

CRYPTON



290 AU HI-SPEC EMISSION ANALYSER

OIML Class I and MOT approved

290 AU HI-SPEC EMISSION ANALYSER

Designed to meet or exceed all present high level European legislative standards, the 290 AU is Swiss Approved OIML Class 1 and has a Department of Transport Certificate of Acceptance for MOT use. The 290 AU is an infra-red emission analyser combined with a state-of-the-art message centre display which not only shows the 4 gas results but also Lambda Ratio and AFR. Offering excellent microprocessor controlled reliability, ease of use and a range of options to suit your requirements the 290 AU is the most advanced and versatile emission analyser available today.



FEATURES

- 4 Gas CO/HC/CO₂/O₂
- OIML Class 1 Approved
- Certificate of Acceptance for MOT use
- AFR/Lambda Ratio
- Large message centre with contrast control
- On-screen operator prompts, test selection menus and diagnostic messages
- Automatic calibration, zeroing and O₂ spanning
- Automatic leak detection and HC residue tests
- Exceptionally fast 5 minute warm-up time and rapid response
- Membrane function keys and numeric data input keys
- Optional Oil Temperature Probe and Engine RPM Display (DIS/Wankel and 4 stroke selection)
- Optional Trolley with storage
- Optional A4 width Printer with 2 copy paper, automatic date/time printout and personal header
- Garage name and address header input card
- Parallel Centronics and Serial RS485/RS232 outputs
- Communicates with Crypton Engine Test Equipment



Quality, Accuracy & Reliability

DESIGNED FOR MOT TESTING AND EUROPEAN EMISSION PROGRAMMES

The importance of accurate emission analysis is widely recognised and is now included in annual MOT tests. A full exhaust emission diagnosis provides more than just a check, thereby assisting with the analysis of the many fault conditions that cause poor combustion efficiency.

The 290 AU makes the emission check for MOT purposes simplicity itself with the unique AUTOMATIC OPERATOR PROMPTED MOT TEST. No other stand alone emission analyser provides such ease of use.

4 GAS COMBINED WITH AFR/LAMBDA DISPLAY

High levels of CO are produced in conventional petrol engines when insufficient oxygen causes incomplete combustion. This over rich mixture indicates possible air blockages or component wear. High HC levels occur when unburnt fuel is present indicating ignition system or engine wear faults.

With the advent of catalytic convertor equipped vehicles the CO/HC is reduced to near zero and so the measurement of CO₂ and O₂ are essential as diagnostic indicators.

The 290 AU LAMBDA display provides a quick check for engines with closed loop catalytic convertors by calculating the fuel efficiency directly from the exhaust emissions.

The 290 AU AFR display also provides a useful indicator of combustion efficiency with the calculation of the Air to Fuel Ratio for conventional exhaust systems.

UNIQUE DISPLAY GIVES CLEAR OPERATOR INSTRUCTIONS

The 290 AU message centre provides easy to read operator messages and diagnosis on screen.

The MOT test provides a simple procedure with clear step by step instructions to ensure the vehicle is correctly set prior to the MOT emission check.

The display also provides clear indications of filter blockages. Calibration is fully automatic ensuring that accuracy and reliability are always maintained.

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--> END (READINGS)          MOT GAS TEST

          MOT GAS TEST = PASS

RESULTS                                LIMITS
CO      0.00 % VOL      PASS      min max
HC      0 PPM VOL      PASS      - 1200
IDLE    749 RPM        PASS
SMOKE   PASS
    
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--> PRINT CERTIFICATE

ALT.	6.04	1220
MENU	CO % VOL	HC PPM VOL
	13.54	0.30
	CO2 % VOL	O2 % VOL
MOT	1000	26
	RPM	TEMP. C
	12.3 : 1	0.84
	AFR	LAMBDA

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--> READINGS          MOT GAS TEST

ENGINE SPEED      = 1000 RPM

ENSURE ENGINE AT NORMAL
OPERATING TEMPERATURE
(COOLING FAN CUT-IN TWICE)

OIL TEMPERATURE = 25 DEG.C

WARNING BEWARE ROTATING PARTS

--> PRESS WHEN DONE
    
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CRYPTON TRAINING CENTRE

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EQUIPMENT COURSES	SYSTEM COURSES
ENGINE MANAGEMENT	ON-SITE TRAINING
ELECTRONIC IGNITION	PETROL INJECTION

ON THE RIGHT COURSE FOR THE FUTURE

DATE : 24/06/93 TEST TIME : 16:14

MILEAGE : REG. NO :

CUSTOMER : MAKE/MODEL :

CO	=	1.57 % Vol
HC	=	267 ppm Vol
CO2	=	12.80 % Vol
O2	=	1.98 % Vol
RPM	=	915

LU	=	1.40 % Vol
HC	=	290 ppm Vol
CO2	=	12.47 % Vol
O2	=	2.27 % Vol
AFR	=	15.5 : 1
LAMBDA	=	1.04
RPM	=	898

HIGH QUALITY PRINTOUT TO IMPRESS YOUR CUSTOMER

The optional A4 printout provides a permanent record for you and your customer.

The 290 AU personalised header card enables garage name and address to be printed with results.

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Technical Specification

CO —0—99.9%	Accuracy to +/- 0.06% Repeatability to +/- 0.03%	Operating Temperature	+2 — +50 Degrees C
HC —0—9999 ppm	Accuracy to +/-11 ppm Repeatability to +/- 5 ppm	Response Time	10 Seconds to 95% of final reading with 8 m hose and probe 6 Seconds to 95% of final reading without hose and probe
CO₂ —0—20.00%	Accuracy to +/- 0.4% Repeatability to +/- 0.2%	Warm-up Time	5 Minutes
O₂ —0—25.00%	Accuracy to +/- 0.2% Repeatability to 0.1%	Humidity	0—85% relative humidity (non-condensing)
Noise: CO	<0.05%	Altitude	-1000 to +7000 feet -300 to +2100 metres
CO ₂	<0.1%	Power Consumption	200W
HC	<5 ppm	Power Requirements	180—250V AC 50—60Hz 110—120V Available to special order
RPM —0—6000 rpm	With DIS/Wankel and 4 stroke selection	Size	495mm (19 1/2") Wx368mm (14 1/2") D x 175 (7") H
Oil Temperature	0—120 Degrees C	Weight	16.5kg (36.3lb)
AFR Ratio	From 5:1 to 25:1		
Lambda Ratio	From 0.35 to 1.70 with fuel type selection, leaded, unleaded or LPG		

The 290 AU Range

290 — 4 Gas with Lambda/AFR Measurement

290 OR — As 290 plus Oil Temperature and RPM Display

290 P — As 290 plus A4 Width Printer

290 POR — As 290 plus A4 Width Printer, Oil Temperature and RPM Display

290 PORT — As 290 POR plus Trolley

Service

Essential rapid call-out and calibration services as well as contract maintenance is available from Transervice to ensure fast back-up and minimum down time in the event of a service requirement. Transervice is the largest garage equipment service organisation in the UK with regional offices, over 130 on the road engineers and backed-up with Crypton training and spare parts. The equipment comes with a full 12 month warranty and operating instructions.

The company reserve the right to introduce improvements in design or specification without prior notice.

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CRYPTON

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WELLMAN
WERKSTATT-TECHNIK

