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SW 4670.3C  
Appendix 4

## APPENDIX 4. PREVENTIVE MAINTENANCE STANDARD FOR SPME

\*NOTE All items listed shall be accomplished on each SPME to which they apply at least annually and more frequently if indicated below.\*

|                                                            | <u>Trucks</u><br>Miles*Mos**<br>or<br>Days* | <u>Tractors</u><br>(all<br>types<br>except<br>truck)<br>Hrs*Mos** | <u>Cranes,</u><br><u>Excavating</u><br>& <u>Grading</u><br><u>Eqpt.</u><br>except<br><u>Bulldozer</u><br>Hrs*Mos** | <u>Bulldozer</u><br>Hrs*Mos** | <u>Fork</u><br><u>Lifts</u><br>Hrs*Mos** | <u>Snow</u><br><u>Vehicles</u><br>Hrs*Mos** |
|------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------|---------------------------------------------|
|                                                            |                                             |                                                                   |                                                                                                                    |                               |                                          |                                             |
| <u>SERVICE</u>                                             |                                             |                                                                   |                                                                                                                    |                               |                                          |                                             |
| LUBRICATE:                                                 |                                             |                                                                   |                                                                                                                    |                               |                                          |                                             |
| Chassis (including<br>chassis with<br>sealed fittings)     | 2000                                        | 50                                                                | 50                                                                                                                 | 20                            | 100                                      | 50                                          |
| Generator--<br>Alternator<br>(except sealed<br>bearings)   | 2000                                        | 150                                                               | 150                                                                                                                | 150                           | 100                                      | 150                                         |
| Distributor                                                | 2000                                        | 150                                                               | 150                                                                                                                | 150                           | 100                                      | 150                                         |
| Accelerator<br>Linkage                                     | 2000                                        | 150                                                               | 150                                                                                                                | 150                           | 100                                      | 150                                         |
| Exhaust Manifold<br>Control Valve                          | 2000                                        | 150                                                               | 150                                                                                                                | 150                           | 100                                      | 150                                         |
| Door Hinges, Locks,<br>and Latches                         | 2000                                        | 400                                                               | 400                                                                                                                |                               | 400                                      | 150                                         |
| Repack Universal<br>Joints                                 | 10000                                       | 400                                                               | 400                                                                                                                | 400                           | 400                                      | 150                                         |
| CHANGE ENGINE OIL--USE<br>HEAVY DUTY (MS)<br>DETERGENT OIL | 4000                                        | 100                                                               | 100                                                                                                                | 100                           | 100                                      | 50                                          |
| REPLACE OIL FILTER<br>CARTRIDGE                            | 4000                                        | 200                                                               | 200                                                                                                                | 200                           | 200                                      | 100                                         |
| CHANGE AUTOMATIC<br>TRANSMISSION FLUID                     | 12000                                       | 400                                                               | 400                                                                                                                | 400                           |                                          | 100                                         |

|             | Tractors<br>(all<br>types<br>except<br>truck) | Cranes,<br>Excavating<br>& Grading<br>Eqpt.<br>except | Bulldozer                | Bulldozer                | Fork<br>Lifts            | Snow<br>Vehicles         |
|-------------|-----------------------------------------------|-------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|             | Miles*Mos**<br>Hrs*Mos**                      | Miles*Mos**<br>Hrs*Mos**                              | Miles*Mos**<br>Hrs*Mos** | Miles*Mos**<br>Hrs*Mos** | Miles*Mos**<br>Hrs*Mos** | Miles*Mos**<br>Hrs*Mos** |
| Trucks      |                                               |                                                       |                          |                          |                          |                          |
| Miles*Mos** |                                               |                                                       |                          |                          |                          |                          |
| Hrs*Mos**   |                                               |                                                       |                          |                          |                          |                          |
| or          |                                               |                                                       |                          |                          |                          |                          |
| Days*       |                                               |                                                       |                          |                          |                          |                          |

