

CERTIFICATE OF CALIBRATION

ISSUED BY: **CALIBRATION MAINTENANCE & REPAIR LTD**

DATE OF ISSUE: 30 November 2022 CERTIFICATE NUMBER: **1136398**



0654



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Approved Signatory
Electronically Authorised Document

P K CLARK J FRYER
 R J WADE M FOY
 M A FROST
 M S PARDOE

CUSTOMER

DJB LABCARE LTD
UNIT 12 HOWARD WAY
CROMWELL BUSINESS CENTRE
NEWPORT PAGNELL
BUCKINGHAMSHIRE
MK16 9QS
UNITED KINGDOM

MANUFACTURER

DESCRIPTION

MODEL

SERIAL No.

IDENT No.

DATE RECEIVED

DATE OF CALIBRATION

ORDER No.

STANDARD

TACHOMETER OPTICAL

AT-6

12078435

UNKNOWN

24 NOVEMBER 2022

29 NOVEMBER 2022

NS23971

INSTRUMENT CONDITION

Adjustments Made
Repairs Made

No
No

ENVIRONMENT

The instrument was placed in the Laboratory environment for a minimum period of 4 hours prior to calibration.

The ambient conditions were: 18 to 23°C and 45 %RH ± 15 %RH.

STABILITY

The results contained in this Certificate refer to the measurements made at the time of test and not to the instrument's ability to maintain calibration.

PROCEDURE

Measurements were performed in accordance with the in house Laboratory procedure No.1053

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a coverage probability of approximately 95 %. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

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UKAS ACCREDITED CALIBRATION LABORATORY No. 0654

Calibration Equipment Used:

| <u>Cert Number</u> | <u>Ident Number</u> | <u>Model</u> | <u>Serial Number</u> | <u>Test Equipment Calibration Due</u> |
|--------------------|---------------------|--------------|----------------------|---------------------------------------|
| M2988 | 475 | A002206.G1 | 13431078 | 8 Sept 2023 |
| 1132675IH | 143 | 33220A | MY44025316 | 30 Sept 2023 |

Notes:

Results relate only to the items calibrated.

Measurement Uncertainties

These are our best measurement capabilities with the listed test equipment, any uncertainties shown on the result sheet take in to account the resolution of the instrument being calibrated.

| <u>Parameter</u> | <u>Range</u> | <u>Uncertainty</u> | <u>Parameter</u> | <u>Range</u> | <u>Uncertainty</u> |
|------------------------|----------------------|--------------------|------------------|--------------|--------------------|
| Revolutions Per Minute | 6RPM to 600RPM | 0.064RPM | | | |
| | 600RPM to 6000RPM | 0.065RPM | | | |
| | 6000RPM to 120000RPM | 0.066RPM | | | |

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Parameter

Range

Uncertainty

Parameter

Range

Uncertainty

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RESULT SHEET 1053-NC-UKAS : STANDARD AT-6 OPTICAL TACHOMETER

AS FOUND

BATTERY REPLACED: NO

The Revolution Per Minute (RPM) was simulated using a precision Frequency Generator with an attached optical light source.

RPM

| Range | Simulated | Indicated | Units | Indicated Deviation | Measurement Uncertainty ± |
|------------------|-----------|-----------|-------|---------------------|---------------------------|
| 2 to 99999RPM | 600.000 | 600.0 | RPM | 0.000 | 0.064 |
| | 1000.00 | 1000 | RPM | 0.00 | 0.58 |
| | 2500.00 | 2500 | RPM | 0.00 | 0.58 |
| | 5000.00 | 5000 | RPM | 0.00 | 0.58 |
| | 7499.99 | 7500 | RPM | 0.01 | 0.58 |
| | 9999.82 | 10000 | RPM | 0.18 | 0.58 |
| | 14999.47 | 15000 | RPM | 0.53 | 0.58 |
| | 19999.16 | 20000 | RPM | 0.84 | 0.58 |
| | 24998.83 | 25000 | RPM | 1.17 | 0.58 |
| | 29998.43 | 30000 | RPM | 1.57 | 0.58 |

Manufacturer stated Accuracy: $\pm(0.05\%+1 \text{ digit})$

COMMENTS:

TEST ENGINEER: M Foy

DATE: 29th November 2022