

Policy and Procedure 5-1 Fleet Management, Care and Maintenance

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Codes/Mandates: N/A

References: Department of General Services, [Office of Fleet Management Services Policies and Procedures Manual](#) January 2020
[VDOF Policy and Procedure 4-3 Readiness and Mobilization Plan](#)

Forms: [Form 4.17 Personal Equipment Inspection Checklist](#)
[Form 4.18 Pickup Equipment Inspection Checklist](#)
[Form 4.19 Transport Equipment Inspection Checklist](#)
[Form 4.20 Tractor Equipment Inspection Checklist](#)
[Form 4.21 Engine Equipment Inspection Checklist](#)
[Form 5.1 Vehicle/Equipment Maintenance Record](#)
[Form 5.3 Tractor Service Record \(K-model and newer\)](#)
[Form 5.4 Tractor Service Record \(J-models and older\)](#)

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PURPOSE

VDOF is committed to ensuring proper use of state vehicles in the performance of its duties while ensuring an adequate state of readiness for fire and emergency response. VDOF continually evaluates agency and individual position needs as it relates to the selection and assignment of vehicles and equipment. It establishes standards to ensure vehicles and equipment are properly prepared and equipped for the job they are intended for before assignment and are maintained in good working condition.

POLICY

This policy provides the guidance and direction for the proper assignment, management and maintenance of agency-owned or leased vehicles within the agency. Using or allowing others to use agency facilities or the tools and equipment therein to perform any type of work on privately-owned vehicles, including but not limited to routine maintenance and repairs, is expressly prohibited.

DEFINITIONS

“Agency” and **“VDOF”** means the Virginia Department of Forestry.

“Agency fleet” means all vehicles owned, leased or rented by VDOF.

“Agency staff” means all Virginia Department of Forestry classified, restricted, part-time and wage personnel, consultants, contract personnel and other non-employees, such as volunteers or interns.

“Agency Transportation Officer” and **“ATO”** means the agency employee who oversees vehicle management and reporting, and serves as liaison with the Office of Fleet Management Services.

“Commonwealth” means the Commonwealth of Virginia.

“DGS” means Department of General Services.

“DGS pool vehicle” means a vehicle leased or rented to the agency from DGS.

“Emergency” is defined as those situations where life and/or significant property damage is imminent and immediate response is required and that are sanctioned by the Governor, the state forester and/or the appropriate budget manager.

“Equipment” means any large machinery typically used off-road and not licensed to be driven on state highways, such as a tractor/fire plow, tree planter or all-terrain vehicle.

“Employee vehicle assignment” is a VDOF vehicle that has been assigned permanently to a specific VDOF employee.

“OFMS” means the Office of Fleet Management Services, DGS.

“Privately-owned vehicle” means any all-terrain vehicle, automobile, boat, motorcycle, snowmobile, tractor, truck, utility vehicle, or like motorized vehicle that is self-propelled or designed for self-propulsion, that is owned by or under the control of an agency staff member and which is not owned, leased or rented by the agency.

“VDOF vehicle” means any vehicle that is owned, leased or rented by the agency.

“Vehicle” means any motor vehicle, special purpose vehicle (tractors, ATVs, etc.) and trailers.

“Work unit vehicle assignment” is a VDOF vehicle that has been assigned permanently to a particular work unit in VDOF.

PROCEDURES

Fleet Management

General

The agency transportation officer (ATO) is responsible for the overall management of the agency's fleet of vehicles, including VDOF-owned vehicles and DGS pool vehicles. VDOF vehicles will be managed on the basis of need and standard rotation criteria such as mileage, age and repair history.

The ATO will assess the cost of maintaining a small fleet of vehicles against the cost of reimbursing employees for mileage. He/she will advise the appropriated agency managers of his findings and recommendations by April 1st of each year. The agency will consider the recommendations and prepare the budget accordingly. The agency fleet size will be determined based upon the number of requests meeting the criteria for assignment, available funding and periodic fleet reviews.

- ◆ VDOF vehicles will be assigned and managed by the ATO in accordance with VDOF policy and procedure.
- ◆ DGS pool vehicles will be assigned and managed by the ATO in accordance with the Office of Fleet Management Services policies and procedures.

Assignment of Vehicles

Employee Vehicle Assignments

Vehicles will be assigned to employees based on agency business need to ensure efficient and effective delivery of services. These will be VDOF-owned vehicles.

