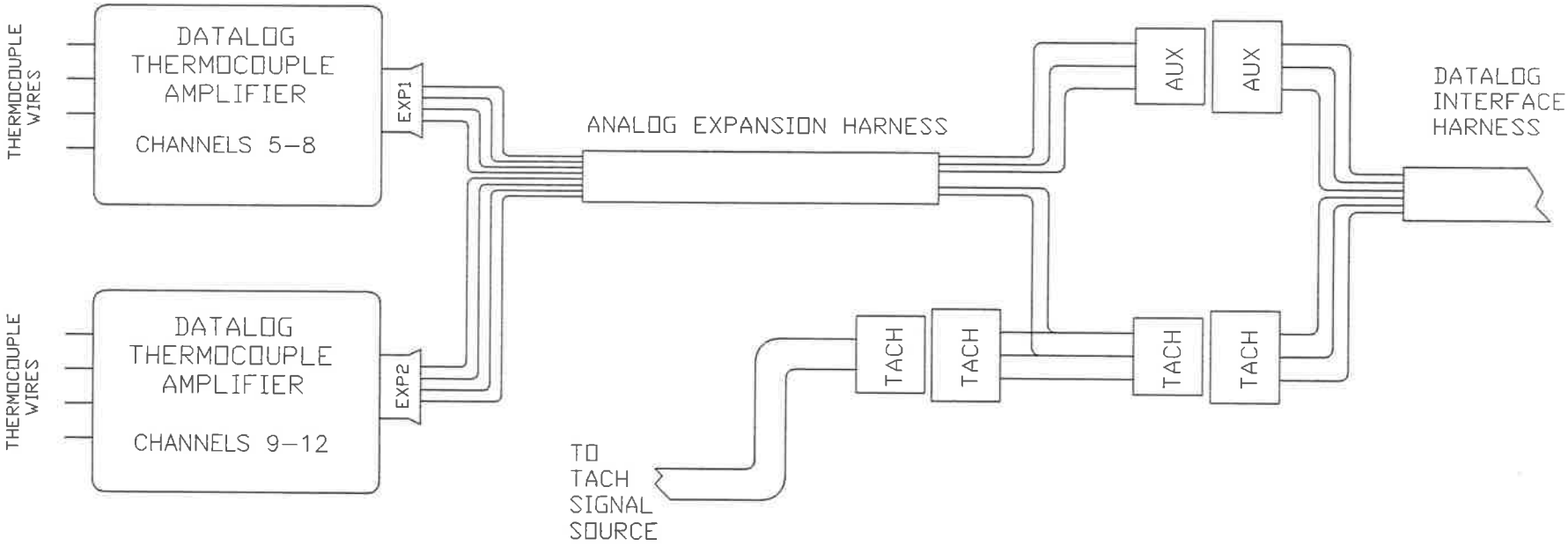
	Datalog Analog Channel	Engine Cylinder #
Amplifier #1	5	1
	6	2
	7	3
	8	4
Amplifier #2	9	5
	10	6
	11	7
	12	8