**CHECK:**

**Air Cleaners**  
(replace paper  
filter--clean  
oil bath type  
if needed)

|      |     |   |     |     |     |    |
|------|-----|---|-----|-----|-----|----|
| 6000 | 100 | 6 | 100 | 100 | 100 | 50 |
|------|-----|---|-----|-----|-----|----|

**Battery-Water Level,  
Corrosion of  
Cables,  
Connections,  
Carriers, and  
Holddowns**

2000 3      50 3      50 3      50 3      50 3      50 3

Antifreeze  
Protection  
(in season)

2000 12      50 12      50 12      50 12      50 12      50 12

### Lubrication of track

8 8 8

CHECK OIL:  
Differential

|      |    |    |    |     |     |
|------|----|----|----|-----|-----|
| 2000 | 50 | 50 | 50 | 100 | 100 |
|------|----|----|----|-----|-----|

## Transmission

|      |    |    |    |     |     |
|------|----|----|----|-----|-----|
| 2000 | 50 | 50 | 50 | 100 | 100 |
|------|----|----|----|-----|-----|

## Steering Gear Box

|      |    |    |    |     |     |
|------|----|----|----|-----|-----|
| 2000 | 50 | 50 | 50 | 100 | 100 |
|------|----|----|----|-----|-----|

Hydraulic power  
systems &  
accessories

|      |    |    |    |     |    |
|------|----|----|----|-----|----|
| 2000 | 50 | 50 | 50 | 100 | 50 |
|------|----|----|----|-----|----|

Clean oil in engine

500                    8                    8                    8                    8

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|                                                                                                          | <u>Trucks</u> |       | <u>Tractors</u> |       | <u>Cranes,</u> |       |           |       |       |          |
|----------------------------------------------------------------------------------------------------------|---------------|-------|-----------------|-------|----------------|-------|-----------|-------|-------|----------|
|                                                                                                          |               |       | (all            |       | Excavating     |       |           |       |       |          |
|                                                                                                          |               |       | types           |       | & Grading      |       |           |       |       |          |
|                                                                                                          |               |       | except          |       | Eqpt.          |       |           |       |       |          |
|                                                                                                          |               |       | truck)          |       | except         |       |           |       |       |          |
|                                                                                                          |               |       |                 |       | Bulldozer      |       | Bulldozer |       | Fork  | Snow     |
|                                                                                                          |               |       |                 |       |                |       |           |       | Lifts | Vehicles |
|                                                                                                          | Miles*        | Mos** | Hrs*            | Mos** | Hrs*           | Mos** | Hrs*      | Mos** | Hrs*  | Mos**    |
|                                                                                                          | or            |       |                 |       |                |       |           |       |       |          |
|                                                                                                          | Days*         |       |                 |       |                |       |           |       |       |          |
| CLEAN CRANKCASE<br>VENTILATION SYSTEM<br>& REPLACE VALVE IF<br>NECESSARY                                 | 4000          |       | 100             |       | 100            |       | 100       |       | 100   | 50       |
| INSPECT & REPAIR<br>AS REQUIRED                                                                          |               |       |                 |       |                |       |           |       |       |          |
| Windshield wiper<br>& blades                                                                             | 2000          | 6     | 100             |       | 100            | 6     |           |       | 6     | 100 12   |
| Glass & mirrors--<br>cracks,<br>discoloration, &<br>tightness                                            | 2000          |       | 100             |       | 100            |       | 100       |       | 100   | 100      |
| Panel instrument,<br>warning lights,<br>& signals for<br>operation                                       | 2000          |       | 8               |       | 8              |       | 8         |       | 8     | 8        |
| Lights--headlights,<br>dome, panel,<br>directional, stop,<br>tail, license plate,<br>clearance, & marker |               |       | 2000            | 6     | 100            |       | 100       | 6     | 100   | 6 50 12  |
| Headlight alignment--<br>test for proper focus of<br>high & low beams                                    |               |       | 2000            | 6     | 100            | 12    | 100       | 12    | 100   | 50 12    |
| Light reflectors--<br>for condition &<br>secureness                                                      | 2000          | 7     | 100             |       | 100            |       | 100       |       |       | 50       |
| Horn--for<br>operation                                                                                   | 2000          | 6     | 8               | 6     |                |       |           |       | 8     | 6 8 6    |

