

COMPACT UTILITY TRACTOR

MODEL

SA221

SA324

SA424



YANMAR

SA221

SA324

SA424

QUICK OPERATION
& MAINTENANCE
GUIDE





HOW TO OPERATE YOUR TRACTOR

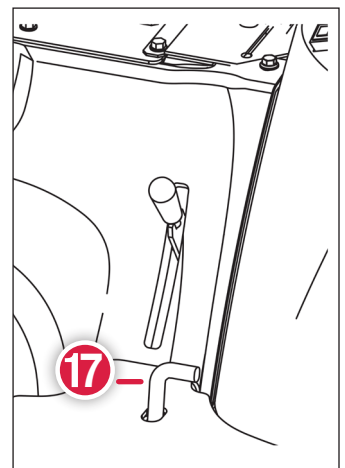
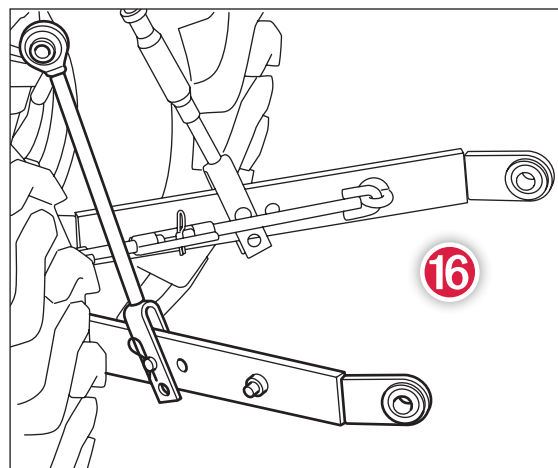
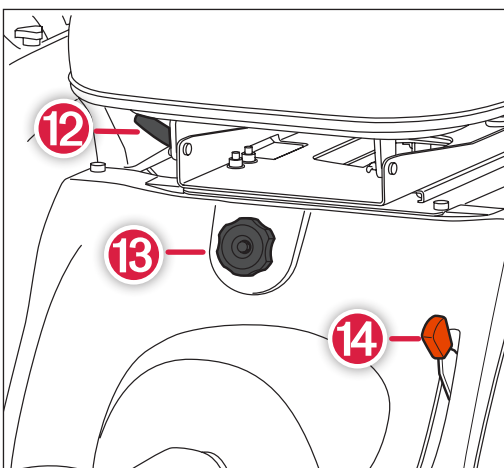
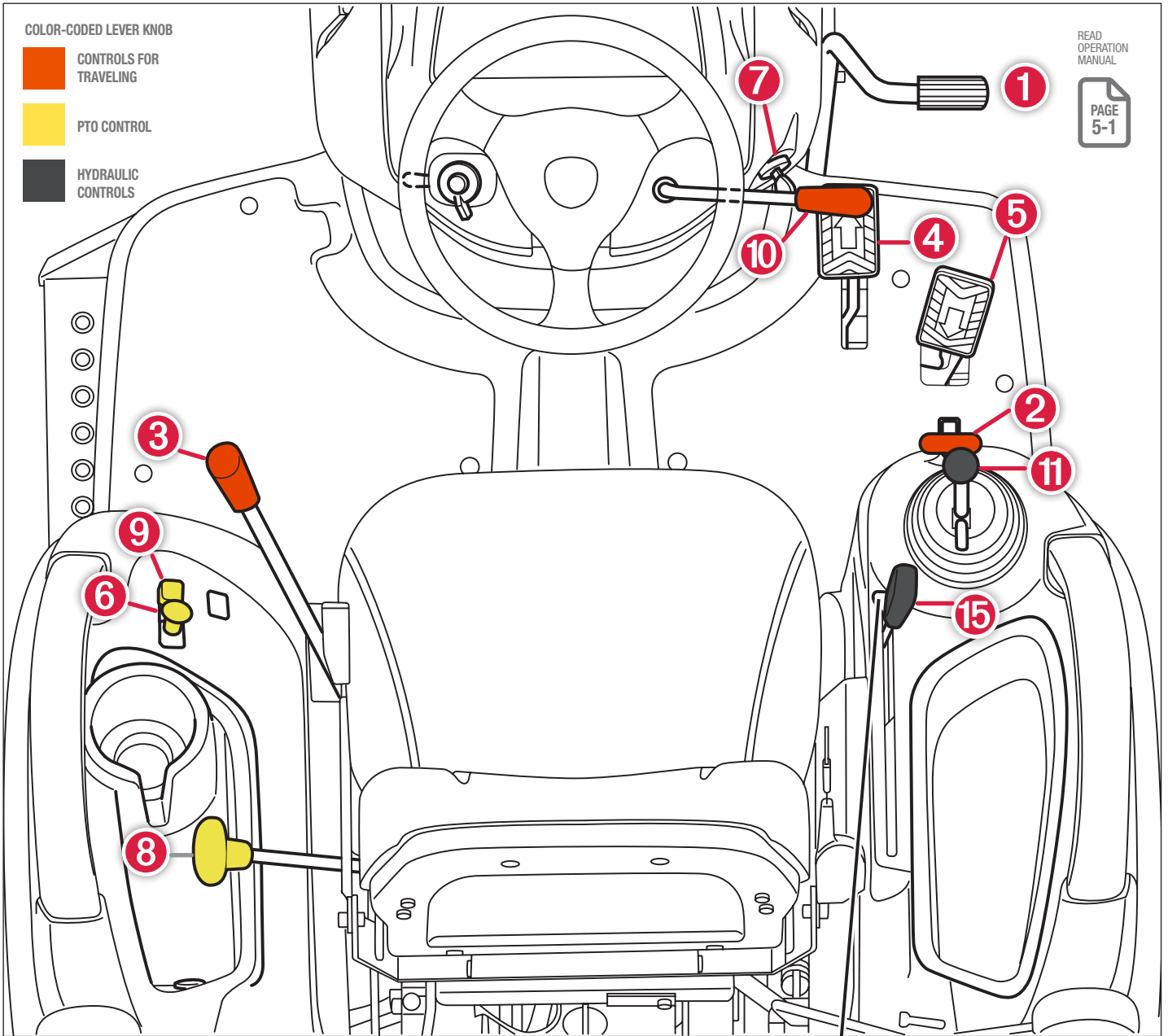
READ
OPERATION
MANUAL
PAGE
5-1

