



QUICK SERVICE REFERENCE

Copyright 2004 – The Toro Company
Version 14, Jan, 2011

This book is intended to provide easy reference to information most commonly accessed. Every effort has been made to assure the information provided in this book is up to date. The most current version of this book can be found on www.toro.com. Look at revision date on cover page for current version and compare to the version on website

Part numbers are provided for your convenience, but number changes are common. Toro part number changes are usually reflected on shipping invoices. However, non-Toro part number changes (Kohler, B&S, etc.) may occur without notification. Refer to the proper parts catalog prior to ordering to assure accuracy.

To make this book a desk reference, print it (or only the desired pages), Use a standard 3 hole punch, and put them into a 1 inch thick 3-ring binder (8.5 X 11).

All oils mentioned in this guide are based on Toro engineering specifications. Please refer to your equipment's Operators Manual for acceptable substitutes (if any). You may also refer to Toro's website for Service Bulletins regarding the use of Biodegradable oils (listed under General Topics).

The "Charts" indicated for many of the oil listings provide viscosity ratings for different operating temperatures. All charts are listed in the back of this book (pages 244-254).

All traction units have grease fittings that must be lubricated regularly with No.2 General Purpose Lithium-based grease. If machinery is operated under severe conditions, lubricate all bearings and bushings more often than normal recommendations.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change without notice. Refer to Toro Master Parts Viewer on the internet at www.toro.com for free online Toro parts catalogs. The current version of this document may be found at Toro's Golf or Grounds area of the website under the Education and Technical Reference section of the *Toro Customer Care* page.

The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for detailed information on motor oils.

Table of Contents

Serial Number Locations	6-9
Reelmaster®	10-55
Greensmaster®	56-91
Groundsmaster®	92-153
Workman® Mid Duty	154-167
Workman® Heavy Duty	168-189
Aerators	190-207
ProCore® Processor	208-209
4800 Turf Sweeper	210-211
Rake-O-Vac®	212-213
Pro Force Debris Blower	214-215
Sand Pro®	216-219
Line Painter 1200	220-221
Multi Pro®	222-233
Foam Marker Kits	234-237
Top Dressers, ProPass™, Material Handlers	238-247
Engine Oil Viscosity Charts	248-253
Hydraulic Oil Viscosity Charts	254
Hydraulic Oil Standards Charts	255-258
Toro Oil Chart	259
API Motor Oil Guide	260-262

Notes

- Version 2 changes: Pages 48 & 50; Toro part numbers provided for Air and Fuel Filters. dated 08/2002
- Version 3 changes: Pages 2, 9, 27& 34; Peugeot engine coolant has changed. The part number has changed from (93-7213) to (104-8606). dated 03/2010
- Version 4 changes: Page 35; Incorrect part number for oil filter on GM 345. The correct number is FL-100-A. dated 03/2010
- Version 4 changes: Page 41; Workman 1100 tire pressure range change. dated 03/2010
- Version 5 changes: All 2003 updates - dated 01/2003
- Version 6 changes: All 2004 updates - dated 07/2004
- Version 7 changes: All 2005 updates - dated 02/2005
- Version 8 changes: All 2006 updates
- Version 9 changes: All 2007 updates - includes increased oil change intervals newer units.
- Version 10 changes: All 2008 updates - includes Toro oil part numbers at the end of the book.
- Version 11 changes: All 2009 updates - includes Toro serial number locations.
- Version 12 changes: All 2010 updates – dated 02/2010
- Version 13 changes: All 2010 updates – dated 06/2010
- Version 14 changes: All 2011 updates – dated 02/2011

Important Information on Consumable Items

The normal operating environment of Toro machines can be categorized as off road-severe duty. In order for equipment to provide continuous service in this type of environment, regular cleaning and scheduled maintenance must be performed.

Components are designed to provide durability with a minimum amount of maintenance. Maintenance schedules are developed for each product in an effort to reduce unexpected failures and down-time. However, components that have constant contact with the turf environment (i.e. reels, bedknives, blades, rollers, caster wheels, etc.) are subject to a wide variety of detrimental influences that can accelerate the need for maintenance and/or repair prior to the recommended schedules. Because of this, these components (greaseable and non-greaseable) may require additional repairs as part of maintenance, and should be considered "consumable" items.

For additional information on consumable items, refer to the Toro General Commercial Products Warranty statement on the rear cover of the Operator's Manuals or at www.toro.com.

FINDING YOUR PRODUCT'S MODEL AND SERIAL NUMBER



This is a picture of a Toro model and serial number plate. You should be able to find a model and serial number plate that looks similar to this one on your type of machine.

Review the sample images below to help identify the location of the model and serial number plate on your machine.

Due to the various product configurations these plates may be placed in a somewhat protected area (not readily visible). Most plates will be attached to a main frame member.



Product Type: Walk-behind Mowers/Product

How to find the model and serial number plate:

Look between the wheels on top of the frame on the back of the machine.



Product Type: Riding Greensmowers

How to find the model and serial number plate:

Locations vary on these machines based on vintage. Check under the seat area or on the main frame just above the rear steer wheel, or on the right-hand frame member near the wheel brake and somewhat behind and below the driver's right foot.



Product Type: Workman Vehicles

How to find the model and serial number plate:

These plates are under the dashboard area and may be in the center (as shown) or on either the right or left-hand side.



Product Type: Multi Pro Sprayers

How to find the model and serial number plate:

Look for the plate on the left-hand side of the operator's compartment (near the driver's left knee area) or on the chassis near the battery on the left side.



Product Type: Groundsmasters and Reelmasters

How to find the model and serial number plate:

Placement varies based on model. Look first in the area directly behind the operator's left knee, on the firewall.



Another location is on the front frame extension to the left of the driver's feet.



Product Type: Other Non-Riding Product

How to find the model and serial number plate:

Look on the main frame structure in and open, yet damage-protected area.

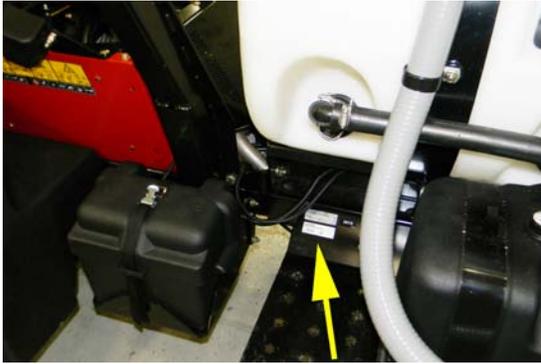
The ProForce Blower is shown.



The ProCore 648 Aerator is shown.



Propass as shown, is located on the front LH side of the unit



Multipro 5800 as shown, is now located above the step plate on the LH side of the machine



Groundsmaster 360 is located directly in front of the steering column



QUICK SERVICE REFERENCE

REELMASTER 6500 D / 6700 D (2 & 4 WHEEL DRIVE)

Model	03806 thru 03808	Serial	210000001- 240999999
Engine Brand	..... Kubota		
Engine Oil (<i>Chart A</i>)	.....7.5 Qts.....	SAE 10W30 CH-4, CI-4	
Engine Oil Filter	..... 108-3841		
Breather Element	..... 98-9493		
Hydraulic Oil (<i>Chart R</i>)	.....9 Gal	ISO VG 46	
Hydraulic Filter	..... 94-2621		
Air Filter	..... 108-3812		
Safety Air Filter	..... 108-3813		
Water Separator	..... 98-9764		
Filter Fuel*	..... 99-8358 (2001-2002)		
Filter In-line Fuel*	..... 98-7612 (2003-2007)		
Planetary Gear Drive	.....32Oz.....	SAE 85W140	
Rear Axle Oil	.....80Oz.....	SAE 80W90	
Tire Pressure	..... 15 – 20 PSI (Front & Rear)		
Engine Coolant	.....2.5 Gal.....	Ethylene Glycol, Water (50/50 mix)	

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle).
After first 200 hours	<ul style="list-style-type: none"> • Change the planetary gear oil • Change the 4 WD rear axle lubricant.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Check the air cleaner.¹ • Check the battery fluid level and cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 200 hours	<ul style="list-style-type: none"> • Drain moisture from hydraulic tank. • Drain moisture from fuel tank. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner.¹ • Replace the fuel/water separator filter. • Replace the fuel filter. • Inspect traction linkage movement • Check the engine RPM (idle and full throttle). • Check the planetary gear oil • Check the 4 WD rear axle lubricant.
Every 800 hours	<ul style="list-style-type: none"> • Change the hydraulic filter. • Change the hydraulic fluid • Check rear wheel toe-in. • Pack the 2WD rear wheel bearings. • Change the planetary gear oil • Change the 4 WD rear axle lubricant. • Adjust valves
Every 1600 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush fuel tank. • Drain/flush hydraulic tank.

¹Service air cleaner whenever indicator shows red

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 6500 D / 6700 D

(2 & 4 WHEEL DRIVE)

Model	03806 thru 03813	Serial	250000001 & Up
Engine Brand	Kubota		
Engine Oil (Chart A)	7.5 Qts	SAE 10W30 CD (2005-2006)	
Engine Oil (Chart M)	7.5 Qts	SAE 15W40 (2007 & Up)	
Engine Oil Filter	108-3841		
Breather Element	98-9493		
Hydraulic Oil (Chart R)	9 Gal	ISO VG 46	
Hydraulic Filter	94-2621		
Air Filter	108-3812		
Safety Air Filter	108-3813		
Water Separator Element*	98-9764		
Filter In-line Fuel*	98-7612 (2003-2007)		
Fuel Filter Spin On*	110-9049 (2008 & Up)		
Planetary Gear Drive	16 Oz	SAE 85W140	
Rear Axle Oil	80Oz	SAE 80W90	
Tire Pressure	15 – 20 PSI (Front & Rear)		
Engine Coolant	2.5 Gal	Ethylene Glycol, Water (50/50 mix)	

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts or bolts (after the first 1–4 hours of operation and then after 10 hours of operation).
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and oil filter.
After the first 200 hours	<ul style="list-style-type: none"> • Change the planetary gear drive oil. • Change the rear axle lubricant.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check and clean the cooling system. • Check the hydraulic fluid level. • Check the tire pressure. • Check the reel to bedknife contact. • Check the interlock switches. • Drain the fuel filter/water separator. • Remove debris from the rear screen, oil cooler, and radiator (more frequently in dirty conditions). • Inspect the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. • Check the condition of the battery.
Every 100 hours	<ul style="list-style-type: none"> • Inspect and tighten the cooling system hoses and connections. • Check the condition and tension of the alternator belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts or bolts.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.) • Check the fuel lines and connections. • Replace the fuel filter canister. • Replace the fuel pre-filter. • Check the rear axle lubricant level.
Every 800 hours	<ul style="list-style-type: none"> • Change the planetary gear drive oil. • Change the rear axle lubricant. • Check the rear wheel toe-in. • Change the hydraulic fluid.
Yearly	<ul style="list-style-type: none"> • Change the planetary gear drive oil.
Every 2 years	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Drain and flush the cooling system. • Replace all moving hoses. • Drain/flush the hydraulic tank.

Important: Refer to your engine *Operator's Manual* for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 6500 D / 6700 D

(2 & 4 WHEEL DRIVE)

Model	03800 thru 03805	Serial	51001 & Up
Engine Brand	..... Peugeot		
Engine Oil	(Chart C).....5.3 Qts	.....	SAE 15W40 CI,CI4
Engine Oil Filter	..... 108-3837		
Hydraulic Oil	(Chart R).....9 Gal	.....	ISO VG 46
Hydraulic Filter	..... 94-2621		
Air Filter	..... 108-3812		
Safety Air Filter	..... 108-3813		
Water Separator	..... 76-5220		
Planetary Gear Drive	.....32Oz	.....	SAE 85W140
Rear Axle Oil	.....80Oz	.....	SAE 80W90
Tire Pressure	..... 15 – 20 PSI (Front & Rear)		
Engine Coolant	(Special Requirement) ..	Peugeot Antifreeze	3.5Gal Toro Part # (104-8606)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10



QUICK SERVICE REFERENCE

REELMASTER 5010 Series
(2 & 4 WHEEL DRIVE)

- Model** 03660 thru 03690 **Serial** 260000001 & Up
- Engine Brand** Kubota
- Engine Oil** (*Chart A*)..... SAE 15W-40 CI-4
- Engine Oil Filter** 108-3841
- Breather Element**..... 68-6150
- Hydraulic Oil** (*Chart R*)..... ISO VG 46
- Hydraulic Filter** 94-2621
- Steering Valve Filter** 86-3010
- Air Filter (5210 - 5510)** 108-3810
- Air Filter (5610 Only)** 108-3812
- Water Separator**..... 98-9764 (2006-2007)
- Fuel Filter In-line**..... 98-7612 (2006-2007)
- Fuel Filter Spin On*** 110-9049 (2008 & Up)
- Tire Pressure**..... 12 – 15 PSI (Front & Rear)
- Engine Coolant**..... Ethylene Glycol, Water
(50/50 mix)

	<u>5210</u>	<u>5410</u>	<u>5510</u>	<u>5610</u>
<u>Engine oil in Quarts</u>	3.5	5.5	5.5	5.5
<u>Hydraulic oil in Gallons</u>	9	9	9	9
<u>Coolant in Quarts</u>	5.5	7	7	10

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
After the first 8 hours	<ul style="list-style-type: none"> • Check the condition and tension of the alternator belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the cooling system. • Check the hydraulic fluid level. • Check the reel to bedknife contact. • Check the operation of the interlock switches. • Remove debris from the screen, oil coolers, and radiator (more frequently in dirty operating conditions). • Check the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. (Grease them immediately after every washing regardless of the interval listed.) • Check the condition of and clean the battery. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the condition and tension of the alternator belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Drain moisture from the fuel and hydraulic fluid tanks. • Check the reel bearing preload.
Every 250 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.) • Check the fuel lines and connections for deterioration, damage, or loose connections. • Replace the fuel filter canister. • Check the engine RPM (idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank • Check the rear wheel toe-in. • Change the hydraulic fluid. • Change the hydraulic filters (sooner if the service interval indicator is in the Red zone). • Pack the rear wheel bearings • Adjust the engine valves (refer to the engine Operator's Manual)
Before storage	<ul style="list-style-type: none"> • Drain and clean the fuel tank
Every 2 years	<ul style="list-style-type: none"> • Flush and replace the cooling system fluid. • Drain and flush the hydraulic tank. • Replace all moving hoses.



QUICK SERVICE REFERENCE

REELMASTER 5200 D / 5400 D
(2 & 4 WHEEL DRIVE)

Model 03540 thru 03544 **Serial** 80001 - 240999999

Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....	3.8 Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	108-3841
Breather Element	98-9493
Transmission Oil (<i>Chart T</i>)....	5 Qts..... UTHF
Transmission Filter	110-4146
Front Axle Element	75-6340
Hydraulic Oil (<i>Chart T</i>).....	8.5 Gal UTHF
Hydraulic Filter	75-1310
Air Filter	108-3810
Pre Cleaner Filter	48-7430
Water Separator*	98-9764
Fuel Filter In-line (If Used)*	98-7612
Pre Fuel Filter (If Used)	99-8358
Rear Axle, Models*	SAE 80W90
Tire Pressure	10 – 15 PSI (Front & Rear)
Engine Coolant	1.8 Gal Ethylene Glycol, Water (50/50 mix)

*** Rear axle: 2.4Qts for center section. .35Qts Steering knuckles**

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Important Refer to your engine operator's manual for additional maintenance procedures.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts. • Change the transmission fluid. • Replace the transmission filter.
After first 50 hours	<ul style="list-style-type: none"> • Replace the engine oil filter. • Check the engine RPM (idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Lubricate all grease fittings. • Change the engine oil. • Inspect the air filter, dust cup, and baffle.
Every 100 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Replace the engine oil filter. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Drain moisture from the hydraulic tank. • Drain moisture from the fuel tank. • Check the reel bearing preload. • Lubricate the front axle bearings.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner (when the indicator shows red). • Replace the fuel/water separator filter. • Replace the fuel filter. • Inspect the traction linkage movement. • Check the engine RPM (idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Change the hydraulic filter. • Change the transmission fluid. • Replace the transmission filter. • Check rear wheel toe-in. • Pack the bearings to both rear wheels (2WD). • Change the rear axle lubricant (4WD). • Adjust the valves (Kubota diesel engine).
Every 1600 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace the interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush the fuel tank. • Drain/flush the hydraulic tank.



QUICK SERVICE REFERENCE

REELMASTER 5200 D / 5400 D

(2 & 4 WHEEL DRIVE)

Model	03540 thru 03544	Serial	250000001 & Up
Engine Brand	Kubota		
Engine Oil (<i>Chart A</i>)	4 Qts	SAE 10W30 CI, CI4	
Engine Oil Filter	108-3841		
Breather Element	98-9493		
Transmission Oil (<i>Chart T</i>)	5 Qts	UTHF	
Transmission Filter	110-4146		
Front Axle Element	75-6340		
Hydraulic Oil (<i>Chart T</i>)	7.5 Gal	UTHF	
Hydraulic Filter	75-1310		
Air Filter	108-3810		
Pre Cleaner Filter	48-7430		
Water Separator*	98-9764		
Fuel Filter In-line*	98-7612		
Rear Axle, Models	SAE 80W90		
Tire Pressure	10 – 15 PSI (Front & Rear)		
Engine Coolant	2.4 Gal	Ethylene Glycol, Water (50/50 mix)	

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first operating hour	<ul style="list-style-type: none"> Torque the wheel lug nuts to 75 to 80 ft-lb (102 to 108 N·m).
After the first 8 operating hours	<ul style="list-style-type: none"> Check the condition and tension of the alternator belt. Check the condition and tension of the cooling fan belt.
After the first 10 operating hours	<ul style="list-style-type: none"> Torque the wheel lug nuts to 75 to 80 ft-lb (102 to 108 N·m).
After the first 50 operating hours	<ul style="list-style-type: none"> Change the engine oil and filter. Check the engine RPM (idle and full throttle).
After the first 200 operating hours	<ul style="list-style-type: none"> Replace the transmission oil filter.
Before each use or daily	<ul style="list-style-type: none"> Check the engine oil level. Check the cooling system. Check the transmission fluid. Check the hydraulic fluid level. Check the rear axle lubricant (Model 03544 only). Check the reel to bedknife contact. Check the operation of the interlock switches. Inspect the air cleaner for damage and check the service indicator. If it is red, service the air cleaner. Check and clean out the air filter pre-cleaner bowl (more often in dusty and dirty conditions). Drain water and other contaminants from the fuel filter/water separator. Remove debris from the screen, oil coolers, and radiator (more frequently in dirty operating conditions). Check the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> Grease the bearings and bushings. Check the condition of and clean the battery. Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> Inspect the cooling system hoses. Check the condition and tension of the alternator belt. Check the condition and tension of the cooling fan belt.
Every 150 hours	<ul style="list-style-type: none"> Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> Lubricate the front axle bearings. Drain moisture from the fuel and hydraulic fluid tanks. Check the reel bearing preload.
Every 250 hours	<ul style="list-style-type: none"> Torque the wheel lug nuts to 75 to 80 ft-lb (102 to 108 N·m).

Maintenance Service Interval	Maintenance Procedure
Every 400 hours	<ul style="list-style-type: none"> Check the fuel lines and connections for deterioration, damage, or loose connections. Replace the fuel filter canister. Replace the fuel prefilter. Check the traction linkage movement. Check the engine RPM (idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> Change the transmission fluid. Replace the transmission filter. Change the rear axle lubricant (Model 03544 only) Check the rear wheel toe-in. Change the hydraulic fluid. Change the hydraulic filter (sooner if the service interval indicator on the filter head is in the Red zone). Pack the rear wheel bearings (2-wheel drive only) Adjust the engine valves (refer to the engine Operator's Manual)
Every 2 years	<ul style="list-style-type: none"> Drain and clean the fuel tank. Flush and replace the cooling system fluid. Drain and flush the hydraulic tank. Replace all moving hoses. Replace the safety interlock switches

Important: Refer to your Engine Operator's Manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 5100 D / 5300 D

(2 & 4 WHEEL DRIVE)

Model All Models	Serial 40001 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart I</i>).....	3.8 Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	108-3841 (5100D) 93-4295 (5300D)
Breather Element	98-9493
Transmission Oil (<i>Chart T</i>).....	5 Qts..... UTHF
Transmission Filter	75-1330
Front Axle Element	75-6340
Hydraulic Oil (<i>Chart T</i>).....	8 Gal..... UTHF
Hydraulic Filter	75-1310
Air Filter	27-7110
Pre Cleaner Filter	48-7430
Water Separator	63-8300
Fuel Filter In-line	43-2550
Rear Axle, Models	SAE 80W90
Tire Pressure	10 – 15 PSI (Front & Rear)
Engine Coolant	1.6 Gal..... Ethylene Glycol, Water (50/50 mix)

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

REELMASTER® 223-D, 5100-D, and 5300-D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Fluid Level	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Cable Connections	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Lubricate All Grease Fittings	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Change Engine Oil	<i>A Level Service</i>				
Inspect Air Filter, Dust Cup, and Baffle	<i>A Level Service</i>				
† Check Fan and Alternator Belt Tension	<i>A Level Service</i>				
‡ Replace Engine Oil Filter	<i>B Level Service</i>				
Inspect Cooling System Hoses	<i>B Level Service</i>				
Drain Moisture-Hyd. Tank	<i>C Level</i>				
Drain Moisture-Fuel Tank	<i>C Level</i>				
Check Reel Bearing Preload Adjustment	<i>C Level</i>				
† Torque Wheel Lug Nuts	<i>C Level</i>				
Service Air Filter	<i>D Level</i>				
Replace Electric Fuel Pump Filter	<i>D Level</i>				
Replace Fuel/Water Separator Filter	<i>D Level</i>				
Inspect Traction Linkage Movement	<i>D Level</i>				
‡ Torque Head and Adjust Valves	<i>D Level</i>				
‡ Check Engine RPM (idle and full throttle)	<i>D Level</i>				
Change Hydraulic Fluid	<i>E Level Service</i>				
Change Transmission Fluid	<i>E Level Service</i>				
† Replace Transmission Filter	<i>E Level Service</i>				
Check Rear Wheel Toe-in	<i>E Level Service</i>				
Rear Axle Service	<i>E Level Service</i>				
- pack Rear Wheel Bearings (2WD)	<i>E Level Service</i>				
- change Rear Axle Lubricant (4WD)	<i>E Level Service</i>				
† Initial break in at 10 hours	<i>E Level Service</i>				
‡ Initial break in at 50 hours	<i>E Level Service</i>				
Replace Moving Hoses	Annual Recommendations:				
Replace Safety Switches	<i>Items listed are recommended every 1600 hours or 2 years whichever occurs first.</i>				
Coolant System - Flush/Replace Fluid	<i>Items listed are recommended every 1600 hours or 2 years whichever occurs first.</i>				
Fuel Tank - Drain/Flush	<i>Items listed are recommended every 1600 hours or 2 years whichever occurs first.</i>				
Hydraulic Tank - Drain/Flush	<i>Items listed are recommended every 1600 hours or 2 years whichever occurs first.</i>				

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

REELMASTER 5500 D (2 & 4 WHEEL DRIVE)

Model	03550 and 03551	Serial	210000001 - 240999999
Engine Brand	Kubota		
Engine Oil (<i>Chart A</i>)	4 Qts	SAE 10W30 CI, CI4	
Engine Oil Filter	108-3841		
Breather Element	98-9493		
Transmission Oil (<i>Chart T</i>)	5 Qts	UTHF	
Transmission Filter	110-4146		
Front Axle Element	75-6340		
Hydraulic Oil (<i>Chart T</i>)	8.5 Gal	UTHF	
Hydraulic Filter	94-2621		
Air Filter	108-3810		
Pre Cleaner Filter	48-7430		
Water Separator*	98-9764		
Fuel Filter*	99-8351 (2000-2001)		
Fuel Filter In-line*	98-7612 (2002 & Up)		
Rear Axle	<i>Check Plug</i>	SAE 80W90	
Tire Pressure	10 – 15 PSI (Front & Rear)		
Engine Coolant	2.4 Gal	Ethylene Glycol, Water (50/50 mix)	

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts. • Change the transmission fluid. • Replace the transmission filter.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle). • Torque the head and adjust valves.
After first 200 hours	<ul style="list-style-type: none"> • Change the planetary gear oil
Every 50 hours	<ul style="list-style-type: none"> • Change the engine oil. • Lubricate all grease fittings. • Check the air cleaner.¹ • Check the battery fluid level and cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil filter. • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 200 hours	<ul style="list-style-type: none"> • Drain moisture from hydraulic tank. • Drain moisture from fuel tank. • Torque the wheel lug nuts. • Check the reel bearing preload.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner.¹ • Replace the fuel/water separator filter. • Replace the fuel filter. • Inspect traction linkage movement • Check the engine RPM (idle and full throttle). • Torque the head and adjust valves.
Every 800 hours	<ul style="list-style-type: none"> • Change the hydraulic fluid • Check rear wheel toe-in. • Pack the 2 WD rear wheel bearings. • Change the 4 WD rear axle lubricant. • Change the transmission fluid.
Every 1600 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush fuel tank. • Drain/flush hydraulic tank.

¹Service air cleaner whenever indicator shows red



QUICK SERVICE REFERENCE

REELMASTER 5500 D
(2 & 4 WHEEL DRIVE)

Model	03550 and 03551	Serial	250000001 & Up
Engine Brand	..... Kubota		
Engine Oil (Chart A)	..... 4 Qts	..... SAE 10W30 CI, CI4	
Engine Oil (Chart M)	..... SAE 15W40 (2006)		
Engine Oil Filter	..... 108-3841		
Breather Element	..... 98-9493		
Transmission Oil (Chart T)	..... 5 Qts	..... UTHF	
Transmission Filter	..... 110-4146		
Front Axle Element	..... 75-6340		
Hydraulic Oil (Chart T)	..... 8.5 Gal	..... UTHF	
Hydraulic Filter	..... 94-2621		
Air Filter	..... 108-3810		
Pre Cleaner Filter	..... 48-7430		
Water Separator*	..... 98-9764		
Fuel Filter In-line*	..... 98-7612 (2002 & Up)		
Rear Axle	..... SAE 80W90		
Tire Pressure	..... 10 – 15 PSI (Front & Rear)		
Engine Coolant	..... 2.3 Gal	..... Ethylene Glycol, Water (50/50 mix)	

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Replace the engine oil and filter. • Check the engine RPM (idle and full throttle).
After first 200 hours	<ul style="list-style-type: none"> • Replace the transmission filter.
Every 50 hours	<ul style="list-style-type: none"> • Check the air cleaner.¹ • Lubricate all grease fittings. • Check the battery fluid level and cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Replace the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Drain moisture from hydraulic tank. • Drain moisture from fuel tank. • Torque the wheel lug nuts. • Check the reel bearing preload.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner.¹ • Replace the fuel/water separator filter. • Replace the fuel filter. • Inspect traction linkage movement • Check the engine RPM (idle and full throttle). • Adjust the valves.
Every 800 hours or annually, whichever occurs first	<ul style="list-style-type: none"> • Change the transmission fluid. • Replace the transmission filter.
Every 800 hours	<ul style="list-style-type: none"> • Change the hydraulic fluid • Check rear wheel toe-in. • Pack the 2 WD rear wheel bearings. • Change the 4 WD rear axle lubricant.
Every 1600 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush fuel tank. • Drain/flush hydraulic tank.

¹Service air cleaner whenever indicator shows red

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 4500 D

Model All Models	Serial 30101 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart A</i>).....	6.9 Qts..... SAE 10W30 CI,CI4
Engine Oil Filter	108-3835
Planetary Gear	30Oz SAE 80W90
Hydraulic Oil (<i>Chart R</i>).....	9.3 Gal ISO VG 46
Hydraulic Filter	86-6110
Air Filter	108-3833
Pre Cleaner Filter	48-7430
Water Separator Fuel Filter	60-5470
Tire Pressure	13 PSI (Front) 15 PSI (Rear)
Engine Coolant	3.7 Gal Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

REELMASTER® 450-D and 4500-D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service Type :				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Lubricate Reel Control Valve Grease Fitting	Every 50hrs				
Lubricate Reel Speed Control Valve with Oil					
Lubricate all Grease Fittings	<i>A Level Service</i>				
Check Battery Condition and Connections					
‡ Change Engine Oil and Filter					
Drain water from Hydraulic Tank					
† Check Engine Fan and Alternator Belt	<i>B Level Service</i>				
Inspect Cooling System Hoses					
Service Air Cleaner Filter Element					
Inspect Cutting Unit Reel Drive Belts	<i>C Level Service</i>				
† Torque Wheel Lug Nuts					
Replace Fuel Filter					
Inspect Fuel Lines and connections					
‡ Torque Cylinder Head and Adjust Valves	<i>D Level Service</i>				
‡ Check Engine RPM (idle and full throttle)					
Drain and Clean Fuel Tank					
‡ Replace Hydraulic Oil Filter					
Replace Hydraulic Tank Breather					
‡ Change Front Planetary Gear Lube					
Pack Rear Axle Bearings (2wd)	<i>E Level Service</i>				
Check Rear Wheel Toe-in					
† Initial break in at 10 hours					
‡ Initial break in at 50 hours					
Replace all Moving Hydraulic Hoses	Annual Recommendations: <i>Items listed are recommended every 1500 hours or 2 years whichever occurs first.</i>				
Replace Safety Switches					
Cooling System - Flush/Replace Fluid					
Change Hydraulic Oil					

See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

REELMASTER 4000 D

Model 03706 and 03707	Serial 80101 - 240999999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....	8 Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	104-5169
Breather Element	98-7419
Hydraulic Oil (<i>Chart S</i>).....	9.3 Gal ISO VG 68
Hydraulic Filter	86-6110
Air filter	108-3812
Air Filter -Safety	108-3813
Water Separator*	98-9764 (2002 & Up)
Water Separator*	76-5220 (2001 & Older)
Fuel Filter In-line*	98-7612 (1998 - 2001)
Fuel Filter In-line*	99-8358 (2002 - 2003)
Tire Pressure	13 – 15 PSI (Front & Rear) (<i>see operators manual for tire pressures for various turf conditions</i>)
Engine Coolant	3.7 Gal Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle). • Change the hydraulic filter. • Adjust valves • Change the front planetary gear lube
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Check the air cleaner.¹ • Check the battery fluid level and cable connections. • Lubricate reel control valve grease fitting • Lubricate reel speed valve with oil
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Drain water from hydraulic tank • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Inspect cutting unit reel drive belts
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner.¹ • Replace the fuel filters. • Check the engine RPM (idle and full throttle). • Inspect fuel lines and connections
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean fuel tank • Change the hydraulic filter • Change hydraulic tank breather • Check rear wheel toe-in. • Pack the 2WD rear wheel bearings. • Change the front planetary gear lube • Adjust valves
Every 1600 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush hydraulic tank.