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|                                                                           | <u>Trucks</u> |              | <u>Tractors<br/>(all<br/>types<br/>except<br/>truck)</u> |              | <u>Cranes,<br/>Excavating<br/>&amp; Grading<br/>Eqpt.<br/>except<br/>Bulldozer</u> |              | <u>Bulldozer</u> |              | <u>Fork<br/>Lifts</u> |              | <u>Snow<br/>Vehicles</u> |              |
|---------------------------------------------------------------------------|---------------|--------------|----------------------------------------------------------|--------------|------------------------------------------------------------------------------------|--------------|------------------|--------------|-----------------------|--------------|--------------------------|--------------|
|                                                                           | <u>Miles*</u> | <u>Mos**</u> | <u>Hrs*</u>                                              | <u>Mos**</u> | <u>Hrs*</u>                                                                        | <u>Mos**</u> | <u>Hrs*</u>      | <u>Mos**</u> | <u>Hrs*</u>           | <u>Mos**</u> | <u>Hrs*</u>              | <u>Mos**</u> |
|                                                                           | or<br>Days*   |              |                                                          |              |                                                                                    |              |                  |              |                       |              |                          |              |
| Radiator--leaks,<br>coolant level, &<br>pressure cap                      | 1000          | 3            | 100                                                      | 3            | 100                                                                                | 3            | 100              | 3            | 100                   | 3            | 100                      | 6            |
| Hoses--condition,<br>tightness of<br>connections                          | 2000          | 3            | 100                                                      | 3            | 100                                                                                | 3            | 100              | 3            | 100                   | 3            | 100                      | 6            |
| Water pump--for<br>leaks & condition                                      | 2000          | 3            | 100                                                      | 3            | 100                                                                                | 3            | 100              | 3            | 100                   | 3            | 100                      | 6            |
| Fan & accessory<br>belts--alignment<br>& tension                          | 2000          |              | 100                                                      |              | 100                                                                                |              | 100              |              | 100                   |              | 100                      |              |
| Tires--condition                                                          | Day           | 3            | 8                                                        | 3            | 8                                                                                  | 3            | 3                |              | 100                   | 3            | 100                      | 3            |
| Wheels & rims--for<br>bent flanges                                        | 2000          |              | 100                                                      |              | 100                                                                                |              |                  |              | 100                   |              | 100                      |              |
| HUBS (full floating axle)                                                 |               |              |                                                          |              |                                                                                    |              |                  |              |                       |              |                          | 1            |
| Brake system<br>supply lines--<br>for leaks,<br>secureness &<br>condition | 2000          |              | 100                                                      |              | 100                                                                                |              | 100              |              | 100                   |              | 100                      |              |
| Brake pedal--<br>action &<br>adequate reserve                             | Day           |              | 8                                                        |              | 8                                                                                  |              |                  |              | 8                     |              | 8                        |              |
| Parking brake--<br>action & adequate<br>reserve, ratchet<br>hold          | Day           | 8            | 8                                                        |              |                                                                                    |              | 8                |              | 8                     |              |                          |              |