COLOR-CODED LEVER KNOB

 CONTROLS FOR TRAVELING

 PTO CONTROL

 HYDRAULIC CONTROLS



LAMPS & INDICATORS ON METER PANEL

Start Engine

- 1 2 Parking brake set and locked
- 3 324/424 only – Range shift lever [N]
- 4 5 Foot off of both drive pedals
- 6 Push the PTO switch to [OFF]
- 10 Push the throttle control lever forward from the slow idle position to the 1/3 to 1/2 fast positions

- 7 Turn the Key switch [START]
“Cold start” use glow plugs

* Use the HEAT position in cold weather condition. Refer the Key Switch section for the detail.

Power Take Off (PTO) Operation

- 8 Select the desired position of the PTO select lever [BOTH/REAR]
- 6 Pull the PTO switch to [ON]

Mid PTO Reverse Override

- 9 Push and hold the reverse override switch
- 5 Press the reverse pedal

** By pressing the reverse pedal with the Mid PTO engaged, PTO will stop automatically for safety if the reverse override switch is not pressed. In this condition, PTO will not be re-engaged even if the operator starts to drive forward again. Turn the PTO switch off to reset the safety circuit then turn the PTO switch on again to restart the Mid PTO.

*** Use the reverse override switch to operate the PTO while reversing the tractor.

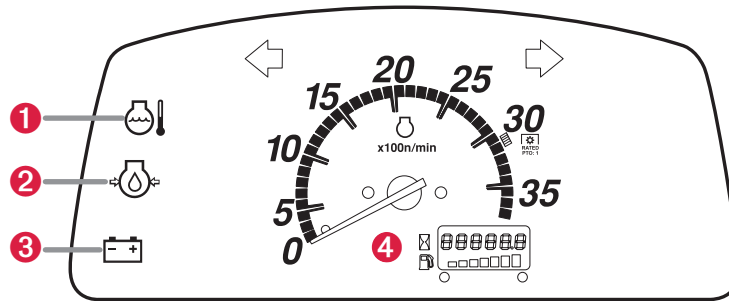
**** PTO Reverse override is canceled when the reverse pedal is released. Push and hold the PTO reverse override switch again to reactivate the override before pressing the reverse pedal.

Travel Speed Control

- 3 324/424 only – Stop the tractor to select the range shift lever [L/H]
- 2 Parking brake released
- 10 Push the throttle control lever forward to increase the engine speed.
- 4 5 Press or release the drive pedals to adjust the travel speed.

Additional Controls

- 11 Implement control lever
- 12 Operator seat forward and backward lever
- 13 3-Point Hitch hydraulic flow control/ stop knob
- 14 2WD/4WD lever
- 15 16 3-point hitch control lever and rear 3-point hitch
- 17 Differential lock pedal
(Standard SA324/424, Option SA221)



READ OPERATION MANUAL

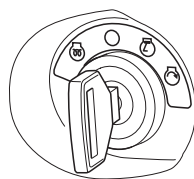


Meter Panel

1. **Coolant temperature warning light**
Illuminates when the current coolant temperature is too high. Stop and check for debris blockage on radiator.
2. **Engine oil pressure warning light***
Illuminates when the current engine oil pressure is too low. Stop and contact your local Yanmar tractor dealer.
3. **Alternator/battery charging light***
Illuminates when the alternator/battery charging circuit is out of order. Stop and contact your local Yanmar tractor dealer.

4. **Tachometer**
Indicates the current engine speed in increments of 100 Revolutions Per Minutes (rpm).
 - Engine Rated Speed: 3200 rpm
 - Rear PTO Rated RPM 540 rpm at Engine 3120 rpm
 - Mid PTO Rated RPM 2000 rpm at Engine 3111 rpm

* The lights 2 and 3 illuminate when the key switch is in ON position and the engine is not running.



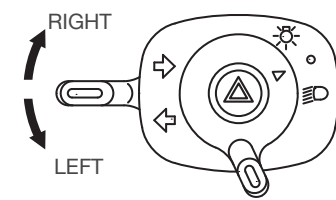
Key Switch



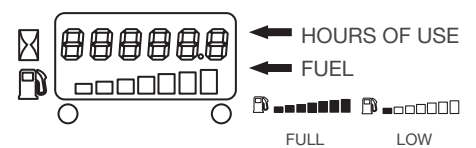
* Preheating time should be determined according to the ambient temperature. For details, see the table below.

Ambient Temperature (°F (°C))	Preheating Time (sec.)
Over 32 (0)	2 to 3
Below 32(0)	4

Headlight Switch



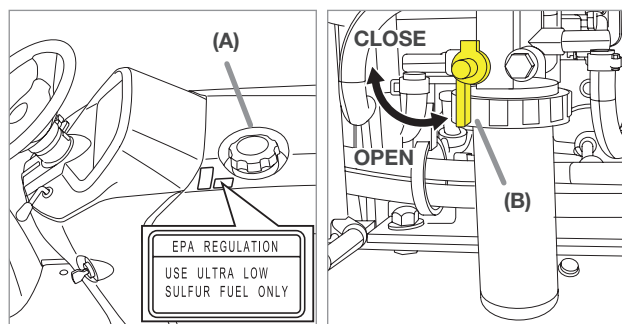
LCD



READ OPERATION MANUAL



Fuel Tank and Fuel Shut-off Valve



(A) – Fuel Filler Cap

(B) – Fuel Shut-off Valve

Dirt and water in the fuel can damage the engine. Remove dirt and debris from the fuel tank before filling.

Ensure the fuel and filling equipment is clean and free of debris. Avoid using fuel containers made of zinc plated steel. A plastic or stainless container is recommended. Fill the fuel tank with fresh diesel fuel. Tank capacity: 6.1 gal (23.0L).

