



Project Results from Lean Efforts

Pursuit Vehicle Mobile Platform Installation

Washington State Patrol



Problem

The Washington State Patrol (WSP) Fleet Section acquires, outfits, customizes and maintains patrol vehicles and related emergency equipment for the agency. In addition, the Fleet Section personnel manage a statewide replacement and retirement schedule for all vehicles. Prior to August 2011, the mobile platform installation process produced 12 vehicles per month; however, that pace was not enough to meet the 110,000 mile replacement standard.

Causes

Lack of Standard Work – The pursuit vehicle mobile platform was modified to meet the requests and desires of the vehicle owner. These modifications took extra time to complete and created challenges when repair work was needed.

Workload Issues – Emergency equipment repair work was completed by the installation team. This work was not scheduled and had to be completed as needed. The installation team was often pulled from its primary duty to complete this work.

Mistakes and Rework – The equipment kits delivered to the installation team contained the wrong equipment 80% of the time.

Inconsistent Workflow – The installation team worked on a variety of vehicle platforms as determined by the supervisor/manager. The work of the team was interrupted regularly to address different issues that arose.

Solutions

Standard Work – The team developed a standard pursuit vehicle mobile platform and all pursuit vehicles are now built to that standard. Any variation to the standard is completed at a private vendor automotive shop.

Workload Leveling – Emergency equipment repair work was traditionally completed by the installation team which limited the amount of time available to produce new pursuit vehicles. This work was shifted to the mechanics in the repair shop.

Mistake Proofing – Equipment inventory was reorganized, and labeled, and pick lists were developed. New carts replaced the pallets to improve kit accuracy and to separate equipment inventory based on installation needs.

Dedicated Work Teams – Personnel were assigned to specific teams to develop skills and improve competencies in order to increase pursuit vehicle mobile platform installations.

Results

The pursuit vehicle mobile platform installation capacity has increased by 40% and, when fully staffed, the Fleet Section is expected to meet the goal of producing 20 vehicles per month.

Next Steps

The WSP will conduct Lean workshops at the Fleet Section to address the continual improvement process. The mobile platform installation process will be reviewed and adjusted with the introduction of the Chevrolet Caprice.



The chart below tracks new vehicle production. This mirrors the installation lanes and informs installers of upcoming work.



Visual cues have been created throughout the shop. The chart above shows how many cameras/computers were to be installed by the end of the biennium. The chart is updated regularly and gives everyone a clear view whether there are any abnormalities with installations.

Lean Methods Used:

Value Stream Mapping

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