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|                                                                                                                | <u>Trucks</u>      | <u>Tractors</u>  | <u>Cranes,</u>       |                  |                  |                  |
|----------------------------------------------------------------------------------------------------------------|--------------------|------------------|----------------------|------------------|------------------|------------------|
|                                                                                                                |                    | <u>(all</u>      | <u>Excavating</u>    |                  |                  |                  |
|                                                                                                                |                    | <u>types</u>     | <u>&amp; Grading</u> |                  |                  |                  |
|                                                                                                                |                    | <u>except</u>    | <u>Eqpt.</u>         |                  |                  |                  |
|                                                                                                                |                    | <u>truck)</u>    | <u>except</u>        |                  |                  |                  |
|                                                                                                                |                    |                  | <u>Bulldozer</u>     | <u>Bulldozer</u> | <u>Fork</u>      | <u>Snow</u>      |
|                                                                                                                |                    |                  |                      |                  | <u>Lifts</u>     | <u>Vehicles</u>  |
|                                                                                                                | <u>Miles*Mos**</u> | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u>     | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> |
|                                                                                                                | <u>or</u>          |                  |                      |                  |                  |                  |
|                                                                                                                | <u>Days*</u>       |                  |                      |                  |                  |                  |
| Brake master cylinder--for fluid level                                                                         | 2000               | 100              | 100                  |                  | 100              | 100              |
| Condition of brake linings, shoes, wheel cylinders & drums, repack front wheel bearings & rear when applicable | 10000              | 500              | 100                  |                  | 500              | 500              |
| Air or vacuum brakes Day                                                                                       | 8                  | 8                |                      |                  |                  |                  |
| Steering gear mounting bolts--tightness                                                                        | 2000               | 100              | 100                  |                  | 100              | 100              |
| Steering arms, tie rod ends, drag links, & turning stops                                                       | 2000               | 100              | 100                  |                  | 100              | 100              |
| Steering--wander, pulling to side, shimmy                                                                      | 2000               | 100              | 100                  |                  | 100              | 100              |
| Steering--for excessive play                                                                                   | 2000               | 100              | 100                  |                  | 100              | 100              |
| Front end--kingpins, upper & lower control arms, wheel bearing adjustment (raise to inspect)                   | 2000               | 500              | 500                  |                  | 500              |                  |

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|                                                                                                       | Trucks                     | Tractors<br>(all<br>types<br>except<br>truck) | Cranes,<br>Excavating<br>& Grading<br>Eqpt.<br>except | Bulldozer | Bulldozer | Fork<br>Lifts | Snow<br>Vehicles |
|-------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------|-------------------------------------------------------|-----------|-----------|---------------|------------------|
|                                                                                                       | Miles*Mos**<br>or<br>Days* | Hrs*Mos**                                     | Hrs*Mos**                                             | Hrs*Mos** | Hrs*Mos** | Hrs*Mos**     | Hrs*Mos**        |
| Wheel alignment<br>(check if signs<br>of unusual tread<br>wear)                                       | 2000                       | 500                                           | 500                                                   |           |           | 500           |                  |
| Exhaust system--<br>condition & tight-<br>ness of manifolds,<br>mufflers, pipes,<br>hangers, & clamps | 2000                       | 100                                           | 100                                                   | 100       | 100       | 100           |                  |
| Electrical wiring--<br>condition:<br>connections for<br>tightness                                     | 2000                       | 500                                           | 500                                                   | 100       | 100       | 100           |                  |
| Distributor cap,<br>rotor, & ignition<br>wires--condition                                             | 2000                       | 500                                           | 500                                                   | 500       | 500       | 50            |                  |
| Points--condition<br>& settings,<br>operation                                                         | 2000                       | 500                                           | 500                                                   | 500       | 100       | 50            |                  |
| Spark plugs--<br>clean & regap                                                                        | 2000                       | 500                                           | 500                                                   | 500       | 100       | 50            |                  |
| Coil--for<br>mounting<br>secureness                                                                   | 10000                      | 2000                                          | 2000                                                  | 2000      | 2000      | 50            |                  |
| Ignition timing                                                                                       | 2000                       | 500                                           | 500                                                   | 500       | 100       | 50            |                  |
| Generator &<br>voltage regulator                                                                      | 2000                       | 1000                                          | 1000                                                  | 1000      | 100       | 50            |                  |