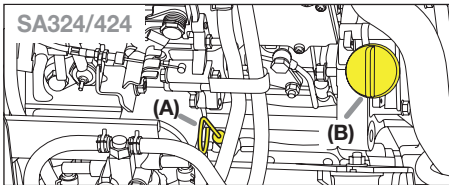
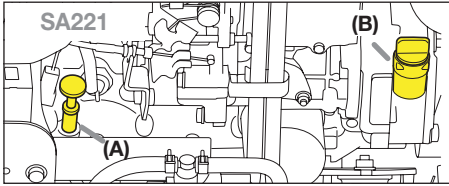
READ OPERATION MANUAL





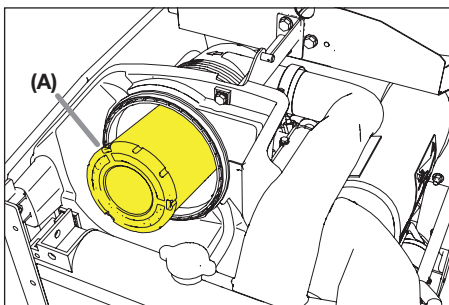
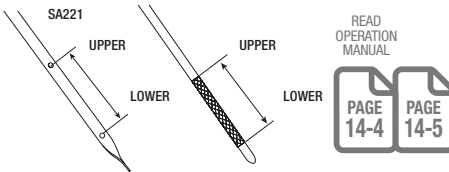
DAILY CHECK ITEMS

Always turn off engine and allow the machine to cool down completely before accessing the engine, muffler, radiator or other hot components.



Engine Oil Level

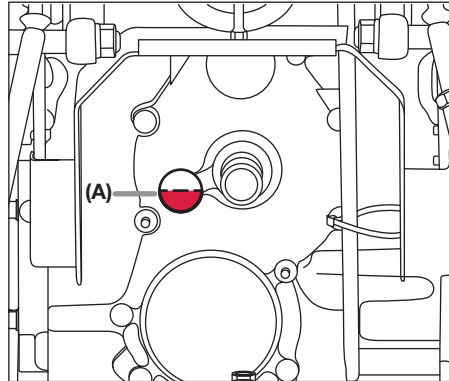
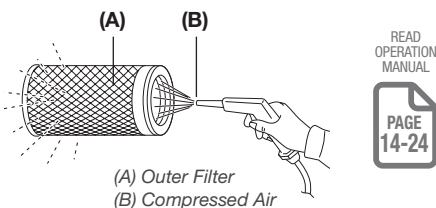
Remove the dipstick (A) and wipe the dipstick with a clean rag. Insert the dipstick completely and remove it to check the oil level. If the engine oil level is low, add the specified engine oil from the engine oil filler (B) until the engine oil level is in the operating range on the dipstick.



Air Cleaner

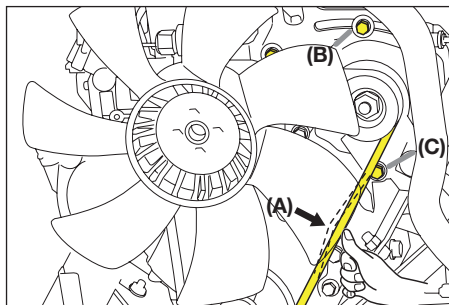
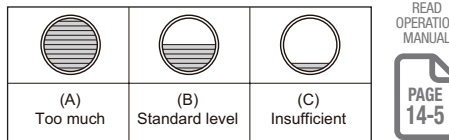
Air cleaner (A) can be accessed without tools. Release the two latch hooks on the air cleaner canister cover and remove the cover. Never wash the filter or attempt to clean the filter by tapping the filter against another object. Apply compressed air from inside of the element to blow away the dust. Clean every 100 hours or if necessary, replace every 1 year or if necessary.

Genuine Parts: 1A8330-05110, ELEMENT ASSY



Transmission Oil Level

Read the transmission hydraulic oil gauge window (A) on the rear side of the transmission case. The transmission hydraulic oil level should be in the middle of gauge window.