Employees will be assigned their vehicle in the asset inventory system and will be responsible for the care, cleanliness and maintenance. {See *Care and Maintenance of VDOF Vehicles*}

Criteria for Assignment

Positions will be approved on the basis of the following criteria:

- ◆ The employee routinely performs duties related to public safety or response to life-threatening situations.
- ◆ The employee is on call 24-hours per day, seven days per week, and must respond to emergencies on a regular or continuing basis, and the emergency response is normally to a location other than the employee's official duty station.
- ◆ The employee responds to other emergencies around the Commonwealth.
- ◆ The employee responds to building and office emergencies.
- ◆ The employee's job duties require the constant or continuous availability of specialized equipment directly related to their routine functions, such as a two-way radio, forest fire suppression tools and protective clothing, water tank and pump, vehicle testing and repair equipment, building maintenance and repair equipment, or other supplies or materials necessary to perform the duties of the agency.
- ◆ The employee's job duties require frequent, essential travel for administrative functions of the VDOF for which the use of a temporary assignment or personal mileage reimbursement is neither feasible nor economical.

Work Unit Vehicle Assignments

Work units within VDOF may be assigned vehicles (most will be VDOF vehicles; there could be some DGS vehicles) to meet the transportation and special functions of the work unit. These vehicles will be available to perform normal operations as well as special tasks, such as transporting forest fire suppression equipment to fires or transporting staff. Examples include SUVs, vans, pickups, stake bodies, dump trucks, ATVs, utility trucks, tractors, etc.

The vehicles are generally used by more than one employee but will be assigned to one individual in the asset inventory system. That individual will be responsible for care and maintenance.

Pool Vehicles

The Headquarters Mechanic Shop will maintain an adequate size fleet of pool vehicles (VDOF and DGS vehicles) to meet the day-to-day transportation needs of staff who do not have permanently-assigned vehicles at Headquarters or the Headquarters Mechanics Shop. Pool vehicles may also be used to meet any additional needs of the agency including temporary short-term assignments to individuals and to provide adequate substitution for vehicles in repair.

Pool vehicles will be assigned to the ATO but are generally available to employees through a reservation system. See *Policy and Procedure 5-2, Motor Vehicle Operation* for information on using pool vehicles.

The number of vehicles in the pool will be based on an annual assessment of cost effectiveness (ownership verses personal mileage reimbursement).

Requests for Employee or Work Unit Vehicle Assignments

Requests for assignment of VDOF vehicles to an individual or work unit are to be submitted in writing to the chief of administration. Such requests will include the necessary information to evaluate the criteria for assignment. Final determination will be made by the chief of administration after consultation with the ATO, the deputy state forester, and the director of finance as needed.

Removal or Recall of Assigned Vehicles

Removal or recall of assigned vehicles may be initiated if any of the following occur:

- ◆ The vehicle is no longer needed.
- ◆ The position is vacated and left vacant for longer than 30 days.
- ◆ Vehicle abuse occurs. Abuse includes, but is not limited to, improper care and maintenance, operating the vehicle without servicing at the specified frequency, damage to the vehicle caused by willful disregard or improper use, and unauthorized personal use.
- ◆ Other reasons which are in the best interests of the agency.

Vehicle Assignment Following Employee Departure or Transfer

Employee Transfers to Another Administrative Unit

- ◆ An employee who transfers to a different administrative unit within the VDOF will leave the vehicle and associated assigned property in the unit they are departing.

Field Employee Leaves the Agency

- ◆ Prior to the employee's last day of work, the budget manager or designee will physically inspect his/her assigned vehicle and account for all associated property in the inventory system.
- ◆ The Voyager fuel card will remain with the vehicle.
- ◆ The employee will transfer the vehicle, with mobile radio, to the unit supervisor within 30 days from the date of the vacating employee's last day at work. This transfer will be made in the IFRIS Asset Management system as well.

Headquarters Employee Leaves the Agency

- ◆ Vehicles assigned to Headquarters staff will be inspected by the ATO prior to the departing employee's last day of work.
- ◆ The employee will transfer the vehicle, the mobile radio and all equipment kept in the vehicle to the ATO via IFRIS.
- ◆ The vehicle will remain at Headquarters until needed.

