SOVD: Understanding Service-Oriented Vehicle Diagnostics and the Future Standard

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| Slide Number | Voice-Over Script | On-Screen Text | Video Description | Image/Infographic Suggestion |
| 1 | Hello, and welcome to the module on Service-Oriented Vehicle Diagnostics (SOVD).  *Click Start to begin the module.* | Service-Oriented Vehicle Diagnostics (SOVD)  *Click Start to begin* | Soft animation of a futuristic car diagnostic interface appearing on a screen. Upbeat, modern music plays in the background. | A sleek, futuristic car diagnostic interface with the SOVD logo. |
| 2 | Before we begin, let us watch a scenario. | **Scenario** Before we begin, let us watch a scenario. | The scene opens with a busy car repair shop in Mumbai. Two mechanics, Rohan and Priya, are working on a modern SUV. Rohan is looking frustrated. *Add the transition lines* | Image of a bustling car repair shop in Mumbai, India, with modern diagnostic equipment. |
| 3 | Rohan: (Frustrated) I'm telling you, Priya, this new SOVD system is giving me a headache. I can't even figure out where to start. Priya: (Calmly) Relax, Rohan. We just need to understand the new protocols. | Rohan: I'm telling you, Priya, this new SOVD system is giving me a headache. Priya: Relax, Rohan. We just need to understand the new protocols. | Rohan wipes sweat off his forehead, looking stressed. Priya examines a tablet with a calm demeanor. | Close-up of Rohan's frustrated face and Priya's calm, analytical expression. |
| 4 | Rohan: Protocols? It’s all jargon – ASAM, MCD, UDS... my head is spinning! Priya: It's just new terminology, Rohan. Think of it as an upgrade to our existing tools. We can learn it together. | Rohan: Protocols? It’s all jargon – ASAM, MCD, UDS... Priya: It's just new terminology. We can learn it together. | Rohan throws his wrench down in exasperation. Priya puts a hand on his shoulder reassuringly. | Image of diagnostic terms flashing on a screen, causing Rohan's confusion. Priya offering support. |
| 5 | Rohan: (Sighs) I wish there was a simpler way to understand this SOVD stuff. All these acronyms and standards… it’s overwhelming. Priya: Let’s take a step back. Maybe we can find some training materials to simplify things. | Rohan: I wish there was a simpler way to understand this SOVD stuff. Priya: Let’s take a step back. Maybe we can find some training materials. | Rohan leans against the car, looking defeated. Priya is typing on her phone, searching for resources. | Priya searching for SOVD training on her phone, while Rohan looks on with hope. |
| 6 | Priya: Look, I found this e-learning module on SOVD. It seems to break it down into smaller, manageable topics. Rohan: (Hopeful) Really? Maybe that’s exactly what we need. Let’s give it a try. | Priya: Look, I found this e-learning module on SOVD. Rohan: Really? Maybe that’s exactly what we need. Let’s give it a try. | Priya shows Rohan her phone screen with the e-learning module. Rohan's face brightens with renewed hope. *Add the transition lines* | Close-up of the e-learning module interface on Priya’s phone. |
| 7 | As seen from the above scenario... | As seen from the above scenario... | A montage of scenes from the scenario plays quickly. | Montage of the car repair shop scenario. |
| 8 | Let us quickly look at the objectives of this module.  By the end of this module, you will be able to:  • Recall common acronyms used in SOVD  • Explain the evolution of vehicle diagnostics  • Apply ASAM standards in vehicle diagnostics  • Analyze the SOVD Standardization landscape | **Learning Objectives**  By the end of this module, you will be able to:  • Recall common acronyms used in SOVD  • Explain the evolution of vehicle diagnostics  • Apply ASAM standards in vehicle diagnostics  • Analyze the SOVD Standardization landscape | Objectives animate on screen one by one with checkmarks appearing next to each. | Animated checkmarks appear next to each learning objective as it is displayed. |
| 9 | Now that we have a general overview, let us delve into the 'Understanding SOVD landscape'.  *Click each tab to learn more.* | **Understanding SOVD landscape**  • ASAM in Nutshell  • ASAM – Diagnostic Portfolio  • Understanding MCD-2 D & MCD-3D  • SOVD Standardization Landscape  *Click each tab to learn more.* | *<Create an interactive infographic with clickable tabs for each item: "ASAM in Nutshell," "ASAM – Diagnostic Portfolio," "Understanding MCD-2 D & MCD-3D," and "SOVD Standardization Landscape." Each tab shows a separate slide on click. Only one tab is active at a time. Guide the learner through each item.*> | An interactive infographic with tabs for each topic within the "Understanding SOVD Landscape" section. |