Alternator / Fan Belt

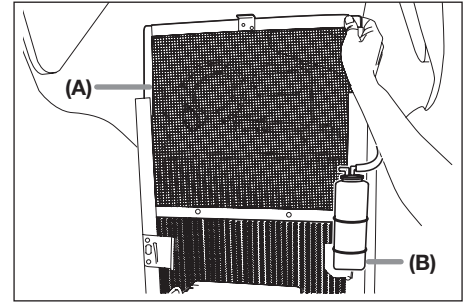
Turn off engine and disconnect battery cable for safety. Using the thumb, gently apply pressure to the midpoint (A) of the alternator/fan belt between the pulleys. Check whether the alternator/fan belt deflects inward by approximately 0.4 to 0.6 in. (10 to 15 mm). If the deflection is not as specified, adjust the tension of the alternator/fan belt. Adjust every 50 hours, replace if necessary.

- (A) 0.4 to 0.6 in. (10 to 15 mm)
- (B) Adjusting bolt
- (C) Mounting bolt

Genuine Parts:

- 25152-003500, V-BELT, A35 (SA221);
- 25152-003600, V-BELT, A36 (SA324/424)

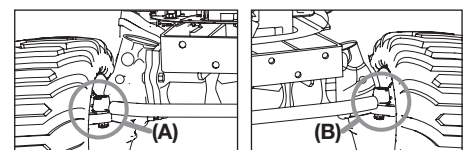
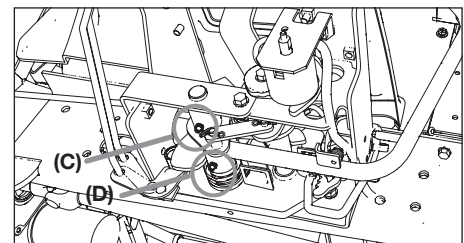
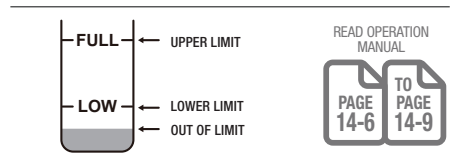
SAFETY: 1-Engine off. 2-Battery disconnected.



Radiator Screen & Coolant

Radiator Screen: Raise the hood. Pull out the radiator cooling screen (A). Remove straw and dust attached from the radiator cooling screen.

Coolant: Check the coolant level of the reservoir tank (B). It should be between the upper and lower limits marked on it when the engine is warm. If the engine is cold, the coolant level must be at the low line on the reserve tank. When necessary, add a pre-diluted coolant with an antifreeze to water ratio that suits the local climate*.



Grease Points

Extremely Wet or Muddy Conditions: Lubricate the grease fittings once every 10 operating hours or once a day, whichever comes first.

All Other Conditions

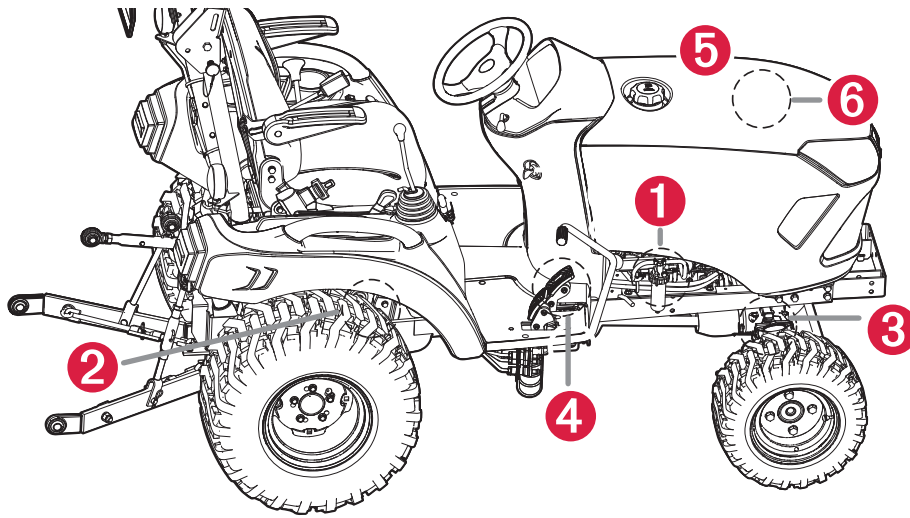
Lubricate the grease fittings once every 50 operating hours, whichever comes first.