Determining the Appropriate Vehicle for the Position

- ◆ Pickup trucks will be assigned to positions when the primary purpose is to transport employees and first response fire equipment.
- ◆ SUVs will be assigned to positions when the primary purpose is to transport employees and special tools for forest firefighting, water quality, forest management or other field activities, which are best kept in an enclosed SUV environment.
- ◆ All utility and special-use trucks will be purchased in accordance with the type, size and scope of work required of the vehicle.
- ◆ The ATO will assess vehicle needs with the employee and supervisor to determine the type of vehicle that best suits the needs of the position. Choosing the right vehicle for the job will ensure safe and efficient use of agency resources.
 - Sedans (cars) are issued for where travel is on interstate, primary and secondary roads; these vehicles are not to be used off-road or used extensively on gravel or unpaved roads.
 - Sport Utility Vehicles (SUVs) (Explorers, Escapes) are best issued for duties where occasional, not extreme off-road travel is required. SUV's will not be used to transport trailers with a gross weight rating more than 3,000 pounds.
 - Passenger vans can be used for traveling on interstate, primary and secondary roads when more than four (4) passengers are traveling. Vans will not be used to transport trailers with a gross vehicle rating more than 3,000 pounds unless equipped with a trailer hitch of the correct rating and presence of an electric brake controller or surge brake mechanism on the trailer (Firewise Trailer).

Rotation and Replacement of VDOF Vehicles

Subject to funding availability, agency vehicles will be rotated or replaced according to the following criteria:

- ◆ Pickup truck and SUV-type vehicles shall be replaced upon the end of ten years and/or once the vehicle reaches 120,000 miles.
- ◆ Transports, tractors, stake body and dump trucks shall be replaced upon the end of 20 years.
- ◆ All other vehicles will be replaced on comparable mileage or age criteria, and/or conditions.

Spare Key Placement in VDOF Vehicles

A spare key will be kept on all VDOF vehicles. The following will guide the placement of the spare key to ensure consistency throughout the agency. Either a securely mounted lockable metallic storage box or mechanical means of securing the key is acceptable.

- ◆ **Pick-ups** – Locked inside the driver's side toolbox at the rear of the vehicle.
 - **Pick-ups without a tool box** – Inside a securely mounted lockable metallic key storage box located under the top edge bed, driver's side, rear of the vehicle near the tailgate.
 - **Pick-ups without a toolbox and no way to securely stow key under the top edge of the bed** – Driver side, rear wheel, securely mounted lockable metallic storage box located on top or side of main frame rail accessible from the rear wheel well.
- ◆ **Transport Trucks** – Engine compartment, under the hood, in a securely mounted lockable metallic storage box on the driver's side bulkhead of the vehicle. A spare key for the dozer should be included on the same ring with the spare truck key.
- ◆ **Engines** – Passenger side, rear of the vehicle, in a securely mounted lockable metallic storage box inside of the pumps protective housing, accessible through the service access door to the pump.
- ◆ **SUV's, All Other Vehicles** – Driver side, near the rear wheel, in a securely mounted lockable metallic storage box located on top or side of main frame rail, accessible from the rear wheel well.

Alterations to VDOF Vehicles

- ◆ Vehicles will be properly equipped prior to assignment.
- ◆ Except in cases of legitimate business need, vehicles will not be redesigned to meet individual preferences. Likewise, vehicles assigned to administrative units will not be redesigned.
- ◆ Installation, alteration or removal of any equipment on VDOF vehicles is prohibited without written approval. Requests for modifications to communications equipment, radios and antennas will be made to the assets and infrastructure manager. Requests for modifications or installations of equipment or accessories on vehicles will be made to the ATO.
- ◆ Installation of commercial radio equipment will be permitted in permanently-assigned vehicles without factory-installed commercial radios with written authorization from the ATO under the following conditions:
 - Placement and removal of the radio will not detract from the appearance of the vehicle (no visible holes, all bezels replaced, etc.).
 - Only an antenna and internal speaker specifically designed for the vehicle will be permitted. Antennas and speakers will become a permanent part of the vehicle and will not be removed when the vehicle is transferred.
 - Installation will be made by a VDOF mechanic.
 - Installation will be of high quality and must not connect or attach in any way to two-way radio equipment.
- ◆ No additional commercial radio equipment (AM/FM, CD players, speakers, etc.) will be installed in any pool or VDOF vehicle already equipped with factory-installed equipment.
- ◆ Installation of sirens on VDOF vehicles is prohibited, unless approved by the director of fire and emergency response and deputy state forester.
- ◆ Sirens installed in VDOF vehicles will be standard order and installed only at the direction of the ATO.
- ◆ Installation of radio equipment supplied by other entities, such as counties and fire departments, must be approved in writing and installed by or under the direction of the agency's assets and Infrastructure manager in his/her capacity as telecommunications officer.