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|                                                                                 | <u>Trucks</u>      | <u>Tractors</u>  | <u>Cranes,</u>       |                  |                  |                  |
|---------------------------------------------------------------------------------|--------------------|------------------|----------------------|------------------|------------------|------------------|
|                                                                                 |                    | <u>(all</u>      | <u>Excavating</u>    |                  |                  |                  |
|                                                                                 |                    | <u>types</u>     | <u>&amp; Grading</u> |                  |                  |                  |
|                                                                                 |                    | <u>except</u>    | <u>Eqpt.</u>         |                  | <u>Fork</u>      | <u>Snow</u>      |
|                                                                                 | <u>Miles*Mos**</u> | <u>truck)</u>    | <u>Bulldozer</u>     | <u>Bulldozer</u> | <u>Lifts</u>     | <u>Vehicles</u>  |
|                                                                                 |                    | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u>     | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> |
|                                                                                 | or                 |                  |                      |                  |                  |                  |
|                                                                                 | <u>Days*</u>       |                  |                      |                  |                  |                  |
| Commutator<br>& brushes--<br>condition                                          | 10000              | 1000             | 1000                 | 1000             | 100              | 50               |
| Carburetor, fuel<br>pump, & fuel lines<br>for secureness,<br>leaks, & condition | 2000               | 500              | 500                  | 500              | 100              | 50               |
| Choke & throttle<br>linkage--operation                                          | 2000               | 500              | 500                  | 500              | 100              |                  |
| Fuel filter &<br>sediment bowls--<br>clean                                      | 2000               | 100              | 100                  | 100              | 100              |                  |
| Breather caps--<br>for need of<br>cleaning                                      | 2000               | 100              | 100                  | 100              | 100              |                  |
| Carburetor, idle<br>mixture & speed                                             | 2000               | 100              | 100                  | 100              | 100              |                  |
| Tappets--overhead<br>valve engines not<br>equipped with<br>hydraulic lifters    | 10000              | 1000             | 1000                 | 1000             | 400              |                  |
| Cylinder head<br>bolts or nuts                                                  | 10000              | 1000             | 1000                 | 1000             | 1000             |                  |
| Engine--for ease<br>of starting                                                 | 2000 3             | 8 3              | 8 3                  | 8 12             | 3                | 8 3              |

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|                                                                                                           | <u>Trucks</u>      |   | <u>Tractors<br/>(all<br/>types<br/>except<br/>truck)</u> |   | <u>Cranes,<br/>Excavating<br/>&amp; Grading<br/>Eqpt.<br/>except<br/>Bulldozer</u> |   | <u>Bulldozer</u> | <u>Fork<br/>Lifts</u> | <u>Snow<br/>Vehicles</u> |
|-----------------------------------------------------------------------------------------------------------|--------------------|---|----------------------------------------------------------|---|------------------------------------------------------------------------------------|---|------------------|-----------------------|--------------------------|
|                                                                                                           | <u>Miles*Mos**</u> |   | <u>Hrs*Mos**</u>                                         |   | <u>Hrs*Mos**</u>                                                                   |   | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u>      | <u>Hrs*Mos**</u>         |
|                                                                                                           | or<br>Days*        |   |                                                          |   |                                                                                    |   |                  |                       |                          |
| Engine--smoothness,<br>acceleration,<br>knocks & other<br>unusual noises,<br>overheating, oil<br>pressure | 2000               | 3 | 8                                                        | 3 | 8                                                                                  | 3 | 8 12             | 3                     | 8 3                      |
| Clutch--engagement,<br>drag, grab, slip,<br>& noises                                                      | 2000               |   | 8                                                        |   | 8                                                                                  |   | 8                |                       | 8                        |
| Clutch pedal--for<br>free play & travel                                                                   | 2000               |   | 8                                                        |   | 8                                                                                  |   | 8                |                       | 8                        |
| Transmission for<br>secureness, leaks,<br>cracks, shift lever,<br>& linkage condition                     | 2000               |   | 50                                                       |   | 50                                                                                 |   | 50               |                       | 50                       |
| Transmission--ease<br>in shifting, noises,<br>jumping out of gear                                         | 2000               |   | 8                                                        |   | 8                                                                                  |   | 8                |                       | 8                        |
| Drive shaft(s)<br>center bearing--<br>flanges & universal<br>joints to include<br>U-bolt tightness        | 2000               |   | 50                                                       |   | 50                                                                                 |   | 50               |                       |                          |
| Differential(s) for<br>leaks, bolts & nuts<br>for tightness                                               | 2000               |   | 50                                                       |   | 50                                                                                 |   | 50               |                       | 50                       |
| Drive train--unusual<br>noises, excessive<br>heat                                                         | 2000               |   | 50                                                       |   | 50                                                                                 |   | 50               |                       | 50                       |