Type of grease: General all-purpose grease NLGI GRADE No.2

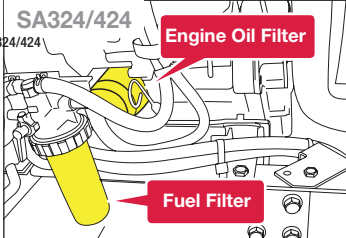
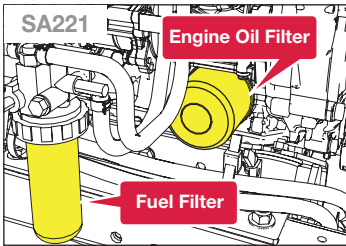
- (A) Right tie rod end
- (B) Left tie rod end
- (C) Forward drive pedal rod end
- (D) Reverse drive pedal rod end



PERIODICAL MAINTENANCE ITEMS



1. Engine Oil Filter Fuel / Water Separator



Service interval:

Replace after the first 50 and 200 hours, then every 200 hours

Genuine part:
119305-35170
FILTER ASSY
D68LX65

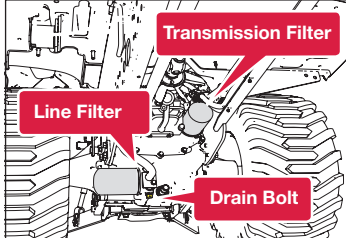
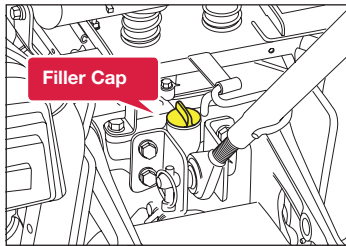


Fuel/Water Separator Service Interval
Drain every 50 hours, replace every 100 hours or if necessary.

Genuine part:
119810-55650
ELEMENT



2. Transmission Filters and Oil (4.1 GAL / 15.5 L)



Service interval:

Replace after the first 50 and 300 hours, then every 300 hours

Genuine part:
198167-24900
FILTER, OIL
(Transmission)



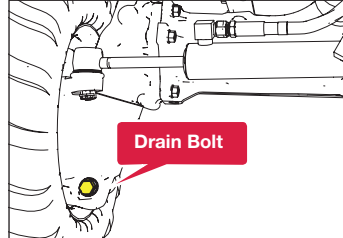
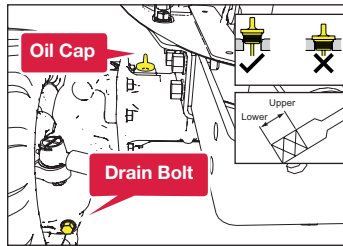
198119-48310
FILTER (Line)



Genuine part:
TF500A
Transmission Fluid (1 gal)
TF500A5G
Transmission Fluid (5 gal)



3. Front Axle Gear Oil (3.2 QT. / 3.0 L)



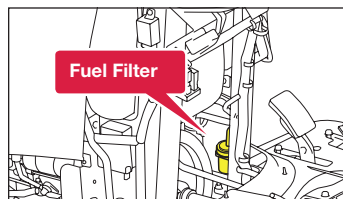
Service interval:

Check after the first 50 hours, replace every 500 hours

Genuine part:
SAE90 (1 qt)



4. Fuel Filter



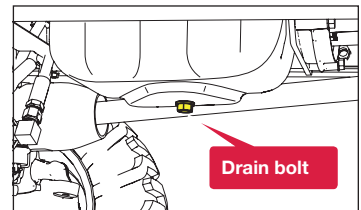
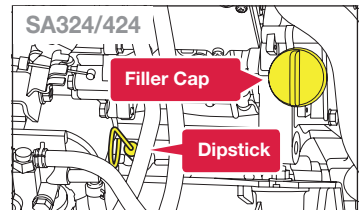
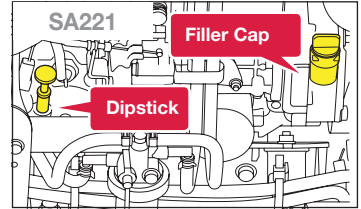
Service interval:

Replace every 500 hours, or if necessary.