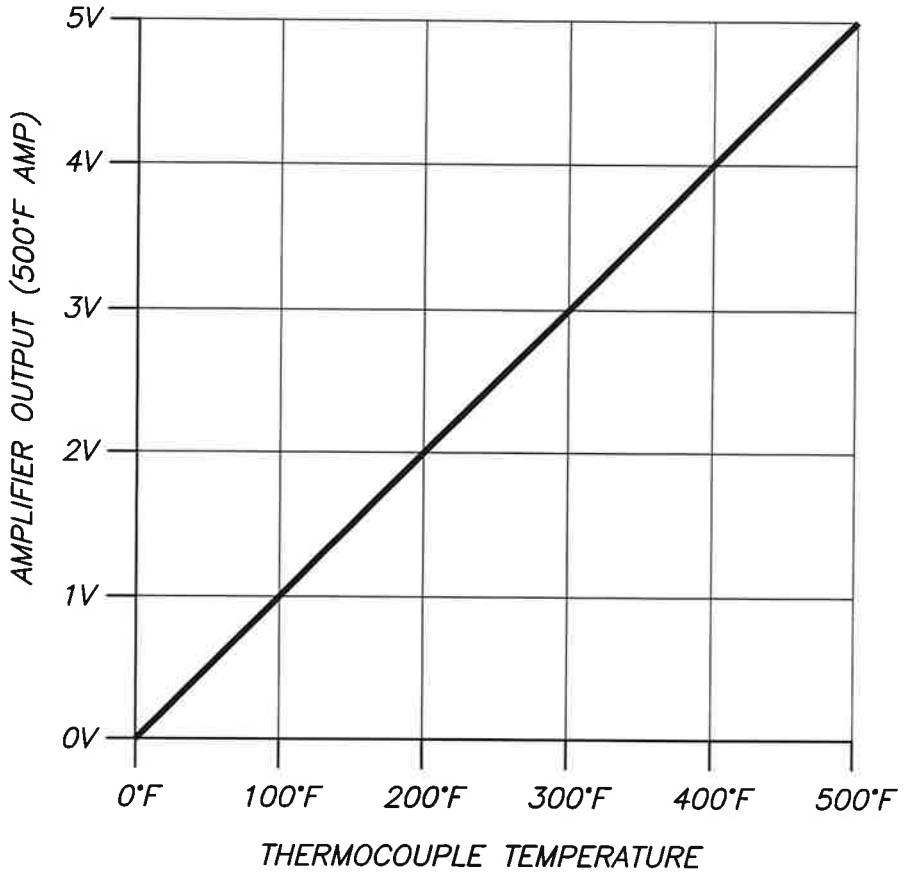
After the wires are inserted in the terminal block, lay the wires over the slot on the end of the amplifier and reinstall the box lid and screws.

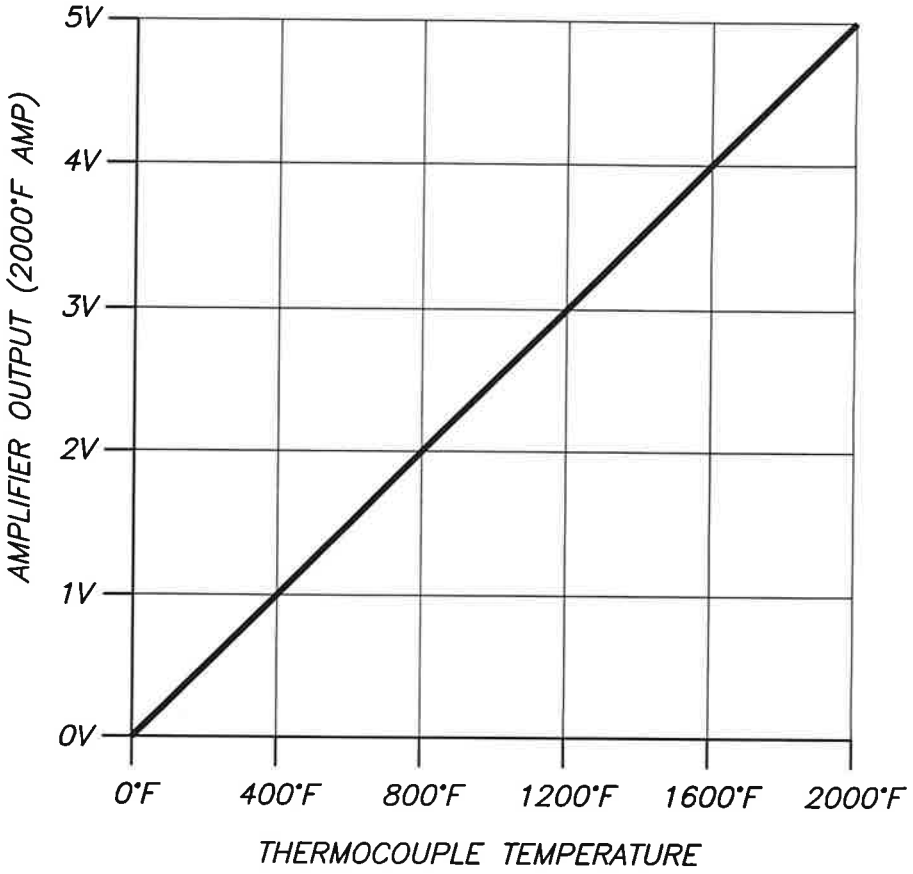
7. Use the adhesive Velcro patches to mount the Thermocouple Amplifiers to a convenient spot near the Datalog.