¹Service air cleaner whenever indicator shows red

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 4000 D

Model 03706 and 03707 **Serial** 250000001 & Up

Engine Brand Kubota

Engine Oil (*Chart A*).....8 Qts..... SAE 10W30 CI, CI4

Engine Oil Filter 104-5169

Hydraulic Oil (*Chart S*).....18.2 Gal..... ISO VG 68

Hydraulic Filter 86-6110

Hydraulic Breather Element 68-6150

Air filter 108-3812

Air Filter -Safety 108-3813

Water Separator Element* 98-9764 (2002 & Up)

Fuel Filter In-line* 98-7612 (2004 & 2007)

Tire Pressure..... 13 – 15 PSI (Front & Rear)
(*see operators manual for tire pressures for various turf conditions*)

Engine Coolant.....3.7 Gal Ethylene Glycol, Water
(50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle). • Change the hydraulic filter. • Adjust valves • Change the front planetary gear lube
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Check the air cleaner.¹ • Check the battery fluid level and cable connections. • Lubricate reel control valve grease fitting • Lubricate reel speed valve with oil
Every 100 hours	<ul style="list-style-type: none"> • Drain water from hydraulic tank • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Inspect cutting unit reel drive belts
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner.¹ • Replace the fuel filters. • Check the engine RPM (idle and full throttle). • Inspect fuel lines and connections
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean fuel tank • Change the hydraulic filter • Change hydraulic tank breather • Check rear wheel toe-in. • Pack the 2WD rear wheel bearings. • Change the front planetary gear lube • Adjust valves
Every 1600 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace interlock safety switches. • Flush/replace the cooling system fluid. • Drain/flush hydraulic tank.

¹Service air cleaner whenever indicator shows red

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 4000 D

Model	03706 and 03707	Serial	310000001 & Up
Engine Brand	..... Kubota		
Engine Oil (Preferred)	..... 8 Qts	..... SAE 15W-40 CH4, CI4	
Engine Oil (Alternate)	..... SAE 10W-30 or 5W-30		
Engine Oil Filter	..... 104-5169		
Hydraulic Oil (Chart S)	..... 18 Gal	..... ISO VG 68	
Hydraulic Filter	..... 86-6110		
Hydraulic Breather Element	..... 68-6150		
Air filter	..... 108-3812		
Air Filter -Safety	..... 108-3813		
Water Separator Element*	..... 98-9764 (2002 & Up)		
Tire Pressure	..... 13 – 15 PSI (Front & Rear) <i>(see operators manual for tire pressures for various turf conditions)</i>		
Engine Coolant	..... 3.7 Gal	..... Ethylene Glycol, Water (50/50 mix)	

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Torque the wheel lug nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the planetary gear drive oil level. • Change the hydraulic filter. • Lubricate the reel speed valve with oil. • Check the engine RPM (idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the level of the coolant in the cooling system. • Check the hydraulic fluid level. • Check the reel to bedknife contact. • Check the warning indicator lights. • Check the safety interlock system. • Drain the fuel filter/water separator. • Remove debris from the screen, oil coolers, and radiator (more frequently in dirty operating conditions). • Check the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. (Grease them immediately after every washing regardless of the interval listed.) • Check the condition of and clean the battery. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the condition and tension of the alternator belt. • Drain water from the hydraulic reservoir.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Service the air cleaner. (More frequently in extremely dirty or dusty conditions) • Torque the wheel lug nuts. • Drain moisture from the fuel and hydraulic fluid tanks. • Check the cutting unit reel drive belts.
Every 400 hours	<ul style="list-style-type: none"> • Check the fuel lines and connections for deterioration, damage, or loose connections. • Replace the fuel filter canister. • Check the engine RPM (idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank • Check the rear wheel toe-in. • Check the planetary gear drive oil level. • Flush and replace the cooling system fluid. • Change the hydraulic filter. • Change the hydraulic system breather. (More often in extremely dusty or dirty conditions) • Pack the rear wheel bearings • Adjust the engine valves (refer to the engine Operator's Manual)
Every 1,500 hours	<ul style="list-style-type: none"> • Change the hydraulic fluid.
Before storage	<ul style="list-style-type: none"> • Drain and clean the fuel tank
Every 2 years	<ul style="list-style-type: none"> • Replace all moving hoses.



QUICK SERVICE REFERENCE

REELMASTER 3100 D

Model All Models	Serial 90001- 24099999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....	4 Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	108-3841
Breather Element	98-9493
Hydraulic Oil (<i>Chart R</i>).....	3.5 Gal..... ISO VG 46
Hydraulic Filter	54-0110
Air Filter	108-3811
Water Separator*	98-9764
Fuel Filter In-line*	98-7612
Tire Pressure	14 – 18 PSI (Front & Rear)
Engine Coolant	1.5 Gal..... Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check Fan and Alternator Belt Tensions • Change Hydraulic Filter • Torque Wheel Lug Nuts
After first 50 hours	<ul style="list-style-type: none"> • Change Engine Oil Filter • Check Engine RPM (idle and full throttle)
Every 50 hours	<ul style="list-style-type: none"> • Inspect Air Filter, Dust Cup, and Burp Valve • Lubricate All Grease Fittings • Change Engine Oil • Check Battery Cable Connections • Check Fan and Alternator Belt Tensions • Check Battery Fluid Level
Every 100 hours	<ul style="list-style-type: none"> • Change Engine Oil Filter • Check Traction Belt
Every 200 hours	<ul style="list-style-type: none"> • Change Air Filter • Change Hydraulic Filter • Torque Wheel Lug Nuts
Every 400 hours	<ul style="list-style-type: none"> • Change Hydraulic Fluid • Change Fuel/Water Separator Filter • Change Fuel Pre Filter • Inspect Traction Cable Movement • Inspect Spider Coupling for Wear • Check Engine RPM (idle and full throttle)
Every 800 hours	<ul style="list-style-type: none"> • Adjust valves
Every 1000 hours	<ul style="list-style-type: none"> • Replace Moving Hoses • Replace Safety Switches • Coolant System – Flush/Replace Fluid • Fuel Tank – Drain/Flush • Hydraulic Tank – Drain/Flush



QUICK SERVICE REFERENCE

REELMASTER 3100 D

Model All Models	Serial 250000001 - 280999999
Engine Brand	Kubota
Engine Oil (<i>Chart M</i>).....	4 Qts..... SAE 15W-40 CH-4
Engine Oil Filter	108-3841
Breather Element	98-9493
Hydraulic Oil (<i>Chart R</i>).....	3.5 Gal..... ISO VG 46
Hydraulic Filter	54-0110
Air Filter	108-3811
Water Separator*	98-9764 (1999-2007)
Fuel Filter In-line*	98-7612 (1999-2007)
Fuel Filter Spin On*	110-9049 (2008 & Up)
Tire Pressure	14 – 18 PSI (Front & Rear)
Engine Coolant	1.5 Gal Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check Fan and Alternator Belt Tensions • Change Hydraulic Filter • Torque Wheel Lug Nuts
After first 50 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter • Check Engine RPM (idle and full throttle)
Every 50 hours	<ul style="list-style-type: none"> • Inspect Air Filter, Dust Cup, and Burp Valve • Lubricate All Grease Fittings • Check Battery Cable Connections • Check Fan and Alternator Belt Tensions • Check Battery Fluid Level
Every 100 hours	<ul style="list-style-type: none"> • Check Traction Belt
Every 150 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter
Every 200 hours	<ul style="list-style-type: none"> • Change Air Filter • Change Hydraulic Filter • Torque Wheel Lug Nuts
Every 400 hours	<ul style="list-style-type: none"> • Change Hydraulic Fluid • Change Fuel/Water Separator Filter • Change Fuel Pre Filter • Inspect Traction Cable Movement • Inspect Spider Coupling for Wear • Check Engine RPM (idle and full throttle)
Every 800 hours	<ul style="list-style-type: none"> • Adjust valves
Every 1000 hours	<ul style="list-style-type: none"> • Replace Moving Hoses • Replace Safety Switches • Coolant System – Flush/Replace Fluid • Fuel Tank – Drain/Flush • Hydraulic Tank – Drain/Flush



QUICK SERVICE REFERENCE

REELMASTER 3100 D

Model	All Models	Serial	290000001 & Up
Engine Brand	..... Kubota		
Engine Oil	(Chart M)..... 4 Qts	..... SAE 15W-40 CH-4	
Engine Oil Filter	..... 108-3841		
Breather Element	..... 98-9493		
Hydraulic Oil	(Chart R)..... 3.5 Gal	..... ISO VG 46	
Hydraulic Filter	..... 54-0110		
Air Filter	..... 108-3811		
Fuel Filter Spin On*	..... 110-9049 (2008 & Up)		
Tire Pressure	..... 14 – 18 PSI (Front & Rear)		
Engine Coolant	..... 1.5 Gal	..... Ethylene Glycol, Water (50/50 mix)	

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Torque the wheel nuts.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel nuts. • Check the condition and tension of all belts. • Change the hydraulic filter.
After the first 50 hours	<ul style="list-style-type: none"> • Change the oil and oil filter.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the engine coolant level. • Check the hydraulic fluid level. • Check the tire pressure. • Check the reel-to-bedknife contact. • Check the interlock system. • Drain the water separator. • Clean the radiator and oil cooler. • Check the hydraulic lines and hoses.
Every 25 hours	<ul style="list-style-type: none"> • Check the electrolyte level. (If machine is in storage, check every 30 days.)
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all bearings and bushings. (Lubricate all bearings and bushings daily when conditions are dusty and dirty.)
Every 100 hours	<ul style="list-style-type: none"> • Check the condition and tension of all belts.
Every 150 hours	<ul style="list-style-type: none"> • Change the oil and oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel nuts. • Service the air cleaner (More frequently in extreme dusty or dirty conditions) • Check the parking brake adjustment. • Change the hydraulic filter.
Every 400 hours	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace the fuel filter canister. • Change the hydraulic fluid.
Every 500 hours	<ul style="list-style-type: none"> • Grease the bearings in the rear axle.
Yearly	<ul style="list-style-type: none"> • Apply a liberal coating of grease to the check valve pins.
Every 2 years	<ul style="list-style-type: none"> • Drain and clean the fuel tank.

⚠ CAUTION

If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition before you do any maintenance.

REELMASTER® 335-D and 3500-D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service Type :				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Inspect Air Filter, Dust Cup, and Baffle	Every 50hrs	Every 100hrs			
Lubricate All Grease Fittings	<i>A Level Service</i>				
‡ Change Engine Oil & Filter					
Check Battery Level and Connections		<i>B Level Service</i>			
Inspect Cooling System Hoses					
Service Air Cleaner Filter Element					
Inspect Cutting Unit Reel Drive Belts			<i>C Level Service</i>		
† Torque Wheel Lug Nuts					
Replace Fuel Filter					
Check Front Transaxle Oil level					
Check Rear Axle Oil level (4WD)					
Inspect Fuel Lines and Connections					<i>D Level Service</i>
‡ Check Engine RPM (idle and full throttle)					
Inspect Engine Fan Belt					
Inspect Engine Timing Belt (see note below)					
Drain and Clean Fuel Tank					
Change Hydraulic Oil					
‡ Replace Hydraulic Oil Filter					
Change Front Transaxle Oil					
Pack Rear Axle Bearings (2WD)					
Change Rear Axle Oil (4WD)					<i>E Level Service</i>
Check Rear Wheel Toe-in					
† Initial break in at 10 hours					
‡ Initial break in at 50 hours					
Replace Moving Hydraulic Hoses	Annual Recommendations:				
Replace Safety Switches	<i>Items listed are recommended every 1500 hours or 2 years whichever occurs first.</i>				
Cooling System - Flush/Replace Fluid					

See Operator's and Service Manual for specifications and procedures)

NOTE : Replace Timing Belt if worn, cracked or oil soaked. A new Timing Belt should be installed any time the Belt is removed or loosened.



QUICK SERVICE REFERENCE

REELMASTER 2300 D / 2600 D

Model	All Models	Serial	60001 & Up
Engine Brand	..... Perkins		
Engine Oil	(Chart M).....3Qts	..... SAE 10W30 CI	
Engine Oil Filter	..... 85-4930		
Hydraulic Oil	(Chart R).....3.3Gal	..... ISO VG 46	
Hydraulic Filter	..... 54-0110		
Air Filter	..... 108-3811		
Water Separator	..... 98-9764		
Fuel Filter	..... Perkins-130336040		
Tire Pressure	..... 12 – 18 PSI (Front & Rear)		
Engine Coolant	..... 1.3Gal	..... Ethylene Glycol, Water (50/50 mix)	

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

REELMASTER 2300±D/2600±D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Inspect Air Filter, Dust Cup, and Baffle</td> <td style="width: 12.5%; text-align: center;">Every 50hrs</td> <td style="width: 12.5%; text-align: center;">Every 100hrs</td> <td style="width: 12.5%; text-align: center;">Every 200hrs</td> <td style="width: 12.5%; text-align: center;">Every 400hrs</td> </tr> <tr> <td>Lubricate All Grease Fittings</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Change Engine Oil</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Check Fan and Alternator Belt Tensions</td> <td style="text-align: center;"><i>A±Level Service</i></td> <td></td> <td></td> <td></td> </tr> </table>	Inspect Air Filter, Dust Cup, and Baffle	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Lubricate All Grease Fittings					Change Engine Oil					Check Fan and Alternator Belt Tensions	<i>A±Level Service</i>							
Inspect Air Filter, Dust Cup, and Baffle	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs																				
Lubricate All Grease Fittings																								
Change Engine Oil																								
Check Fan and Alternator Belt Tensions	<i>A±Level Service</i>																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Change Engine Oil and Filter</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%; text-align: center;"><i>B±Level Service</i></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> <tr> <td>Check Traction Belt Tension</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Change Engine Oil and Filter		<i>B±Level Service</i>			Check Traction Belt Tension																		
Change Engine Oil and Filter		<i>B±Level Service</i>																						
Check Traction Belt Tension																								
Service Air Filter Replace Fuel Filter/Water Separator Replace Hydraulic Filter Torque Wheel Lug Nuts			<i>C±Level Service</i>																					
Replace Hydraulic Fluid Check Battery Level/Connections Inspect Traction Linkage Movement * Inspect Spider Coupling for Wear Torque Head Bolts and Adjust Valves Check Engine RPM (idle and full throttle)				<i>D±Level Service</i>																				
Initial break in at 10 hours * Every 400 hours or annually, whichever occurs first Initial break in at 50 hours																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> Replace all Moving Hoses Replace Safety Switches Cooling System ± Flush/Replace Fluid Replace Thermostat Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush </td> <td style="width: 50%; text-align: center;"> Annual Recommendations: <i>Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</i> </td> </tr> </table>	Replace all Moving Hoses Replace Safety Switches Cooling System ± Flush/Replace Fluid Replace Thermostat Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush	Annual Recommendations: <i>Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</i>																						
Replace all Moving Hoses Replace Safety Switches Cooling System ± Flush/Replace Fluid Replace Thermostat Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush	Annual Recommendations: <i>Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</i>																							

(See Operator's and Service Manuals for specifications and procedures.)



QUICK SERVICE REFERENCE

REELMASTER 2000 D

Model	03428	Serial	220000001 - 250999999
Engine Brand	..... B&S / Daihatsu		
Engine Oil	(Chart G).....3.5Qts	.....	SAE 10W30 CI
Engine Oil Filter	..... 108-3842		
Hydraulic Oil	(Chart R).....3.3Gal	.....	ISO VG 46
Hydraulic Filter	..... 54-0110		
Air Filter	..... 108-3811		
Water Separator*	..... 63-8300		
Tire Pressure	..... 16 – 20 PSI (Front & Rear)		
Engine Coolant	..... 1.3Gal	.....	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the engine belt tension. • Change the engine oil filter. • Check the traction belt tension. • Replace the hydraulic filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Check the engine RPM (idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Inspect the air filter, dust cup, and burp valve. • Lubricate all grease fittings. • Check the engine belt tension.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil filter. • Check the traction belt tension. • Change the engine oil.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Replace the fuel filter/water separator. • Replace the hydraulic filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Replace the hydraulic fluid. • Check the battery level and connections. • Inspect the traction linkage movement. • Check the engine RPM (idle and full throttle).
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace the safety switches. • Flush the cooling system and replace the hoses. • Replace the thermostat. • Drain and flush the fuel tank. • Drain and flush the hydraulic tank.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

REELMASTER 2000 D

Model 03431	Serial 260000001 & Up
Engine Brand	B&S / Daihatsu
Engine Oil (<i>Chart M</i>).....	3.5Qts SAE 15W-40 CH-4
Engine Oil Filter	108-3842
Hydraulic Oil (<i>Chart R</i>).....	3.3Gal..... ISO VG 46
Hydraulic Filter	54-0110
Air Filter	108-3811
Fuel Filter Spin On	63-8300
Tire Pressure	16 – 20 PSI (Front & Rear)
Engine Coolant	1.3Gal Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 45 to 65 ft-lb (61 to 88 N-m).
After the first 5 hours	<ul style="list-style-type: none"> • Change the hydraulic oil filter.
After the first 8 hours	<ul style="list-style-type: none"> • Check the condition and tension of the alternator belt. • Check the condition and tension of the hydraulic pump belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 45 to 65 ft-lb (61 to 88 N-m).
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the cooling system. • Check the hydraulic fluid level. • Check the tire pressure. • Check the reel to bedknife contact. • Check the operation of the interlock switches. • Drain water from the water separator. • Remove debris from the screen, oil coolers, and radiator. (Clean more frequently in dirty operating conditions.)
Every 25 hours	<ul style="list-style-type: none"> • Check the electrolyte level and clean the battery. • Check the battery cable connections.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. (Grease immediately after every washing regardless of the interval listed.) • Check the condition and tension of the alternator belt.
Every 100 hours	<ul style="list-style-type: none"> • Check the condition and tension of the hydraulic pump belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service it more frequently in extremely dirty or dusty conditions.) • Change the hydraulic oil filter.
Every 250 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 45 to 65 ft-lb (61 to 88 N-m).
Every 400 hours	<ul style="list-style-type: none"> • Check the fuel lines and connections for deterioration, damage, or loose connections. • Replace the fuel filter canister. • Change the hydraulic fluid. • Check the engine RPM (idle and full throttle). • Inspect the traction linkage movement.
Every 1,000 hours	<ul style="list-style-type: none"> • Flush and replace the cooling system fluid and hoses. • Drain and flush the hydraulic tank (contact your local Toro distributor). • Replace all moving hoses. • Replace the thermostat. • Drain and flush the fuel tank. • Drain and flush the hydraulic tank.



QUICK SERVICE REFERENCE

GROUNDS PRO 2000

Model All Models	Serial 80001 & Up
Engine Brand	Briggs & Stratton
Engine Oil (<i>Chart K</i>).....	1.75Qts.... SAE 30 SH, SJ
Engine Oil Filter	107-7817
Hydraulic Oil (<i>Chart P</i>).....	5Qts SAE 10W30
Hydraulic Filter	54-0110
Air Filter Main	107-7817
Air Filter Wrapper	*272490
Fuel Filter In-line	38-8000
Tire Pressure	12 – 18 PSI (Front & Rear)

*Indicates Briggs & Stratton Part Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

GROUNDS PRO 2000 D

Model 02003	Serial 90001 & Up
Engine Brand	B&S / Daihatsu
Engine Oil (<i>Chart G</i>).....	3.5Qts SAE 30 CI, CI4
Engine Oil Filter	108-3842
Hydraulic Oil (<i>Chart P</i>).....	5Qts..... SAE 10W30
Hydraulic Filter	54-0110
Air Filter	108-3811
Water Separator	63-8300
Tire Pressure	12 – 18 PSI (Front & Rear)
Engine Coolant	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

REELMASTER TRANSPORT FRAME

Model	All Models	Serial	40001 & Up
Hydraulic Fluid	(<i>Chart R</i>).....	2Gal.....	ISO VG 46
Gear Case Cutting Unit	15-21oz		SAE 80W90
Grease			NO.2 G/P Lithium Base
Friction Points			SAE30 Oil
Transport Frame Tires			24-28 PSI
Tire Pressure Cutting Units			35 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A

TORO QUICK SERVICE REFERENCE

GREENSMaster 3250 D

Model 04383	Serial 200000001 - 240999999
Engine Brand	B&S / Daihatsu
Engine Oil (<i>Chart E</i>).....3.5Qts.....	SAE10W30 CI, CI4
Engine Oil Filter	108-3842
Hydraulic Oil (<i>Chart R</i>).....5.5Gal.....	ISO VG 46
Hydraulic Filter	75-1310 (2002 & Older)
Hydraulic Filter	107- 9531 (2003 & Up)
Air Filter	108-3811
Air Filter-Safety	98-2982
Fuel/Water Separator Element	100-3192 (2000-2006)
Tire Pressure	8 - 12 PSI (Front) 8 - 15 PSI (Rear)
Engine Coolant.....3.6Qts	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the fan/alternator belt tension. • Replace the engine oil filter.
After first 50 hours	<ul style="list-style-type: none"> • Replace the hydraulic oil filter. • check the engine RPM (at idle and full throttle)
Every 50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Service the air filter. • Lubricate all grease fittings. • Change the engine oil. • Check the fan/alternator belt tension.
Every 100 hours	<ul style="list-style-type: none"> • Replace the engine oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter element. • Torque the wheel lug nuts.
Every 800 hours	<ul style="list-style-type: none"> • Replace the hydraulic oil. • Replace the hydraulic oil filter. • Check the engine RPM (idle and full throttle) • Replace the fuel filter/water separator canister.
Every 2000 hours or 2 years	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Drain/flush the fuel tank. • Drain/flush the hydraulic tank. • Drain/flush the cooling system.

Important Refer to your engine operator's manual for additional maintenance procedures.



Caution



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition and disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.

TORO QUICK SERVICE REFERENCE

GREENSMaster 3250 D

Model	04383	Serial	250000001 & Up
Engine Brand	..... B&S / Daihatsu		
Engine Oil	(Chart E).....3.5Qts	..... SAE10W30 CI - SJ	
Engine Oil Filter	..... 108-3842		
Hydraulic Oil	(Chart R).....5.5Gal	..... ISO VG 46	
Hydraulic Filter	..... 107-9531 (2003 & Up)		
Air Filter	..... 108-3811		
Air Filter-Safety	..... 98-2982		
Fuel/Water Separator Element*	..... 100-3192 (2000-2006)		
Fuel/Water Filter Element*	..... 112-9188 (2007 & UP)		
Tire Pressure	..... 8 - 12 PSI (Front) 8 - 15 PSI (Rear)		
Engine Coolant	.....3.6Qts	..... Ethylene Glycol, Water (50/50 mix)	

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the tension on the alternator belt.
After the first 10 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Change the hydraulic oil filter. • Check the engine RPM (at idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Clean debris off of the radiator screen and radiator. Clean hourly if conditions are extremely dusty and dirty. • Check the hydraulic fluid level. • Check the reel-to-bedknife contact. • Check the hydraulic lines and hoses.
Every 25 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. (If the machine is in storage, check every 30 days.)
Every 50 hours	<ul style="list-style-type: none"> • Service the air cleaner foam pre-cleaner (more frequently when operating conditions are dusty or dirty). • Change the engine oil. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts. • Service the air cleaner cartridge (more frequently when operating conditions are dusty or dirty). • Check the reel bearing preload adjustment.
Every 800 hours	<ul style="list-style-type: none"> • Replace the filter element. • Change the hydraulic oil and filter. • Check the engine RPM (at idle and full throttle). • Check the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace moving hoses.

Important: Refer to your engine operator's manual for additional maintenance procedures.



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition.



QUICK SERVICE REFERENCE

GREENSMaster 3200 D

Model 04381	Serial 60474 & Up
Engine Brand	Perkins
Engine Oil (<i>Chart M</i>).....	3Qts..... SAE10W30 CI
Engine Oil Filter	85-4930
Hydraulic Oil (<i>Chart R</i>).....	5.5Gal..... ISO VG 46
Hydraulic Filter	75-1310
Air Filter	108-3811
Fuel Filter	Perkins 130336040
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)
Engine Coolant	5Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GREENSMATER 3200±D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs		
Check Battery Fluid Level	Every 50hrs						
Check Battery Cable Connections							
Service Air Filter							
Lubricate All Grease Fittings							
Change Engine Oil	<i>A±Level</i>						
Check Fan/Alternator Belt Tension	<i>Service</i>						
Replace Engine Oil Filter		<i>B±Level</i>					
Torque Wheel Lug Nuts			<i>C±Level</i>				
Replace Air Filter Element			<i>Service</i>				
Replace Fuel Filter/Water Separator				<i>D±Level</i>			
Adjust Valves and Torque Heads				<i>Service</i>			
Replace Hydraulic Oil					<i>E±Level</i>		
Replace Hydraulic Oil Filter					<i>Service</i>		
Check Engine RPM (idle and full throttle)					<i>Service</i>		
Initial break in at 8 hours							
Initial break in at 50 hours							
<table style="width: 100%; border: 1px solid black;"> <tr> <td style="width: 60%;"> Replace Moving Hoses Replace Safety Switches Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush Cooling System ± Drain/Flush </td> <td style="width: 40%; text-align: center;"> Annual Recommendations: <i>Items listed are recommended every 2,000 hours or 2 years, whichever occurs first</i> </td> </tr> </table>						Replace Moving Hoses Replace Safety Switches Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush Cooling System ± Drain/Flush	Annual Recommendations: <i>Items listed are recommended every 2,000 hours or 2 years, whichever occurs first</i>
Replace Moving Hoses Replace Safety Switches Fuel Tank ± Drain/Flush Hydraulic Tank ± Drain/Flush Cooling System ± Drain/Flush	Annual Recommendations: <i>Items listed are recommended every 2,000 hours or 2 years, whichever occurs first</i>						

(See Operator's and Service Manuals for specifications and procedures.)



QUICK SERVICE REFERENCE

GREENSMaster 3200

Model 04380	Serial 60001 & Up
Engine Brand	B&S / Daihatsu
Engine Oil (<i>Chart E</i>).....	3.2Qts SAE10W30 SH, SJ
Engine Oil Filter	*491056
Hydraulic Oil (<i>Chart R</i>).....	5.5Gal..... ISO VG 46
Hydraulic Filter	75-1310
Air Filter	108-3811
Fuel Filter In-line	94-2690
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)
Engine Coolant	1.9Qts Ethylene Glycol, Water (50/50 mix)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GREENSMASTER 3200 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Cable Connections	Every 50hrs				
Service Air Filter					
Check Battery Electrolyte					
Lubricate All Grease Fittings	<i>A±Level Service</i>				
Check Fan/Alternator Belt Tension					
Change Engine Oil		<i>B±Level Service</i>			
Replace Engine Oil Filter					
Torque Wheel Lug Nuts			<i>C±Level Service</i>		
Replace Air Filter Element					
Replace Fuel Filter				<i>D±Level Service</i>	
Adjust Valves and Torque Heads					
Replace Spark Plugs					
Replace Hydraulic Oil					<i>E±Level Service</i>
Replace Hydraulic Oil Filter					
Initial break in at 8 hours					
Initial break in at 50 hours					
Replace Moving Hoses					
Replace Safety Switches					
Fuel Tank ± Drain/Flush					
Hydraulic Tank ± Drain/Flush					
Cooling System ± Drain/Flush					

Annual Recommendations:
Items listed are recommended every 2,000 hours
or 2 years, whichever comes first.

(See Operator's and Service Manuals for specifications and procedures.)



QUICK SERVICE REFERENCE

GREENSMASTER 3150

Model 04357	Serial 220000001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart K</i>).....	1.75Qts..... SAE 30 SH, SJ
Engine Oil Filter (Toro)	107-7817
Engine Oil Filter	*492932
Hydraulic Oil (<i>Chart R</i>).....	8.5Gal..... ISO VG 46
Hydraulic Filter	107-9531
Air Filter	*394018S
Air Filter-Safety	*272490S
Fuel Filter In-line	94-2690
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> • Change the engine oil. • Replace the engine oil filter.
After first 50 hours	<ul style="list-style-type: none"> • Replace the hydraulic oil filter. • Check the engine RPM (at idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Service the air filter pre-cleaner. • Lubricate all grease fittings.¹ • Change the engine oil.
Every 100 hours	<ul style="list-style-type: none"> • Replace the engine oil filter. • Replace the air filter element.
Every 200 hours	<ul style="list-style-type: none"> • Check the reel bearing preload adjustment. • Torque the wheel lug nuts.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Check the engine RPM (idle and full throttle). • Check the valve clearance. • Replace the hydraulic oil and filter.
Every 2000 hours or 2 years (whichever occurs first)	<ul style="list-style-type: none"> • Replace moving hoses. • Replace the safety switches. • Drain/flush the fuel tank. • Drain/flush the hydraulic tank.

¹immediately after every washing, regardless of the interval listed

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GREENSMASTER 3150

Model 04357	Serial 280000001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart K</i>).....	1.75Qts..... SAE 30 SJ
Engine Oil Filter (Toro)	107-7817
Engine Oil Filter	*492932
Hydraulic Oil (<i>Chart R</i>).....	8.5Gal..... ISO VG 46
Hydraulic Filter	107-9531
Air Filter (Toro)	92-0527
Air Filter	*394018S
Air Filter-Safety	*272490S
Fuel Filter In-line	94-2690
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
After the first 10 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Change the hydraulic filter. • Check the engine RPM (at idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Check the hydraulic fluid level. • Check the safety interlock system. • Inspect and cleanup after mowing. • Check the hydraulic lines and hoses.
Every 50 hours	<ul style="list-style-type: none"> • Grease the machine (immediately after every washing). • Service the air cleaner foam pre-cleaner (more frequently when operating conditions are dusty or dirty). • Change the engine oil. • Check the battery electrolyte level. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Service the air cleaner cartridge (more frequently when operating conditions are dusty or dirty). • Change the engine oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts. • Check the reel bearing preload adjustment.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Change the hydraulic oil. • Change the hydraulic filter. • Check the engine RPM (at idle and full throttle). • Check the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace moving hoses.