| 10 | Let's start with ASAM in Nutshell. The ASAM - Association for Standardization of Automation and Measuring Systems was founded in December 1998. It is a member-Driven Organization with more than 350 member companies worldwide. ASAM standards define interfaces, protocols, file formats and data models for development and testing throughout the vehicle development pipeline. *Add the transition lines* | **ASAM in Nutshell** ASAM - Association for Standardization of Automation and Measuring Systems. Founded in December 1998. Member-Driven Organization - more than 350 member companies worldwide. ASAM standards define interfaces, protocols, file formats and data models. | Zoom in on the "ASAM in Nutshell" tab after it is clicked. Animate the bullet points as they are spoken. | The "ASAM in Nutshell" section highlighted with bullet points. |
| 11 | We will now see about the ASAM Diagnostic Portfolio. Standards for describing and testing the diagnostic subsystems of devices is one of the domains of ASAM. It also includes Standards for working with ECU variables and parameters, Standards for describing and testing ECU networks, Standards for working with test systems. *Add the transition lines* | **ASAM Diagnostic Portfolio** Standards for describing and testing the diagnostic subsystems of devices. Standards for working with ECU variables and parameters. Standards for describing and testing ECU networks. Standards for working with test systems. | The ASAM Diagnostic Portfolio section appears. Highlight each area of standardization as it is mentioned. | Visual representation of the different areas covered by the ASAM Diagnostic Portfolio. |
| 12 | Next, let's understand MCD-2 D & MCD-3D. | **Understanding MCD-2 D & MCD-3D** | Explanation of MCD-2 D & MCD-3D | Diagrams illustrating the differences between MCD-2 D and MCD-3D. |
| 13 | Additionally, the SOVD Standardization Landscape will be discussed. This includes various standards and protocols that enable service-oriented vehicle diagnostics, such as UDS, REST, and JSON. | **SOVD Standardization Landscape** SOVD Standardization Landscape includes various standards and protocols that enable service-oriented vehicle diagnostics, such as UDS, REST, and JSON. | A visual representation of the SOVD standardization landscape, showing the relationships between different standards and protocols. | A diagram illustrating the SOVD standardization landscape with UDS, REST, and JSON highlighted. |
| 14 | Before we proceed further, let us have a quick check of your understanding. Read the question carefully.   Click Submit to verify your answer.  Feedback: Well done! That’s correct. ASAM stands for Association for Standardization of Automation and Measuring Systems. Oops, That’s incorrect. The correct answer is Association for Standardization of Automation and Measuring Systems. | **Check Your Understanding** What does ASAM stand for? a) Association for Software and Machine learning b) Automotive System Architecture Management c) Association for Standardization of Automation and Measuring Systems d) Automated System Assembly Method  Select the correct option and click Submit. | *<Allow the learners to choose a single option and activate the Submit button.*> | Multiple-choice question about the meaning of ASAM. |
| 15 | Next, let us discuss the 'Evolution of SOVD Diagnostics'. SOVD represents a significant shift from traditional diagnostic methods. Early vehicle diagnostics relied on proprietary protocols and hardware, making it difficult to access and interpret data across different vehicle models and manufacturers. | **Evolution of SOVD Diagnostics** SOVD represents a significant shift from traditional diagnostic methods. Early vehicle diagnostics relied on proprietary protocols and hardware. | A timeline illustrating the evolution of vehicle diagnostics from traditional methods to SOVD. *Add the transition lines* | Timeline graphic showing the evolution of vehicle diagnostics. |
| 16 | Now that we have gone through the Evolution of SOVD Diagnostics, let us delve into 'SOVD Standardization'. SOVD Standardization is crucial for ensuring interoperability and compatibility across different vehicle systems and diagnostic tools. Key standardization efforts are led by organizations like ASAM and ISO, which develop and maintain standards for diagnostic communication protocols, data formats, and interfaces. | **SOVD Standardization** SOVD Standardization is crucial for ensuring interoperability and compatibility across different vehicle systems and diagnostic tools. Key standardization efforts are led by organizations like ASAM and ISO. | Visual representation of the SOVD standardization process, highlighting the roles of ASAM and ISO. *Add the transition lines* | Diagram illustrating the SOVD standardization process. |