Care and Maintenance of VDOF Vehicles

General Vehicle Care

All employee-assigned vehicles will observe the following:

- ◆ All vehicles will be maintained in a neat, well-kept and professional manner.
- ◆ All highway vehicles will be waxed annually.
- ◆ Operator will maintain a log of all maintenance and repairs on [Form 5.1 Vehicle/Equipment Maintenance Record](#).
- ◆ Operators are responsible for performing routine vehicle inspections. The purpose is to detect and eliminate conditions that could potentially cause accidents and injuries to people as well as damage to the equipment itself. This is basically a routine check to make sure the vehicle is in good working order. Routine inspections shall include the following check points:
 - Check all fluid levels and fill as required.
 - Check tires for proper inflation, condition and mounting hardware.
 - Confirm lights are clean and working.
 - Check horn operation.
 - Check windshield wiper operation and condition.
 - Check for required safety items (fire extinguisher, first aid kit, reflective triangles, etc.).
 - Inspect steering components, operation and condition.

- Clean interior and remove trash from cab and/or bed.
- Check brake operation.
- Test two-way radio transmit and receive operation (if equipped).
- Ensure fuel card is present.
- Check for the presence of flammable debris in engine compartment, such as mouse nests.
- Check all belts.
- Ensure jumper cables, map book and maintenance records are present.
- ◆ In addition to the above check points, transport units should be checked for the following:
 - Check all lube points (refer to operator manual if needed).
 - Visually check for broken leaf springs and center pins.
 - Check backup alarm for proper operation.
 - Check for proper securing of dozer, chains and load binders.

Any deficiencies found during inspections should be corrected immediately or arrangements made for repairs. Unsafe units should be removed from service until repairs are made.

Preventive Maintenance Guidelines

Maintaining a vehicle in good working order helps ensure the safety of the operator as well as increasing equipment longevity. Therefore, VDOF personnel with assigned vehicles are responsible for ensuring that routine preventive maintenance is performed on their assigned vehicle(s) by a certified mechanic (i.e., VDOF mechanic or vendor) in accordance with the equipment user manual and the appropriate VDOF preventive maintenance schedule for the vehicle.

Whenever service work is completed, save your receipt and document the service work details on your vehicle's Form 5.1 Vehicle/Equipment Maintenance Record, or the appropriate Tractor Service Record ([Form 5.3 Tractor Service Record \(K-Models and Newer\)](#) or [Form 5.4 Tractor Service Record \(J-Models and Older\)](#)), depending on the equipment type. Be sure to include the date when the Preventive Maintenance (PM) or service work was performed, by whom, vehicle mileage, and a brief summary of the work done on the vehicle, including PM and any other repairs. You will then forward your receipt to the designated person in your work unit for payment and for documentation through work orders in IFRIS.

Note the following:

- ◆ All new vehicles shall receive their first oil change at 3,000 miles.
- ◆ Vehicle and equipment preventive maintenance guidelines for all agency vehicles and equipment will be followed as outlined in the maintenance schedule at the end of this document.
- ◆ Extended-life coolant will be used when changing coolant.
- ◆ Stanadyne or John Deere fuel conditioner will be used where low sulfur (on road) fuel is used in our off-road equipment.
- ◆ Replacement batteries do NOT have to be Optima brand. Do not purchase Deep Cycle batteries for the starting system on vehicles or equipment. If a brush truck, transport or dozer develops a bad battery, replace both batteries as a pair.
- ◆ Any vehicle travelling out of state MUST be checked for service before departure.

John Deere K - Model and Later Dozer Fluid Sampling

Fluid sampling will be used to prolong the time necessary between some fluid and filter changes, as recommended in the equipment service maintenance schedules by the equipment manufacturer.

- ◆ All fluid sampling will follow the OEM guidelines and recommendations.
- ◆ Fluid samples should be submitted to OEM recommended sampling labs for analysis.
- ◆ Fluid and filter changes should follow the recommendations provided through the fluid sampling process.

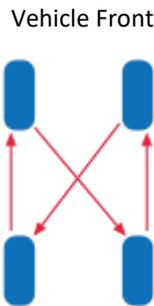
- ◆ Fluid sampling results are documented electronically through the sampling process and maintained electronically for the life of the equipment.