QUICK SERVICE REFERENCE

GREENSMASTER 3100

Model	04356	Serial	200000001 - 220999999
Engine Brand	..... B&S Vanguard		
Engine Oil	(<i>Chart K</i>)..... 1.75Qts..... SAE 30 SH, SJ		
Engine Oil Filter	..... 107-7817		
Hydraulic Oil	(<i>Chart R</i>)..... 8.5Gal..... ISO VG 46		
Hydraulic Filter	..... 74-3570		
Air Filter	(Toro) 92-0527		
Air Filter	..... *394018S		
Air Filter-Safety	..... *272490S		
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 8-12 PSI (Front) 8-15 PSI (Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance Schedule

Maintenance Procedure	Maintenance Interval & Service																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Check battery fluid level</td> <td style="text-align: center; padding: 5px;">Every 50</td> <td rowspan="5" style="vertical-align: middle; text-align: center;">Every 100 hours</td> <td rowspan="5" style="vertical-align: middle; text-align: center;">Every 200 hours</td> <td rowspan="5" style="vertical-align: middle; text-align: center;">Every 800 hours</td> </tr> <tr> <td style="padding: 5px;">Check battery cable connections</td> <td style="text-align: center; padding: 5px;">hours</td> </tr> <tr> <td style="padding: 5px;">Service the air filter pre-cleaner</td> <td></td> </tr> <tr> <td style="padding: 5px;">Lubricate all grease fittings</td> <td></td> </tr> <tr> <td style="padding: 5px;">†Change the engine oil</td> <td></td> </tr> </table>	Check battery fluid level	Every 50	Every 100 hours	Every 200 hours	Every 800 hours	Check battery cable connections	hours	Service the air filter pre-cleaner		Lubricate all grease fittings		†Change the engine oil					
Check battery fluid level	Every 50	Every 100 hours				Every 200 hours	Every 800 hours										
Check battery cable connections	hours																
Service the air filter pre-cleaner																	
Lubricate all grease fittings																	
†Change the engine oil																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">†Replace the engine oil filter</td> </tr> <tr> <td style="padding: 5px;">Replace the air filter element</td> </tr> </table>	†Replace the engine oil filter	Replace the air filter element															
†Replace the engine oil filter																	
Replace the air filter element																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Check the reel bearing preload adjustment</td> </tr> <tr> <td style="padding: 5px;">Torque the wheel lug nuts</td> </tr> </table>	Check the reel bearing preload adjustment	Torque the wheel lug nuts															
Check the reel bearing preload adjustment																	
Torque the wheel lug nuts																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Replace the spark plugs</td> </tr> <tr> <td style="padding: 5px;">Replace the fuel filter</td> </tr> <tr> <td style="padding: 5px;">Check valve clearance</td> </tr> <tr> <td style="padding: 5px;">Check the engine RPM (idle and full throttle)</td> </tr> </table>	Replace the spark plugs	Replace the fuel filter	Check valve clearance	Check the engine RPM (idle and full throttle)													
Replace the spark plugs																	
Replace the fuel filter																	
Check valve clearance																	
Check the engine RPM (idle and full throttle)																	
† Initial break in at 8 hours																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Replace moving hoses Replace safety switches Fuel tank—drain and flush Hydraulic tank—drain and flush Replace the hydraulic oil </td> <td style="width: 50%; padding: 5px; text-align: center;"> Recommendations Items are recommended every 2000 hours or 2 years, whichever occurs first. </td> </tr> </table>					Replace moving hoses Replace safety switches Fuel tank—drain and flush Hydraulic tank—drain and flush Replace the hydraulic oil	Recommendations Items are recommended every 2000 hours or 2 years, whichever occurs first.											
Replace moving hoses Replace safety switches Fuel tank—drain and flush Hydraulic tank—drain and flush Replace the hydraulic oil	Recommendations Items are recommended every 2000 hours or 2 years, whichever occurs first.																



QUICK SERVICE REFERENCE

GREENSMASTER 3100

Model 04356	Serial 230000001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart K</i>).....	1.75Qts..... SAE 30 SH, SJ
Engine Oil Filter	107-7817
Hydraulic Oil (<i>Chart R</i>).....	4.5Gal..... ISO VG 46
Hydraulic Filter	74-3570
Air Filter (Toro)	92-0527
Air Filter	*394018S
Air Filter-Safety	*272490S
Fuel Filter In-line	94-2690
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
After the first 10 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Check the engine RPM (at idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Check the hydraulic fluid level. • Check the safety interlock system. • Inspect and cleanup after mowing. • Check the hydraulic lines and hoses.
Every 50 hours	<ul style="list-style-type: none"> • Grease the machine (immediately after every washing). • Service the air cleaner foam pre-cleaner (more frequently when operating conditions are dusty or dirty). • Change the engine oil. • Check the battery electrolyte level. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Service the air cleaner cartridge (more frequently when operating conditions are dusty or dirty). • Change the engine oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Check the engine RPM (at idle and full throttle). • Check the valve clearance.
Every 2,000 hours	<ul style="list-style-type: none"> • Change the hydraulic oil and filter
Every 2 years	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace moving hoses.



QUICK SERVICE REFERENCE

GREENSMASTER 3050

Model	04351	Serial	70001 - 20999999
Engine Brand	..... B&S Vanguard		
Engine Oil	<i>(Chart K)</i> 1.75Qts.....	SAE 30 SH, SJ	
Engine Oil Filter	..... *492932		
Hydraulic Oil	<i>(Chart R)</i> 4.5Gal.....	ISO VG 46	
Hydraulic Filter	..... 74-3570		
Air Filter	..... *394018S		
Air Filter-Safety	..... *272490S		
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 8-12 PSI (Front)		
	..... 8-15 PSI (Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GREENSMASTER® 3100/3050 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
Check Battery Fluid Level Check Battery Cable Connections Service Air Filter Pre-Cleaner Lubricate All Grease Fittings † Change Engine Oil	Every 50hrs	Every 100hrs	Every 200hrs	Every 800hrs
Replace Engine Oil Filter Replace Air Filter Element	<i>B Level Service</i>			
Check Reel Bearing Preload Adjustment Torque Wheel Lug Nuts				<i>C Level Service</i>
Replace Spark Plugs Replace Fuel Filter Decarbon Combustion Chambers Torque Heads and Adjust Valves Check Engine RPM (idle and full throttle)				<i>D Level Service</i>
† Initial break in at 8 hours				
Replace Moving Hoses Replace Safety Switches Fuel Tank - Drain/Flush Hydraulic Tank - Drain/Flush Replace Hydraulic Filter	Annual Recommendations: <i>Items listed are recommended every 2000 hours or 2 years whichever occurs first.</i>			

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

GREENSMASER 3050

Model 04351	Serial 210000001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart K</i>).....	1.75Qts..... SAE 30 SH, SJ
Engine Oil Filter	107-7817
Hydraulic Oil (<i>Chart R</i>).....	8.5Gal..... ISO VG 46
Hydraulic Filter	74-3570
Air Filter (Toro)	92-0527
Air Filter	*394018S
Air Filter-Safety	*272490S
Fuel Filter In-line	94-2690
Tire Pressure	8-12 PSI (Front) 8-15 PSI (Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
After the first 10 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Check the hydraulic fluid level. • Check the safety interlock system. • Inspect and cleanup after mowing. • Check the hydraulic lines and hoses.
Every 50 hours	<ul style="list-style-type: none"> • Grease the machine (immediately after every washing). • Service the air cleaner foam pre-cleaner (more frequently when operating conditions are dusty or dirty). • Change the engine oil. • Check the battery electrolyte level. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Service the air cleaner cartridge (more frequently when operating conditions are dusty or dirty). • Change the engine oil filter.
Every 200 hours	<ul style="list-style-type: none"> • Check the torque of the wheel nuts.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Check the engine RPM (at idle and full throttle). • Check the valve clearance.
Every 2,000 hours	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Drain and flush the fuel tank. • Change the hydraulic oil and filter. • Drain and flush the hydraulic tank. • Replace moving hoses.



QUICK SERVICE REFERENCE

GREENSMASTER 1000, 1600, 2000 & 2600

Model 04052 and 04060 **Serial** 10001 - 210999999

Engine Brand Kawasaki

Engine Oil (*Chart B*)..... 16oz SAE 30 SH, SJ

Air Filter:

 Element 93-8636

 Pre-Cleaner 93-8637

Fuel Filter 94-6826 (1996 & up)

Fuel Filter 93-8684 (1995 - Mid 1996)

Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GREENSMASTER® 1000 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
Service Air Filter Pre-Cleaner	Every 25hrs	Every 50hrs	Every 100hrs	Every 200hrs
Lubricate All Grease Fittings				
Check for loose Fasteners	<i>A Level</i>			
Clean Fuel Filter and Sediment Bowl				
Adjust Traction Drive Belts	<i>B Level Service</i>			
† Change Engine Oil				
¹ Clean Combustion Chamber				
¹ Replace Spark Plug				
Check Cut-Off Bar Adjustment	<i>C Level Service</i>			
Service Air Cleaner Filter				
² Clean Combustion Chamber				
² Replace Spark Plug	<i>D Level Service</i>			
Adjust Valves and Torque Head Bolts				
† Initial Break in at 20 hours				
¹ Interval for Engine Model: FG150				
² Interval for Engine Model: FE120				
Replace All Interlock Switches	Annual Recommendations: Item listed is recommended every 2 years.			

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

GREENSMASTER 1000 & 1600

Model 04052, 04060 **Serial** 220000001 - 250000001

Engine Brand Kawasaki

Engine Oil (*Chart B*).....20oz..... SAE 30 SH, SJ

Air Filter:

 Element 93-8636

 Pre-Cleaner 93-8637

Fuel Filter 94-6826 (1996 & up)

Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
25 Hours	<ul style="list-style-type: none"> • Air filter pre-cleaner—service • Grease fittings—lubricate • Fasteners—check and tighten
50 Hours	<ul style="list-style-type: none"> • Fuel filter and sediment bowl—clean • Traction drive belts—adjust • Engine oil—change¹
100 Hours	<ul style="list-style-type: none"> • Cut-off bar—check adjustment • Air cleaner filter—service
200 Hours	<ul style="list-style-type: none"> • Combustion chamber—clean • Spark plug—replace • Valves—adjust • Head bolts—torque
Every 2 years	<ul style="list-style-type: none"> • Interlock switches—replace

¹Initial break in at 20 hours

Important Refer to your engine operator's and service manuals for additional maintenance procedures.



QUICK SERVICE REFERENCE

GREENSMASTER 1000 & 1600

Model 04052 and 04060 **Serial** 260000001 & Up

Engine Brand Kawasaki

Engine Oil (*Chart B*).....20oz..... SAE 30 SH, SJ

Air Filter:

Element 93-8636

Pre-Cleaner 93-8637

Fuel Filter 94-6826

Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none"> • Change the engine oil.
After the first 25 hours	<ul style="list-style-type: none"> • Clean the fuel filter.
Before each use or daily	<ul style="list-style-type: none"> • Check the interlock switch operation. • Check the engine oil level.
Every 25 hours	<ul style="list-style-type: none"> • Grease the machine. • Clean and oil the air cleaner foam element. (More often in dirty or dusty conditions)
Every 50 hours	<ul style="list-style-type: none"> • Change the engine oil. (More frequently in dusty or dirty conditions) • Clean the fuel filter.
Every 100 hours	<ul style="list-style-type: none"> • Clean or replace the paper air filter element. (More often in dirty or dusty conditions) • Check the spark plug.
Every 200 hours	<ul style="list-style-type: none"> • Decarbon the engine.
Every 300 hours	<ul style="list-style-type: none"> • Change the air filter paper element • Check the condition and tension of belts.
Before storage	<ul style="list-style-type: none"> • Paint chipped surfaces. • Refer to the Storage Section for additional information

Important: Refer to your *Engine Operator's Manual* for additional maintenance procedures.



QUICK SERVICE REFERENCE

GREENSMASTER 800

Model 04048 and 04048TE **Serial** 80001 - 210999999

Engine Brand Kawasaki

Engine Oil (*Chart B*)..... 16oz SAE 30 SH, SJ

Air Filter:

Element 93-8636

Pre-Cleaner 93-8637

Fuel Filter 94-6826

Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GREENSMASTER® 800 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
Service Air Filter Pre-Cleaner	Every 25hrs	Every 50hrs	Every 100hrs	Every 200hrs
Lubricate All Grease Fittings				
Check for loose Fasteners	<i>A Level</i>			
Clean Fuel Filter and Sediment Bowl				
Adjust Traction Drive Belts	<i>B Level</i>			
† Change Engine Oil	<i>Service</i>			
¹ Clean Combustion Chamber				
¹ Replace Spark Plug				
Check Cut-Off Bar Adjustment	<i>C Level</i>			
Service Air Cleaner Filter	<i>Service</i>			
² Clean Combustion Chamber				
² Replace Spark Plug	<i>D Level</i>			
Adjust Valves and Torque Head Bolts	<i>Service</i>			
† Initial Break in at 20 hours				
¹ Interval for Engine Model: FG150				
² Interval for Engine Model: FE120				
Replace All Interlock Switches	Annual Recommendations: Item listed is recommended every 2 years.			

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

GREENSMASTER 800

Model 04048 and 04048TE **Serial** 220000001 & Up

Engine Brand Kawasaki

Engine Oil (*Chart B*).....20oz..... SAE 30 SH, SJ

Air Filter:

Element 93-8636

Pre-Cleaner 93-8637

Fuel Filter 94-6826

Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
25 Hours	<ul style="list-style-type: none"> • Air filter pre-cleaner—service • Grease fittings—lubricate • Fasteners—check and tighten
50 Hours	<ul style="list-style-type: none"> • Fuel filter and sediment bowl—clean • Traction drive belts—adjust • Engine oil—change¹
100 Hours	<ul style="list-style-type: none"> • Cut-off bar—check adjustment • Air cleaner filter—service
200 Hours	<ul style="list-style-type: none"> • Combustion chamber—clean • Spark plug—replace • Valves—adjust • Head bolts—torque
Every 2 years	<ul style="list-style-type: none"> • Interlock switches—replace

¹Initial break in at 20 hours

Important Refer to your engine operator's and service manuals for additional maintenance procedures.



QUICK SERVICE REFERENCE

GREENSMASTER 500

Model	All Models	Serial	30001 & Up
Engine Brand	..... Kawasaki		
Engine Oil	(Chart B).....20oz	.....	SAE 10W30 SH, SJ
Transaxle	.....Check plug	.....	SAE 90
Air Filter:			
Element	.....	93-8636	
Pre-Cleaner	.....	93-8637	
Fuel Filter	.....	94-6826	
Tire Pressure	.....	15 PSI	

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service			
Service the air filter foam element Check for loose fasteners Lubricate all grease fittings	Every 25 hours	Every 50 hours	Every 100 hours	Every 200 hours
‡Change the engine oil filter †Adjust the traction drive belts Clean the fuel filter and bowl Check the transmission oil level				
Check the spark plug Service the air cleaner filter				
Clean the combustion chamber Replace the spark plug Adjust valves and torque the head bolts				
†Initial break in at 10 hours ‡Initial break in at 25 hours				
Adjust the reel drive chain	Recommendations: Adjust the reel drive chain annually.			



QUICK SERVICE REFERENCE

GREENSMASTER Flex 21

Model 04021 **Serial** 210000001 - 240000001
Engine Brand Kawasaki
Engine Oil (*Chart B*).....20oz..... SAE 10W30 SH, SJ
Transmission.....94oz..... Dexron III ATF
Air Filter:
 Element 93-8636
 Pre-Cleaner 93-8637
Fuel Filter 94-6826
Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 20 hours	<ul style="list-style-type: none">• Change the engine oil.• Clean the fuel filter.• Change the transmission fluid.
Every 5 hours	<ul style="list-style-type: none">• Check the engine oil.
Every 25 hours	<ul style="list-style-type: none">• Service the foam air filter pre-cleaner.• Check for loose fasteners.
Every 50 hours	<ul style="list-style-type: none">• Clean the fuel filter and sediment bowl.• Change the engine oil.• Check the transmission fluid level.
Every 100 hours	<ul style="list-style-type: none">• Check the cut-off bar adjustment.• Service the air cleaner paper element.
Every 200 hours	<ul style="list-style-type: none">• Clean the combustion chamber.• Replace the spark plug.• Adjust the valves and torque the head bolts.
Every 2 years	<ul style="list-style-type: none">• Replace safety interlock switch.• Change the transmission fluid.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GREENSMASTER Flex 18/21

Model 04018 thru 04024 **Serial** 260000001 & Up
Engine Brand Kawasaki
Engine Oil (*Chart B*).....20oz SAE 10W30 SH, SJ
Transmission.....94oz..... Dexron III ATF
Air Filter:
 Element 93-8636
 Pre-Cleaner 93-8637
Fuel Filter 94-6826
Tire Pressure..... 15 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none">• Change the engine oil.
After the first 25 hours	<ul style="list-style-type: none">• Clean the fuel filter.• Change the transmission fluid.
Before each use or daily	<ul style="list-style-type: none">• Check the engine oil level.
Every 25 hours	<ul style="list-style-type: none">• Clean the air cleaner (more often in dirty or dusty conditions).
Every 50 hours	<ul style="list-style-type: none">• Change the engine oil.• Clean the fuel filter.• Check the transmission fluid level.
Every 100 hours	<ul style="list-style-type: none">• Clean or replace the paper air filter element (more often in dirty or dusty conditions).• Check the spark plug.• Inspect belts and check belt tension
Every 800 hours	<ul style="list-style-type: none">• Change the transmission fluid. (Or 2 years, whichever occurs first)
Before storage	<ul style="list-style-type: none">• Paint chipped surfaces.

Important: Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 7200/7210

Model 30360 -30365	Serial 270000001 & Up
Engine Brand	Kubota
Engine Oil.....3.9Qt	SAE15W-40
Engine Oil Filter	108-3841
Hydraulic Oil (Chart T).....10.9Qt.....	UTHF
Hydraulic Filter	108-5194
Air Filter	108-3810
Water Separator*	98-9764 (2007)
Water Separator*	110-9049 (2008 & Up)
Pre Fuel Filter	98-7612
Tire Pressure	15 PSI (Rear) 25 PSI (Castor)
Engine Coolant	6Qt..... Ethylene Glycol, Water (50/50 mix)
Gearbox Oil.....12oz.....	SAE EP90W

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> • Check the alternator belt tension. • Torque the frame mounting bolts. • Torque wheel lug nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Change the mower deck gear box lubricant • Change the engine oil and filter.
After the first 200 hours	<ul style="list-style-type: none"> • Change the hydraulic oil and filter.
Before each use or daily	<ul style="list-style-type: none"> • Test the safety system. • Check the engine oil level. • Check the engine coolant level. • Clean the radiator with compressed air (do not use water) • Check the hydraulic fluid level. • Check the mower blades. • Clean the mower deck.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearing and bushing grease fittings. • Check battery cable connections. • Check the tire pressure. • Check the condition of the blade drive belts on the mower deck.
Every 150 hours	<ul style="list-style-type: none"> • Check the lubricant in the mower deck gear box. • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Inspect cooling system hoses and seals. Replace them if cracked or torn. • Check the alternator belt tension. • Torque wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change the mower deck gear box lubricant • Service the air cleaner. • Replace the fuel filter canister. • Check the fuel lines and connections.
Every 800 hours	<ul style="list-style-type: none"> • Change the hydraulic oil and filter. • Inspect engine valve clearance. Refer to your Engine Operator's Manual.
Every 1,500 hours	<ul style="list-style-type: none"> • Replace moving hoses
Every 2 years	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Flush and replace cooling system fluid.

Important: Refer to your *Engine Operator's Manual* for additional maintenance procedures. A detailed Service Manual is also available for purchase from your Authorized Toro Distributor.



QUICK SERVICE REFERENCE

GROUNDMASTER 360 D

(2 & 4 WHEEL DRIVE)

Model: 30534 - 30542 **Serial** 311000001 & Up

Engine Brand Kubota

Engine Oil5.5Qts SAE 15W-40 CH-4 CI-4

Engine Oil Filter 108-3841

Hydraulic Oil18Qts Mobile 424

Hydraulic Filter 108-5194

Gear box oil.....12Fl Oz SAE 80-90

Air Filter 108-3810

Water Separator 110-9049

Tire Pressure..... (Front & Rear) Psi
(15 & 25) (25 w/cab & 25)

Engine Coolant6Qts..... Ethylene Glycol, Water
(50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 12/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none">• Check the alternator belt tension.• Check the air conditioning compressor belt tension (cab models)• Torque wheel lug nuts.
After the first 50 hours	<ul style="list-style-type: none">• Change the mower deck gear box lubricant• Change the engine oil and filter.
After the first 200 hours	<ul style="list-style-type: none">• Change the hydraulic oil and filter.
Before each use or daily	<ul style="list-style-type: none">• Test the safety system.• Check the operation of the interlock switches.• Check the engine oil level.• Check the engine coolant level.• Clean the radiator with compressed air (do not use water)• Check the hydraulic fluid level.• Check the mower blades.• Clean the mower deck.
Every 50 hours	<ul style="list-style-type: none">• Grease the bearing and bushing grease fittings.• Check battery cable connections.• Check the tire pressure.• Check the condition of the blade drive belts on the mower deck.• Clean the air conditioning screen. (Clean more frequently in extremely dusty or dirty conditions)
Every 100 hours	<ul style="list-style-type: none">• Check the alternator belt tension.• Check the air conditioning compressor belt tension (cab models)
Every 150 hours	<ul style="list-style-type: none">• Check the lubricant in the mower deck gear box.• Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none">• Inspect cooling system hoses and seals. Replace them if cracked or torn.• Torque wheel lug nuts.
Every 250 hours	<ul style="list-style-type: none">• Clean the cab air filters. (Replace them if they are torn or excessively dirty.)• Clean the air conditioning coil. (Clean more frequently in extremely dusty or dirty conditions)
Every 400 hours	<ul style="list-style-type: none">• Change the mower deck gear box lubricant• Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.)• Replace the fuel filter canister.• Check the fuel lines and connections.
Every 800 hours	<ul style="list-style-type: none">• Change the hydraulic oil and filter.• Inspect engine valve clearance. Refer to your Engine Operator's Manual.
Every 1,500 hours	<ul style="list-style-type: none">• Replace moving hoses
Every 2 years	<ul style="list-style-type: none">• Drain and clean the fuel tank.• Flush and replace cooling system fluid.



QUICK SERVICE REFERENCE

GROUNDMASTER 5900/5910-D

Model 31598 & 31599	Serial 280000001 & Up
Engine Brand	Cummins
Engine Oil (<i>Chart C</i>).....	8.5Qt..... SAE 15W-40 CH4
Engine Oil Filter	115-8868
Hydraulic Oil (<i>Chart R</i>).....	19Gal..... ISO VG 46
Hydraulic Reservoir Filter	75-1310
Hydraulic Filter	86-6110
Air Filter	115-8887
Air Filter Safety	115-8877
Engine Thermostat	115-8860
Fuel Filter	117-2792
Planetary Gear Drive	16Oz..... 85W-140
Water Separator	115-5471
Tire Pressure	Front-50 Rear-30 PSI
Caster Tire	25-30 PSI
Engine Coolant	13.5qt..... Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the alternator belt tension. • Check the compressor belt tension. • Check blade bolt torque
After the first 250 hours	<ul style="list-style-type: none"> • Adjust the valve clearance • Change the front planetary gear oil.
Before each use or daily	<ul style="list-style-type: none"> • Check the tire pressure. • Lubricate castor arm bushings. • Check the engine oil level. • Drain the water separator • Check the coolant level. • Check the hydraulic fluid level. • Check mower blade condition • Check the safety interlock switch operation
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Remove air cleaner cover and clean out debris Do not remove filter. • Check the battery condition • Inspect the blade drive belts. • Check the hydraulic filter service indicators (2) • Check blade bolt torque • Remove all debris and chaff from the engine compartment, radiator and oil cooler.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses.
Every 250 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Change the engine oil and filter. • Check the planetary gear drive oil level • Service the spark arrestor. • Clean the cabin air filters. (Replace them if they are torn or excessively dirty.) • Clean the air conditioning coil.
Every 500 hours	<ul style="list-style-type: none"> • Inspect the fuel lines and connections. • Replace the fuel/water separator element. • Replace the fuel filter element • Inspect the cutting unit castor wheel assemblies.
Every 1,000 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Recalibrate traction pedal • Change the front planetary gear oil. • Check the rear wheel toe-in. • Check the alternator belt tension. • Check the compressor belt tension. • Replace the drive blade belts • Change the hydraulic fluid and filters.
Every 2,000 hours	<ul style="list-style-type: none"> • Adjust the valve clearance
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.

MAINTENANCE SCHEDULE

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service																																																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Lubricate All Grease Fittings</td> <td style="text-align: center; padding: 5px;">Every 50hrs</td> <td style="padding: 5px;">Inspect Air Filter, Dust Cup, and Baffle</td> <td style="text-align: center; padding: 5px;">Every 100hrs</td> <td style="padding: 5px;">Clean Under Cutting Unit Belt Covers</td> <td style="text-align: center; padding: 5px;">Every 200hrs</td> <td style="padding: 5px;">Check Cutting Unit Drive Belt Adjustment</td> <td style="text-align: center; padding: 5px;">Every 400hrs</td> <td style="padding: 5px;">† Change Engine Oil and Replace Filter</td> <td style="text-align: center; padding: 5px;">Every 800hrs</td> </tr> <tr> <td style="padding: 5px;">‡ Check Fan and Alternator Belt Tension</td> <td></td> <td style="padding: 5px;">Inspect Cooling System Hoses</td> <td></td> <td style="padding: 5px;">Service Air Filter</td> <td></td> <td style="padding: 5px;">Replace Fuel/Water Separator Filter</td> <td></td> <td style="padding: 5px;">† Torque Wheel Lug Nuts</td> <td></td> </tr> <tr> <td style="padding: 5px;">Check Battery Level/Cable Connections</td> <td></td> <td style="padding: 5px;">‡ Replace Hydraulic Filter</td> <td></td> <td style="padding: 5px;">‡ Torque Head and Adjust Valves</td> <td></td> <td style="padding: 5px;">‡ Check Engine RPM (idle and full throttle)</td> <td></td> <td style="padding: 5px;">‡ Change Planetary Gear Drive Fluid</td> <td></td> </tr> <tr> <td style="padding: 5px;">‡ Torque Wheel Lug Nuts</td> <td></td> <td style="padding: 5px;">Check Rear Wheel Toe-In</td> <td></td> <td style="padding: 5px;">† Initial break in at 10 hours</td> <td></td> <td style="padding: 5px;">‡ Initial break in at 50 hours</td> <td></td> <td style="padding: 5px;">Change Brake Fluid</td> <td></td> </tr> <tr> <td style="padding: 5px;">Change Fuel Filter</td> <td></td> <td style="padding: 5px;">Change Thermostat</td> <td></td> <td style="padding: 5px;">Replace Safety Switches</td> <td></td> <td style="padding: 5px;">Flush Cooling System and Replace Hoses</td> <td></td> <td style="padding: 5px;">Fuel Tank – Drain/Flush</td> <td></td> </tr> <tr> <td style="padding: 5px;">Change Hydraulic Oil</td> <td></td> <td style="padding: 5px;"></td> <td></td> <td style="padding: 5px;"></td> <td></td> <td style="padding: 5px;"></td> <td></td> <td style="padding: 5px;"></td> <td></td> </tr> </table>	Lubricate All Grease Fittings	Every 50hrs	Inspect Air Filter, Dust Cup, and Baffle	Every 100hrs	Clean Under Cutting Unit Belt Covers	Every 200hrs	Check Cutting Unit Drive Belt Adjustment	Every 400hrs	† Change Engine Oil and Replace Filter	Every 800hrs	‡ Check Fan and Alternator Belt Tension		Inspect Cooling System Hoses		Service Air Filter		Replace Fuel/Water Separator Filter		† Torque Wheel Lug Nuts		Check Battery Level/Cable Connections		‡ Replace Hydraulic Filter		‡ Torque Head and Adjust Valves		‡ Check Engine RPM (idle and full throttle)		‡ Change Planetary Gear Drive Fluid		‡ Torque Wheel Lug Nuts		Check Rear Wheel Toe-In		† Initial break in at 10 hours		‡ Initial break in at 50 hours		Change Brake Fluid		Change Fuel Filter		Change Thermostat		Replace Safety Switches		Flush Cooling System and Replace Hoses		Fuel Tank – Drain/Flush		Change Hydraulic Oil																		
Lubricate All Grease Fittings	Every 50hrs	Inspect Air Filter, Dust Cup, and Baffle	Every 100hrs	Clean Under Cutting Unit Belt Covers	Every 200hrs	Check Cutting Unit Drive Belt Adjustment	Every 400hrs	† Change Engine Oil and Replace Filter	Every 800hrs																																																												
‡ Check Fan and Alternator Belt Tension		Inspect Cooling System Hoses		Service Air Filter		Replace Fuel/Water Separator Filter		† Torque Wheel Lug Nuts																																																													
Check Battery Level/Cable Connections		‡ Replace Hydraulic Filter		‡ Torque Head and Adjust Valves		‡ Check Engine RPM (idle and full throttle)		‡ Change Planetary Gear Drive Fluid																																																													
‡ Torque Wheel Lug Nuts		Check Rear Wheel Toe-In		† Initial break in at 10 hours		‡ Initial break in at 50 hours		Change Brake Fluid																																																													
Change Fuel Filter		Change Thermostat		Replace Safety Switches		Flush Cooling System and Replace Hoses		Fuel Tank – Drain/Flush																																																													
Change Hydraulic Oil																																																																					
<p>Annual Recommendations: Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</p>																																																																					



QUICK SERVICE REFERENCE

GROUNDMASTER 580 D

Model 30581	Serial 80001 - 240999999
Engine Brand	Mitsubishi
Engine Oil (<i>Chart C</i>).....	8.5Qts..... SAE 30 CI, CI-4
Engine Oil Filter	110-6166
Hydraulic Oil (<i>Chart S</i>).....	40Gal..... ISO VG 68
Hydraulic Filter	69-1720
Hydraulic Breather	68-6150 (1993-2004)
Air Filter	108-3815
Fuel Feed Pump	70-4790
Water Separator*	69-1770 (1989-2003)
Water Separator*	69-5470 (2004-2005)
Engine Thermostat	99-2155
Planetary Gear Drive	32Oz..... SAE 80W90
Brake Fluid	DOT 3 Fluid
Tire Pressure	See Operator's
Caster Tire	50 PSI
Engine Coolant	3.9Gal Ethylene Glycol. Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt adjustment. • Torque the wheel lug nuts. • Check the cutting unit drive belt adjustment.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and replace the filter. • Replace the hydraulic filter. • Torque head and adjust valves. • Check the engine RPM (at idle and full throttle). • Change the planetary gear drive fluid.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air filter, dust cup, and baffle. • Clean under the cutting unit belt covers. • Check the cutting unit drive belt adjustment.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and replace the filter. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Replace the fuel/water separator filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Check the battery level and cable connections. • Replace the hydraulic filter. • Torque head and adjust valves. • Check the engine RPM (at idle and full throttle).
Maintenance Service Interval	Maintenance Procedure
Every 800 hours	<ul style="list-style-type: none"> • Change the planetary gear drive fluid. • Check the rear wheel toe-in.
Every 1000 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Change the brake fluid. • Change the fuel filter. • Change the thermostat. • Replace the safety switches. • Flush the cooling system and replace the hoses. • Drain/flush the fuel tank. • Change the hydraulic oil.

Important Refer to your engine operator's manual for additional maintenance procedures.

