

Make sure you schedule for maintenance

Scheduled preventive maintenance is the best way to prevent unscheduled breakdowns and costly stops in your production.

By MARK NEIDICH

What's that saying about an ounce of prevention beating a pound of cure? A little early expenditure of time and money, through scheduled maintenance, can save your operation from far greater expense later. Scheduled preventive maintenance (PM) is the best way I know to prevent unscheduled breakdowns.

PM is a series of regular inspections and equipment adjustments to catch problems early, before they have a chance to develop into major costly repairs. The preventive maintenance inspection program is one aspect of scheduled maintenance; other key parts are operator inspections and planned component replacement.

An effective preventive maintenance inspection is a systematic servicing and inspection of trucks and equipment at a predetermined interval, based on time, mileage or hours. The interval varies with the type of equipment and its use.

It's the system that counts

The primary objective of a PM program is to maximize truck and equipment availability. Remember, PM is a scheduled operation and it produces scheduled repairs so you have maximum use of your mechanics and minimum downtime of your equipment. A good PM program will also minimize unscheduled repairs and unexpected breakdowns.

Diagnosis and correction are vital to any PM program, so necessary repairs should be scheduled by time and planned accordingly. Obviously, it is more cost effective to execute a "planned" repair in the shop than to fix a breakdown in the field.

The preferred method of servicing is usually by the mechanic according to a routine schedule. I break out PM into three general schedules, ac-

cording to mileage, time between service and the maintenance performed.

The operators themselves are key to a good inspection system, and inspections should be done routinely by them. Mechanics, too, should make inspections periodically. The inspection should include the following preventive maintenance checks:

PREVENTIVE MAINTENANCE CHECKLIST

PMI Vehicle

Inspection:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Accident kit | <input checked="" type="checkbox"/> Engine oil level |
| <input checked="" type="checkbox"/> Gauge | <input checked="" type="checkbox"/> Running lights |
| <input checked="" type="checkbox"/> Automatic transmission | <input checked="" type="checkbox"/> Fire extinguishers |
| <input checked="" type="checkbox"/> Headlights | <input checked="" type="checkbox"/> Tire pressure |
| <input checked="" type="checkbox"/> Brake | <input checked="" type="checkbox"/> First aid kit |
| <input checked="" type="checkbox"/> Hydraulic oil level | <input checked="" type="checkbox"/> Truck inspection |
| <input checked="" type="checkbox"/> Dashboard light | <input checked="" type="checkbox"/> Four-way flashers |
| <input checked="" type="checkbox"/> Radiator | <input checked="" type="checkbox"/> Turn signals |
| | <input checked="" type="checkbox"/> Two-way radio |

PMI Trailer

Inspection:

- Ball coupler
- Equipment tie-down
- Running lights
- Safety chains
- Turn signals

PMI Equipment

Inspection:

- Engine oil level
- Lubrication
- Radiator
- Tire pressure
- Transmission/hydraulic oil level

Routines that work

When it is time for servicing, make sure your mechanic is performing this according to a routine schedule. The maintenance plan should be broken out into categories, according to mileage or time.

Make sure that all defects are noted and scheduled for repair during the servicing and inspection process. Notify the production department or team so they can adjust the workload. You can't rush these things — the fleet mechanic(s) should be given the time to properly complete repairs.

A good PM program consists of several department levels. Responsibility starts with the operator, who is the cornerstone of an effective program, and then progresses up through the chain of command:

- ▶ Operator
- ▶ Crew leader
- ▶ Mechanic
- ▶ Fleet manager
- ▶ Account manager/operations manager
- ▶ Vice president operations/president/owner.

Smart maintenance management

Applying this information to the green industry can be a challenge. Someone has to implement the program and monitor its progress. Paper is important to the program because it provides structure and accountability. But the types of paper forms you use and how and when they are monitored determine the success of your system. Don't forget that operation and training are as important to the success of the program as the system itself.

It takes a certain amount of time to perform a service. Knowing this, and multiplying it by the number of pieces of equipment, will help you determine the time schedule (when the equipment will be serviced) and how much labor will be needed.

Spare equipment also plays a role in the program. Ideally, a fleet should have 115% of truck and equipment needs. Spare equipment will keep your workers going, even while maintaining your routine maintenance schedule.

Flexible scheduling of maintenance and repairs may be needed to allow you to reduce the time that your trucks and equipment will be out of service. For example, during normal work hours (7 a.m. to 5 p.m.) trucks and equipment could be out producing revenue. This means service time is either before 7 a.m. or after 5 p.m. You can see how production affects the fleet's service hours.

EQUIPMENT MAINTENANCE SCHEDULE BASED ON MILEAGE OR TIME

Trucks

Based on manufacturer's recommendation:

3,500 to 5,000 miles/ 3 to 6 months
200 to 400 hours/ 1 year

- Lubrication
- Minor repairs
- Oil change
- Tire pressure

MAJOR SERVICE/WINTER

Based on manufacturer's recommendation:

15,000 to 30,000 miles/ 1 to 2 years
1,200 to 2,400 hours

- Belts
- Brakes
- Cooling system
(Check radiator hoses)
- Exhaust
- Suspension
- Fuel filter
- Testing battery/charging system
- Tires
- Tune up

Equipment

Based on manufacturer's recommendation:

25, 50, 100, 200 hours
1 to 3 months, 6 months to 1 year

- Lubrication
- Minor repairs
- Oil change
- Tire pressure

MAJOR SERVICE/SPRING

Based on manufacturer's recommendation:

250, 500, 750, 1000 hours
3, 6, 9 months, 1 year

- Air-cooled engines
- Belts
- Cooling fins
- Decks: Belts, pulleys, stress cracks
- Drive systems
- Frame: Stress cracks, bearings, bushing
- Hydros: hoses, fluid leaks
- Water cooled engine: radiator/hoses

The fleet department should be working on trucks and equipment ahead of their seasonal production needs. This gives ample time to perform the work and not delay production.

Mark Neidich is fleet manager at Groundmasters, Cincinnati, OH, where he is responsible for 45 trucks and 400 pieces of equipment, including tractors, turf spraying equipment, commercial mowers, small power equipment, snow plows, salt spreaders, trailers and landscape renovation equipment.