VDOF Preventative Maintenance (PM) Schedules		
Light Duty Vehicles – 1-1/4 Ton and Less – Type 1 Vehicles		
Required Preventive Maintenance (PM) Tasks	Fuel Type	Interval – No Later than Listed
<ul style="list-style-type: none"> ◆ Change engine oil and filter ◆ Utilize quality engine oil and OEM oil filter or equivalent ◆ Engine oil <ul style="list-style-type: none"> ➢ Ford vehicles shall utilize blended or full synthetic engine oil ONLY ➢ GM vehicles shall utilize DEXOS1 approved engine oil ONLY ➢ Oil viscosity rating shall be the manufacturer’s recommendation per the vehicles Operators Manual. <i>Different year models may require different oils</i> ◆ Lubricate all grease zerk fittings (if equipped) ◆ Check ALL fluid levels <ul style="list-style-type: none"> ➢ Replenishing as necessary, utilizing manufacturer approved fluids and lubricants ◆ Check and/or replace engine air filter <ul style="list-style-type: none"> ➢ Utilize filter indicator (if equipped) to determine filter condition ➢ If engine air filter is removed, it shall be replaced, never cleaned ◆ Tires and wheels <ul style="list-style-type: none"> ➢ Inspect tire wear, condition and proper air pressure (ambient temperature) ➢ Inspect wheels, hubs and studs ➢ Inspect brakes for wear, condition and operation, replace or repair if necessary ➢ Rotate tires utilizing the Modified X pattern ONLY ➢ Lug nuts shall be torqued to the manufacturers specifications utilizing a calibrated torque wrench ◆ Brush truck or engine <ul style="list-style-type: none"> ➢ ONLY VDOF mechanics shall service these units following all above procedures in addition to the following ➢ PM shall be performed to the pump engine and the pump gearbox lubricant shall also be changed utilizing manufacturer approved fluids and filters 	ALL	6,000 Miles or 12 Months – whichever occurs first *First Oil Change on New Vehicles at 3,000 Miles
<ul style="list-style-type: none"> ◆ Replace fuel filter(s) (if equipped) 	Gasoline	30,000 Miles
<ul style="list-style-type: none"> ➢ Drain DEF (Diesel Exhaust Fluid) tank and refill with new DEF fluid (if equipped) 	Diesel	24 Months / 2 Years

<ul style="list-style-type: none"> ◆ Change automatic transmission fluid and filter(s) utilizing fluid as recommended by the manufacturer 	ALL	50,000 Miles
<ul style="list-style-type: none"> ◆ Replace coolant, inspect belts and hoses, replace as necessary <ul style="list-style-type: none"> ➢ Only utilize manufacturer specific Long Life pre-mixed coolant at a 50/50 mixture. <i>Never use different coolant types or mixtures.</i> 	ALL	75,000 Miles
<ul style="list-style-type: none"> ◆ Perform engine tune up <ul style="list-style-type: none"> ➢ Frequency varies by vehicle, consult operators manual ➢ Replace spark plugs, wires or boots, utilizing OEM recommended spark plugs ONLY. Spark plugs shall be gapped and torqued to the manufacturer’s specifications. 	Gasoline	60,000 to 90,000 Miles
<ul style="list-style-type: none"> ◆ Vehicle safety <ul style="list-style-type: none"> ➢ Check all vehicle lighting functions and lenses ➢ Check all vehicle glass, windshield wiper function and condition, clean and or replace as necessary ➢ Check for loose or missing parts or accessories ➢ Check exhaust system for leaks, loose and or missing parts, shields etc. 	ALL	EACH PM

Tire Rotation Method – Required Each PM

Vehicles that are equipped with non-directional tires and wheels should use the Rearward Cross or the alternative X rotation patterns.



Medium Vehicles – Heavy Duty Vehicles – Type 2 Vehicles

Required PM Tasks	<i>Interval – No Later than Listed</i>
<ul style="list-style-type: none"> ◆ Change engine oil and filter <ul style="list-style-type: none"> ➢ Utilize quality engine oil and OEM oil filter or equivalent ➢ Fill new engine oil filter with oil before installing ◆ Engine Oil <ul style="list-style-type: none"> ➢ Oil viscosity rating shall be the manufacturer’s recommendation per the vehicles Operators Manual. ◆ Lubricate all grease zerk fittings ◆ Check ALL fluid levels 	6,000 Miles or 24 Months – whichever occurs first