 Caution 
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition and disconnect the wire(s) from the spark plug(s) before you do any maintenance. Set the wire(s) aside so that it does not accidentally contact the spark plug(s).</p>



QUICK SERVICE REFERENCE

GROUNDMASTER 580 D

Model 30582 & 30583	Serial 240000001 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart N</i>).....	8.5Qts..... SAE 15W 40 CI-4
Engine Oil Filter	110-6166
Hydraulic Oil (<i>Chart S</i>).....	40Gal..... ISO VG 68
Hydraulic Filter	69-1720
Hydraulic Breather	68-6150
Air Filter	108-3815 (Mid & up)
Engine Thermostat	99-2155
Water Separator*	60-5470
Fuel Filter*	108-3831 (2005 & Up)
Planetary Gear Drive	32Oz..... SAE 80W90
Brake Fluid	DOT 3 Fluid
Tire Pressure	See Operator's
Caster Tire	50 PSI
Engine Coolant	3.9Gal..... Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt adjustment. • Torque the wheel lug nuts. • Check the cutting unit drive belt adjustment.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and replace the filter. • Replace the hydraulic filter. • Torque cylinder head bolts and adjust valves. • Check the engine RPM (at idle and full throttle). • Change the planetary gear drive fluid.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air filter, dust cup, and baffle. • Clean under the cutting unit belt covers. • Check the cutting unit drive belt adjustment.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and replace the filter. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Replace the fuel/water separator filter and the fuel filter. • Check the battery level and cable connections. • Replace the hydraulic filter. • Adjust valves. • Check the engine RPM (at idle and full throttle). • Inspect and adjust fuel injection nozzles
Every 800 hours	<ul style="list-style-type: none"> • Change the planetary gear drive fluid. • Check the rear wheel toe-in.
Every 1000 hours or every 2 years, whichever occurs first	<ul style="list-style-type: none"> • Change the brake fluid. • Change the injection pump filter. • Change the thermostat. • Replace the safety switches. • Flush the cooling system and replace the hoses. • Drain/flush the fuel tank. • Change the hydraulic oil. • Torque cylinder head bolts.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 455 D

Model 30450 and 30455	Serial 20001 & Up
Engine Brand	Peugeot
Engine Oil (<i>Chart C</i>).....5.3Qt.....	SAE 15W40 CI, CI-4
Engine Oil Filter	108-3837
Hydraulic Oil (<i>Chart S</i>).....6.5Gal.....	ISO VG 68
Hydraulic Filter	86-3010
Bidirectional Clutch (Where Appropriate)	ISO VG 68 (<i>Chart S</i>)
Air Filter	108-3812 (1996 & UP)
Safety Air Filter	108-3813 (1996 & UP)
Air Filter	108-3833 (1992-95)
Fuel Filter	76-5220
Rear4WDAxle Oil.....80Oz.....	SAE 80W90
Transaxle Oil.....128Oz.....	80W90
Tire Pressure	15 – 20 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant (Special Requirement) ..	Peugeot Antifreeze (3.5Gal) Toro Part # (104-8606)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GROUNDMASTER® 455-D Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service Type :				
	Every 50hrs <i>A Level Service</i>	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Inspect Air Filter, Dust Cup, and Baffle					
Lubricate All Grease Fittings					
Check Cutting Unit Gear Box Oil Level					
‡ Change Engine Oil and Filter					
Check Battery Level and Connections		<i>B Level Service</i>			
Inspect Cooling System Hoses					
Service Air Cleaner Filter Element					
† Inspect PTO and Cutting Unit Belts					
‡ Check Electric Deck Clutches Adjustment					
‡ Check Electric PTO Clutch Adjustment				<i>C Level Service</i>	
† Torque Wheel Lug Nuts					
Replace Fuel Filter					
Check Front Transaxle Oil level					
Check Rear Axle Oil level (4wd)					
Inspect Fuel Lines and Connections					<i>D Level Service</i>
‡ Check Engine RPM (idle and full throttle)					
† Inspect Engine Fan Belt					
Inspect Engine Timing Belt (see note below)					
Drain and Clean Fuel Tank					
Change Hydraulic Oil					
‡ Replace Hydraulic Oil Filter					
Change Front Transaxle Oil					
Pack Rear Axle Bearings (2wd)					
Change Rear Axle Oil (4wd)					
Check Rear Wheel Toe-in					<i>E Level Service</i>
† Initial break in at 10 hours					
‡ Initial break in at 50 hours					
Replace Moving Hydraulic Hoses					
Replace Safety Switches					
Cooling System - Flush/Replace Fluid					
Replace PTO Belts/Cutter Deck Belts					

Annual Recommendations:

*Items listed are recommended every 1500 hours or
2 years whichever occurs first.*

See Operator's and Service Manual for specifications and procedures)

NOTE: Replace Timing Belt if worn, cracked or oil soaked. A new Timing Belt should be installed any time the Belt is removed or loosened.



QUICK SERVICE REFERENCE

GROUNDMASTER 4000 D

Model 30410	Serial 210000001 - 280000999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....8Qt.....	SAE10W30 CI, CI4
Engine Oil Filter	104-5169
Breather Element	98-7419
Hydraulic Oil.....8Gal.....	Mobil DTE 15M
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element*	98-9764
Fuel Filter In-line*	98-7612
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	99-7591
Tire Pressure	25-30 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant.....2.75Gal.....	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 operating hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the fan and alternator belt tension. • Check the blade drive belt tension.
After the first 50 operating hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle). • Torque the locknuts on the pivots.
After the first 200 operating hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner. • Check the battery level and cable connections. • Check the blade drive belt tension. • Clean the underside of the mower housing and under the belt covers.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor.
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Change the fuel filters (fuel/water and prefilter). • Check the engine RPM (at idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the front planetary gear oil. • Change the rear axle oil. • Check the rear wheel toe-in. • Inspect the blade drive belts. • Change the hydraulic oil. • Change the hydraulic oil filters. • Inspect the cutting unit castor wheel assemblies. • Check and adjust the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4000 D

Model 30412

Serial 290000001 & UP

Engine Brand	Kubota
Engine Oil.....10Qt.....	SAE 15W-40 CH4 or CI4
Engine Oil Filter	104-5169
Breather Element.....	100-3715
Hydraulic Oil (<i>Chart R</i>).....8Gal.....	ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element.....	110-9049
Fuel Filter In-line.....	98-7612
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	110-4812
Tire Pressure.....	25-30 PSI (Front & Rear)
Caster Tires.....	50 PSI
Engine Coolant.....13Qts.....	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 operating hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the fan and alternator belt tension. • Check the blade drive belt tension.
After the first 50 operating hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle). • Torque the locknuts on the pivots.
After the first 200 operating hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner. • Check the battery level and cable connections. • Check the blade drive belt tension. • Clean the underside of the mower housing and under the belt covers.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor.
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Change the fuel filters (fuel/water and prefilter). • Check the engine RPM (at idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the front planetary gear oil. • Change the rear axle oil. • Check the rear wheel toe-in. • Inspect the blade drive belts. • Change the hydraulic oil. • Change the hydraulic oil filters. • Inspect the cutting unit castor wheel assemblies. • Check and adjust the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4000/4010 D

Model 30446 & 30448	Serial 310000001 & UP
Engine Brand	Kubota
Engine Oil	10Qts SAE 15W-40 CH4, CI4
Engine Oil Filter	115-8527
Breather Element	100-3715
Hydraulic Oil (<i>Chart R</i>).....	8Gal..... ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element	110-9049
Planetary Gear Drive	16Oz..... SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	110-4812
Tire Pressure	25-30 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant	13Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the alternator belt tension. • Check the compressor belt tension. • Check the blade drive belt tension.
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine speed (at idle and full throttle).
After the first 200 hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure. • Check the air cleaner indicator • Check the interlock switch operation
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner. • Check the blade drive belt tension. • Clean the air conditioning screen. (Clean more frequently in extremely dusty or dirty conditions) • Remove all debris and chaff from the radiator and oil cooler.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses and clamps. • Check the alternator belt tension. • Check the compressor belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor muffler.
Every 250 hours	<ul style="list-style-type: none"> • Clean the cab air filters. (Replace them if they are torn or excessively dirty.) • Clean the air conditioning coil. (Clean more frequently in extremely dusty or dirty conditions)
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Replace the fuel filter canister. • Check the engine speed (at idle and full throttle).



QUICK SERVICE REFERENCE

GROUNDMASTER 4100 D

Model 30411	Serial 230000001 - 280000999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....8Qt.....	SAE10W30 CI, CI4
Engine Oil Filter	104-5169
Breather Element	98-7419
Hydraulic Oil (<i>Chart R</i>).....8Gal.....	ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element*	98-9764
Fuel Filter In-line*	98-7612
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	99-7591
Tire Pressure	25-30 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant.....2.75Gal.....	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 operating hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the fan and alternator belt tension. • Check the blade drive belt tension.
After the first 50 operating hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle). • Torque the locknuts on the pivots.
After the first 200 operating hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner. • Check the battery level and cable connections. • Check the blade drive belt tension. • Clean the underside of the mower housing and under the belt covers.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor.
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Change the fuel filters (fuel/water and prefilter). • Check the engine RPM (at idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the front planetary gear oil. • Change the rear axle oil. • Check the rear wheel toe-in. • Inspect the blade drive belts. • Change the hydraulic oil. • Change the hydraulic oil filters. • Inspect the cutting unit castor wheel assemblies. • Check and adjust the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4100 D

Model 30413	Serial 290000001 & Up
Engine Brand	Kubota
Engine Oil.....10Qts	SAE 15W-40 CH4, CI4
Engine Oil Filter	104-5169
Breather Element	100-3715
Hydraulic Oil (Chart R).....8Gal.....	ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element	110-9049
Fuel Filter In-line	98-7612
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	110-4812
Tire Pressure	25-30 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant.....13Qts	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 operating hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the fan and alternator belt tension. • Check the blade drive belt tension.
After the first 50 operating hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle). • Torque the locknuts on the pivots.
After the first 200 operating hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure.
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner. • Check the battery level and cable connections. • Check the blade drive belt tension. • Clean the underside of the mower housing and under the belt covers.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the fan and alternator belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor.
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Change the fuel filters (fuel/water and prefilter). • Check the engine RPM (at idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the front planetary gear oil. • Change the rear axle oil. • Check the rear wheel toe-in. • Inspect the blade drive belts. • Change the hydraulic oil. • Change the hydraulic oil filters. • Inspect the cutting unit castor wheel assemblies. • Check and adjust the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4100/4110 D

Model 30447 & 30449	Serial 310000001 & Up
Engine Brand	Kubota
Engine Oil	10Qt SAE 15W-40 CH4, CI4
Engine Oil Filter	104-5169
Breather Element	98-9493
Hydraulic Oil (<i>Chart R</i>).....	8Gal ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element	110-9049
Planetary Gear Drive	16Oz SAE 85W140
Rear Axle	80Oz SAE 85W140
Rear Axle Breather	110-4812
Tire Pressure	25-30 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant	13Qt Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Check the fan belt tension. • Check the blade drive belt tension.
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine speed (at idle and full throttle).
After the first 200 hours	<ul style="list-style-type: none"> • Change the front planetary gear oil. • Change the rear axle oil. • Change the hydraulic oil. • Change the hydraulic oil filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the coolant level. • Check the hydraulic fluid level. • Check the tire pressure. • Check the air cleaner indicator. • Check the interlock switch operation
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Check the blade drive belt tension. • Check the battery level and cable connections. • Clean the underside of the mower housing and under the belt covers.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses and clamps. • Check the fan belt tension.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor muffler
Every 250 hours	<ul style="list-style-type: none"> • Clean the cab air filters. (Replace them if they are torn or excessively dirty.)
Every 400 hours	<ul style="list-style-type: none"> • Check the planetary gear drive oil. • Check the rear axle lubricant. • Check the rear axle gear box lubricant. • Service the air filter (if the indicator shows red). • Inspect the fuel lines and connections. • Replace the fuel filter canister. • Check the engine speed (at idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the front planetary gear oil. • Change the rear axle oil. • Check the rear wheel toe-in. • Inspect the blade drive belts. • Change the hydraulic oil. • Change the hydraulic oil filters. • Inspect the cutting unit castor wheel assemblies. • Check and adjust the valve clearance.
Every 2 years	<ul style="list-style-type: none"> • Flush the cooling system and replace fluid. • Replace moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4300 D

Model 30859 & 30861 **Serial** 310000001 & Up

Engine Brand Kubota

Engine Oil.....5.5Qts..... SAE 15W-40 CI-4

Engine Oil Filter 108-3841

Hydraulic Oil (*Chart R*)..... 10Gal..... ISO VG 46

Hydraulic Filter 94-2621

Steering Valve Filter 86-3010

Air Filter (4300 - 5610 only)..... 108-3812

Fuel Filter / Water Separator 110-9049

Tire Pressure..... 12 – 15 PSI (83 – 103 kPa) Front & Rear

Engine Coolant..... 10Qts Ethylene Glycol, Water
(50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first hour	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
After the first 8 hours	<ul style="list-style-type: none"> • Check the condition and tension of the alternator belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (idle and full throttle).
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the cooling system. • Check the hydraulic fluid level. • Check the operation of the interlock switches. • Remove debris from the screen, oil coolers, and radiator (more frequently in dirty operating conditions). • Check the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. (Grease them immediately after every washing regardless of the interval listed.) • Check the condition of and clean the battery. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Inspect the cooling system hoses. • Check the condition and tension of the alternator belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Drain moisture from the fuel and hydraulic fluid tanks.
Every 250 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts to 70 to 90 ft-lb (94 to 122 N·m).
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.) • Check the fuel lines and connections for deterioration, damage, or loose connections. • Replace the fuel filter canister. • Check the engine RPM (idle and full throttle).
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank • Check the rear wheel toe-in. • Change the hydraulic fluid. • Change the hydraulic filters (sooner if the service interval indicator is in the Red zone). • Pack the rear wheel bearings • Adjust the engine valves (refer to the engine Operator's Manual)
Before storage	<ul style="list-style-type: none"> • Drain and clean the fuel tank
Every 2 years	<ul style="list-style-type: none"> • Flush and replace the cooling system fluid. • Drain and flush the hydraulic tank. • Replace all moving hoses.



QUICK SERVICE REFERENCE

GROUNDMASTER 4500 & 4700 D

Model 30856 & 30868	Serial 220000001 - 240999999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....8Qts.....	SAE10W30 CI, CI4
Engine Oil Filter	104-5169
Breather Element	98-7419
Hydraulic Oil (<i>Chart R</i>).....7.5Gal.....	ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element*	98-9764
Fuel Filter In-line*	98-7612
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle.....80Oz.....	SAE 85W140
Rear Axle Breather	99-7591
Tire Pressure	20 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant.....2.75Gal.....	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the alternator belt tension. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the air cleaner indicator.¹ • Check the battery level and cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Inspect the cooling system hoses. • Check the alternator belt tension.
After first 200 hours	<ul style="list-style-type: none"> • Change the hydraulic oil. • Change the hydraulic oil filters. • Change the front planetary gear lube. • Change the rear axle oil.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Service the spark arrestor.
Every 400 hours	<ul style="list-style-type: none"> • Service the air filter.¹ • Change the fuel filters (fuel/water and pre-filter) • Inspect the fuel lines and connections. • Check the engine RPM (at idle and full throttle) • Check the rear axle oil level. • Check the front planetary gear lube.
Every 800 hours or annually, whichever occurs first	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the hydraulic oil. • Change the hydraulic oil filters. • Change the front planetary gear lube. • Change the rear axle oil. • Inspect the cutting unit front roller assemblies for wear. • Check the rear wheel toe-in. • Check and adjust the valve clearance. • Replace the hydraulic tank breather
Every 1500 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Flush the cooling system and replace fluid.

¹If the indicator shows red

Important Refer to your engine operator's manual and cutting unit operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 4500 & 4700 D

Model 30856 & 30868 **Serial** 250000001 - 280999999

Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....8Qt.....	15W 40 CI, CI4
Engine Oil Filter	104-5169
Hydraulic Oil (<i>Chart R</i>).....7.5Gal.....	ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element	98-9764, up to 2007
Water/Separator Element	110-9049 - 2008
Fuel Filter In-line	98-7612 to 2007
Planetary Gear Drive.....16Oz.....	SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	99-7591to 2006
Tire Pressure	20 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant.....2.75Gal	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none"> • Torque the wheel nuts.
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
After the first 200 hours	<ul style="list-style-type: none"> • Change the planetary gear drive oil. • Change the rear axle lubricant. • Change the hydraulic filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the cooling system. • Check the hydraulic fluid level. • Check the tire pressure. • Check the interlock switches. • Drain water or other contaminants from the water separator. • Remove debris from the engine area, oil cooler, and radiator. • Inspect the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. • Check the battery condition.
Every 100 hours	<ul style="list-style-type: none"> • Check the condition and tension of the alternator belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel nuts. • Clean the spark arrestor muffler.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.) • Check the fuel lines and connections. • Replace the fuel filter canister. • Check the planetary gear drive oil level (sooner if external leakage is noticed). • Check the rear axle lubricant level.
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the planetary gear drive oil. • Change the rear axle lubricant. • Check the rear wheel toe-in. • Change the hydraulic fluid. • Change the hydraulic filters.
Before storage	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Check the tire pressure. • Check all fasteners. • Grease or oil all grease fittings and pivot points. • Paint chipped surfaces.
Yearly	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Change the planetary gear drive oil. • Check the rear wheel toe-in.

Important: Refer to your engine *Operator's Manual* and cutting unit *Operator's Manual* for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 4500 & 4700 D

Model 30857 & 30858	Serial 29000001 and Up
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....	10Qts..... 15W 40 CI, CI4
Engine Oil Filter	104-5169
Hydraulic Oil (<i>Chart R</i>).....	7.5Qts..... ISO VG 46
Hydraulic Filter	75-1310
Traction Hydraulic Filter	94-2621
Hydraulic Breather	68-6150
Air Filter	108-3814
Safety Air Filter	108-3816
Water/Separator Element	110-9049
Planetary Gear Drive	16Oz..... SAE 85W140
Rear Axle	80Oz..... SAE 85W140
Rear Axle Breather	110-4815
Tire Pressure	20 PSI (Front & Rear)
Caster Tires	50 PSI
Engine Coolant	13Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	<ul style="list-style-type: none"> • Torque the wheel nuts.
After the first 50 operating hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
After the first 200 operating hours	<ul style="list-style-type: none"> • Change the planetary gear drive oil. • Change the rear axle lubricant. • Change the hydraulic filters.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the cooling system. • Check the hydraulic fluid level. • Check the tire pressure. • Check the interlock switches. • Drain water or other contaminants from the water separator. • Remove debris from the engine area, oil cooler, and radiator. • Inspect the hydraulic lines and hoses for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. • Check the battery condition.
Every 100 hours	<ul style="list-style-type: none"> • Check the condition and tension of the alternator belt.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the wheel nuts. • Clean the spark arrestor muffler.
Every 400 hours	<ul style="list-style-type: none"> • Service the air cleaner. (Service the air cleaner earlier if the air cleaner indicator shows red. Service it more frequently in extremely dirty or dusty conditions.) • Check the fuel lines and connections. • Replace the fuel pre-filter. • Check the planetary gear drive oil level (sooner if external leakage is noticed). • Check the rear axle lubricant level.
Every 800 hours	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Change the planetary gear drive oil. • Change the rear axle lubricant. • Check the rear wheel toe-in. • Change the hydraulic fluid. • Change the hydraulic filters.
Before storage	<ul style="list-style-type: none"> • Drain and clean the fuel tank. • Check the tire pressure. • Check all fasteners. • Grease or oil all grease fittings and pivot points. • Paint chipped surfaces.
Yearly	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace the fuel pre-filter. • Change the planetary gear drive oil. • Check the rear wheel toe-in.
Every 2 years	<ul style="list-style-type: none"> • Replace the interlock switches.

Important: Refer to your engine Operator's Manual and cutting unit Operator's Manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 3500 D

Model 30821 & 30839	Serial 200000001 - 249999999
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....	4Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	108-3841
Breather Element	98-9493
Hydraulic Oil (<i>Chart R</i>).....	3.5Gal..... ISO VG 46
Hydraulic Filter	86-3010 (2002 & up)
Hydraulic Filter	54-0110 (2000 - 2001)
Air Filter	108-3810
Water/Separator	98-9764
Fuel Filter In-line	98-7612
Tire Pressure	14 - 18 PSI Front & Rear
Engine Coolant	6Qts Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Replace the hydraulic filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Inspect the air filter, dust cup, and burp valve. • Lubricate all grease fittings. • Change the engine oil. • check the battery cable connections. • Check the fan and alternator belt tension. • Check the battery fluid level.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil filter. • Inspect the traction belt.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter. • Replace the hydraulic filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Replace the hydraulic fluid. • Replace the fuel/water separator filter. • Replace the fuel prefilter. • Inspect the traction cable movement. • Check the engine RPM (at idle and full throttle).
Every 800 hours or annually, whichever occurs first	<ul style="list-style-type: none"> • Adjust the valves. • Inspect, disassemble and install new seals in cutting unit roller assemblies.
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace the safety switches. • Flush the cooling system and replace the fluid. • Drain and flush the fuel tank. • Drain and flush the hydraulic tank.

Important Refer to your engine operator's manual and cutting unit operator's manual for additional maintenance procedures.

	Caution	
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition before you do any maintenance.</p>		



QUICK SERVICE REFERENCE

GROUNDMASTER 3505 & 3500 D

Model 30821, 30839 & 30826 **Serial** 250000101 & Up

Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....4Qts.....	SAE 10W30 CI, CI4
Engine Oil Filter	108-3841
Breather Element	98-9493
Hydraulic Oil (<i>Chart R</i>).....3.5Qts.....	ISO VG 46
Hydraulic Filter	86-3010
Air Filter	108-3810
Water/Separator	98-9764
Fuel Filter In-line	98-7612
Tire Pressure	14-18 PSI (Front & Rear)
Engine Coolant.....6Qts.....	Ethylene Glycol, Water (50/50 mix)

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the fan and alternator belt tension. • Replace the hydraulic filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the engine RPM (at idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Inspect the air filter, dust cup, and burp valve. • Lubricate all grease fittings. • Check the battery cable connections. • Check the fan and alternator belt tension. • Check the battery fluid level.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Inspect the traction belt.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter. • Replace the hydraulic filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Replace the hydraulic fluid. • Replace the fuel/water separator filter. • Replace the fuel prefilter. • Inspect the traction cable movement. • Check the engine RPM (at idle and full throttle).
Every 800 hours or annually, whichever occurs first	<ul style="list-style-type: none"> • Adjust the valves. • Inspect, disassemble and install new seals in cutting unit roller assemblies.
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace all moving hoses. • Replace the safety switches. • Flush the cooling system and replace the fluid. • Drain and flush the fuel tank. • Drain and flush the hydraulic tank.

Important Refer to your engine operator's manual and cutting unit operator's manual for additional maintenance procedures.

 Caution 
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition before you do any maintenance.</p>



QUICK SERVICE REFERENCE

GROUNDMASTER 3320

Model 30307	Serial 250000101 & Up
Engine Brand	B&S Daihatsu
Engine Oil (<i>Chart E</i>).....	3.2Qts..... SAE 30 SH, SJ
Engine Oil Filter	108-3842
Hydraulic Oil (<i>Chart T</i>).....	5Qts UTHF
Hydraulic Filter	23-2300
Air Filter	108-3810
Fuel Filter	95-2926
Tire Pressure	20 PSI (Front & Rear)
Engine Coolant	4Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Change Transmission Filter • Torque Wheel Lug Nuts • Check Brake Operation
After first 50 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter • Check PTO Belt Tension • Check Brake Operation
Every 50 hours	<ul style="list-style-type: none"> • Check Battery Fluid Level • Check Battery Cable Connections • Lubricate All Grease Fittings • Lubricate Brake Cables • Inspect Air Filter, Dust Cup, and Baffle
Every 200 hours	<ul style="list-style-type: none"> • Check Electric Clutch Gap Adjustment • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Inspect Cooling System Hoses • Change Engine Oil and Filter • Check Rear Wheel Toe-In and Steering Linkage • Change Transmission Filter • Torque Wheel Lug Nuts
Every 400 hours	<ul style="list-style-type: none"> • Replace Air Filter • Replace Fuel Filter • Coat Transmission Bypass Pins with Grease • Adjust Valves and Check Engine RPM
Every 1500 hours	<ul style="list-style-type: none"> • Replace Moving Hoses • Replace Safety Switches • Coolant System – Flush/Replace Fluid • Replace Hydraulic Oil

 Caution 
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.</p>



QUICK SERVICE REFERENCE

GROUNDMASTER 225

Model	30230	Serial	60001 & Up
Engine Brand	B&S Daihatsu		
Engine Oil (<i>Chart E</i>).....	3.2Qts	.....	SAE 30 SH, SJ
Engine Oil Filter	108-3842		
Hydraulic Oil (<i>Chart P</i>).....	5Qts	.....	SAE10W30, 10W40 (<i>Choose either oil but do not intermix</i>)
Hydraulic Oil (<i>Chart T</i>).....	UTHF		
Hydraulic Filter	23-2300		
Air Filter	95-2926		
Fuel Filter	99-9193		
Fuel Filter In-line	95-2926 (2000 & older)		
Tire Pressure	20 PSI (Front & Rear)		
Engine Coolant	6Qts	.....	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
	50hrs	100hrs	200hrs	400hrs
Check Battery Fluid Level				
Check Battery Cable Connections				
Lubricate All Grease Fittings				
Lubricate Brake Cables				
Check Cutting Unit Gear Box Oil Level				
Clean Under Cutting Unit Belt Covers				
Check Cutting Unit Drive Belt Adjustment				
Change Engine Oil				
Inspect Air Filter, Dust Cup, and Baffle				
‡ Replace Engine Oil Filter				
Check Electric Clutch Gap Adjustment				
† Check PTO Belt Tension				
† Check Fan and Alternator Belt Tension				
Inspect Cooling System Hoses				
Service Air Filter				
Replace Gasoline Fuel Filter (gas unit)				
Check Rear Wheel Toe-In and Steering Linkage				
† Replace Transmission Filter				
† Torque Wheel Lug Nuts				
Drain and Clean Fuel Tank (diesel unit)				
Change Cutting Unit Gear Box Oil				
Change Electric Fuel Pump Filter				
Change Diesel/Water Separator Filter				
Rear Axle Service				
- pack rear wheel bearings (2WD)				
- change rear axle lubricant (4WD)				
Coat Transmission Bypass Pins with Grease				
Replace Spark Plugs (gasoline unit)				
‡ Torque Head, Adjust Valves, and Check Engine RPM				
† Initial break in at 10 hours				
‡ Initial break in at 50 hours				
Replace Moving Hoses				
Replace Safety Switches				
Coolant System - Flush/Replace Fluid				
Change Hydraulic Oil				

Annual Recommendations:
Items listed are recommended every 1000 hours or 2 years whichever occurs first.

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

GROUNDMASTER 3000

Model 30300	Serial 60001 & Up
Engine Brand	Ford
Engine Oil (<i>Chart D</i>).....	3.5Qts SAE 10W30 SF, SJ
Engine Oil Filter	*FL-400A
Hydraulic Oil (<i>Chart T</i>)	12Qts..... UTHF
Hydraulic Filter	94-3951
Air Filter	108-3812
Fuel Filter	*FG795A
Tire Pressure	15 PSI (Front & Rear)
Caster Tire	50 PSI
Engine Coolant	9Qts Ethylene Glycol, Water (50/50 mix)

*Indicates Ford Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Groundsmaster 3000 Maintenance Schedule

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Lubricate All Grease Fittings	Every 50hrs				
Inspect Air Filter					
Check Battery Level/Cable Connections					
Check Cutting Unit Gearbox Oil Level					
Clean Under Cutting Unit Belt Covers					
Check Cutting Unit Drive Belt Adjustment	<i>A Level Service</i>				
Change Engine Oil and Filter					
Inspect Cooling System Hoses					
Check Fan, Governor and Alternator Belt Tension		<i>B Level Service</i>			
Torque Wheel Lug Nuts					
Check Governor Oil Level			<i>C Level Service</i>		
Service Spark Arrester Muffler					
Service Air Filter					
Change Fuel Filter					
Inspect Fuel Lines and Connections					
Change Spark Plugs					
Check Engine RPM (idle and full throttle)					
Torque Head and Adjust Valves				<i>D Level Service</i>	
Change Cutting Unit Gearbox Oil					
Change Hydraulic Oil					
Change Hydraulic Oil Filter					
Drain and Clean Fuel Tank					
Pack Rear Axle Bearings					
Check Rear Wheel Toe±In					<i>E Level Service</i>
Initial break in at 10 hours					
Initial break in at 50 hours					
Initial break in at 200 hours					
Replace Moving Hoses					
Replace Safety Switches					
Cooling System Flush/Replace Fluid					
			Annual Recommendations: Items listed are recommended every 1500 hours or 2 years, whichever occurs first.		

(See Operator's Manual for specifications and procedures.)



QUICK SERVICE REFERENCE

GROUNDMASTER 3000-D

Model All Models	Serial 60001 & Up
Engine Brand	Peugeot
Engine Oil (<i>Chart C</i>).....	4.75Qts SAE 15W40 CI
Engine Oil Filter	108-3837
Breather Element	93-5670
Hydraulic Oil (<i>Chart T</i>).....	12Qts UTHF
Hydraulic Filter	94-3951
Hydraulic Filter Contour Deck	54-0110
Rear Axle (4WD) (<i>Chart T</i>).....	UTHF
Air Filter	108-3812
Fuel Filter	76-5220
Tire Pressure	15 PSI (Front & Rear)
Castor Tire	50 PSI
Engine Coolant (Special Requirement) ..	Peugeot Antifreeze (11.5Qts) Toro Part # (104-8606)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Groundsmaster 3000-D Maintenance Schedule

Minimum Recommended Maintenance Intervals

	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800 hrs
Lubricate All Grease Fittings Inspect Air Filter Check Battery Level/Cable Connections Check Cutting Unit Gearbox Oil Level Clean Under Cutting Unit Belt Covers Check Cutting Unit Drive Belt Adjustment	<i>A Level Service</i>				
Change Engine Oil and Filter Inspect Cooling System Hoses Check Fan and Alternator Belt Tension		<i>B Level Service</i>			
Torque Wheel Lug Nuts			<i>C Level Service</i>		
Service Air Filter Change Fuel Filter Inspect Fuel Lines and Connections Check Engine RPM (idle and full throttle) Check Rear Axle Oil Level (4wd) Change Cutting Unit Gearbox Oil Change Rear Axle Oil (4wd)				<i>D Level Service</i>	
Change Hydraulic Oil (see note below) Change Hydraulic Oil Filter (see note below) Inspect Engine Timing Belt (see note below) Drain and Clean Fuel Tank Pack 2WD Rear Axle Bearings Check Rear Wheel Toe±In					<i>E Level Service</i>
Initial break in at 10 hours Initial break in at 50 hours Initial break in at 200 hours					
Replace Moving Hoses Replace Safety Switches Cooling System Flush/Replace Fluid					

Annual Recommendations:
Items listed are recommended every 1500 hours or 2 years, whichever occurs first.

(See Operator's Manual for specifications and procedures.)

NOTE: Replace Timing Belt after every 2500 hours of operation or if worn, cracked, oil soaked or any time the Belt is removed or loosened.

NOTE: Replace Hydraulic Oil and Filter every 400 hours of operation if machine is equipped with Model 30726 Auxiliary Hydraulic Kit.