| 17 | We will now understand about the 'SOVD Developments'. Recent SOVD developments focus on enhancing diagnostic capabilities through cloud connectivity, over-the-air (OTA) updates, and advanced data analytics. Cloud-based diagnostics enable remote access to vehicle data, allowing for real-time monitoring, predictive maintenance, and remote software updates. | **SOVD Developments** Recent SOVD developments focus on enhancing diagnostic capabilities through cloud connectivity, over-the-air (OTA) updates, and advanced data analytics. Cloud-based diagnostics enable remote access to vehicle data, allowing for real-time monitoring, predictive maintenance, and remote software updates. | A futuristic interface showing cloud connectivity and OTA updates for vehicle diagnostics. *Add the transition lines* | Visual of cloud-based diagnostics and OTA update interface. |
| 18 | Additionally, let us discuss the 'SOVD User Perspective and Future Outlook'. From a user perspective, SOVD offers several benefits, including improved diagnostic accuracy, reduced downtime, and enhanced vehicle performance. Technicians can quickly identify and resolve issues using standardized diagnostic interfaces and data formats, minimizing the need for specialized training and equipment. | **SOVD User Perspective and Future Outlook** From a user perspective, SOVD offers several benefits, including improved diagnostic accuracy, reduced downtime, and enhanced vehicle performance. Technicians can quickly identify and resolve issues using standardized diagnostic interfaces and data formats. | Image of a mechanic efficiently diagnosing a vehicle using SOVD tools. *Add the transition lines* | Mechanic using SOVD diagnostic tools. |
| 19 | Before we proceed further, let us have a quick check of your understanding. Read the question carefully.   Click Submit to verify your answer.  Feedback: Well done! That’s correct. SOVD enhances diagnostic capabilities through cloud connectivity, over-the-air (OTA) updates, and advanced data analytics. Oops, That’s incorrect. The correct answer is SOVD enhances diagnostic capabilities through cloud connectivity, over-the-air (OTA) updates, and advanced data analytics. | **Check Your Understanding** Which of the following is a key feature of recent SOVD developments? a) Reliance on proprietary protocols b) Limited data analytics c) Cloud connectivity and OTA updates d) Exclusive use of specialized equipment  Select the correct option and click Submit. | *<Allow the learners to choose a single option and activate the Submit button.*> | Multiple-choice question about key features of SOVD developments. |
| 20 | Let us continue by 'Realization of Today's Diagnostic Use Cases with SOVD'. SOVD enables the realization of various diagnostic use cases, including fault code reading, parameter identification, and software updates. Fault code reading allows technicians to quickly identify and troubleshoot vehicle issues by accessing standardized diagnostic trouble codes (DTCs). Parameter identification involves monitoring and analyzing vehicle parameters, such as engine temperature, fuel pressure, and sensor data, to identify potential problems. | **Realization of Today's Diagnostic Use Cases with SOVD** SOVD enables the realization of various diagnostic use cases, including fault code reading, parameter identification, and software updates. Fault code reading allows technicians to quickly identify and troubleshoot vehicle issues. | A diagram illustrating different diagnostic use cases enabled by SOVD. *Add the transition lines* | Diagram of diagnostic use cases. |
| 21 | Before we wind up, here is a quick recap:  In this module, you have learned about:  • Common acronyms used in SOVD  • Evolution of vehicle diagnostics  • Application of ASAM standards in vehicle diagnostics  • Analysis of the SOVD Standardization landscape | **Summary**  In this module, you have learned about:  • Common acronyms used in SOVD  • Evolution of vehicle diagnostics  • Application of ASAM standards in vehicle diagnostics  • Analysis of the SOVD Standardization landscape | *<Sync OST with the audio.*> | Textual summary of key learning points. |
| 22 | Now that you have understood the concept of the SOVD, let us have an assessment.   Before you begin, read the instructions carefully.   Click Start once you are ready! | **Instructions**  1. There are 15 questions in total.  2. Each correct answer will earn you 10 points.  3. There is no penalty for incorrect answers.  4. To pass, you need to achieve a score of at least 90%.  5. Once you complete the assessment, your score will be revealed.  6. If your score falls below 90%, you will have three opportunities to retake the assessment.   Click Start to begin. | *<Allow the learners to select Start button.*> | On-screen instructions for the final assessment. |
| 23 | Thank you for your time. We hope this module was helpful and informative. | **Thank You** | Positive, happy learner or instructor gives a thumbs-up. | Image of a smiling mechanic giving a thumbs-up. |