

MAGNETO

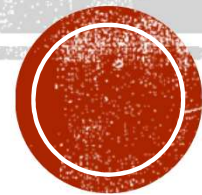
THE TRUCK MOUNTED MAGNET

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PURPOSE OF THE MAGNET

- Remove nails and other metal objects from the roadway and shoulders.
- Save tires and labor hours.
- Save time by allowing crews to pothole at the same time debris is being removed.



PRIOR TO IMPLEMENTATION

- Small roller magnets, brooms, and shovels were used to clear metal debris from the highways and shoulders.
- Metal debris removal required more employees, time, and labor.
- Public and Private vehicle tires were more frequently requiring repair or replacement do to metal objects being picked up in tires.



DESIGN

Magneto is designed to remain on the vehicle for easy use.
Simply fold the magnet down when needed for picking up debris.
When not in use, fold the magnet into the upright position.



DESIGN

Two bolts are used to lock the magnet in its upright position (storage/driving position).



To unlock, the two pins are removed allowing the magnet to fold down into the working position.





COST & MATERIALS

- \$1000.00 for the magnet.
- 4 hours @ welders rate.
- Scrap material was used constructing the brackets.
- New material would cost ~ \$100.00.
- Materials include: bullet hinges, bolts and nuts, pins, tubing and flat bar.



BENEFITS

- **Saves time**
 - ✓ Cover more area at one time
 - ✓ Pick up more material
 - ✓ Less time with state vehicles receiving tire repair
- **Save Money**
 - ✓ Labor hours
 - ✓ Tire Repair & Blowouts
- **Safer for DOTD employees**
 - ✓ Fewer employees on roadways & shoulders
 - ✓ Fewer injuries due to less manual labor
 - ✓ Less time spent outside of vehicle on the roadway & shoulder
- **Safer for State Police & Public**
 - ✓ Fewer flat tires as a result of debris being picked up more easily and quickly
 - ✓ Police and public not put into as many dangerous tire changing situations