QUICK SERVICE REFERENCE

GROUNDMASTER 345

Model 30789	Serial 40001 & Up
Engine Brand	Ford
Engine Oil (<i>Chart D</i>).....	3.5Qts..... SAE 10W20 SH, SJ
Engine Oil Filter	108-3817
Hydraulic Oil (<i>Chart P</i>).....	5Qts SAE10W30, 10W40 (<i>Choose either oil but do not intermix</i>)
Hydraulic Oil (<i>Chart T</i>).....	UTHF
Hydraulic Filter	23-9740
Air Filter	108-3833
Fuel Filter	99-9403
Fuel Filter (at tank)	95-3305
Tire Pressure	21 PSI (Front & Rear)
Engine Coolant	6Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the PTO belt tension. • Check the fan and alternator belt tension. • Change the transmission filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the PTO belt tension.
Every 50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Lubricate all grease fittings. • Lubricate the brake cables. • Check the PTO belt tension. • Inspect the air filter, dust cup and baffle.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Change the transmission filter. • Service the air filter. • Check governor oil level • Decarbon spark arrestor muffler. • Check rear wheel toe-in and steering linkage. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change fuel filter. • Replace spark plugs • Pack the rear wheel bearings. • Torque head, adjust valves and check engine RPM.
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Flush and replace the coolant system fluid. • Replace the hydraulic fluid.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 325 D
(2 & 4 WHEEL DRIVE)

Model	All Models	Serial	80001 & Up
Engine Brand	..... Mitsubishi		
Engine Oil	(Chart I).....3.7Qts	..... SAE10W30 CI, CI4	
Engine Oil Filter	..... 108-3841 (4WD 1995&UP)		
Engine Oil Filter	..... 42-9030 (2WD & 4WD 1991-94)		
Breather Element	..... 98-9493		
Hydraulic Oil	(Chart P).....5Qts	..... SAE10W30, 10W40 (Choose either oil but	
Hydraulic Oil	(Chart T).....	UTHF do not intermix)	
Hydraulic Filter	..... 23-9740		
Air Filter	..... 108-3833		
Water Separator	..... 98-9764		
Fuel Pump Filter	..... 43-2550		
Fuel Filter In-line	..... 43-1820		
Rear Axle	.....36oz	..... SAE 80W90	
Bi-directional Clutch	(Chart T).....	UTHF	
Tire Pressure	..... 21 PSI (Front & Rear)		
Engine Coolant	.....6Qts	..... Ethylene Glycol, Water (50/50 mix)	

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Change Transmission Filter • Torque Wheel Lug Nuts
After first 50 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter • Torque Head, Adjust Valves and Check Engine RPM
Every 50 hours	<ul style="list-style-type: none"> • Check Battery Fluid Level • Check Battery Cable Connections • Lubricate All Grease Fittings • Lubricate Brake Cables • Inspect Air Filter, Dust Cup, and Baffle
Every 100 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter • Check Electric Clutch Gap Adjustment • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Inspect Cooling System Hoses
Every 200 hours	<ul style="list-style-type: none"> • Check Rear Wheel Toe-In and Steering Linkage • Change Transmission Filter • Torque Wheel Lug Nuts
Every 400 hours	<ul style="list-style-type: none"> • Service Air Filter • Change Electric Fuel Pump Filter • Pack Rear Wheel Bearings • Coat Transmission Bypass Pins with Grease • Torque Head, Adjust Valves and Check Engine RPM
Every 1000 hours	<ul style="list-style-type: none"> • Replace Moving Hoses • Replace Safety Switches • Coolant System – Flush/Replace Fluid • Replace Hydraulic Oil

 Caution 
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition and disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.</p>



QUICK SERVICE REFERENCE

GROUNDMASTER 328 D

(2 & 4 WHEEL DRIVE)

Model All Models

Serial 210000001 - 2409999999

Engine Brand Kubota

Engine Oil (Chart A).....3.25Qts..... SAE 10W30 CI, CI4

Engine Oil Filter 108-3841

Breather Element..... 98-9493

Hydraulic Oil (Chart P).....5Qts SAE10W30, 10W40 *(Choose either oil but*

Hydraulic Oil (Chart T)..... UTHF *do not intermix)*

Hydraulic Filter 23-9740

Bidirectional Clutch (Chart T)..... UTHF

4 WD Rear Axle.....36oz SAE 80W90

Air Filter 108-3810

Water Separator 98-9764

Pre Fuel Filter-In Line 98-7612

Tire Pressure..... 21 PSI
(Front & Rear)

Engine Coolant.....6Qts Ethylene Glycol, Water
(50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the PTO belt tension. • Check the fan and alternator belt tension. • Change the transmission filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check engine RPM. • Check the PTO belt tension. • Check engine RPM
Every 50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Lubricate all grease fittings. • Lubricate the brake cables. • Inspect the air filter.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the PTO belt tension. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Check rear wheel toe-in and steering linkage. • Change the transmission filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change fuel filter. • Change the fuel/water separator filter. • Change rear axle lubricant (4 wheel drive only). • Change bidirectional clutch lubricant (4 wheel drive only). • Pack the rear wheel bearings (2 wheel drive only). • Torque head, adjust valves and check engine RPM
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Flush and replace the coolant system fluid. • Replace the hydraulic fluid. • Drain and clean the fuel tank.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 328 D

(2 & 4 WHEEL DRIVE)

Model	All Models	Serial	250000001 & Up
Engine Brand	..... Kubota		
Engine Oil	(Chart A).....3.25Qts.....	SAE 10W30 CI, CI4	
Engine Oil Filter	..... 108-3841		
Hydraulic Oil	(Chart P).....5Qts.....	SAE10W30, 10W40 (Choose either oil but	
Hydraulic Oil	(Chart T).....	UTHF	do not intermix)
Hydraulic Filter	..... 23-9740		
Bidirectional Clutch	(Chart T)..... UTHF		
4 WD Rear Axle	..... SAE 80W90		
Air Filter	..... 108-3810		
Water Separator	..... 98-9764		
Pre Fuel Filter-In Line	..... 98-7612		
Tire Pressure	..... 21 PSI		
	(Front & Rear)		
Engine Coolant	.....6Qts.....	Ethylene Glycol, Water	
		(50/50 mix)	

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the PTO belt tension. • Check the fan and alternator belt tension. • Change the transmission filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check engine RPM. • Check the PTO belt tension. • Check engine RPM
Every 50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Lubricate all grease fittings. • Lubricate the brake cables. • Inspect the air filter.
Every 100 hours	<ul style="list-style-type: none"> • Check the PTO belt tension. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 150 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Check rear wheel toe-in and steering linkage. • Change the transmission filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change fuel filter. • Change the fuel/water separator filter. • Change rear axle lubricant (4 wheel drive only). • Change bidirectional clutch lubricant (4 wheel drive only). • Pack the rear wheel bearings (2 wheel drive only). • Torque head, adjust valves and check engine RPM
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Flush and replace the coolant system fluid. • Replace the hydraulic fluid. • Drain and clean the fuel tank.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 228 D (2 & 4 WHEEL DRIVE)

Model	All Models	Serial	210000001 & Up
Engine Brand	Kubota		
Engine Oil (<i>Chart A</i>)	.....9Qts	SAE10W30 CI, CI4	
Engine Oil Filter	108-3841		
Hydraulic Oil (<i>Chart P</i>)	.....5Qts	SAE10W30, 10W40 (<i>Choose either oil but do not intermix</i>)	
Hydraulic Oil (<i>Chart T</i>)	UTHF		
Hydraulic Filter	23-2300		
Bidirectional Clutch (<i>Chart T</i>)	UTHF		
4 WD Rear Axle	SAE 80W90		
Air Filter	108-3810		
Water Separator	98-9764		
Pre Fuel Filter-In Line	98-7612		
Tire Pressure	20 PSI (Front & Rear)		
Engine Coolant	.....7Qts	Ethylene Glycol, Water (50/50 mix)	

* Rear axle: 2.4Qts for center section. .35Qts Steering knuckles

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check the PTO belt tension. • Check the fan and alternator belt tension. • Change the transmission filter. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check engine RPM. • Check the PTO belt tension. • Check engine RPM
Every 50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Lubricate all grease fittings. • Lubricate the brake cables. • Inspect the air filter.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Check the PTO belt tension. • Check the fan and alternator belt tension. • Inspect the cooling system hoses.
Every 200 hours	<ul style="list-style-type: none"> • Service the air filter. • Check rear wheel toe-in and steering linkage. • Change the transmission filter. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change fuel filter. • Change the fuel/water separator filter. • Change rear axle lubricant (4 wheel drive only). • Change bidirectional clutch lubricant (4 wheel drive only). • Pack the rear wheel bearings (2 wheel drive only). • Torque head, adjust valves and check engine RPM
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Flush and replace the coolant system fluid. • Replace the hydraulic fluid. • Drain and clean the fuel tank.

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

GROUNDMASTER 3280 D

(2 & 4 WHEEL DRIVE)

Model 30308 & 30309	Serial 250000101 & Up
Engine Brand	Kubota
Engine Oil (<i>Chart A</i>).....4Qts.....	SAE10W30 CI, CI4
Engine Oil Filter	108-3841
Hydraulic Oil (<i>Chart T</i>).....5Qts	UTHF
Hydraulic Filter	23-2300
Bidirectional Clutch (<i>Chart T</i>)....1/3Full	UTHF
4 WD Rear Axle	SAE 80W90
Air Filter	108-3810
Water Separator	98-9764
Pre Fuel Filter	98-7612
Tire Pressure	20 PSI (Front & Rear)
Engine Coolant	8Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Change Transmission Filter • Torque Wheel Lug Nuts • Check Brake Operation
After first 50 hours	<ul style="list-style-type: none"> • Change Engine Oil and Filter • Check PTO Belt Tension • Check Brake Operation
Every 50 hours	<ul style="list-style-type: none"> • Check Battery Fluid Level • Check Battery Cable Connections • Lubricate All Grease Fittings • Lubricate Brake Cables • Inspect Air Filter, Dust Cup, and Baffle
Every 150 hours	<ul style="list-style-type: none"> • Check Electric Clutch Gap Adjustment • Check PTO Belt Tension • Check Fan and Alternator Belt Tension • Inspect Cooling System Hoses • Change Engine Oil and Filter • Check Rear Wheel Toe-In and Steering Linkage • Change Transmission Filter • Torque Wheel Lug Nuts
Every 450 hours	<ul style="list-style-type: none"> • Replace Air Filter • Drain and Clean Fuel Tank • Change Fuel/Water Separator Filter • Change Rear Axle Lubricant (4 wheel drive only) • Change Bi-directional Clutch Lubricant (4 wheel drive only) • Coat Transmission Bypass Pins with Grease • Adjust Valves and Check Engine RPM
Every 1500 hours	<ul style="list-style-type: none"> • Replace Moving Hoses • Replace Safety Switches • Coolant System – Flush/Replace Fluid • Replace Hydraulic Oil



QUICK SERVICE REFERENCE

GROUNDMASTER 223 D

(2 & 4 WHEEL DRIVE)

Model 30243 and 30223	Serial 80001 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart E</i>).....	3.8Qts..... SAE 10W30 CI, CI4
Engine Oil Filter	108-3841
Hydraulic Oil (<i>Chart P</i>).....	5Qts..... SAE 10W30 SJ
Hydraulic Filter	23-2300
Air Filter	27-7110 x 108-3833
Water/Separator	63-8300
Fuel Pump Filter	43-2550
Tire Pressure	20 PSI (Front & Rear)
Engine Coolant	6Qts..... Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GROUNDMASTER® 220-D, 223-D, 224 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
	50hrs	100hrs	200hrs	400hrs
Check Battery Fluid Level	50hrs	100hrs	200hrs	400hrs
Check Battery Cable Connections				
Lubricate All Grease Fittings				
Lubricate Brake Cables				
Check Cutting Unit Gear Box Oil Level				
Clean Under Cutting Unit Belt Covers				
Check Cutting Unit Drive Belt Adjustment				
Change Engine Oil	<i>A Level</i>			
Inspect Air Filter, Dust Cup, and Baffle	<i>Service</i>			
‡ Replace Engine Oil Filter				
Check Electric Clutch Gap Adjustment				
† Check PTO Belt Tension				
† Check Fan and Alternator Belt Tension			<i>B Level</i>	
Inspect Cooling System Hoses			<i>Service</i>	
Service Air Filter				
Replace Gasoline Fuel Filter (gas unit)				
Check Rear Wheel Toe-In and Steering Linkage				
† Replace Transmission Filter				<i>C Level</i>
† Torque Wheel Lug Nuts				<i>Service</i>
Drain and Clean Fuel Tank (diesel unit)				
Change Cutting Unit Gear Box Oil				
Change Electric Fuel Pump Filter				
Change Diesel/Water Separator Filter				
Rear Axle Service				
- pack rear wheel bearings (2WD)				
- change rear axle lubricant (4WD)				
Coat Transmission Bypass Pins with Grease				
Replace Spark Plugs (gasoline unit)				<i>D Level</i>
‡ Torque Head, Adjust Valves, and Check Engine RPM				<i>Service</i>
† Initial break in at 10 hours				
‡ Initial break in at 50 hours				
Replace Moving Hoses				
Replace Safety Switches				
Coolant System - Flush/Replace Fluid				
Change Hydraulic Oil				

Annual Recommendations:
Items listed are recommended every
1000 hours or 2 years whichever occurs
first.

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

GROUNDMASTER 1000L

Model 30200	Serial 70001 & Up
Engine Brand	Kawasaki
Engine Oil (<i>Chart B</i>).....	1.6Qts SAE10W30 SH, SJ
Engine Oil Filter	95-9762
Hydraulic Oil (<i>Chart P</i>).....	6Qts SAE 10W30 SJ
Hydraulic Filter	23-2300
Air Filter	95-9898
Pre Air Filter	95-9899
Fuel Filter	95-9962
Tire Pressure	20 PSI (Front & Rear)
Engine Coolant	4Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

GROUNDMASTER® 1000

Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
	50hrs	100hrs	200hrs	400hrs
Check Battery Fluid Level				
Check Battery Cable Connections				
Lubricate All Grease Fittings				
Lubricate Brake Cables				
Check Cutting Unit Gear Box Oil Level				
Clean Under Cutting Unit Belt Covers				
Check Cutting Unit Drive Belt Adjustment				
Change Engine Oil				
Inspect Air Filter, Dust Cup, and Baffle				
‡ Replace Engine Oil Filter				
Check Electric Clutch Gap Adjustment				
† Check PTO Belt Tension				
† Check Fan and Alternator Belt Tension				
Inspect Cooling System Hoses				
Service Air Filter				
Replace Gasoline Fuel Filter (gas unit)				
Check Rear Wheel Toe-In and Steering Linkage				
† Replace Transmission Filter				
† Torque Wheel Lug Nuts				
Drain and Clean Fuel Tank (diesel unit)				
Change Cutting Unit Gear Box Oil				
Change Electric Fuel Pump Filter				
Change Diesel/Water Separator Filter				
Rear Axle Service				
- pack rear wheel bearings (2WD)				
- change rear axle lubricant (4WD)				
Coat Transmission Bypass Pins with Grease				
Replace Spark Plugs (gasoline unit)				
‡ Torque Head, Adjust Valves, and Check Engine RPM				
† Initial break in at 10 hours				
‡ Initial break in at 50 hours				
Replace Moving Hoses				
Replace Safety Switches				
Coolant System - Flush/Replace Fluid				
Change Hydraulic Oil				

Annual Recommendations:
Items listed are recommended every 1000 hours or 2 years whichever occurs first.

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 1100

Model 07252	Serial 210000001 & Up
Engine Brand	1.2Qts..... Kohler
Engine Oil (<i>Chart F</i>).....	SAE 10W30 SH, SJ
Transaxle Oil	1.5Qts..... SAE 10W30
Air Filter	108-3811
Fuel Filter In-line	94-2690
Tire Pressure	8-22 PSI (Front & Rear)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Important Refer to your **engine operator's manual** for additional maintenance procedures.

Maintenance Service Interval	Maintenance Procedure
After First Use	<ul style="list-style-type: none"> • Check the drive belt tension. • Check the starter belt tension. • Check the engine oil.
Every 8 Hours	<ul style="list-style-type: none"> • Check the engine oil. • Check the tire pressure.
After First 20 Hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the front wheel toe-in at the proper ride height.
Every 50 Hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections.
Every 100 Hours	<ul style="list-style-type: none"> • Change the engine oil.¹ • Lubricate all grease fittings. • Clean the engine cooling areas.¹ • Inspect the air cleaner filter.¹ • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front suspension adjustment toe-in and ride height. • Check the spark plug and replace it, if necessary. • Check the operation of the Neutral gear shift position.
Every 200 Hours	<ul style="list-style-type: none"> • Replace the air cleaner filter. • Check the brake cable adjustments. • Inspect the drive belt. • Inspect and adjust the starter belt.
Every 400 Hours or Yearly	<ul style="list-style-type: none"> • Inspect the fuel lines. • Clean and lubricate the primary drive clutch • Complete all yearly maintenance procedures specified in the engine operator's manual.
Every 800 Hours or Yearly	<ul style="list-style-type: none"> • Replace the fuel filter. • Change the transaxle oil.

¹Twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions, page 24.



QUICK SERVICE REFERENCE

WORKMAN 2100

Model	07253	Serial	200000001 & Up
Engine Brand	..... B&S Vanguard		
Engine Oil	(Chart J).....48Oz.....	SAE 30 SH, SJ	
Engine Oil Filter	..... 107-7817		
Transaxle	.....1.5Qt.....	SAE 10W30	
Air Filter	..... 108-3811		
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 8-22 PSI (Front & Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> • Change the engine oil.
Every 8 hours	<ul style="list-style-type: none"> • Check the engine oil.
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Change the engine oil (includes synthetic oil).¹
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Clean the engine rotating screen.² • Inspect the air cleaner filter.² • Replace the engine oil filter. • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front suspension adjustment.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air cleaner filter. • Check the brake cable adjustments. • Inspect the drive belt. • Adjust the starter generator belt.
Every 400 hours or yearly	<ul style="list-style-type: none"> • Inspect the fuel lines. • Check the front wheel toe-in.
Every 800 hours or yearly	<ul style="list-style-type: none"> • Replace the fuel filter. • Change the transaxle oil. • Replace the spark plugs. • Drain and flush the fuel tank.

¹More often when operating under heavy load or high temperatures

²More often in dusty, dirty conditions

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

WORKMAN 2110

Model 07277	Serial 26000001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart J</i>).....48Oz	SAE30 SH, SJ
Engine Oil Filter	107-7817
Transaxle.....1.5Qts.....	SAE 10W30
Air Filter	108-3811
Fuel Filter In-line	94-2690
Tire Pressure	8-22 PSI (Front & Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the condition and tension of the drive belt. • Check the tension of the starter generator belt.
After the first 25 operating hours	<ul style="list-style-type: none"> • Check the front wheel toe-in and front suspension.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Check the tire pressure. • Check the transmission oil level. • Check the brake fluid level.
Every 50 hours	<ul style="list-style-type: none"> • Change the engine oil (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Check the battery cable connections for wear or damage. • Check the battery electrolyte level.
Every 100 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. • Inspect and clean the air filter element (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Change the oil filter (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Check the operation of the Neutral gear shift position. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts to 45-65 ft-lb (61-88 N·m). • Check the front wheel toe-in and front suspension. • Clean the engine cooling areas (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Inspect the brakes.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter element. • Adjust the parking brake. • Check the condition and tension of the drive belt. • Check the tension of the starter generator belt.
Every 400 hours	<ul style="list-style-type: none"> • Inspect the fuel lines and connections. • Clean and lubricate the primary drive clutch.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Change the transaxle fluid.
Yearly	<ul style="list-style-type: none"> • Complete all yearly maintenance procedures specified in the Engine Operator's Manual.

Important: Refer to your Engine Operator's Manual for additional maintenance procedures.

Maintenance Service Interval	Maintenance Procedure
When not in use	<ul style="list-style-type: none"> • Charge the batteries.
Every 8 hours	<ul style="list-style-type: none"> • Check the tire pressure.
After first 20 hours	<ul style="list-style-type: none"> • Check the front wheel toe-in at the proper ride height.
Every 25 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Clean the batteries.
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front suspension toe-in and ride height. • Check the transaxle oil level.
Every 200 hours	<ul style="list-style-type: none"> • Check the brake cable adjustments.



QUICK SERVICE REFERENCE

WORKMAN MD

Model 07279	Serial 210000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart F</i>).....	1.2Qts..... SAE 10W30 SH, SJ
Transaxle Oil	1.5Qts SAE 10W30
Air Filter	108-3811
Fuel Filter In-line	94-2690
Tire Pressure	8-22 PSI (Front & Rear)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Important Refer to your **engine operator's manual** for additional maintenance procedures.

Maintenance Service Interval	Maintenance Procedure
After First Use	<ul style="list-style-type: none"> • Check the drive belt tension. • Check the starter belt tension. • Check the engine oil.
Every 8 Hours	<ul style="list-style-type: none"> • Check the engine oil. • Check the tire pressure.
After First 20 Hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the front wheel toe-in at the proper ride height.
Every 50 Hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections.
Every 100 Hours	<ul style="list-style-type: none"> • Change the engine oil.¹ • Lubricate all grease fittings. • Clean the engine cooling areas.¹ • Inspect the air cleaner filter.¹ • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front suspension adjustment toe-in and ride height. • Check the spark plug and replace it, if necessary. • Check the operation of the Neutral gear shift position.
Every 200 Hours	<ul style="list-style-type: none"> • Replace the air cleaner filter. • Check the brake cable adjustments. • Inspect the drive belt. • Inspect and adjust the starter belt.
Every 400 Hours or Yearly	<ul style="list-style-type: none"> • Inspect the fuel lines. • Clean and lubricate the primary drive clutch • Complete all yearly maintenance procedures specified in the engine operator's manual.
Every 800 Hours or Yearly	<ul style="list-style-type: none"> • Replace the fuel filter. • Change the transaxle oil.

¹Twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions, page 24.



QUICK SERVICE REFERENCE

WORKMAN MDX

Model	07273	Serial	28000001 & Up
Engine Brand	..... B&S Vanguard		
Engine Oil	(Chart J)..... 1.2Qts	..... SAE 10W-30 SH, SJ	
Engine Oil Filter	..... 107-7817		
Transaxle	..... 1.5Qts	..... SAE 10W30	
Air Filter	..... 108-3811		
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 8-22 PSI (Front &Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	<ul style="list-style-type: none"> • Change the engine oil. • Check the condition and tension of the drive belt. • Check the tension of the starter generator belt.
After the first 25 operating hours	<ul style="list-style-type: none"> • Check the front wheel toe-in and front suspension.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil. • Check the tire pressure. • Check the transmission oil level. • Check the brake fluid level.
Every 50 hours	<ul style="list-style-type: none"> • Change the engine oil (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Check the battery cable connections for wear or damage. • Check the battery electrolyte level.
Every 100 hours	<ul style="list-style-type: none"> • Grease the bearings and bushings. • Inspect and clean the air filter element (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Change the oil filter (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Check the operation of the Neutral gear shift position. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts to 45-65 ft-lb (61-88 N·m). • Check the front wheel toe-in and front suspension. • Clean the engine cooling areas (twice as often in special operating conditions; refer to Maintaining the Vehicle under Special Operating Conditions). • Inspect the brakes.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter element. • Adjust the parking brake. • Check the condition and tension of the drive belt. • Check the tension of the starter generator belt.
Every 400 hours	<ul style="list-style-type: none"> • Inspect the fuel lines and connections. • Clean and lubricate the primary drive clutch.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Change the transaxle fluid.
Yearly	<ul style="list-style-type: none"> • Complete all yearly maintenance procedures specified in the Engine Operator's Manual.

Important: Refer to your Engine Operator's Manual for additional maintenance procedures.

Maintenance Service Interval	Maintenance Procedure
When not in use	<ul style="list-style-type: none"> • Charge the batteries.
Every 8 hours	<ul style="list-style-type: none"> • Check the tire pressure.
After first 20 hours	<ul style="list-style-type: none"> • Check the front wheel toe-in at the proper ride height.
Every 25 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Clean the batteries.
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings. • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front suspension toe-in and ride height. • Check the transaxle oil level.
Every 200 hours	<ul style="list-style-type: none"> • Check the brake cable adjustments.



QUICK SERVICE REFERENCE

WORKMAN 3100

Model	07210	Serial	40001 - 210999999
Engine Brand	..... Kohler		
Engine Oil	(Chart G)..... 1.2Qts	..... SAE 10W30 SH, SJ	
Engine Oil Filter	..... *1205001S		
Trans/Hydraulic Oil	..... 7.5Qts	..... Dexron III ATF	
Trans/Hydraulic Filter	..... 54-0110		
Air Filter	..... *4708303S		
Pre Cleaner Element	..... *2408302S		
Fuel Filter In-line	..... 99-9403 (1993-1999)		
Fuel Filter In-line	..... 99-9404 (2000 & up)		
Tire Pressure	..... 6-12 PSI (Front)		
23" Tire	..... 20 PSI (Rear)		
24" Tire	..... 18 PSI (Rear)		

*Indicates Kohler Part Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

WORKMAN 3100 and 3120 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Fluid Level					
Check Battery Cable Connections					
Lubricate Engine Prefilter					
Change Engine Oil and Filter					
<i>A Level Service</i>					
Lubricate All Grease Fittings					
Remove Engine Shrouds and Clean Fins					
Inspect Condition and Wear of Tires					
<i>B Level Service</i>					
Check Cable Adjustments					
Check Pump Drive Belt Tension					
Replace Air Filter					
Check Engine RPM (Idle and Full Throttle)					
Torque Wheel Lug Nuts					
<i>C Level Service</i>					
Check Front Wheel Alignment					
Inspect Service and Parking Brakes					
Inspect Fuel Lines					
Replace Fuel Filter					
<i>D Level Service</i>					
Replace Transaxle Filter					
Change Transaxle Oil					
Clean Transaxle Strainer					
Pack Front Wheel Bearings					
Replace Spark Plugs					
<i>E Level Service</i>					
Initial break in at 5 hours					
Initial break in at 10 hours					
Replace all Interlock Switches					
Drain/Flush Fuel Tank					
Change Brake Fluid					
Annual Recommendations: <i>Items listed are recommended every 1200 hours or 2 years, whichever occurs first.</i>					

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 3100

Model 07214	Serial 220000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....	1.2Qts..... SAE 10W30 SH, SJ
Engine Oil Filter	*1205001S
Trans/Hydraulic Oil	7.5Qts..... Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	*2408303S
Pre Cleaner Element	*2408305S
Breather Element	*2405010S
Fuel Filter In-line	99-9403 (1993-1999)
Fuel Filter In-line	108-3832 (2000 & up)
Tire Pressure	6-12 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)

*Indicates Kohler Part Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 5 hours	<ul style="list-style-type: none"> • Replace the engine oil and filter.
After first 10 hours	<ul style="list-style-type: none"> • Check cable adjustments • Check pump drive belt tension • Torque wheel lug nuts • Replace transaxle filter
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Lubricate engine pre filter • Replace engine oil and filter
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings • Inspect condition and wear of tires • Remove engine shrouds and clean fins
Every 200 hours	<ul style="list-style-type: none"> • Check cable adjustments • Check pump drive belt tension • Replace air cleaner filter • Check engine RPM (idle and full throttle) • Torque wheel lug nuts
Every 400 hours	<ul style="list-style-type: none"> • Check front wheel alignment • Inspect service and parking brakes • Inspect fuel lines • Replace fuel filter
Every 800 hours	<ul style="list-style-type: none"> • Replace transaxle filter • Change transaxle oil • Clean transaxle strainer • Replace spark plugs • Pack front wheel bearings
Every 1200 hours or 2 years (whichever occurs first)	<ul style="list-style-type: none"> • Replace all interlock switches • Fuel tank–drain/flush • Change brake fluid

¹immediately after every washing, regardless of the interval listed

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

WORKMAN 3120

Model	07232	Serial	90001 & Up
Engine Brand	..... Kohler		
Engine Oil	(Chart F)..... 1.2Qts.....	SAE 10W30 SH, SJ	
Engine Oil Filter	..... *1205001S		
Trans/Hydraulic Oil	..... 7.5Qts.....	Dexron III ATF	
Trans/Hydraulic Filter	..... 54-0110		
Air Filter	..... *4708303S		
Pre Cleaner Element	..... *2408302S		
Breather Element	..... *2405010S		
Fuel Filter In-line	..... 99-9404		
Tire Pressure	..... 35 PSI (Front) 50 PSI (Rear)		

* Indicates Kohler Part Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

WORKMAN 3100 and 3120 Maintenance Schedule

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Fluid Level					
Check Battery Cable Connections					
Lubricate Engine Prefilter					
Change Engine Oil and Filter	<i>A Level Service</i>				
Lubricate All Grease Fittings					
Remove Engine Shrouds and Clean Fins					
Inspect Condition and Wear of Tires		<i>B Level Service</i>			
Check Cable Adjustments					
Check Pump Drive Belt Tension					
Replace Air Filter					
Check Engine RPM (Idle and Full Throttle)					
Torque Wheel Lug Nuts				<i>C Level Service</i>	
Check Front Wheel Alignment					
Inspect Service and Parking Brakes					
Inspect Fuel Lines					
Replace Fuel Filter				<i>D Level Service</i>	
Replace Transaxle Filter					
Change Transaxle Oil					
Clean Transaxle Strainer					
Pack Front Wheel Bearings					
Replace Spark Plugs					<i>E Level Service</i>
Initial break in at 5 hours					
Initial break in at 10 hours					
Replace all Interlock Switches					
Drain/Flush Fuel Tank					
Change Brake Fluid					
				Annual Recommendations: <i>Items listed are recommended every 1200 hours or 2 years, whichever occurs first.</i>	

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 3130

Model 07214	Serial 220000002 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....2Qts	SAE 10W30 SH, SJ
Engine Oil Filter	*1205001S
Trans/Hydraulic Oil.....7.5Qts.....	Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	*4708303S
Pre Cleaner Element	*2408302S
Breather Element	*2405010S
Fuel Filter In-line	99-9403
Tire Pressure	6-12 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)

*Indicates Kohler Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service				
	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Fluid Level	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Cable Connections	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Lubricate Engine Prefilter	<i>A Level Service</i>				
Change Engine Oil and Filter	<i>A Level Service</i>				
Lubricate All Grease Fittings					
Remove Engine Shrouds and Clean Fins		<i>B Level Service</i>			
Inspect Condition and Wear of Tires		<i>B Level Service</i>			
Check Cable Adjustments					
Check Pump Drive Belt Tension					
Replace Air Filter					
Check Engine RPM (Idle and Full Throttle)			<i>C Level Service</i>		
Torque Wheel Lug Nuts			<i>C Level Service</i>		
Check Front Wheel Alignment					
Inspect Service and Parking Brakes					
Inspect Fuel Lines				<i>D Level Service</i>	
Replace Fuel Filter				<i>D Level Service</i>	
Replace Transaxle Filter					
Change Transaxle Oil					
Clean Transaxle Strainer					
Pack Front Wheel Bearings					
Replace Spark Plugs					<i>E Level Service</i>
Initial break in at 5 hours					
Initial break in at 10 hours					
Replace all Interlock Switches					
Drain/Flush Fuel Tank					
Change Brake Fluid					

Annual Recommendations:
Items listed are recommended every 1200 hours or 2 years, whichever occurs first.