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|                                                                                                                                                                    | <u>Trucks</u> | <u>Tractors</u> | <u>Cranes,</u>       |                  | <u>Fork</u>  | <u>Snow</u>     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|----------------------|------------------|--------------|-----------------|
|                                                                                                                                                                    |               | <u>(all</u>     | <u>Excavating</u>    |                  | <u>Lifts</u> | <u>Vehicles</u> |
|                                                                                                                                                                    |               | <u>types</u>    | <u>&amp; Grading</u> |                  |              |                 |
|                                                                                                                                                                    |               | <u>except</u>   | <u>Eqpt.</u>         |                  |              |                 |
|                                                                                                                                                                    |               | <u>truck)</u>   | <u>except</u>        |                  |              |                 |
|                                                                                                                                                                    | <u>Miles*</u> | <u>Hrs*</u>     | <u>Bulldozer</u>     | <u>Bulldozer</u> | <u>Hrs*</u>  | <u>Hrs*</u>     |
|                                                                                                                                                                    | <u>Mos**</u>  | <u>Mos**</u>    | <u>Hrs*</u>          | <u>Mos**</u>     | <u>Mos**</u> | <u>Mos**</u>    |
|                                                                                                                                                                    | <u>or</u>     |                 |                      |                  |              |                 |
|                                                                                                                                                                    | <u>Days*</u>  |                 |                      |                  |              |                 |
| Engine--oil pan & bearing seals--for leaks                                                                                                                         | 2000          | 50              | 50                   | 50               |              | 50              |
| Body mounting bolts--tightness                                                                                                                                     | 2000          | 1000 9          | 1000                 | 1000             |              | 50              |
| Frame & cross members--for cracks or other damage                                                                                                                  | 2000          | 1000            | 1000                 | 1000             | 100          | 50 12           |
| Springs--permanent set, broken leaves or center bolts, leaf clips, U-bolts for tightness, shackles & pins                                                          | 2000          | 1000            |                      |                  | 500          | 50              |
| Shock absorbers--mounting & bushings                                                                                                                               | 2000          | 1000            |                      |                  | 500          | 50              |
| SPECIAL PURPOSE COMPONENTS:                                                                                                                                        |               |                 |                      |                  |              |                 |
| Tractor & semi-trailer--check fifth wheel mountings, kingpin, locking mechanism, brake & electrical connections, landing gear for operation--lubricate as required | 2000          |                 |                      |                  |              |                 |

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|       |                    | Tractors<br>(all<br>types<br>except<br>truck) | Cranes,<br>Excavating<br>& Grading<br>Eqpt.<br>except |                  | Fork<br>Lifts    | Snow<br>Vehicles |
|-------|--------------------|-----------------------------------------------|-------------------------------------------------------|------------------|------------------|------------------|
|       | <u>Trucks</u>      |                                               |                                                       | <u>Bulldozer</u> | <u>Bulldozer</u> |                  |
|       | <u>Miles*Mos**</u> | <u>Hrs*Mos**</u>                              | <u>Hrs*Mos**</u>                                      | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> | <u>Hrs*Mos**</u> |
| or    |                    |                                               |                                                       |                  |                  |                  |
| Days* |                    |                                               |                                                       |                  |                  |                  |

Mounted power  
units--inspect  
& service  
(in accordance  
with items that  
are applicable  
above & per  
manufacturer's  
specifications)

Fuel injection nozzle

Fuel injection pump

Test run no load 1 hour

Test run with load  
three hours

Magneto

100

\*Hours, days, refer to periods of operation. Eight operating hours equaling one day.  
\*\*Months refer to calendar months.

NOTE: Whenever a figure is shown under both Miles and Mos. or Hrs. and Mos. for an item of service or inspection, use the figure that occurs first. For example: The battery water level in a truck should be checked after 2000 miles or three months elapsed time depending on whichever occurs first.