AURMKA001 Manage motor sport data

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to configure a data acquisition system, and analyse and present motor sport data. It involves preparing for the task, analysing data requirements, configuring an electronic system, and retrieving, analysing and presenting data in various forms, including charts, graphs, tables, comparisons and reports. The data may be related to weather, circuit, driver or rider characteristics, system capability, and vehicle design specifications.

It applies to those working in the motor sport industry.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Motor Sport

Unit Sector

Information Technology

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Identify and confirm data acquisition requirements	1.1 Team requirements and controlling body rules, category rules and supplementary regulations are used to specify data requirements 1.2 Benchmark specifications for a correctly functioning electronic data acquisition system are accessed and interpreted

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
2. Configure electronic data acquisition system	2.1 Tools and material to support data acquisition process are selected and prepared 2.2 Component rates, ratios and parameters for input sensors are calculated and entered into system math channels 2.3 Sample rates most suited to particular data logging channel are entered 2.4 System operation is checked according to manufacturer specifications and team requirements
3. Retrieve data	3.1 Data acquisition system start-up procedure is carried out according to manufacturer procedures 3.2 Data acquisition system is operated according to its designed capacity and purpose, manufacturer specifications and *safety requirements* 3.3 Retrieved data is verified, where appropriate, using reliable alternative or optional processes according to team requirements 3.4 Data parameter variables and potential for inaccurate results are identified
4. Analyse data	4.1 Sources of collected data are compared for consistency 4.2 Data is analysed using mathematical processes 4.3 Trends and patterns in data are analysed, including non-conforming results outside of predicted outcomes 4.4 Possible reasons for trends and patterns are investigated 4.5 Potential vehicle performance enhancement solutions are identified 4.6 Problems with required data or operation of equipment are reported to appropriate persons
5. Present data	5.1 End users of statistical data and their preferred format are identified 5.2 Data is represented to meet end user needs 5.3 Recommendations are documented and presented with supporting data
6. Complete work processes	6.1 Equipment and support material are cleaned, maintained and prepared ready for further use according to manufacturer procedures and team requirements 6.2 Faults in acquisition systems and components are diagnosed 6.3 Unserviceable equipment and faults are documented and appropriate action is taken according to team procedures

     Mining and Automotive Skills Alliance

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	• adapt procedures to different vehicles.
Reading skills to:	• interpret data acquisition system and data analysis software operating procedures from manufacturer instructions.
Oral communication skills to:	• discuss needs of data end users.
Numeracy skills to:	• use basic mathematical processes, including addition, subtraction, multiplication and division, to calculate component rates, ratios and parameters for input sensors • compare numerical information with expected values • perform basic statistical calculations in data, such as mean and standard deviation.
Digital literacy skills to:	• operate computer-based data acquisition systems and data analysis software to analyse data and represent data in differing formats.
Planning and organising skills to:	• gather data with a minimum of backtracking or workflow interruptions.
Self-management skills to:	• work efficiently with minimal supervision and within workplace timeframes.
Technology skills to:	• connect and disconnect data acquisition system to vehicle without causing damage.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

Safety requirements must include:	• work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for identifying hazards and managing risks.

Unit Mapping Information

Equivalent to AURMKA4001 Manage motorsport data

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1