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 3300/4300 D

Model 07205 and 07215	Serial 50001 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart I</i>).....	3.8Qts SAE30, 10W30CI, CI4
Engine Oil Filter	108-3841
Trans/Hydraulic Oil	7.5Qts Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	108-3811
Fuel Pump Filter	43-2550
Water Separator	63-8300
Strainer	87-3990
Front Differential	1Qts 10W30 CI
Tire Pressure	20 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)
Engine Coolant	4Qts Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

WORKMAN 3300-D, 3310-D, 3320-D, and 4300-D Maintenance Schedule

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service					
Check Battery Fluid Level	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs	
Check Battery Cable Connections						
Check Dust Cup and Baffle						
<i>A Level Service</i>						
Lubricate All Grease Fittings						
Inspect Condition and Wear of Tires						
Check Front Differential Oil Level (4WD)						
Change Engine Oil and Filter						
Inspect Cooling System Hoses						<i>B Level Service</i>
Check Cable Adjustments						
Check Alternator and Fan Belts						
Service Air Filter						
Check Front Axle CV Boot Joint (4WD)						
Check Engine RPM (Idle and Full Throttle)						
Torque Wheel Lug Nuts						<i>C Level Service</i>
Check Front Wheel Alignment						
Inspect Service and Parking Brakes						
Inspect Fuel Lines						
Replace Electric Fuel Pump Filter						
Replace Fuel/Water Separator Filter						
Torque Cylinder Head and Adjust Valves						<i>D Level Service</i>
Replace Transaxle Filter						
Change Transaxle Oil						
Clean Transaxle Strainer						
Pack Front Wheel Bearings						
Change Front Differential Oil (4WD)						<i>E Level Service</i>
Initial break in at 10 hours						
Initial break in at 50 hours						
Replace all Interlock Switches						
Flush/Replace Coolant System Fluid						
Change Brake Fluid						
Drain/Flush Fuel Tank						
Annual Recommendations:						
<i>Replace switches, Coolant and Brake Fluid every 1200 hours or 2 years, whichever occurs first.</i>						

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 3300/4300 D

Model All Models	Serial 220000002 & Up
Engine Brand	B&S Daihatsu
Engine Oil (<i>Chart E</i>).....3.5Qts.....	SAE 30,10W30 CI, C14
Engine Oil Filter	108-3842
Trans/Hydraulic Oil.....7.5Qts.....	Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	108-3811
Safety Element	98-2982
Fuel Filter**	63-8300
Front Differential.....1Qts	SAE 10W30 CI
Tire Pressure	20 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)
Coolant Type.....4Qts.....	Ethylene Glycol, Water (50/50 mix)

*Indicates Briggs & Stratton Parts Number

**Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check cable adjustments • Torque wheel lug nuts • Check alternator and fan belts • Replace transaxle filter
After first 50 hours	<ul style="list-style-type: none"> • Replace the engine oil and filter. • Torque cylinder head and adjust valves
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Service the air cleaner.
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings • Inspect condition and wear of tires • Check front differential oil level (4WD) • Replace engine oil and filter • Inspect cooling system hoses
Every 200 hours	<ul style="list-style-type: none"> • Check cable adjustments • Check alternator and fan belts • Service air cleaner filter • Check front axle CV boot joint (4WD) • Check engine RPM (idle and full throttle) • Torque wheel lug nuts
Every 400 hours	<ul style="list-style-type: none"> • Check front wheel alignment • Inspect service and parking brakes • Inspect fuel lines • Replace electric fuel pump filter • Replace fuel/water separator filter • Adjust valves
Every 800 hours	<ul style="list-style-type: none"> • Replace transaxle filter • Change transaxle oil • Clean transaxle strainer • Pack front wheel bearings • Change front differential oil (4WD)
Every 1200 hours or 2 years (whichever occurs first)	<ul style="list-style-type: none"> • Replace all interlock switches • Coolant System – flush/replace fluid • Fuel tank – Drain/flush • Change brake fluid

¹Immediately after every washing, regardless of the interval listed

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

WORKMAN 3200/4200

Model All Models	Serial 30001 & Up
Engine Brand	Mitsubishi
Engine Oil (<i>Chart H</i>).....3Qts.....	SAE30, 10W30, SH, SJ
Engine Oil Filter	108-3841
Trans/Hydraulic Oil.....7.5Qts.....	Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	108-3811
Fuel Filter In line	99-9403
Strainer	87-3990
Front Differential.....1Qts	SAE 10W30 CI
Tire Pressure	20 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)
Coolant Type.....4Qts.....	Ethylene Glycol, Water (50/50 mix)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

WORKMAN 3200, 3210, 3220, and 4200 Maintenance Schedule

Minimum Recommended Maintenance Intervals

Maintenance Procedure		Maintenance Interval & Service				
		Every 50hrs <i>A Level Service</i>	Every 100hrs	Every 200hrs	Every 400hrs	Every 800hrs
Check Battery Fluid Level						
Check Battery Cable Connections						
Check Dust Cup and Baffle						
Lubricate All Grease Fittings						
Inspect Condition and Wear of Tires						
Check Front Differential Oil Level (4WD)						
Change Engine Oil and Filter						
Inspect Cooling System Hoses						
Check Governor Oil Level		<i>B Level Service</i>				
Check Cable Adjustments						
Check Alternator, Governor and Fan Belts						
Change Air Cleaner Filter						
Check Front Axle CV Boot Joint (4WD)						
Check Engine RPM (Idle and Full Throttle)						
Torque Wheel Lug Nuts				<i>C Level Service</i>		
Check Front Wheel Alignment						
Inspect Service and Parking Brakes						
Inspect Fuel Lines						
Replace Fuel Filter						
Adjust Valves						
Replace Spark Plugs and Check Timing					<i>D Level Service</i>	
Replace Transaxle Filter						
Change Transaxle Oil						
Clean Transaxle Strainer						
Pack Front Wheel Bearings (2WD)						
Change Front Differential Oil (4WD)						<i>E Level Service</i>
Initial break in at 10 hours						
Initial break in at 50 hours						
Replace all Interlock Switches						
Flush/Replace Coolant System Fluid						
Change Brake Fluid						
Replace Engine Timing Belt						
		Annual Recommendations: Replace switches, Coolant and Brake Fluid every 1200 hours or 2 years, whichever occurs first. Replace Engine Timing Belt every 2000 hours or 2 years, whichever occurs first.				

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

WORKMAN 3200/4200

Model All Models	Serial 220000002 & Up
Engine Brand	B&S Daihatsu
Engine Oil (<i>Chart E</i>).....	3.5Qts..... SAE, 10W30 SH, SJ
Engine Oil Filter	108-3842
Trans/Hydraulic Oil	7.5Qts..... Dexron III ATF
Trans/Hydraulic Filter	54-0110
Air Filter	108-3811
Fuel Filter**	105-8045
Front Differential	1Qts SAE 10W30 CI
Tire Pressure	20 PSI (Front)
23" Tire	20 PSI (Rear)
24" Tire	18 PSI (Rear)
Coolant Type	4Qts..... Ethylene Glycol, Water (50/50 mix)

*Indicates Briggs & Stratton Parts Number

**Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 10 hours	<ul style="list-style-type: none"> • Check cable adjustments • Torque wheel lug nuts • Replace transaxle filter
After first 50 hours	<ul style="list-style-type: none"> • Replace the engine oil and filter.
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Service the air cleaner.
Every 100 hours	<ul style="list-style-type: none"> • Lubricate all grease fittings • Inspect condition and wear of tires • Check front differential oil level (4WD) • Replace engine oil and filter • Inspect cooling system hoses • Check governor oil level
Every 200 hours	<ul style="list-style-type: none"> • Check cable adjustments • Check alternator, governor and fan belts • Change air cleaner filter • Check front axle CV boot joint (4WD) • Check engine RPM (idle and full throttle) • Torque wheel lug nuts
Every 400 hours	<ul style="list-style-type: none"> • Check front wheel alignment • Inspect service and parking brakes • Inspect fuel lines • Replace fuel filter • Adjust valves • Replace spark plugs
Every 800 hours	<ul style="list-style-type: none"> • Replace transaxle filter • Change transaxle oil • Clean transaxle strainer • Pack front wheel bearings • Change front differential oil (4WD)
Every 1200 hours or 2 years (whichever occurs first)	<ul style="list-style-type: none"> • Replace all interlock switches • Coolant System – flush/replace fluid • Change brake fluid

¹immediately after every washing, regardless of the interval listed

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

WORKMAN HD

Model 07369	Serial 290000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....2Qts	SAE 10W30 SH, SJ
Engine Oil Filter	*1205001S
Trans/Hydraulic Oil (<i>Chart T</i>)...7.5Qts...	UTHF
Trans/Hydraulic Filter	54-0110
Air Filter	*4708303S
Pre Cleaner Element	*2408302S
Breather Element	*2405010S
Fuel Filter In-line	108-3854
Fuel Filter In-line	115-7854
Tire Pressure	32 PSI (Front) 18 PSI (Rear)

*Indicates Kohler Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 2 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Check the condition and tension of the pump drive belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts. • Check the adjustment of the shift cables. • Check the adjustment of the parking brake. • Replace the hydraulic filter.
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Before each use or daily	<ul style="list-style-type: none"> • Check engine oil level. • Check the transaxle/hydraulic fluid level. • Check the tire pressure. • Check the brake fluid level. • Check the operation of the interlock system.
Every 50 hours	<ul style="list-style-type: none"> • Clean and oil the air cleaner foam pre-cleaner. (Every 25 hours if operating conditions are extremely dusty or sandy) • Inspect the air cleaner paper element. • Check the battery fluid level. (Every 30 days if in storage) • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Grease all bearings and bushings. (Lubricate more frequently in heavy duty applications) • Change the engine oil and filter. • Check the condition of the tires. • Removing debris from the engine cooling system. (Clean more frequently in dirty conditions.)

Maintenance Service Interval	Maintenance Procedure
Every 200 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts • Change the air cleaner paper element. • Check the adjustment of the shift cables. • Check the adjustment of the high-low cable. • Check the adjustment of the differential lock cable. • Check the adjustment of the parking brake. • Check the adjustment of the brake pedal. • Check the condition and tension of the pump drive belt. • Check the adjustment of the accelerator. • Check the adjustment of the clutch pedal. • Inspect the service and parking brakes.
Every 400 hours	<ul style="list-style-type: none"> • Replace the fuel filter. • Check the fuel lines and connections. • Check the front wheel alignment. • Visually inspect the brakes for worn brake shoes.
Every 800 hours	<ul style="list-style-type: none"> • Inspect or replace the spark plugs. • Change the hydraulic fluid and clean the strainer. • Replace the hydraulic filter.
Every 1,000 hours	<ul style="list-style-type: none"> • Change the brake fluid. • Drain/flush the fuel tank.
Yearly	<ul style="list-style-type: none"> • Complete all yearly maintenance procedures specified in the Engine Operator's Manual.



QUICK SERVICE REFERENCE

WORKMAN HDX

Model	All Models	Serial	290000001 & Up
Engine Brand	..... B&S Daihatsu		
Engine Oil	(Chart E).....3.5Qts.....	SAE, 10W30 CI or higher	
Engine Oil Filter	..... 108-3842		
Trans/Hydraulic Oil	(Chart T)...7.5Qts...	UTHF	
Trans/Hydraulic Filter	..... 54-0110		
Air Filter	..... 108-3811		
Fuel Filter	..... 115-7854		
Front Differential	(Chart T).....1Qts.....	UTHF	
Tire Pressure	..... 32 PSI (Front)		
	..... 18 PSI (Rear)		
Coolant Type	.....4Qts.....	Ethylene Glycol, Water (50/50 mix)	

*Indicates Briggs & Stratton Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 2 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Check condition and tension of the alternator belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts. • Check the adjustment of the shift cables. • Check the adjustment of the parking brake. • Replace the hydraulic filter. • Change the high flow hydraulic oil filter (TC Models only)
After the first 50 hours	<ul style="list-style-type: none"> • Change engine oil and filter.
Before each use or daily	<ul style="list-style-type: none"> • Check engine oil level. • Check the level of coolant. • Check the transaxle/hydraulic fluid level. • Check the high flow hydraulic fluid level (TC models only). • Check the tire pressure. • Check the brake fluid level. • Check the operation of the interlock system. • Remove debris from the engine area and radiator. (Clean more frequently in dirty conditions.)
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. (Every 30 days if in storage) • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Check the level of front differential oil (four wheel drive models only). • Grease all bearings and bushings. (Lubricate more frequently in heavy duty applications) • Check the condition of the tires.
Every 150 hours	<ul style="list-style-type: none"> • Change engine oil and filter.
Maintenance Service Interval	Maintenance Procedure
Every 200 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts • Change the air cleaner filter. (more frequently in dusty or dirty conditions) • Inspect the constant velocity boot for cracks, holes, or a loose clamp. • Check the adjustment of the shift cables. • Check the adjustment of the high–low cable. • Check the adjustment of the differential lock cable. • Check the adjustment of the parking brake. • Check the adjustment of the brake pedal. • Check condition and tension of the alternator belt. • Check the adjustment of the clutch pedal. • Inspect the service and parking brakes.
Every 400 hours	<ul style="list-style-type: none"> • Inspect or replace the spark plugs. • Replace the fuel filter. • Check the fuel lines and connections. • Check the front wheel alignment. • Visually inspect the brakes for worn brake shoes.
Every 800 hours	<ul style="list-style-type: none"> • Change the front differential oil. • Change the hydraulic fluid and clean the strainer. • Replace the hydraulic filter. • Change the high flow hydraulic oil (TC Models only) • Change the high flow hydraulic oil filter (TC Models only)
Every 1,000 hours	<ul style="list-style-type: none"> • Change the brake fluid. • Drain/flush the fuel tank. • Flush/replace the coolant system fluid.
Yearly	<ul style="list-style-type: none"> • Complete all yearly maintenance procedures specified in the Engine Operator's Manual.



QUICK SERVICE REFERENCE

WORKMAN HDX D

Model 07371, 07368	Serial 290000001 & Up
Engine Brand	B&S Daihatsu
Engine Oil (<i>Chart E</i>).....	3.5Qts..... SAE 30,10W30 CI, C14
Engine Oil Filter	108-3842
Trans/Hydraulic Oil (<i>Chart T</i>)...7.5Qts...	UTHF
Trans/Hydraulic Filter	54-0110
Air Filter	108-3811
Fuel Filter	110-9044
Front Differential (<i>Chart T</i>).....	1Qts..... UTHF
Tire Pressure	20 PSI (Front) 18 PSI (Rear)
Coolant Type	4Qts..... Ethylene Glycol, Water (50/50 mix)

*Indicates Briggs & Stratton Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 2 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts.
After the first 8 hours	<ul style="list-style-type: none"> • Check condition and tension of the alternator belt.
After the first 10 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts. • Check the adjustment of the shift cables. • Check the adjustment of the parking brake. • Replace the hydraulic filter. • Change the high flow hydraulic oil filter (TC Models only)
After the first 50 hours	<ul style="list-style-type: none"> • Change engine oil and filter. • Adjust the engine valve clearance.
Before each use or daily	<ul style="list-style-type: none"> • Check engine oil level. • Check the level of coolant. • Check the transaxle/hydraulic fluid level. • Check the high flow hydraulic fluid level (TC models only). • Check the tire pressure. • Check the brake fluid level. • Check the operation of the interlock system. • Drain water or other contaminants from the water separator. • Remove debris from the engine area and radiator. (Clean more frequently in dirty conditions.)
Every 50 hours	<ul style="list-style-type: none"> • Check the battery fluid level. (Every 30 days if in storage) • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Check the level of front differential oil (four wheel drive models only). • Grease all bearings and bushings. (Lubricate more frequently in heavy duty applications) • Check the condition of the tires.
Every 150 hours	<ul style="list-style-type: none"> • Change engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Torque the front and rear wheel nuts • Change the air cleaner filter. (more frequently in dusty or dirty conditions) • Inspect the constant velocity boot for cracks, holes, or a loose clamp. • Check the adjustment of the shift cables. • Check the adjustment of the high-low cable. • Check the adjustment of the differential lock cable. • Check the adjustment of the parking brake. • Check the adjustment of the brake pedal. • Check condition and tension of the alternator belt. • Check the adjustment of the clutch pedal. • Inspect the service and parking brakes.
Every 400 hours	<ul style="list-style-type: none"> • Check the fuel lines and connections. • Replace the fuel filter canister. • Check the front wheel alignment. • Visually inspect the brakes for worn brake shoes.
Every 600 hours	<ul style="list-style-type: none"> • Adjust the engine valve clearance.
Maintenance Service Interval	Maintenance Procedure
Every 800 hours	<ul style="list-style-type: none"> • Change the front differential oil. • Change the hydraulic fluid and clean the strainer. • Replace the hydraulic filter. • Change the high flow hydraulic oil (TC Models only) • Change the high flow hydraulic oil filter (TC Models only)
Every 1,000 hours	<ul style="list-style-type: none"> • Change the brake fluid. • Drain/flush the fuel tank. • Flush/replace the coolant system fluid.



QUICK SERVICE REFERENCE

GREENS AERATOR

Model 09120	Serial 80001 & Up
Engine Brand	B&S Vanguard
Engine Oil (<i>Chart K</i>).....56Oz.....	SAE 30 SH, SJ
Engine Oil Filter	107-7817
Hydraulic Oil (<i>Chart P</i>).....43.2Oz.....	SAE 10W30
Transaxle <i>check plug</i>	SAE 90W E.P.
Air Filter	*394018S
Pre Air Filter	*272490S
Fuel Filter In-line	*493629
Tire Pressure	10 PSI (Front & Rear)

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

MAINTENANCE SCHEDULE

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service			
Check Condition of Tines Check Engine Oil Level Service Air Filter Pre-Cleaner † Change Engine Oil Service Air Filter Cartridge Lubricate Coring Head Switch Assembly Change Engine Oil Filter Service Spark Plugs Grease Wheel Bearing Grease Steering Handle Spindle Check Battery Fluid Level Check Battery Cable Connections Check Coring Head Chain Tension Check Hydraulic Pump Belt Tension	Every 5 hrs	Every 25 hrs	Every 50 hrs	Every 100hrs
† Initial break in at 8 hours Replace Safety Switches Change Transaxle gear Lubricant Replace Hydraulic Oil Adjust Valves and Torque head Bolts Decarbon Combustion Chamber	Annual Recommendations: Items listed are recommended every 500 hours or 1 year, whichever occurs first.			



QUICK SERVICE REFERENCE

ProCore 648 Aerator

Model 09200	Serial 240000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart K</i>).....	2Qts..... Mobil 10W30 SH, SJ
Engine Oil Filter	107-7817
Hydraulic Oil (<i>Chart T</i>).....	1.75Gal..... UTHF
Traction Hydraulic Filter	107-9531
Charge Hydraulic Filter	1-633750
Air Filter	*2408303S
Pre Air Filter	*2408305S
Fuel Filter In-line	*2405005S
Tire Pressure	12 PSI (Front & Rear)

*Indicates Kohler Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> Hydraulic fluid—check level Hydraulic return filter—change Hydraulic charge filter—change Pump belt—re-tension Coring head fasteners—check torque
After first 50 Hours	<ul style="list-style-type: none"> Engine oil & filter—change
Each Use	<ul style="list-style-type: none"> Engine oil—check level Safety System—check Engine air intake—clean¹ Belts—check Hydraulic fluid—check level Tires—check pressure Hydraulic lines—check
Every 25 Hours	<ul style="list-style-type: none"> Wash and re-oil air precleaner Battery—check electrolyte
Every 100 Hours	<ul style="list-style-type: none"> Engine oil & filter—change¹ Primary air cleaner filter—replace¹ Fuel filter—replace Engine cooling system—clean¹
Every 200 Hours	<ul style="list-style-type: none"> Hydraulic fluid—change Hydraulic return filter—change Hydraulic charge filter—change Spark Plug(s)—check
Every 500 Hours	<ul style="list-style-type: none"> Spark Plug(s)—replace
Before Storage Service	<ul style="list-style-type: none"> Battery—charge, Disconnect cables Gasoline—drain Chipped Surfaces—paint Perform all maintenance procedures listed above before storage

¹More often in dusty, dirty conditions

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

HYDROJECT 3000

Model 09801	Serial 70001 & Up
Engine Brand	Onan
Engine Oil (<i>Chart M</i>).....	3Qts SAE 30
Engine Oil Filter	57-8530
Gear Case (<i>Chart P</i>).....	5Qts..... Mobil DTE 26
Gear Case Filter	67-8110
Pump Case	Mobil DTE EH 150 (Extra Heavy)
Air Filter	82-0660
Pre Air Filter	82-8670
Fuel Filter	71-5960
Water Filter	86-8630
Strainer	86-9140
Accumulator	Dry Nitrogen
Tire Pressure	16-18 PSI (Front & Rear)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Hydroject 3000 Maintenance Schedule

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service			
Check Battery Fluid Level	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs
Check Battery Cable Connections				
Lubricate All Grease Fittings	A Service			
Change Engine Oil				
Change Engine Oil Filter				
Change Engine Pre-cleaner (Air Filter)		B Service		
Replace Air Filter Element				
Replace Fuel Filter				
Adjust Water System Cam Valve Clearance				
Clean Engine Crankcase Breather				
Change Gear Case Oil and Filter				
Change Pump Case Oil				
Torque Wheel Lug Nuts				C Service
Service Accumulator				
Adjust Parking Brake				
Calibrate Aeration Traction Speed				
Service Injector Nozzles and Springs				
Replace Spark Plugs				
Decarbon Combustion Chambers				
Torque Head and Adjust Valves				
Check Engine RPM (idle and full throttle)				D Service
Initial break in at 25 hours				
Initial break in at 50 hours				
Replace Moving Hoses				
Replace Safety Switches				
Fuel Tank Drain/Flush				
Hydraulic Tank Drain/Flush				
Annual Recommendations: <i>Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</i>				

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

HYDROJECT 3010

Model 09802	Serial 250000101 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart K</i>).....2Qts.....	Mobil SAE 10W30
Engine Oil Filter	*52-050-02-S
Gear Case (HYD RES)(<i>Chart P</i>)...4Qts ..	Mobil DTE 26
Gear Case Filter	67-8110
Pump Case (Water Pump).....40Oz.....	Mobil DTE EH 150 (Extra Heavy)
Primary Air Filter	*25-083-01-S
Safety Air Filter	*25-083-04-S
Fuel Filter	*24-050-09-S
Water Filter	86-8630
Strainer	86-9140
Accumulator	Dry Nitrogen
Tire Pressure	8-12 PSI (Front & Rear)

*Indicates Kohler Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 25 hours	<ul style="list-style-type: none"> • Change the engine oil and filter. • Change the gear case oil and filter. • Change the pump case oil. • Torque the wheel lug nuts.
After first 50 hours	<ul style="list-style-type: none"> • Check the engine RPM (idle and full throttle).
Every 50 hours	<ul style="list-style-type: none"> • Check the battery cable connections. • Lubricate all grease fittings.
Every 100 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 200 hours	<ul style="list-style-type: none"> • Replace the primary air filter element. • Check the inner air filter element. • Replace the fuel filter. • Adjust the water system cam—valve clearance. • Change the gear case oil and filter. • Change the pump case oil. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Service the accumulator. • Adjust the parking brake. • Calibrate the aeration traction speed. • Service the injector nozzles and springs. • Replace the spark plugs. • Check the engine RPM (idle and full throttle).
Every 1000 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace safety switches. • Drain and flush the fuel tank. • Drain and flush the hydraulic tank.



QUICK SERVICE REFERENCE

HYDROJECT 4000

Model 09850	Serial 60001 & Up
Engine Brand (<i>Chart M</i>).....	Onan
Engine Oil.....3Qts.....	SAE 30
Engine Oil Filter	57-8530
Gear Case (<i>Chart P</i>).....5Qts	Mobil DTE 26
Gear Case Filter	87-8110
Pump Case.....40Oz.....	Mobil DTE EH 150 (Extra Heavy)
Air Filter	82-0660
Pre Air Filter	82-0670
Fuel Filter	71-5960
Water Filter	86-8630
Strainer	86-9140
Accumulator	Dry Nitrogen
Tire Pressure	30 PSI (Front)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Hydroject 4000 Maintenance Schedule

Minimum Recommended Maintenance Intervals

Maintenance Procedure	Maintenance Interval & Service			
Check Battery Fluid Level	Every 50hrs	Every 100hrs	Every 200hrs	Every 400hrs
Check Battery Cable Connections				
Lubricate All Grease Fittings	<i>A Service</i>			
Change Engine Oil				
Change Engine Oil Filter				
Change Engine Pre-cleaner (Air Filter)	<i>B Service</i>			
Replace Air Filter Element				
Replace Fuel Filter				
Adjust Water System Cam Valve Clearance				
Clean Engine Crankcase Breather				
Change Gear Case Oil and Filter				
Change Pump Case Oil				
Torque Wheel Lug Nuts			<i>C Service</i>	
Service Accumulator				
Service Injector Nozzles and Springs				
Replace Spark Plugs				
Decarbon Combustion Chambers				
Torque Head and Adjust Valves				
Check Engine RPM (idle and full throttle)				<i>D Service</i>
Initial break in at 25 hours				
Initial break in at 50 hours				
Replace Moving Hoses				
Replace Safety Switches				
Fuel Tank Drain/Flush				
Hydraulic Tank Drain/Flush				
			<p>Annual Recommendations: <i>Items listed are recommended every 1000 hours or 2 years, whichever occurs first.</i></p>	

(See Operator's and Service Manual for specifications and procedures)



QUICK SERVICE REFERENCE

AERATORS 864 and 1298

Model 09715 and 09716 **Serial** 70001 & Up

Gear Case.....56Oz..... 80W-90 Gear Oil

Belt Tension 5.75 inches (Idler Spring)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none">• Change the Gearbox Lubrication• Check the torque of the coring head fasteners
Before each use or daily	<ul style="list-style-type: none">• Check the belt tension• Check belt tension
Every 50 hours	<ul style="list-style-type: none">• Grease bearings and bushings• Inspect bearings
Every 100 hours	<ul style="list-style-type: none">• Check gearbox lubrication
Every 250 hours	<ul style="list-style-type: none">• Change the Gearbox Lubrication
Every 500 hours	<ul style="list-style-type: none">• Inspect bearings and replace as needed
Before storage	<ul style="list-style-type: none">• Perform all 50 hour maintenance procedures• Chipped surfaces-Paint• Remove and clean tines• Remove all debris
Yearly	<ul style="list-style-type: none">• Inspect the belts

N/A



QUICK SERVICE REFERENCE

FAIRWAY AERATOR

Model 09502

Serial 70001 & Up

Gear Case.....25.5Oz..... SAE 90W E.P.

Reservoir.....9.5Qts..... SAE 90W E.P.

Tire Pressure..... 16-18 PSI
(Front & Rear)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

ProCore Soil Relievers

Model 09920 – 09927

Serial 290000001 & Up

Gearbox Oil 80W-90 Gear Oil

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none"> • Check the torque of all the coring head fasteners
After the first 50 hours	<ul style="list-style-type: none"> • Change the Gearbox Oil
Before each use or daily	<ul style="list-style-type: none"> • Inspect the chain tension • Check the springs • Clean and lubricate springs and tine mounting screws • Inspect the PTO for signs of wear.
Every 50 hours	<ul style="list-style-type: none"> • Grease the bearings and PTO shaft • Check the Gearbox Oil • Inspect the chain tension • Check the torque of the crank pin nuts and the hinge bolts. • Inspect bearings
Every 500 hours	<ul style="list-style-type: none"> • Change the Gearbox Oil • Inspect bearings and replace as needed
Before storage	<ul style="list-style-type: none"> • Perform all 50 hour maintenance procedures • Chipped surfaces-Paint • Loosen the PTO clutch bolts • Remove and clean tines • Remove all debris
Yearly or before storage	<ul style="list-style-type: none"> • Adjust the PTO clutch

Model	Gear Case Capacity
SR54	2 quarts (1.9 liters)
SR54-S	2 quarts (1.9 liters)
SR70	2 quarts (1.9 liters)
SR70-S	2 quarts (1.9 liters)
SR72	4 quarts (3.8 liters)



QUICK SERVICE REFERENCE

ProCore Processor & Hitches

Model 09749, 09750 & 09753 **Serial** 280000001 & Up

Engine Oil (*Chart G*).....67Oz..... API, SG, SH, SJ or higher

Engine Oil Filter *842921

Fuel Filter *695666

Air Filter 108-3810

Air Filter-Safety 114-4057

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none">• Check the torque of the wheel nuts• Change the engine oil• Check condition and tension of belts
Before each use or daily	<ul style="list-style-type: none">• Check the engine oil level.• Clean the engine screen and the oil cooler.• Check the hydraulic lines and hoses.• Check chopper tips• Check brush wear• Clean brush/chopper housing
Every 4 hours	<ul style="list-style-type: none">• Inspect and clean the brush housing
Every 50 hours	<ul style="list-style-type: none">• Check condition and tension of belts
Every 100 hours	<ul style="list-style-type: none">• Grease the bearings and bushings• Change the engine oil.• Check the battery electrolyte level• Clean the engine
Every 200 hours	<ul style="list-style-type: none">• Check and/or replace the primary air filter.• Replace the oil filter.• Check the spark plugs.
Every 600 hours	<ul style="list-style-type: none">• Replace the safety air filter.• Replace the fuel filter

Important: Refer to your *Engine Operator's Manual* for additional maintenance procedures.



QUICK SERVICE REFERENCE

4800 TURF SWEEPER

Model 44044	Serial 21000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....	1.7Qts..... SAE 10W30 SH, SJ
Engine Oil Filter	*5205002-S
Hydraulic Oil	28Qts..... Mobil DTE 15M
Hydraulic Filter	23-9740
Air Filter	*2408302-S
Pre Air Filter	*4708303-S
Fuel Filter In-line	*2405002-S
Tire Pressure	22 PSI (Front) 24 PSI (Rear)

*Indicates Kohler Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 50 hours	<ul style="list-style-type: none"> • Change engine oil and filter.
After first 10 hours	<ul style="list-style-type: none"> • Check reel drive belts. • Torque wheel lug nuts.
Every 25 hours	<ul style="list-style-type: none"> • Clean and lubricate foam pre-cleaner. • Clean reel drive area. • Check reel drive belts.
Every 50 hours	<ul style="list-style-type: none"> • Check battery fluid level. • Lubricate gate pivots. • Lubricate all grease fittings. • Check battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Replace air filter. • Clean air intake/cooling areas. • Check reel fingers. • Replace fuel filter. • Inspect condition of tires. • Adjust steering chain.
Every 200 hours	<ul style="list-style-type: none"> • Torque wheel lug nuts. • Service spark plugs. • Check electric brake clutch air gap. • Check engine RPM (idle and full throttle).
Every 600 hours or annually, whichever occurs first	<ul style="list-style-type: none"> • Drain and flush fuel tank. • Inspect hopper and gate for damage. • Replace hydraulic fluid and filter.



QUICK SERVICE REFERENCE

RAKE-O-VAC (ENGINE & PTO DRIVE)

Model 07050 and 07052	Serial 50001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....2Qts	SAE 10W30 SH,SJ
Engine Oil Filter	*1205001
Clutch Housing.....26oz	SAE 30
Air Filter	*2508301
Safety Filter	*2508304
Fuel Filter In-line	*2505002
Tire Pressure	28 PSI (Front & Rear)

*Indicates Kohler Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

Pro Force Debris Blower

Model 44538 & 44542	Serial 280000100 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart K</i>).....67Oz.....	10W-30 SG - SJ
Engine Oil Filter	*1205001S
Air Filter	*2408305S
Fuel Filter	*2405010S
Tire Pressure	14 PSI

*Indicates Kohler Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	<ul style="list-style-type: none">• Check condition and tension of belt
After the first 10 hours	<ul style="list-style-type: none">• Check the torque of the wheel lug nuts
Before each use or daily	<ul style="list-style-type: none">• Check the engine oil level.• Clean the engine screen and the oil cooler.• Check the nozzle clamp
Every 25 hours	<ul style="list-style-type: none">• Clean the foam air filter element and check the paper element for damage.
Every 50 hours	<ul style="list-style-type: none">• Check condition and tension of belt
Every 100 hours	<ul style="list-style-type: none">• Replace the paper air filter element.• Change the engine oil.
Every 200 hours	<ul style="list-style-type: none">• Replace the oil filter.• Check the spark plugs.
Every 500 hours	<ul style="list-style-type: none">• Replace the fuel filter.