<ul style="list-style-type: none"> ➤ Replenishing as necessary, utilizing manufacturer approved fluids and lubricants ◆ Check and or replace engine air filter <ul style="list-style-type: none"> ➤ Utilize filter indicator (if equipped), to determine filter condition ➤ If engine air filter is removed, it shall be replaced, never cleaned ◆ Replace fuel filter(s) <ul style="list-style-type: none"> ➤ Drain water separator, crack fuel tank drain to drain water from tank ➤ Check fuel tank, caps, tank vent, tank mounting and hoses for chafing, kinking, leakage, damage and securement away from exhaust system components ➤ Drain Diesel Exhaust Fluid (DEF) tank and refill with new DEF fluid (if equipped) 		
<ul style="list-style-type: none"> ◆ Air brakes, tires and wheels <ul style="list-style-type: none"> ➤ Inspect tire wear, condition and proper air pressure (at ambient temperature) ➤ Inspect wheels, hubs, drums, chambers, slack adjusters, hoses and mounting hardware ➤ Inspect brakes for wear, condition and operation, replace, repair or adjust as necessary ➤ Record brake rod travel on PM sheet ➤ Replace air drier filter (if equipped) ➤ Drain all air tanks ➤ Check for air leaks ◆ Inspect batteries <ul style="list-style-type: none"> ➤ Clean batteries, clean battery cable connections, load test batteries, check alternator output ◆ Replace battery(s) if 4 years old or older. 	<p>6,000 Miles or 24 Months – whichever occurs first</p>	
<ul style="list-style-type: none"> ◆ Change automatic transmission fluid and filter(s) <ul style="list-style-type: none"> ➤ Utilize Allison TranSynd™ Synthetic Transmission fluid and Allison filters ONLY ➤ Utilize hand tools only when removing and replacing transmission filter housing retainers and torque to manufacturers specifications 	<p>Allison WT Series</p>	<p>First 6000 miles, then every 24,000 or 120 months / 10 Years whichever occurs first</p>
<ul style="list-style-type: none"> ◆ Change lubricant in manual transmission(s) and drive axle housings <ul style="list-style-type: none"> ➤ Check for leaking grease seals ➤ Clean axle housing vents 	<p>ALL 120 Months / 10 Years 60,000 Miles</p>	
<ul style="list-style-type: none"> ◆ Change lubricant in oil bath front axle hubs ◆ Replace coolant, inspect belts and hoses, replace as necessary <ul style="list-style-type: none"> ➤ Only utilize manufacturer specific Long Life pre-mixed coolant at a 50/50 mixture. Never use different coolant types, additives or mixtures 		

<ul style="list-style-type: none"> ➤ Tighten all hose clamps ➤ Clean radiator, oil cooler(s) and A/C condenser ➤ Check for leaks ➤ Check freeze protection 	
All Off-Road Equipment – Type 3 Vehicles	
Required PM Tasks	<i>Interval – No Later than Listed</i>
<ul style="list-style-type: none"> ◆ Lubricate all fittings, check engine, hydraulic and transmission oil levels, empty air cleaner dust bowl, check coolant, drain water from fuel tank, check cutting edges and bolts, clean radiator/cooler fins, check tire pressure (<i>if equipped</i>) 	Operator Level PM – 10 Hours or 12 Months – whichever occurs first
All VDOF Dozers except 2018 John Deere K-model and newer	<i>Interval – No Later than Listed</i>
<ul style="list-style-type: none"> ◆ Change engine oil and filter <ul style="list-style-type: none"> ➤ Operate to bring engine oil to operating temperature ➤ Shutdown engine, drain engine oil and oil filter ➤ Utilize quality engine oil and OEM oil filter or equivalent ➤ Fill new engine oil filter with oil before installing 	200 Hours / 24 Months – whichever occurs first
VDOF 2018 John Deere K-model and newer, VDOF property number #119180 and higher	<i>Interval – No Later than Listed</i>
<ul style="list-style-type: none"> ◆ Operate machine to bring engine to operating temperature, stop engine <ul style="list-style-type: none"> ➤ Utilizing cleanliness, obtain engine oil sample ➤ Furnish requested sample information ➤ Seal and mail sample to vendor providing oil analysis ➤ Continue performing all other PM tasks ➤ Once oil analysis results are received, <i>determine if</i> <ul style="list-style-type: none"> ● Analysis results <i>are within</i> normal range – Engine oil and filter replacement are NOT necessary, continue with all other PM tasks ● Analysis results <i>are outside</i> of normal range – Perform Engine oil and filter replacement in addition to all other PM tasks <p>Only utilize John Deere break-in engine oil until 500 engine hours, then switch to recommended engine oil per manufacturer specifications at next PM.</p>	
All VDOF Dozers – PM Tasks continued	<i>Interval – No Later than Listed</i>
<ul style="list-style-type: none"> ◆ Lubricate all grease (zerk) fittings on tractor and plow (if equipped) 	200 Hours / 24 Months – whichever occurs first
<ul style="list-style-type: none"> ◆ Check ALL fluid levels ◆ Replenishing as necessary, utilizing manufacturer approved fluids and lubricants 	
<ul style="list-style-type: none"> ◆ Check and or replace engine air filter <ul style="list-style-type: none"> ➤ Utilize filter indicator (if equipped) to determine filter condition ◆ If engine air filter is removed, it shall be replaced, never cleaned 	