Genuine part:
129052-55630 FILTER, FUEL

5. Engine Oil

(SA221: 3.1 QT. / 2.9 L)
(SA324/424: 3.6 QT. / 3.4 L)



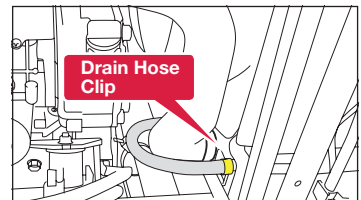
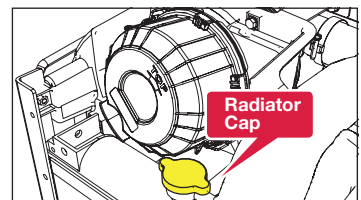
Service interval:

Replace after the first 50 hours and 200 hours, then every 200 hours

Genuine part:
41540G
(1 gal, SAE15W40)



6. Coolant (3.0 QT. / 2.8 L)



Service interval:

Replace every 2 years or 1000 hours

Genuine part:
YG30R (1 gal)



Your Yanmar Dealer

This love of the land and a passion for the environment has guided Yanmar for more than 100 years. Our story began with one simple and powerful tenet: "To conserve fuel is to serve mankind."

Yanmar dealers carry on this tradition. For details about Yanmar tractors, genuine parts and service, contact your local YANMAR dealer.

Maintenance kit for SA221, SA324, SA424

Parts code: KIT-SA001

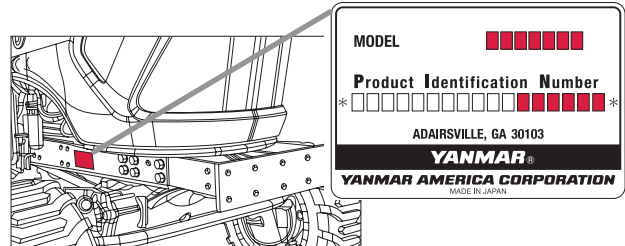
Engine oil 15W40 (4 X 1qt), Engine oil filter, Water separator element, Water separator O-ring, Air cleaner, Transmission oil filter, Line filter.



Service Your Tractor

Your Yanmar tractor dealer is committed to provide reliable and quality services to the tractor. Through the preceding services, the full performance potential of the tractor can be realized. When ordering a part or component, always provide the serial numbers of your tractor to your local YANMAR dealer.

READ
OPERATION
MANUAL



Additional Maintenance Items

Items	Service Intervals	Genuine Part	Reference
Front Grille Screen Radiator Cooling Fins	Clean: Daily		READ OPERATION MANUAL PAGE 14-7 TO PAGE 14-8
Battery and Fuses	Replace: If necessary.	1A8160-51500, BATTERY ASSY, 526RMF 198535-52110, FUSE, 5A 198535-52120, FUSE, 10A 198535-52130, FUSE, 15A 1A7450-52180, FUSE, 25A 1A7000-52820, FUSE, SLOW BLOW 60A 198153-51700, FUSE, SLOW BLOW 80A	READ OPERATION MANUAL PAGE 15-1 TO PAGE 15-5
Radiator Hoses, Air Intake Hoses, Power Steering Line, Hydraulic Hoses, Fuel Lines	Check: Daily Replace: Every 2 years or if necessary.	For replacement, contact local YANMAR dealer for technical assistance.	READ OPERATION MANUAL PAGE 14-6 PAGE 14-9 TO PAGE 14-10 PAGE 14-13
Brake Pedal	Check free play daily to make sure it is within 2.9±0.1 in (73±3 mm)	For adjustment, contact local YANMAR dealer for technical assistance.	READ OPERATION MANUAL PAGE 14-13 TO PAGE 14-14

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