QUICK SERVICE REFERENCE

SAND PRO 2020, 3020 & 5020

Model	All Models	Serial	70001 & Up
Engine Brand	..... B&S Vanguard		
Engine Oil	(Chart K)..... 1.75Qts.....	SAE 30 SH,SJ	
Engine Oil Filter	..... 107-7817		
Hydraulic Oil	(Chart R)..... 3Gal.....	ISO VG 46	
Hydraulic Filter	..... 23-9740		
Remote Air Filter	..... 108-3811		
Air Filter	(Main)	*394018S	
Air Filter	(wrapper)	*272490S	
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 4-6 PSI (Front & Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> • Change the engine oil. • Torque the wheel lug nuts. • Replace the hydraulic oil filter.
Every 25 hours	<ul style="list-style-type: none"> • Check the battery fluid level. • Check the battery cable connections. • Change the engine oil. • Lubricate the front wheel bearing. • Lubricate the traction control linkage.
Every 100 hours	<ul style="list-style-type: none"> • Replace the engine oil filter • Inspect the remote air filter element. • Inspect the engine air filter element. • Lubricate the steering shaft grease fitting. • Check the steering chain adjustment. • Torque the wheel lug nuts.
Every 400 hours	<ul style="list-style-type: none"> • Change the hydraulic oil. • Replace the hydraulic oil filter. • Replace the remote air filter element. • Replace the engine air filter element.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Decarbon the combustion chamber. • Adjust the valves and torque head. • Check the engine RPM (at idle and full throttle). • Drain and clean the fuel tank.
Every 1500 hours or 2 years, whichever occurs first	<ul style="list-style-type: none"> • Replace moving hoses. • Replace the traction safety switch.

Important Refer to your engine operator's manual for additional maintenance procedures.

	Caution	
<p>If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Remove the key from the ignition and disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.</p>		



QUICK SERVICE REFERENCE

SAND PRO 3040 & 5040

Model	All Models	Serial	260000001 & Up
Engine Brand	..... B&S Vanguard		
Engine Oil	(Chart K)..... 1.75Qts.....	SAE 30 SH,SJ	
Engine Oil Filter	..... 107-7817		
Hydraulic Oil	(Chart R)..... 3Gal.....	ISO VG 46	
Hydraulic Filter	..... 54-0110		
Remote Air Filter	..... 108-3811		
Fuel Filter In-line	..... 94-2690		
Tire Pressure	..... 4-6 PSI (Front & Rear)		

*Indicates Briggs & Stratton Part Numbers

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition before you do any maintenance.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Change the engine oil and filter. • Change the hydraulic filter.
Before each use or daily	<ul style="list-style-type: none"> • Check the engine oil level. • Check the hydraulic fluid level. • Check the tire pressure. • Check the condition of the hydraulic lines and hoses. • Inspect and clean the machine.
Every 25 hours	<ul style="list-style-type: none"> • Check the battery fluid level and the cable connections.
Every 50 hours	<ul style="list-style-type: none"> • Change the engine oil and filter.
Every 100 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Grease the machine.
Every 200 hours	<ul style="list-style-type: none"> • Replace the air filter.
Every 400 hours	<ul style="list-style-type: none"> • Change the hydraulic system oil and filter.
Every 800 hours	<ul style="list-style-type: none"> • Replace the spark plugs. • Replace the fuel filter. • Decarbon the combustion chamber. • Adjust the valves and torque head. • Check the engine RPM (at idle and full throttle). • Drain and clean the fuel tank.
Every 1,500 hours	<ul style="list-style-type: none"> • Replace moving hoses. • Replace the neutral and seat interlock switches.

Important: Refer to your Engine Operator's Manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

LINE PAINTER 1200

Model 42004	Serial 250000001 & Up
Engine Brand	Kawasaki
Engine Oil .....	.89 Qts SAE 30 SF - SJ
Engine Oil Filter	108-3842
Air Filter:	
Element	108-2603
Filter ASM.....	108-2604
Fuel Filter	Part of tank ASM
Pump Filter	108-0368
Tire Pressure	12-15 PSI (Rear)
	18-20 PSI (Front caster)

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
Each Use	<ul style="list-style-type: none"> • Check the engine oil level.
5 Hours	<ul style="list-style-type: none"> • Check the engine mounting fasteners. Tighten them if they are loose.
25 Hours	<ul style="list-style-type: none"> • Clean the foam pre-cleaner of the air cleaner.
50 Hours	<ul style="list-style-type: none"> • Change the engine oil (without the oil filter).¹ • Check for leaks in the fuel system and/or a deteriorating fuel hose. Replace parts if necessary. • Remove any debris from the belts.
100 Hours	<ul style="list-style-type: none"> • Change the oil filter. • Inspect the spark plug and replace it if necessary. • Replace the paper air filter. • Clean the cooling system; remove any debris or dirt from the engine air cooling fins and starter. Clean the system more frequently in dirty or high-chaff conditions. • Clean the fuel filter. • Service the wheels.
300 Hours	<ul style="list-style-type: none"> • Replace the paper air filter. Replace it more frequently in dusty operating conditions. • Clean the combustion chamber—see engine manual • Lap the valves
Storage	<ul style="list-style-type: none"> • Empty the fuel tank before repairs as directed or before storage. • Refer to the storage procedures in the back of this manual.

¹Change the engine oil after the first 8 operating hours.

Important Refer to your engine operator's manual for additional maintenance procedures.

	Caution	
<p>If you leave the wire on the spark plug, someone could accidentally start the engine and seriously injure you or other bystanders.</p> <p>Disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.</p>		



QUICK SERVICE REFERENCE

MULTI PRO 1100

Model 41105	Serial 70001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....	2Qts..... SAE 10W30 SH, SJ
Engine Oil Filter	*1205001
Transmission	24Oz SAE 85W140
Differential	48Oz SAE 85W140
Brake Fluid	DOT 3 Brake Fluid
Power Steering Fluid (<i>Chart T</i>)	UTHF
Hydraulic Oil Filter	112-8401
Air Filter	*4708303-S
Pre Cleaner Element	*2408302-S
Cab Charcoal Element	92-3814
Fuel Filter In-line	*2405002-S
Tire Pressure	18 PSI (Front & Rear)

*Indicates Kohler Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Pg. No.	Service at Intervals Indicated (X)	Hours of Operation					
		Daily	25	50	100	200	500
26	Check Safety Start Switch Function	X					
20	Check Engine Crankcase Oil Level	X					
	Note: Change Oil in New or Rebuilt Engine	5					
28	Check Brake Function	X					
25	Check Power Steering Oil Level, & Hoses	X					
21	Check Air Cleaner	X					
11	Check Tire Pressure	X					
27	Check Belt Tensions (initially)	X					
10	Tighten Wheel Nuts (initially)	2 & 10					
21	Service Air Cleaner Pre-cleaner		X				
24	Check Transmission Oil Level			X			
24	Check Differential Oil Level			X			
25	Check Master Cylinder Oil Level			X			
23	Lubricate All Grease Fittings			X			
22	Check Spark Plugs				X		
20	Change Engine Crankcase Oil				X		
21	Check Air Cleaner Filter				X		
20	Change Oil Filter					X	
27	Check Tension of All Belts					X	
8	Clean Battery Terminals					X	
24	Drain and Refill Transmission and Differential						X



QUICK SERVICE REFERENCE

MULTI PRO 1200 / 1250

Model 41107 and 41106	Serial 70001 & Up
Model 41163 and 41164	Serial 240000001 & Up
Model 41178 and 41177	Serial 260000001 & Up
Model 41197 – 41199	Serial 310000001 & Up
Engine Brand	Kohler
Engine Oil (<i>Chart G</i>).....	2.1Qts SAE 10W30 SH,SJ
Engine Oil Filter	108-3847
Hydraulic/Transaxle	7.5Qts..... Dexron III ATF
Hydraulic Filter	54-0110
Gearbox Oil	1Qts..... Mobil SHC 634 Synthetic Lubricant
Brake Fluid	DOT 3 Brake Fluid
Air Filter	*4708303-S
Pre Cleaner Element	*2408302-S
Fuel Filter In-line	*2405002-S
Tire Pressure	18 PSI (Front & Rear)
Suction Screen Sprayer	100-8642

*Indicates Kohler Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Important Refer to your **engine operator's manual** for additional maintenance procedures.

Maintenance Service Interval	Maintenance Procedure
After first 8 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Replace the hydraulic filter. • Check the drive belt tension. • Check the steering pump belt.
8 hours	<ul style="list-style-type: none"> • Check the engine oil. • Check the tire pressure. • Clean the suction strainer³
25 hours	<ul style="list-style-type: none"> • Clean and oil the foam air cleaner element.²
50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Clean the suction strainer.
100 hours	<ul style="list-style-type: none"> • Change the engine oil (includes synthetic oil).¹ • Replace the engine oil filter. • Lubricate all grease fittings. • Replace the fuel filter. • Inspect the brakes. • Clean the engine rotating screen.² • Replace the paper cleaner element.² • Inspect the brake and parking brake. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts. • Check the front wheel toe-in. • Check the steering pump belt. • Check the operation of the Neutral gear shift position.
200 hours	<ul style="list-style-type: none"> • Change the spark plugs. • Check the parking brake. • Check the shift cables. • Check the drive belt.
Maintenance Service Interval	Maintenance Procedure
400 hours or yearly	<ul style="list-style-type: none"> • Change the pump drive gearbox fluid. • Clean and lubricate the primary drive clutch • Inspect the fuel lines. • Have an Authorized Toro Service Distributor check the diaphragms and check valves in the pump and replace them if necessary. • Complete all yearly maintenance procedures specified in the engine operator's manual. • Inspect the pump diaphragm and replace it if necessary. • Inspect the pressure dampener bladder and replace it if necessary. • Inspect the pump check valves and replace them if necessary. • Inspect the O-rings in the valve assemblies and replace them if necessary.
800 hours or yearly	<ul style="list-style-type: none"> • Change the transaxle/hydraulic fluid. • Replace the hydraulic filter.

¹More often when operating under heavy load or high temperatures

²More often in dusty, dirty conditions

³More often when using wettable powers



QUICK SERVICE REFERENCE

MULTI PRO 5500

Model 41564	Serial 70224 & Up
Engine Brand	Ford
Engine Oil (<i>Chart D</i>).....	3.5Qts..... SAE 10W20 SH,SJ
Engine Oil Filter	108-3817
Hydraulic Oil (<i>Chart T</i>).....	12Gal UTHF
Hydraulic Filter	86-3010
Planetary Gear	16Oz SAE 85W140
Air Filter	*41905
Cab Charcoal Element	92-3814
Fuel Filter In-line	*41770
Fuel Filter Threaded	*FG778B
Tire Pressure	18 PSI (Front & Rear)
Coolant Type	12Qts Ethylene Glycol, Water (50/50 mix)

Indicates Ford Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

MAINTENANCE SCHEDULE

Minimum Recommended Maintenance Intervals:

Maintenance Procedure	Maintenance Interval & Service			
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Inspect Air Filter, Dust Cap, and Baffle Lubricate All Grease Fittings Check Battery Fluid Level Check Battery Cable Connections </div>	Every 50 hrs.	Every 100 hrs.	Every 200 hrs.	Every 400 hrs.
** Change Engine Oil and Filter Inspect Cooling System Hoses * Check Fan and Alternator Belt Tension Service Air Filter	"A" Level Service			
* Replace Hydraulic Filter Check Front Wheel Toe-In and Steering Linkage * Torque Wheel Lug Nuts Check Governor Oil Level Lubricate Throttle and Governor Linkage Solenoid Valve Maintenance	"B" Level Service			
Change Fuel Filters Inspect Fuel Lines and Connections Check Rear Planetary Gear Lube Change Hydraulic Oil * Change Hydraulic Oil Filter Flush Cooling System and Replace Coolant Drain and Clean Fuel Tank † Change Rear Planetary Gear Lube † Pack Front Wheel Bearings	"C" Level Service			
† Change Rear Planetary Gear Lube † Pack Front Wheel Bearings	"D" Level Service			
* Initial break-in at 10 hours ** Initial break-in at 50 hours † Initial break-in at 200 hours				
<div style="border: 1px solid black; padding: 5px;"> <p>Recommendations:</p> <p>Items listed are recommended every 800 hours or 2 years, whichever occurs first.</p> <p style="text-align: right;">Replace Safety Switches</p> </div>				



QUICK SERVICE REFERENCE

MULTI PRO 5600

Model 41568	Serial 220000002 & Up
Engine Brand	Ford
Engine Oil (<i>Chart D</i>).....3.5Qts	SAE 10W20 SH,SJ
Engine Oil Filter	108-3817
Hydraulic Oil (<i>Chart T</i>)..... 12Gal.....	UTHF
Hydraulic Filter	86-3010
Planetary Gear <i>Check Plug</i>	SAE 85W140
Air Filter	106-4904
Fuel Filter In-line	*41770
Fuel Filter Threaded	*FG778B
Tire Pressure	18 PSI (Front & Rear)
Coolant Type 12Qts.....	Ethylene Glycol, Water (50/50 mix)

*Indicates Ford Parts Number

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Maintenance

Note: Determine the left and right sides of the machine from the normal operating position.

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
8 hours	<ul style="list-style-type: none"> • Check the air filter, cap, and baffle for wear or damage. • Check the engine oil. • Check the tire pressure. • Check the engine coolant level • Check the hydraulic oil level • Clean the suction strainer³ • Initial break-in service only: check the fan and alternator belts, torque the wheel lug nuts, replace the hydraulic oil filter, and change the rear planetary gearbox fluid.
50 hours	<ul style="list-style-type: none"> • Check the battery electrolyte level. • Check the battery cable connections. • Lubricate all grease fittings. • Initial break-in service only: change the engine oil (includes synthetic oil) and replace the engine oil filter.
100 hours	<ul style="list-style-type: none"> • Change the engine oil (includes synthetic oil).¹ • Replace the engine oil filter. • Check the cooling system hoses for wear or damage. • Service the air cleaner.² • Check the fan and alternator belts. • Inspect the condition and wear of the tires. • Torque the wheel lug nuts.
200 hours	<ul style="list-style-type: none"> • Check the front wheel toe-in. • Clean the radiator fins • Initial break-in service only: pack the front wheel bearings.
400 hours or yearly	<ul style="list-style-type: none"> • Change the spark plugs. • Change the hydraulic oil. • Replace the hydraulic oil filter. • Inspect the fuel lines. • Replace the fuel filters. • Change the rear planetary gearbox fluid. • Check the coolant (as directed by the manufacturer) and change if necessary. • Drain and clean the fuel tank. • Pack the front wheel bearings.

¹More often when operating in high temperatures

²More often in dusty, dirty conditions

³More often when using wettable powders

Important Refer to your engine operator's manual for additional maintenance procedures.



QUICK SERVICE REFERENCE

MULTI PRO 5700

Model 41581 & 41582	Serial 240000001 & Up	
Engine Brand	Kubota	
Engine Oil (<i>Chart O</i>).....	4.9Qts SAE 10W30	
Engine Oil Filter	108-3841	
Hydraulic Oil (<i>Chart R</i>).....	10.6Gal..... ISO VG 46	
Hydraulic Filter	86-3010	
Planetary Gear	<i>Check Plug</i> SAE 85W140	
Air Filter	108-3810	
Fuel Filter In-line*	98-7612	
Water Separator	98-9764	
Tire Pressure	18 PSI (Front & Rear)	
Coolant Type	5.8Qts..... Ethylene Glycol, Water (50/50 mix)	
Diaphragm (pressure dampener)	99-0897	
Suction Screen (standard 50 mesh)	100-8642	
	(coarse 30 mesh)	100-6991
	(fine 80 mesh)	100-6992

*Refer to Toro's parts manual or Parts Viewer for Bio-Diesel fuel filter part numbers.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> Replace the hydraulic oil filter.
After the first 8 hours	<ul style="list-style-type: none"> Torque the wheel lug nuts. Change the rear planetary gearbox fluid. Check the fan/alternator belt
After the first 50 hours	<ul style="list-style-type: none"> Change the engine oil (including synthetic oil) and oil filter. Check the fuel lines and connections.
After the first 200 hours	<ul style="list-style-type: none"> Pack the front wheel bearings.
Before each use or daily	<ul style="list-style-type: none"> Check the air filter, cap, and valve for wear or damage. Check the engine oil. Check the tire pressure. Check the coolant level. Check the brakes. Check the hydraulic oil level. Clean the suction strainer. (More often when using wettable powders)
Every 50 hours	<ul style="list-style-type: none"> Lubricate the pump. Lubricate all grease fittings. Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> Lubricate the boom hinges. Service the air cleaner. (more often in dusty, dirty conditions). Torque the wheel lug nuts. Inspect the condition and wear of the tires. Check the cooling system hoses for wear and damage. Check the fan/alternator belt
Every 150 hours	<ul style="list-style-type: none"> Replace the engine oil filter. Change the engine oil, including synthetic oil (more often when operating under heavy load or in high temperature).
Every 200 hours	<ul style="list-style-type: none"> Check front wheel toe-in. Clean the radiator fins. Inspect all hoses and connections for damage and proper attachment.
Every 400 hours	<ul style="list-style-type: none"> Grease the actuator rod bearings. Complete all yearly maintenance procedure specified in the engine operator's manual. Check the fuel lines and connections. Drain and clean the fuel tank. Replace the fuel filter canister. Replace the in-tank fuel filter. Pack the front wheel bearings. Change the planetary gearbox fluid. Check the coolant (as directed by the manufacturer) and change if necessary. Replace the hydraulic oil filter. Change the hydraulic oil. Inspect the O-rings in the valve assemblies and replace them if necessary. Inspect the pump diaphragm and replace if necessary. (see an Authorized Toro Service Distributor) Inspect the pressure dampener bladder and replace if necessary. (see an Authorized Toro Service Distributor)
Maintenance Service Interval	Maintenance Procedure
	<ul style="list-style-type: none"> Inspect the pump check valves and replace if necessary. (see an Authorized Toro Service Distributor) Check boom actuator hydraulic oil for air bubbles. Inspect the nylon pivot bushings.
Yearly	<ul style="list-style-type: none"> Flush the sprayer with clean water using the Cleaning the Sprayer procedure. During the rinse procedure, increase pump speed to open relief valve; purging valves and hoses of residual fluids.

Important: Refer to your engine *Operator's Manual* for additional maintenance procedures.



QUICK SERVICE REFERENCE

MULTI PRO 5800

Model 41583 **Serial** 311000001 & Up

Engine Brand Kubota

Engine Oil 4.9Qts SAE 15W40 CH-4 CI-4

Engine Oil Filter 108-3841

Hydraulic Oil 14GAL ISO VG 46 / Mobile DTE 15M

Hydraulic Filter 75-1310

Planetary Gear SAE 85W140

Air Filter 108-3810

Fuel Filter In-line* 117-5866

Water Separator 110-9049

Tire Pressure 18 PSI (Front & Rear)

Coolant Type 5.8Qts Ethylene Glycol, Water
(50/50 mix)

Suction Screen (standard 50 mesh) 100-8642

(coarse 30 mesh) 100-6991

(fine 80 mesh) 100-6992

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 12/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> • Replace the hydraulic oil filter.
After the first 8 hours	<ul style="list-style-type: none"> • Torque the wheel lug nuts. • Change the rear planetary gearbox fluid. • Check the fan/alternator belt
After the first 50 hours	<ul style="list-style-type: none"> • Change the engine oil (including synthetic oil) and oil filter. • Check the fuel lines and connections.
After the first 200 hours	<ul style="list-style-type: none"> • Pack the front wheel bearings.
Before each use or daily	<ul style="list-style-type: none"> • Check the air filter, cap, and valve for wear or damage. • Check the engine oil. • Check the tire pressure. • Check the coolant level. • Check the brakes. • Check the hydraulic oil level. • Check the tank straps. • Clean the suction strainer. (More often when using wettable powders)
Every 50 hours	<ul style="list-style-type: none"> • Lubricate the pump. • Lubricate all grease fittings. • Check the battery cable connections.
Every 100 hours	<ul style="list-style-type: none"> • Lubricate the boom hinges. • Service the air cleaner. (more often in dusty, dirty conditions). • Torque the wheel lug nuts. • Inspect the condition and wear of the tires. • Check the cooling system hoses for wear and damage. • Check the fan/alternator belt
Every 150 hours	<ul style="list-style-type: none"> • Replace the engine oil filter. • Change the engine oil, including synthetic oil (more often when operating under heavy load or in high temperature).
Every 200 hours	<ul style="list-style-type: none"> • Check front wheel toe-in. • Clean the radiator fins. • Inspect all hoses and connections for damage and proper attachment.
Every 400 hours	<ul style="list-style-type: none"> • Grease the actuator rod bearings. • Complete all yearly maintenance procedure specified in the engine operator's manual. • Check the fuel lines and connections. • Drain and clean the fuel tank. • Replace the fuel filter canister. • Replace the in-tank fuel filter. • Pack the front wheel bearings. • Change the planetary gearbox fluid. • Check the coolant (as directed by the manufacturer) and change if necessary. • Replace the hydraulic oil filter. • Change the hydraulic oil. • Inspect the O-rings in the valve assemblies and replace them if necessary. • Inspect the pump diaphragm and replace if necessary. (see an Authorized Toro Service Distributor) • Inspect the pump check valves and replace if necessary. (see an Authorized Toro Service Distributor) • Inspect the nylon pivot bushings.
Yearly	<ul style="list-style-type: none"> • Flush the sprayer with clean water using the Cleaning the Sprayer procedure. During the rinse procedure, increase pump speed to open relief valve; purging valves and hoses of residual fluids. • Calibrate the agitation bypass valve.



QUICK SERVICE REFERENCE

Foam Marker Kit

Model 41228	Serial All
Pro Foam.....	41607 (1 gallon container)
Pro Foam Concentrate*.....	41157 (four 1 gallon containers)
Filter.....	94-7227
Plastic Check Valve.....	94-7196

*Note: Concentrate is mixed at 1.25-2.00 ounces per gallon of water.

Daily: Flush the system with clean water after each use, especially when hard water has been used. Note: Do not apply lubricating oil, grease or other petroleum products to the compressor motor assembly.

Every 400 hours or yearly:

Winterizing (or extended storage)

1. Relieve the pressure within the tank by pulling the release valve on the tank.
2. Disconnect the air and liquid tubing from the tank cap. Connect the air and water tubing together with the supplied tubing coupler.
3. Turn on the foam marker for 5 minutes on each side. This will remove solution from the solenoids and avoid damage.
4. Disassemble the foam nozzles and replace the foam sponges.
5. Empty the tank of all soap and liquids to avoid damage.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Every 100 hours	<ul style="list-style-type: none">• Inspect the hose between the foam tank and the compressor for accumulated water.• Inspect and clean the check valve in the tee on top of the compressor. Replace the valve if necessary.• Remove and clean the strainer at the top of the solenoid valve, next to the compressor.• Ensure that the bottom of the compressor is free from debris.
Every 250 hours	<ul style="list-style-type: none">• Replace the compressor air filter.• Check for and rinse out debris from the inside of the tank.
Every 500 hours	<ul style="list-style-type: none">• Replace the plastic check valve at the "Y" near the mixer tee assembly, located at the rear of the machine, on the center boom.



QUICK SERVICE REFERENCE

Foam Marker Kit

Model 41236

Serial All

Pro Foam..... 41607 (1 gallon container)

Pro Foam Concentrate*..... 41157 (four 1 gallon containers)

Foam Mixer Sponge Kit..... 114-9554

*Note: Concentrate is mixed at 1.25-2.00 ounces per gallon of water.

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Daily	Flush the system with clean water after each use, especially when hard water has been used. Note: Do not apply lubricating oils, grease or other petroleum products to the compressor motor assembly.
Every 400 hours or yearly	<p>Winterizing</p> <ol style="list-style-type: none">1. Relieve the pressure within the tank by pulling the release valve on the tank.2. Disconnect the air and liquid tubing from the tank cap. Connect the air and water tubing together with the supplied tubing coupler.3. Turn on the foam marker for 5 minutes on each side. This will remove solution from the solenoids and avoid damage from freezing.4. Disassemble the foam nozzles and replace the foam sponges.5. Empty the tank of all soap and liquids to avoid damage from freezing.



QUICK SERVICE REFERENCE

TOP DRESSER 1800

Model 44225

Serial 250000001 & Up

Grease Premium All Purpose Grease

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Every 25 hours	• Lubricate grease fittings



Before servicing or making adjustments to the machine, stop engine, set parking brake and remove key from ignition switch. Any load material must be removed from hopper before working under raised TopDresser. Always install safety supports on cylinders before working under raised TopDresser.



QUICK SERVICE REFERENCE

TOP DRESSER 2300

Model 44501 **Serial** 20101 & Up
Hydraulic Fluid.....2Gal..... SAE 10W30
Hydraulic Filter 01-317-0240
Tire Pressure..... 20 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

TOP DRESSER 2500

Model 44507	Serial 200000001 & Up
Hydraulic Fluid (<i>Chart R</i>).....2.5Gal.....	ISO VG 46
Biodegradable Hydraulic Fluid	Mobil 224H
Hydraulic Filter	86-3010
Tire Pressure	20-30 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

N/A



QUICK SERVICE REFERENCE

MH 400 MATERIAL DELIVERY UNIT

Model 44930 - 44934 **Serial** 310000001 & Up

Grease Premium All Purpose Grease

Hydraulic Fluid (19 gal) (*Chart R*) ISO VG 46

Tire Pressure..... 25 PSI

IMPORTANT NOTES:

Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After first three months	Adjust electric brakes or sooner depending on performance
Daily	Check tire pressure - 25 psi
	Check hydraulic hoses for wear and visible damage
	Check the hydraulic oil level
Weekly	Check conveyor belt for proper tracking and for slippage
Monthly	Inspect brake shoes and linings
Every 2 months or 25 hours	Lubricate all grease point fittings
	Lubricate front take-up bearings
	Lubricate rear drive bearings
	Lubricate box hinge pins
	Lubricate floor drive chain
	Check front and rear roller bearings for wear or visible damage
Every 300 hours	Check wheel lug nut torque - 100 ft-lb
	Check tires for excessive wear or visible damage
Every 4 months	Check conveyor belt idler rollers between the front and rear rollers for binding or seizing. Replace or repair as required.
Yearly	Lubricate suspension springs
	Inspect, clean and service brake system

* Refer to the operator's manual for daily safety checks before operating the MH-400



QUICK SERVICE REFERENCE

ProPass 200 Broadcast spreader

Model 44700 - 44701

Serial 310000001 & Up

Grease Premium All Purpose Grease

IMPORTANT NOTES:

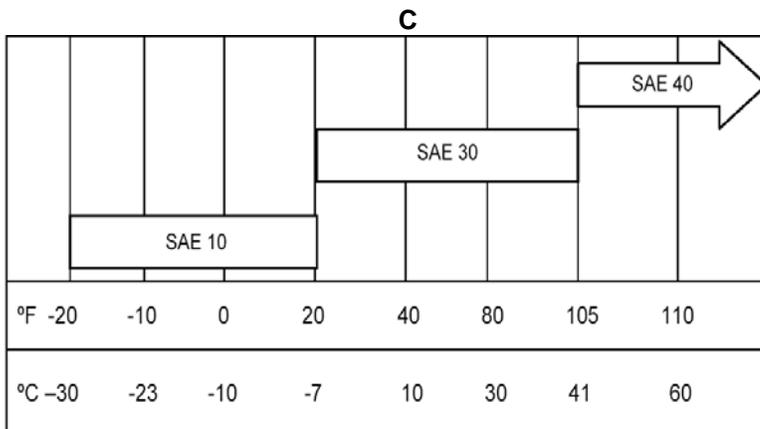
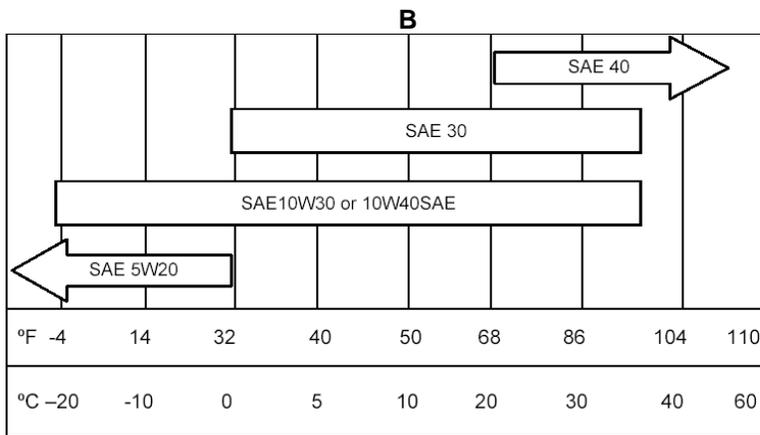
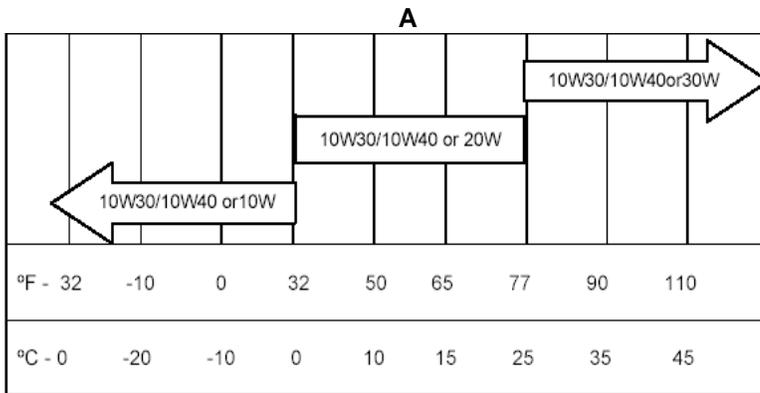
Part numbers, specifications, and lubricants listed herein are subject to change. Refer to Toro's Master Parts Viewer on the internet at www.toro.com for online Toro parts catalogs. The current version of this document may be found at that website under Technical Reference section of the *Toro Customer Care* page. The most current API Service Grade of oil includes the service properties of earlier classifications. Refer to the API Motor Oil Guide at the back of this book for further details.