8. This completes the EGT Kit installation. The EGT readings will show up on analog channels 5 through 12 on your printouts or PC.

DATALOG EGT WIRING HARNESS







DYNATEK			
164 S. VALENCIA ST., GLENDORA, CA 91741			
DATALOG THERMOCOUPLE AMPLIFIER OUTPUT			
500°F & 2000°F AMPLIFIERS			
DATE 6-5-03	REV A	DRAWN L. SOZA	FILE 2801168A

DYNATEK DATALOG
SINGLE CHANNEL
THERMOCOUPLE
W/ AMPLIFIER
P.N. DTCA-500, DTCA-2000

The DTCA single channel thermocouple has been designed to allow single point temperature measurement of a various vehicle components with either a 0-500 degree range (DTCA-500) or a 0-2000 degree range (DTCA-2000).

The DTCA includes one of the following types of thermocouples:

*exposed junction high speed thermocouple - for: exhaust gas temp, intake manifold temp, etc.

*immersion thermocouple (enclosed junction) - for: water temp, oil temp, fluid temp, etc.

*ring terminal thermocouple - for: head temp, block temp, shock temp, etc.

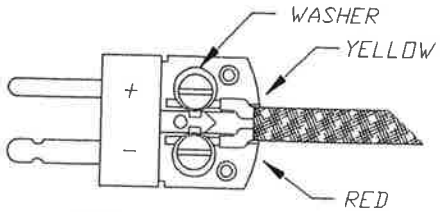
*infra red thermocouple - for: tire temp or other non contact temp measurement. (This is a special order item)

1. Mount the thermocouple and extend the braided thermocouple wire toward the Datalog location along the desired chassis path. High speed and immersion thermocouples are provided with a weld-on compression type fitting to ease installation. If you are going to weld on the fitting, you will have a cleaner installation if you cut off the 1/8" NPT thread on the fitting, and weld the hex shoulder of the fitting directly to the item being monitored.

2. Prepare the thermocouple wire end for the yellow thermocouple plug provided with this kit. The thermocouple provided with this kit is a K type thermocouple with a red and yellow wire. On K type therocouples, the red wire is always negative, and the yellow wire is always positive. There is a '+' and '-' marking on the yellow plug housing. Make sure to install the wires into the yellow plug with the proper polarity. The braided thermocouple wire can be cut to a shorter length if necessary. Open up the yellow plug with a small screw driver and install the plug onto the thermocouple wires.

3. Plug the yellow plug into the thermocouple amplifier included with this kit. The thermocouple amplifier has an eight inch harness pigtail extending from it. Mount the amplifier to the chassis and use the included sensor extension harness to complete the wiring to the Datalog.

4. At the Datalog end, plug the sensor extension harness into an unused Datalog analog channel input. The DTCA output will be recorded by the analog channel you select.



- STRIP WIRES 1/4".
- CLAMP WIRES UNDER WASHERS.

TERMINATING THE EXTENSION CABLE

1. Measure the cable length necessary to run from the DATALOG CPU to the sensor mounting location on the engine or frame along the desired harness path.