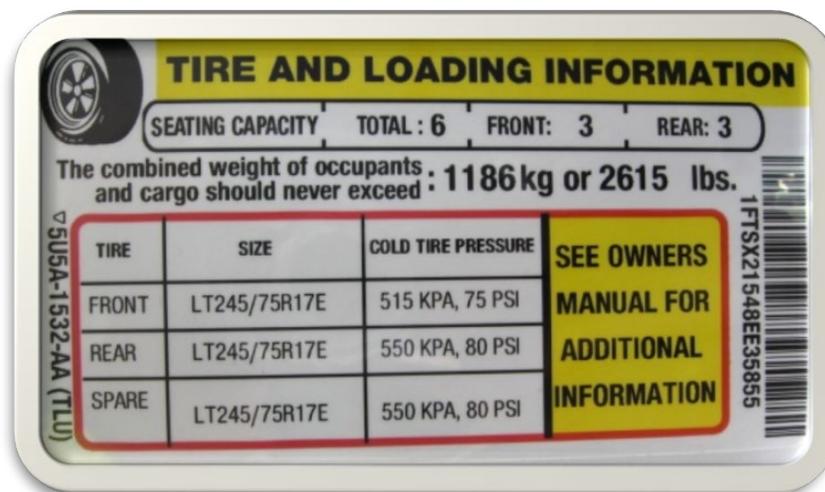
<ul style="list-style-type: none"> ◆ Replace fuel filter(s) <ul style="list-style-type: none"> ➢ Drain water separator, crack fuel tank drain to drain water from tank <ul style="list-style-type: none"> ● Check fuel tank, caps, tank vent, tank mounting and hoses for chafing, kinking, leakage, damage and securement away from exhaust system components ● Drain DEF (Diesel Exhaust Fluid) tank and refill with new DEF fluid (if equipped) 	
<ul style="list-style-type: none"> ◆ Inspect coolant, belts and hoses, replace as necessary <ul style="list-style-type: none"> ➢ Only utilize manufacturer specific Long Life pre-mixed coolant at a 50/50 mixture. never use different coolant types, additives or mixtures ➢ Clean radiator, oil cooler(s) and A/C condenser ➢ Tighten all hose clamps ➢ Check for leaks ➢ Check freeze protection 	
<ul style="list-style-type: none"> ◆ Replace HVAC cabin air charcoal and HEPA filter(s), check for pre-filter in cab 	
<ul style="list-style-type: none"> ◆ Change transmission/hydrostatic and or hydraulic fluids, filters <ul style="list-style-type: none"> ➢ Replace filters, clean or replace suction strainer in transmission and or hydraulic systems ➢ Change lubricant in final drive housings ➢ Change winch oil and filter (if equipped) ➢ Replace engine coolant and clean radiator. Replace belts and hoses ➢ 450 H and J - Hydrostatic and Hyd. = JD Plus 50 15W40 ➢ 450 K – John Deere Hydrau ONLY ◆ 550 K – Consult operator’s manual – There are currently two versions of the 550K which may differ <i>somewhat</i> 	<p>500 Hours or 120 Months – whichever occurs first</p>
VDOF Dozer Specifics	
<ul style="list-style-type: none"> ◆ 450G - Transmission and Hydraulic fluids. = UTHF (Universal Tractor Hydraulic Fluid) for wet brake applications, meets or exceeds John Deere Spec. J20C (<u><i>John Deere 450G has separate reservoirs for transmission and hydraulic systems</i></u>) 	
<ul style="list-style-type: none"> ◆ 450H and J - Hydrostatic and Hydraulic fluid = JD 50 Plus II - 15W40 engine oil. (<u><i>John Deere 450H and J have separate reservoirs for transmission and hydraulic systems</i></u>) 	
<ul style="list-style-type: none"> ◆ 450G - Transmission and Hydraulic fluids 	
<ul style="list-style-type: none"> ◆ 450K – John Deere HYDRAU ONLY. (<u><i>John Deere 450K’s share a common reservoir for both hydrostatic and hydraulic systems</i></u>) 	
<ul style="list-style-type: none"> ◆ 550K – Consult Operator’s Manual – <i>There are currently two versions of the 550K which may differ somewhat.</i> <ul style="list-style-type: none"> ➢ 2013 model - 550K – Four (4) 2013 550K’s - Property Numbers - 118624, 118625, 118626 (ER/LGPs) – 118627 (CR/XLT) These dozers are equipped with a hydraulic reversible engine cooling fan and are longer track, 1 extra bottom roller each side ➢ 2017 and newer model - 550K – Eighteen (18) 2017 550K’s - Property Numbers – 119802 through 119090 (7 units ER/LGP’s) – Property Numbers – 119101 through 119109 (9 units CR/XLT’s) (Zero WR units) Not equipped with hydraulic reversible engine cooling fan and one less bottom roller per side than first group of Four (4) 550K’s (2013) 	

