



**hmt-1**

## The Challenge: Solving Complex Mechanical Problems in Volkswagen Van Centers Remotely and Efficiently

### Challenge

Volkswagen mechanics need to be able to assess and fix complex problems, which lie outside the standard repairs they usually make. They need to share these complex problems with support technicians, giving as much information as quickly as possible. Current telediagnosis machinery does not satisfactorily meet this requirement.

### Solution

Using the voice-activated HMT-1, technicians can work completely hands-free, whilst at the same time liaising effectively with technicians at the support center. Technicians at the support center can control the camera on the master technician's HMT-1, seeing the exact problem and offering relevant advice.

### Results

Remote assistance for the master technician via the HMT-1 has greatly increased the number of complex issues that can be fixed remotely, cutting travel costs and repair time.

Volkswagen van mechanics are often faced with seemingly 'unfixable' issues. This is where a VW master technician needs to pause and contemplate how best to fix the problem. In many cases, this involves liaising with one of the VW technical support centers, who offer expert advice based on similar issues they've experienced.

The current technology utilizes telediagnosis equipment, allowing screen shares to analyze diagnostics taken by the master technician. In many cases, this is not sufficient to understand the nature of the problem, resulting in one of the main support center technicians traveling to the VW van center. This incurs costs and longer repair times. Paul Anderson, service Operations Manager for Volkswagen Commercial Vehicles in the UK stated,

"If there was a big red button we could press that would give an immediate answer to our dealers, we'd do that. But there are situations where you need a step-by-step walk-through because the problem is outside the standardized process. What we're talking about are challenging, complex problems that there aren't answers for."





## Fixing Complex Mechanical Faults

The head-mounted HMT-1 AR allows the master technician to provide an efficient and accurate repair of the vans in their care with the remote assistance of the technicians at the main support center.



With business and commercial customers relying on the vans in their fleet, this is essential to maintaining good relationships with clients, and the VW reputation for excellence.

## The Volkswagen Commercial Van Center HMT-1 AR Trial

Volkswagen mechanics work in a noisy environment and need both hands free to work on difficult tasks. Ten commercial VW van centers have been chosen to trial an augmented-reality solution: the RealWear HMT-1. The devices were first tested out in the workshops of the main support center. The devices fit well and didn't become dislodged when working. The devices connect through both 4G and Wi-Fi, and the team found both methods of connection strong.

The HMT-1 device is voice activated so allows the master technicians to keep both hands and their minds on the job at hand. The camera in the HMT-1 can be manipulated by both the master technician in the workshop, and the remote technician at one of the main support centers. This allows the technician to see exactly what they need to in order to fix the issue, without forcing the master technician to move into awkward and potentially unsafe positions.



*Volkswagen technician uses HMT-1 with both hands free.*

## The Result: Costs Cut, Time Saved and Happier Employees

By seeing what the shop master technician sees and communicating directly, the technicians in the support center can typically resolve the problem remotely and cut down on travel time and the expense caused by on-site visits.

The devices could help reduce job attrition. "If you're the master technician, it's all on you," Anderson said. "The customer wants its vehicle back. It's all stressful for a master technician who wants to resolve the tough problem."

But with augmented-reality devices aiding the diagnostic process, technicians "feel relieved because it's like having another master technician in the dealership," he said. "We can really support them through a stressful time."