2. Cut the 4 foot extension cable to fit the measured installation path (leave a little extra slack so that no tension will be on the connectors).

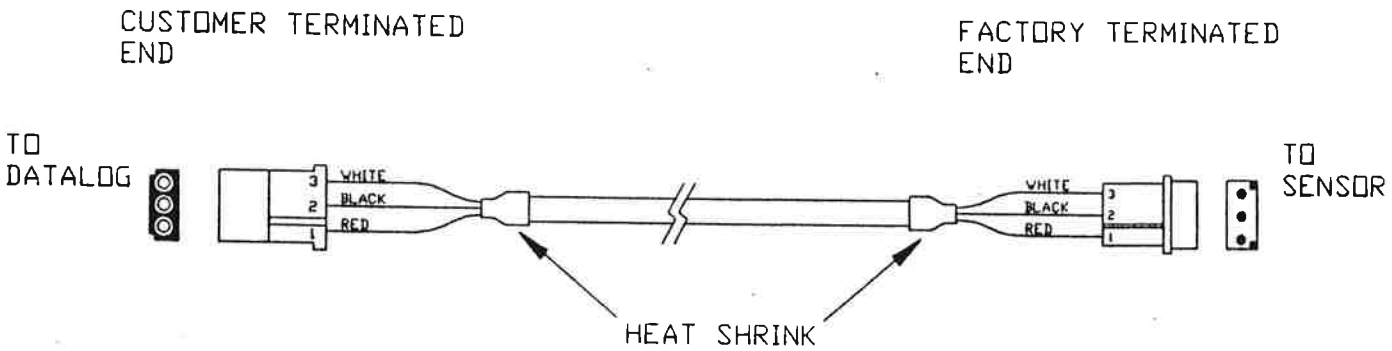
3. Strip the cable jacket back about two inches to expose the three inner wires. Strip each of the three inner wires to expose about 1/4 inch of copper at the end of each wire.

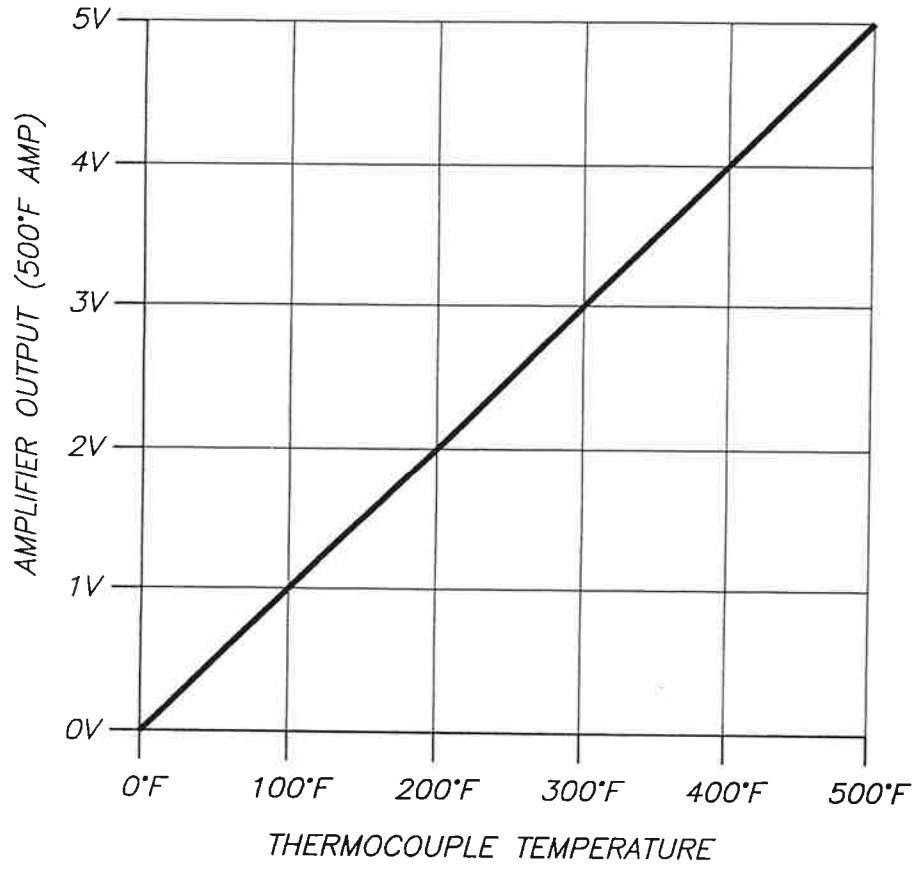
4. Slip the heat shrink tube over the three wires and down the cable until half of the length of the heat shrink tube is over the cable jacket and half is over the three wires. Carefully shrink the heat shrink tube with a match being careful not to burn the wires.