Copyright © 2004 The Toro Company Rev 06/10

Recommended Maintenance Schedule(s)

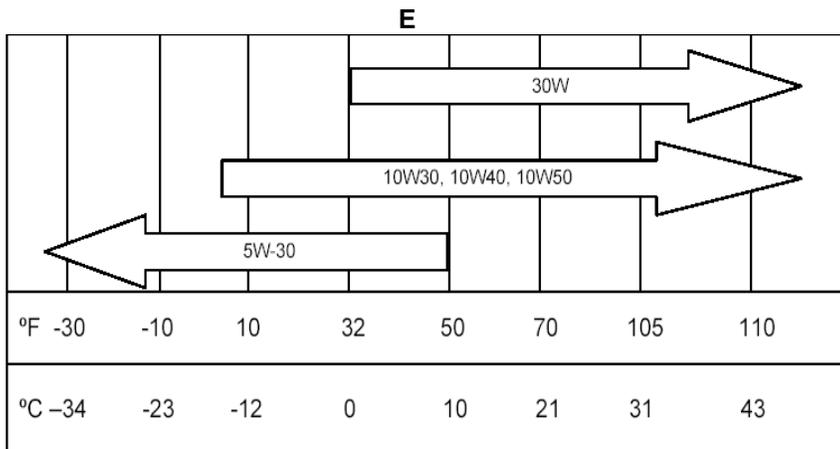
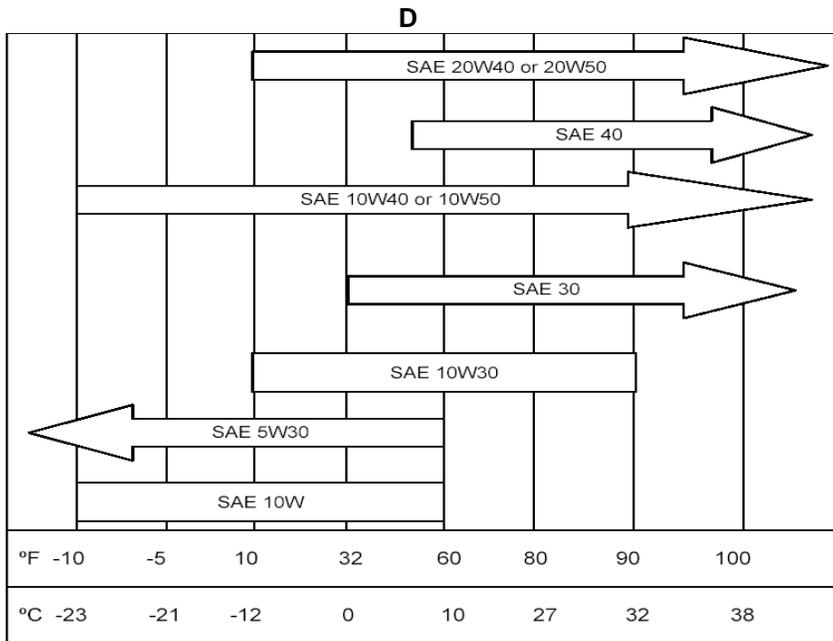
Maintenance Service Interval	Maintenance Procedure
Every 25 hours	Lubricate grease fittings
Every 300 hours	Clean and repack wheel bearings
Every 2 months	Check front and rear roller bearings for wear or visible damage

Engine Oil Viscosity Charts (A thru C)



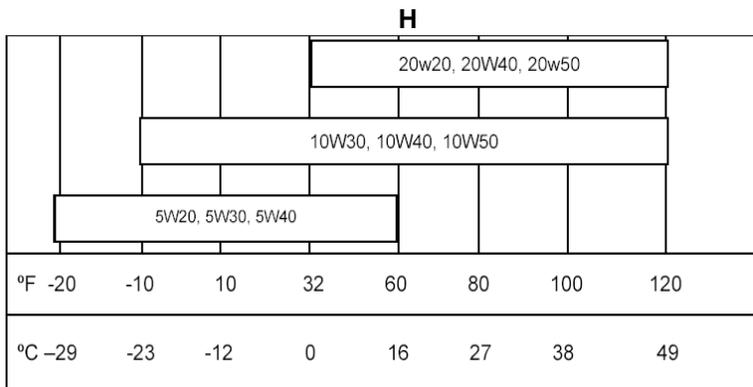
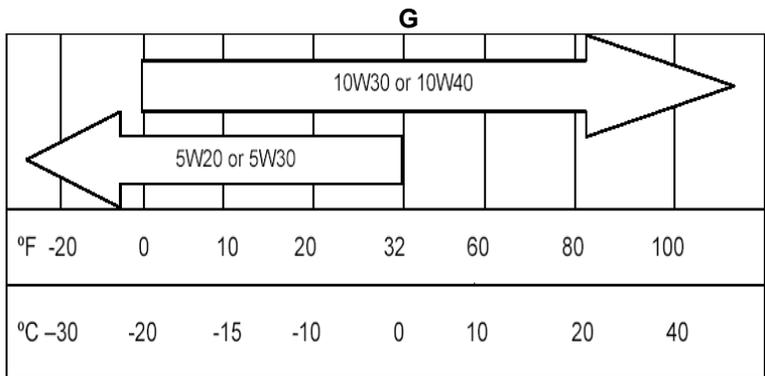
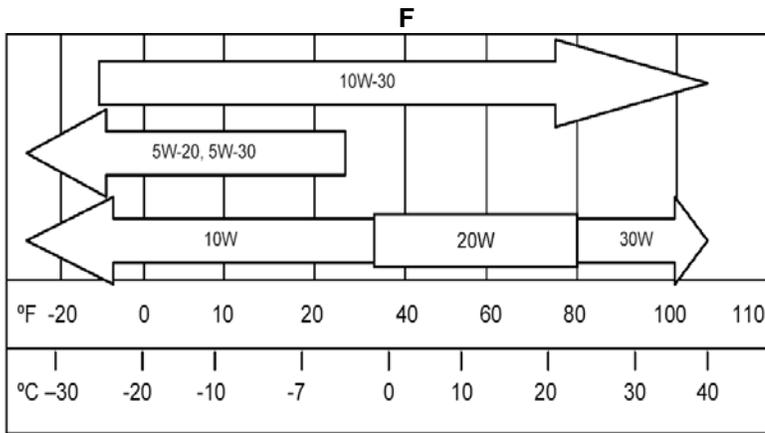
Copyright © 2004 The Toro Company Rev 06/10

Engine Oil Viscosity Charts (D and E)



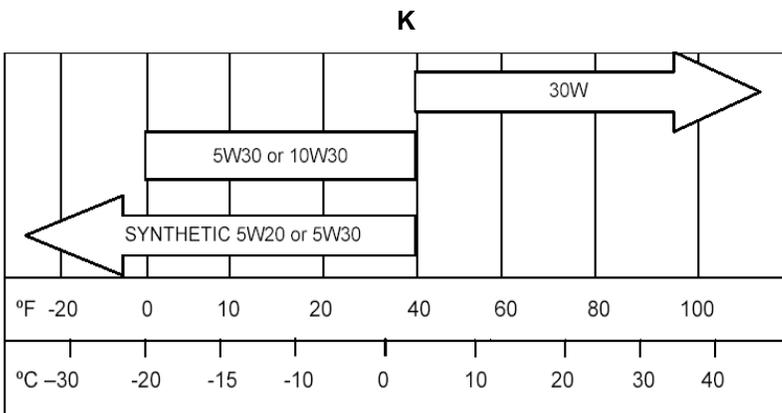
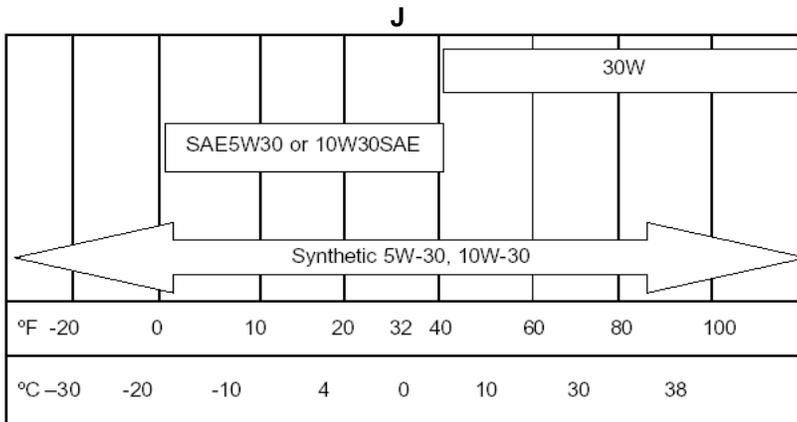
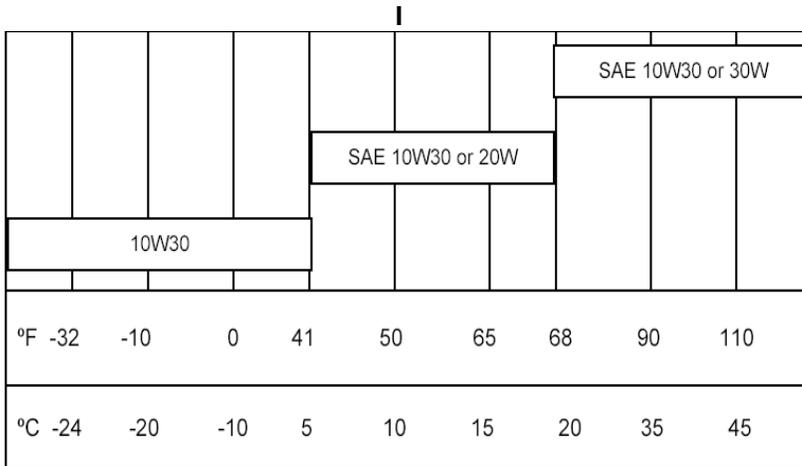
Copyright © 2004 The Toro Company Rev 06/10

Engine Oil Viscosity Charts (F thru H)



Copyright © 2004 The Toro Company Rev 06/10

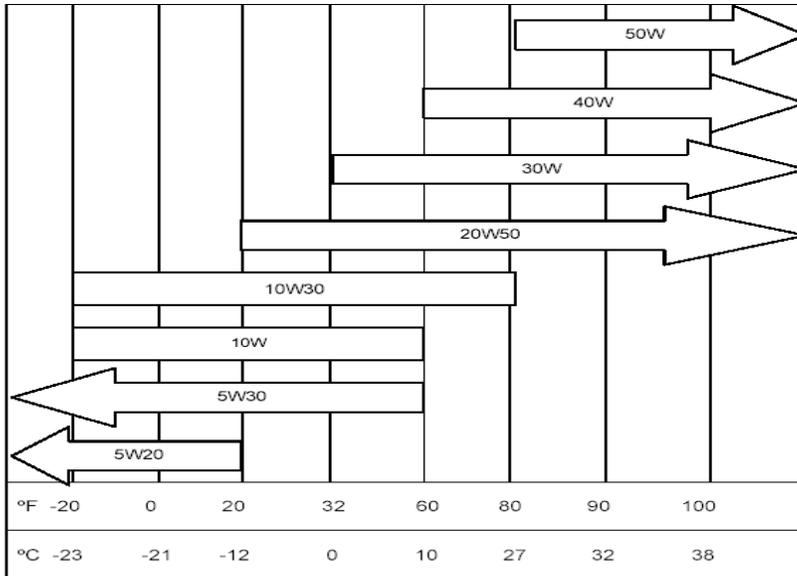
Engine Oil Viscosity Charts (I thru K)



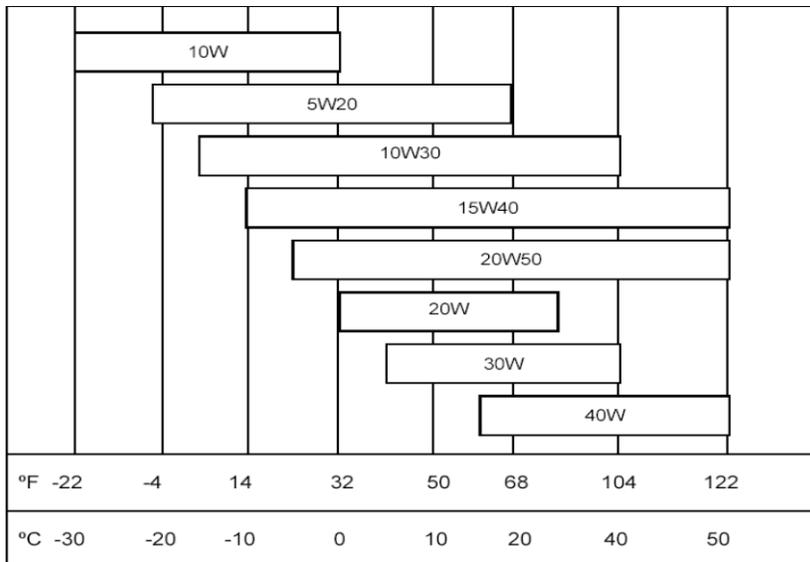
Copyright © 2004 The Toro Company Rev 06/10

Engine Oil Viscosity Charts (L and M)

L



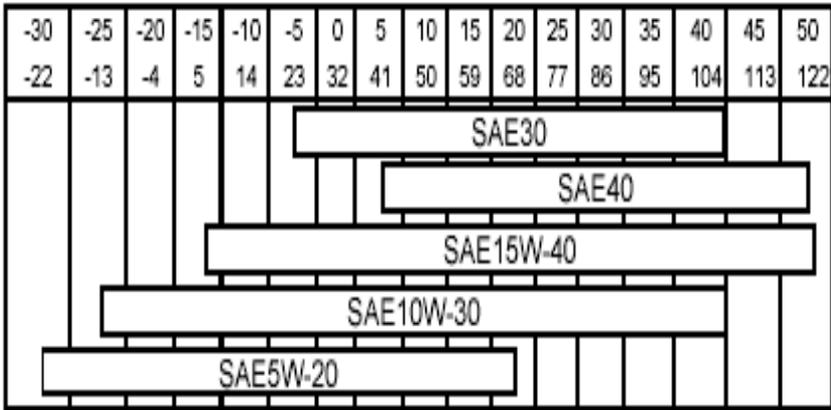
M



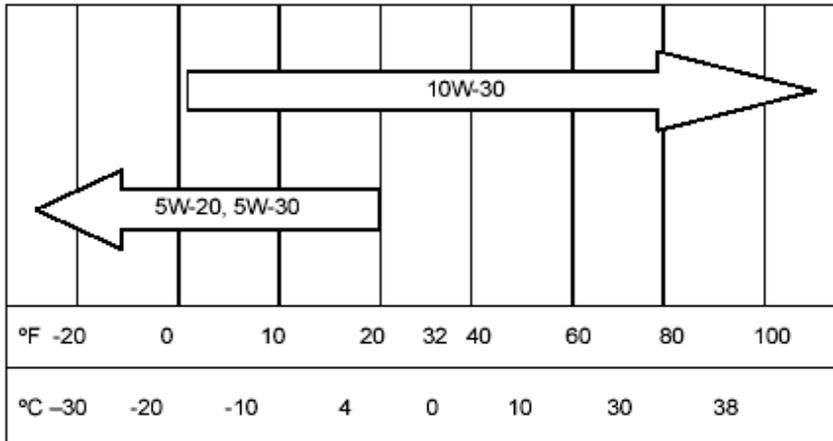
Copyright © 2004 The Toro Company Rev 06/10

Engine Oil Viscosity Charts (N and O)

N



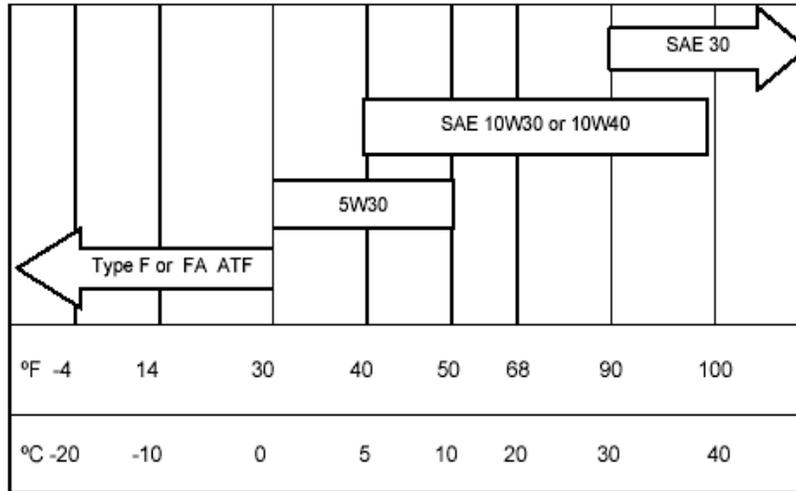
O



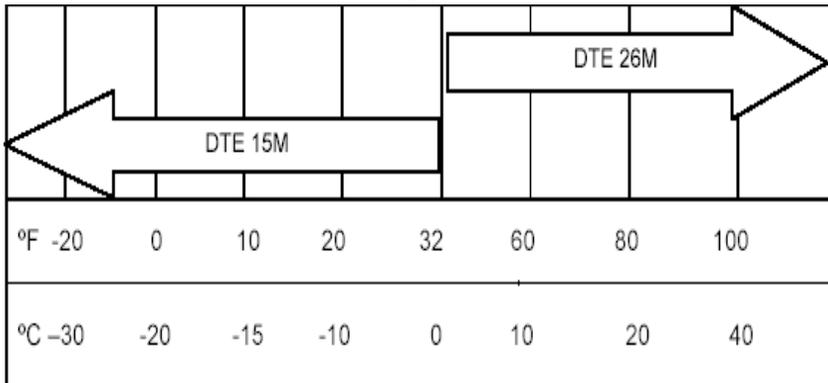
Copyright © 2004 The Toro Company Rev 06/10

Hydraulic Oil Viscosity Charts (P and Q)

P



Q



Copyright © 2004 The Toro Company Rev 06/10

Hydraulic Oil Standards

Chart R

ISO VG 46

Refer to page 255 for Toro Oil Part Numbers

The machine's reservoir is filled at the factory with approximately x.x gallons (xx.x l) of high quality hydraulic fluid. **Check the level of hydraulic fluid before the engine is first started and daily thereafter.** The recommended replacement fluid is:

Toro Premium All Season Hydraulic Fluid

(Available in 5 gallon pails or 55 gallon drums. See the parts catalog or Toro distributor for part numbers.)

Alternative fluids: If the Toro fluid is not available, only other conventional petroleum-based fluids may be used provided they meet all of the following material properties and industry specifications. Check with your oil supplier to see if the oil meets these specifications. The biodegradable fluids listed below may also be used. Note: Toro will not assume responsibility for damage caused by improper substitutions, so use only products from reputable manufacturers who will stand behind their recommendation.

High Viscosity Index/Low Pour Point Antiwear Hydraulic Fluid, ISO VG 46

Material Properties:

Viscosity, ASTM D445:	cSt @ 40°C	44 to 48
	cSt @ 100°C	7.9 to 8.5

Viscosity Index, ASTM D2270:	140 to 160
------------------------------	------------

Pour Point, ASTM D97:	-34°F to -49 °F
-----------------------	-----------------

FZG, Fail stage	11 or better
-----------------	--------------

Water content (new fluid):	500 ppm (maximum)
----------------------------	-------------------

Industry Specifications:

Vickers I-286-S, Vickers M-2950-S, Denison HF-0, Vickers 35 VQ 25 (Eaton ATS373-C)

Note: Many hydraulic fluids are almost colorless, making it difficult to spot leaks. A red dye additive for the hydraulic system oil is available in 2/3 oz (20 ml) bottles. One bottle is sufficient for 4-6 gal (15-22 l) of hydraulic oil. Order part no. 44-2500 from your authorized Toro distributor.

Chart S

ISO VG 68

Refer to page 255 for Toro Oil Part Numbers

CHECK HYDRAULIC SYSTEM FLUID

The machine's reservoir is filled at the factory with approximately x.x gallons (xx.x l) of high quality hydraulic fluid. **Check the level of hydraulic fluid before the engine is first started and daily thereafter.** The recommended replacement fluid is:

Toro Premium All Season Hydraulic Fluid

(Available in 5 gallon pails or 55 gallon drums. See the parts catalog or Toro distributor for part numbers.)

Alternative fluids: If the Toro fluid is not available, only other conventional, petroleum-based fluids may be used provided they meet all of the following material properties and industry specifications. Check with your oil supplier to see if the oil meets these specifications. Note: Toro will not assume responsibility for damage caused by improper substitutions, so use only products from reputable manufacturers who will stand behind their recommendation.

Antiwear Hydraulic Fluid, ISO VG 68

Material Properties:

Viscosity, ASTM D445:	cSt @ 40°C	65 to 71
	cSt @ 100°C	8.4 – 8.9

Viscosity Index, ASTM D2270:	97 to 107
------------------------------	-----------

Pour Point, ASTM D97:	-18°F to -30 °F
-----------------------	-----------------

FZG, Fail stage	11 or better
-----------------	--------------

Water content (new fluid):	500 ppm (maximum)
----------------------------	-------------------

Industry Specifications:

Vickers I-286-S, Vickers M-2950-S, Denison HF-0, Vickers 35 VQ 25 (Eaton ATS373-C)

Note: Many hydraulic fluids are almost colorless, making it difficult to spot leaks. A red dye additive for the hydraulic system oil is available in 2/3 oz (20 ml) bottles. One bottle is sufficient for 4-6 gal (15-22 l) of hydraulic oil. Order part no. 44-2500 from your authorized Toro distributor.

Chart T

Universal Tractor Hydraulic Fluid (UTHF)

Refer to page 255 for Toro Oil Part Numbers

The machine's reservoir is filled at the factory with approximately x.x gallons (xx.x l) of high quality hydraulic fluid. **Check the level of hydraulic fluid before the engine is first started and daily thereafter.** The recommended replacement fluid is:

Toro Premium Transmission/Hydraulic Tractor Fluid

(Available in 5 gallon pails or 55 gallon drums. See the parts catalog or Toro distributor for part numbers.)

Alternative fluids: If Toro fluid is not available, other Universal Tractor Hydraulic Fluids (UTHF) may be used, but they must be only conventional, petroleum-based products. The specifications must fall within the listed range for all of the following material properties and the fluid should meet listed industry standards. Check with your oil supplier to see if the oil meets these specifications. Note: Toro will not assume responsibility for damage caused by improper substitutions, so use only products from reputable manufacturers who will stand behind their recommendation.

Material Properties:

Viscosity, ASTM D445:	cSt @ 40°C	55 to 62
	cSt @ 100°C	9.1 to 9.8

Viscosity Index, ASTM D2270: 140 - 152

Pour Point, ASTM D97: -35°F to -46°F

Industry Standards:

API GL-4, AGCO Powerfluid 821 XL, Ford New Holland FNHA-2-C-201.00, Kubota UDT, John Deere J20C, Vickers 35VQ25 and Volvo WB-101/BM.

Note: Many hydraulic fluids are almost colorless, making it difficult to spot leaks. A red dye additive for the hydraulic system oil is available in 2/3 oz (20 ml) bottles. One bottle is sufficient for 4-6 gal (15-22 l) of hydraulic oil. Order part no. 44-2500 from your authorized Toro distributor.

Chart U

Biodegradable Hydraulic Fluid
Refer to page 255 for Toro Oil Part Numbers

Biodegradable Hydraulic Fluid

Toro Biodegradable Hydraulic Fluid

(Available in 5 gallon pails or 55 gallon drums. See parts catalog
or Toro distributor for part numbers.)

Alternative fluid: Mobil EAL 224H

<u>Product Description</u>	<u>Size</u>	<u>Toro Part Number</u>
Premium All Season Hydraulic Fluid	Drum	108-1177
Premium All Season Hydraulic Fluid	Pail	108-1178
Premium Engine Oil 10W30	Drum	108-1179
Premium Engine Oil 10W30	Pail	108-1180
Premium Engine Oil 15W40	Drum	108-1181
Premium Engine Oil 15W40	Pail	108-1182
Premium Engine Oil SAE 30	Drum	108-1196
Premium Engine Oil SAE 30	Pail	108-1197
Premium Transmission/Hydraulic Tractor Fluid	Drum	108-1183
Premium Transmission/Hydraulic Tractor Fluid	Pail	108-1184
Premium ATF	Drum	108-1185
Premium ATF	Pail	108-1186
Premium All Season Gear Lube	Pail	108-1187
Premium All Season Gear Lube	Quart	108-1590
Premium Heavy Duty All Season Gear Lube	Pail	108-1188
Premium Heavy Duty All Season Gear Lube	Quart	108-1591
Premium Bio-Degradable Hydraulic Fluid	Drum	108-1189
Premium Bio-Degradable Hydraulic Fluid	Pail	100-7674
Premium All Purpose Grease	Tube	108-1190
Extended Life Antifreeze	Gallon	104-8606



AMERICAN PETROLEUM INSTITUTE
ENGINE OIL LICENSING AND CERTIFICATION SYSTEM

Engine Oil Guide

Guidelines to help you get more from your engine oil.

Refer to your owner's manual for type of oil to use.

Follow manufacturer's oil change recommendations.

Use only the recommended API category: "S" for gasoline engines; "C" for diesel engines.

Select the proper SAE oil viscosity grade.

If you find it necessary to mix brands of oil, use the same viscosity grade and API service category to maintain performance.

Properly dispose of used oil. Learn more about recycling used oil on the web at www.recycleoil.org. Go to www.earth911.org for used oil collection center locations.

Look for the API Certification Marks every time you buy engine oil.

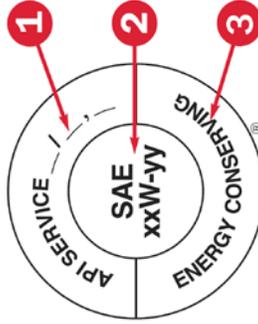
Ask for API-licensed oil whenever you have your oil changed.



The API Certification Mark, also known as the "Starburst"

An oil displaying this mark meets the current engine protection standard and fuel economy requirements of the International Lubricant Standardization and Approval Committee (ILSAC), a joint effort of U.S. and Japanese automobile manufacturers. Most automobile manufacturers recommend oils that carry the API Certification Mark.

API's Service Symbol and Certification Mark identify quality engine oils for gasoline- and diesel-powered vehicles. Oils displaying these marks meet performance requirements set by U.S. and international vehicle and engine manufacturers and the lubricant industry. More than 500 companies worldwide participate in this voluntary program, which is backed by a marketplace sampling and testing program.

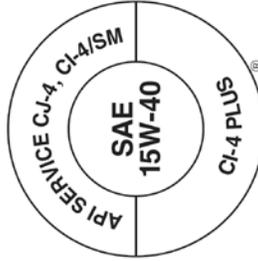


The API Service Symbol, also known as the "Donut"

1. Performance Level: Gasoline engine oil categories (for cars, vans, and light trucks with gasoline engines); Oils designed for gasoline-engine service fall under API's "S" (Service) categories. See inside for descriptions of current and obsolete API service categories. **Diesel engine oil categories** (for heavy-duty trucks and vehicles with diesel engines); Oils designed for diesel-engine service fall under API's "C" (Commercial) categories. See inside for descriptions of current and obsolete API service categories.

2. Viscosity Grade: The measure of an oil's thickness and ability to flow at certain temperatures. Vehicle requirements may vary. Follow your vehicle manufacturer's recommendations on SAE oil viscosity grade.

3. Energy Conserving: The "Energy Conserving" designation applies to oils intended for gasoline-engine cars, vans, and light trucks. Widespread use of "Energy Conserving" oils may result in an overall savings of fuel in the vehicle fleet as a whole.



The API Service Symbol "Donut" with CI-4 PLUS

Used in conjunction with API CI-4 and CI-4, the "CI-4 PLUS" designation identifies oils formulated to provide a higher level of protection against soot-related viscosity increase and viscosity loss due to shear in diesel engines. Like Energy Conserving, CI-4 PLUS appears in the lower portion of the API Service Symbol "Donut."

For more information about API's Engine Oil Program, visit www.api.org/eolcs.

Copyright 2009 - American Petroleum Institute, all rights reserved. API, the API logo, the API Service Symbol (Donut), the API Service Symbol with CI-4 PLUS logo and the API Certification Mark (Starburst) are either trademarks or registered trademarks of API in the United States and/or other countries.
API Creative: 2009-058 | 10.09 | PDF

Which oil is right for you?



Note: API intentionally omitted "SI" and "SK" from the sequence of categories.

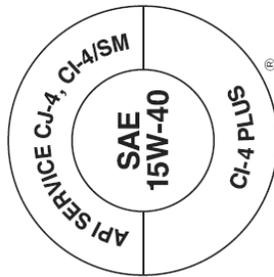
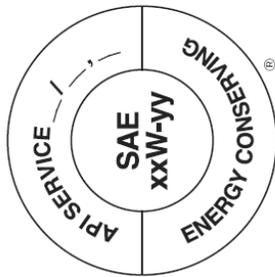


GUIDE TO SAE VISCOSITY GRADES OF ENGINE OIL FOR PASSENGER CARS	
If lowest expected outdoor temperature is	Typical SAE Viscosity Grades for Passenger Cars
0°C (32°F)	5W-20, 5W-30, 10W-30, 10W-40, 20W-50
-18°C (0°F)	5W-20, 5W-30, 10W-30, 10W-40
Below -18°C (0°F)	5W-20, 5W-30

The current and previous API Service Categories are listed below. Vehicle owners should refer to their owner's manuals before consulting these charts. Oils may have more than one performance level.

For automotive gasoline engines, the latest engine oil service category includes the performance properties of each earlier category. If an automotive owner's manual calls for an API SJ or SL oil, an API SM oil will provide full protection. For diesel engines, the latest category usually – but not always – includes the performance properties of an earlier category.

GASOLINE ENGINES		Service
Category	Status	
SM	Current	For all automotive engines currently in use. Introduced in 2004, SM oils are designed to provide improved oxidation resistance, improved deposit protection, better wear protection, and better low-temperature performance over the life of the oil. Some SM oils may also meet the latest ILSAC specification and/or qualify as Energy Conserving.
SL	Current	For 2004 and older automotive engines.
SJ	Current	For 2001 and older automotive engines.
SH	Obsolete	For 1996 and older engines.
SG	Obsolete	For 1993 and older engines.
SF	Obsolete	For 1988 and older engines.
SE	Obsolete	CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1979.
SD	Obsolete	CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1971. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SC	Obsolete	CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1967. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SB	Obsolete	CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1951. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SA	Obsolete	CAUTION: Contains no additives. Not suitable for use in gasoline-powered automotive engines built after 1930. Use in more modern engines may cause unsatisfactory performance or equipment harm.



For more information about
API's Engine Oil Program,
visit www.api.org/eolcs.

Interested in learning about
the chemical additives in
engine oil? Visit
www.americanchemistry.com

Copyright 2009 - American Petroleum Institute, all rights reserved. API, the API logo, the API Service Symbol (Donut), the API Service Symbol with CI-4 PLUS and the API Certification Mark (Starburst) are either trademarks or registered trademarks of API in the United States and/or other countries.

API Creative: 2009-058 | 10.09 | PDF

DIESEL ENGINES		Service
Category	Status	
CJ-4	Current	Introduced in 2006. For high-speed, four-stroke engines designed to meet 2007 model year on-highway exhaust emission standards. CJ-4 oils are compounded for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). However, use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust aftertreatment system durability and/or oil drain interval. CJ-4 oils are effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. Optimum protection is provided for control of catalyst poisoning, particulate filter blocking, engine wear, piston deposits, low- and high-temperature stability, soot handling properties, oxidative thickening, foaming, and viscosity loss due to shear. API CJ-4 oils exceed the performance criteria of API CI-4 with CI-4 PLUS, CH-4, CG-4, and CF-4 and can effectively lubricate engines calling for those API Service Categories. When using CJ-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.
CI-4	Current	Introduced in 2002. For high-speed, four-stroke engines designed to meet 2004 exhaust emission standards implemented in 2002. CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, CG-4, and CH-4 oils. Some CI-4 oils may also qualify for the CI-4 PLUS designation.
CH-4	Current	Introduced in 1998. For high-speed, four-stroke engines designed to meet 1998 exhaust emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, and CG-4 oils.
CG-4	Obsolete	Introduced in 1995. For severe duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards. Can be used in place of CD, CE, and CF-4 oils.
CF-4	Obsolete	Introduced in 1990. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CD and CE oils.
CF-2	Current	Introduced in 1994. For severe duty, two-stroke-cycle engines. Can be used in place of CD/II oils.
CF	Current	Introduced in 1994. For off-road, indirect-injected and other diesel engines including those using fuel with over 0.5% weight sulfur. Can be used in place of CD oils.
CE	Obsolete	Introduced in 1985. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CC and CD oils.
CD-II	Obsolete	Introduced in 1985. For two-stroke cycle engines.
CD	Obsolete	Introduced in 1955. For certain naturally aspirated and turbocharged engines.
CC	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1990.
CB	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1961.
CA	Obsolete	CAUTION: Not suitable for use in diesel-powered engines built after 1959.