Small Motorized Equipment – Type 5 Vehicles	
Required PM Tasks	Interval – No Later than Listed
<ul style="list-style-type: none"> ◆ All Agency Owned Motorized Small Equipment <ul style="list-style-type: none"> ➢ Change engine oil and filter (if equipped) ➢ Check fluids ➢ Check and or replace air filter ➢ Lubricate fittings (if equipped) ➢ Engine tune up, replace spark plug(s) 	50 Hours or 12 Months – whichever occurs first
VDOF Vehicle Types	
<ul style="list-style-type: none"> ◆ Type 1 - Pickup, SUV, 1-Ton Utility, Brush Trucks ◆ Type 2 - Transport, Stake Body, Dump, Road Tractor ◆ Type 3 - Dozers, Loaders, Graders, Farm Tractors, Forklifts etc. ◆ Type 5 - All Terrain Vehicles, Lawn Mowers, etc. 	

Vehicle Repair Guidelines

Operators should outsource the following - consult with VDOF mechanics if there are questions:

- ◆ **Repairs** – Brakes, steering, suspension, drive train, starting, charging and electrical systems, cooling system, fuel system, exhaust system, lights, A/C, steering, body etc.
- ◆ **Glass repair and replacement** – All vehicles and equipment.
- ◆ **Exhaust repair** – All vehicles and equipment.
- ◆ **State Inspections** – All licensed vehicles and equipment.
- ◆ **Tires** – Vendors and state pricing can be located [here in eVA](#). Optional state contracts should be utilized.
 - Contracts for Goodyear/Dunlop, Continental/General Tire and Bridgestone/Firestone are available for use.
 - Michelin and BF Goodrich tires are NO longer under contract or contract pricing.
 - Operators are ONLY authorized to purchase the size tire that was your Original Equipment Manufacturer (OEM) for your vehicle; No matter what size it may currently be equipped with. There is a sticker located inside the driver’s door jamb that indicates the tire size and rating for the vehicle. If sticker is missing, consult the Operator’s Manual or a mechanic.
 - There should be NO tax charged on tire purchases. This includes the FET (Federal Excise Tax). Please provide the vendor with the following info if FET is charged:
 - FET Exemption # 54-73-0076K



The following repairs should be coordinated through a VDOF mechanic.

- ◆ Basic Preventive Maintenance Service (PM) for transports and dozers
- ◆ Engine Repair/Replacement

Purchasing Guidelines

- ◆ All standard purchasing guidelines apply to vehicle maintenance, servicing and repairs.
- ◆ In cases where repair and maintenance for light vehicles will exceed \$100, notify your supervisor. Supervisors will determine if work is needed and costs are within reason, prior to approval.
- ◆ It is the operator's responsibility to ensure that the vendor notifies you if additional repairs are discovered before proceeding with the repair work.

Fire Readiness Vehicle Inspections

VDOF emergency response related equipment will be equipped and ready for response at all times. To ensure readiness, such vehicles and equipment will, at a minimum, be inspected:

- ◆ Prior to spring and fall fire seasons
- ◆ Anytime equipment inspections are needed for readiness
- ◆ Prior to issuing a vehicle to an employee
- ◆ Before and after deployment out of the work area to a training session, compact assignment or other deployment, such as hurricane, tornado, snow, etc.

Inspections will be documented on the following forms:

- ◆ [Form 4.17 Personal Equipment Inspection Checklist](#)
- ◆ [Form 4.18 Pickup Equipment Inspection Checklist](#)
- ◆ [Form 4.19 Tractor Equipment Inspection Checklist](#)
- ◆ [Form 4.20 Transport Equipment Inspection Checklist](#)
- ◆ [Form 4.21 Engine/Equipment Inspection Checklist](#)

Care and Maintenance of Pool Vehicles

- ◆ The agency transportation officer is responsible for the maintenance notifications for the VDOF Headquarters pool vehicles.

AUTHORITY

This policy and procedure is issued by the Virginia state forester.

INTERPRETATION

The agency transportation officer and deputy state forester are responsible for the interpretation of this policy and procedure.

APPROVAL

I certify that this policy and procedure is approved and ready for publication.

Danny Fortune

Agency Transportation Officer Name (Print)

Agency Transportation Officer Signature

John Miller

Director of Fire Emergency and Response (Print)

Director of Fire Emergency and Response Signature

Ed Zimmer

Deputy State Forester Name (Print)

Deputy State Forester Signature