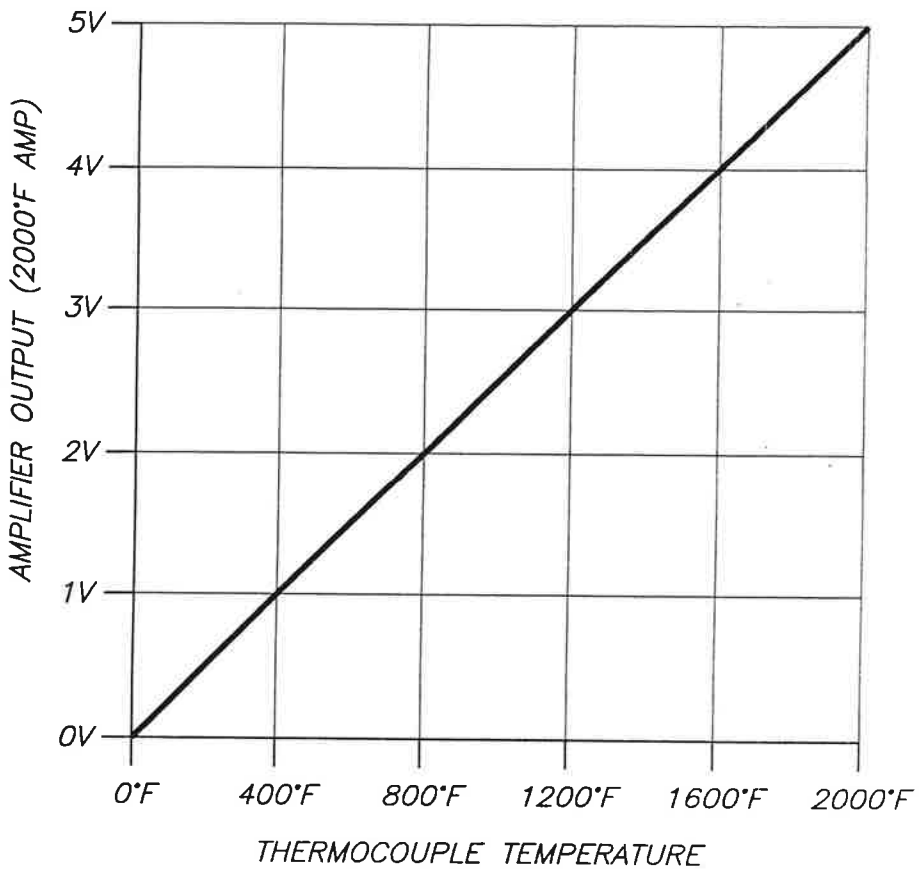
5. Crimp one of the included female connector terminals onto each of the three wires. IMPORTANT - Carefully solder the connections at each of the terminals to insure a strong lasting connection.

6. Plug the terminals into the connector housing according to the following diagram:

SENSOR EXTENSION CABLE WIRING







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