

# **G18 Engine**

## **Safety, Operation, Maintenance & Parts Manual**

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**LT25/LT27**

**rev. E1.00 - E3.05**

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**Safety is our #1 concern!** Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

*January 2004*

*Form #1050*

## California

### Proposition 65 Warning



**WARNING:** Breathing gas/diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Always start and operate the engine in a well-ventilated area.  
If in an enclosed area, vent the exhaust to the outside.  
Do not modify or tamper with the exhaust system.  
Do not idle the engine except as necessary.

For more information go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).



**WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

For more information go to [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood).

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**Indianapolis, Indiana 46214**

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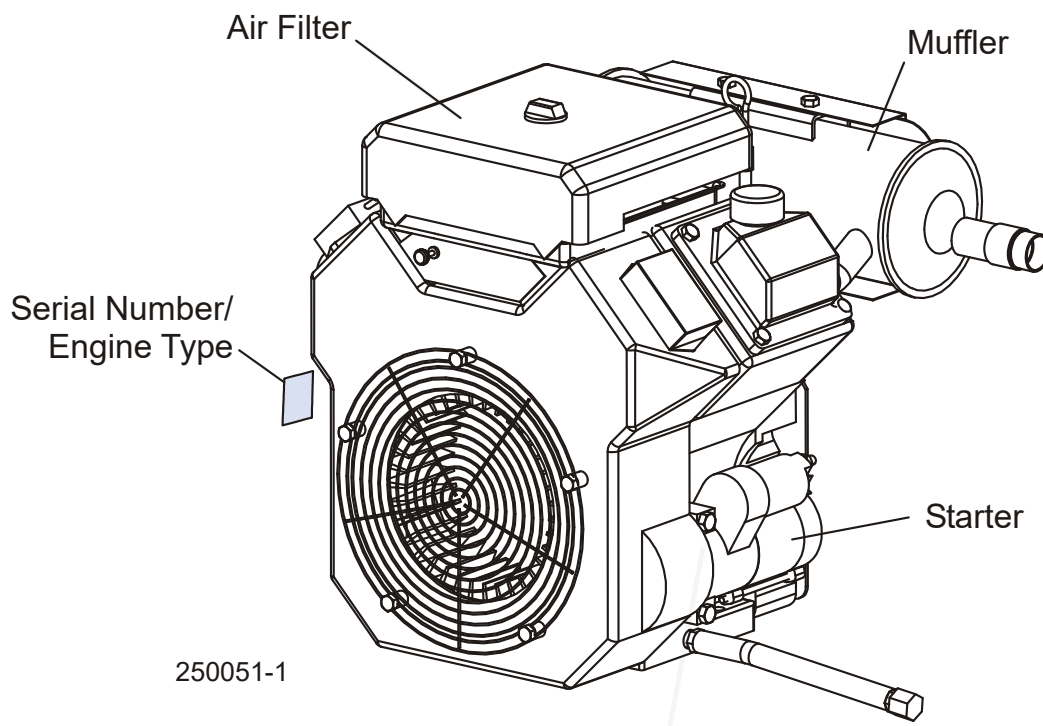
## SECTION 1 ABOUT THIS MANUAL

This manual is provided as a supplement to the equipment manufacturer's manuals. This manual provides information specific to the use of this equipment on the Wood-Mizer® sawmill. Refer to the sawmill operator's manual and manufacturer's manual before attempting to operate this equipment.



**IMPORTANT!** Read the sawmill operator's manual and engine manufacturer's manual for instructions and safety precautions before operating this equipment.

The information and instructions given in this manual do not amend or extend the limited warranties for the equipment given at the time of purchase.



## SECTION 1 OPERATION

### 1.1 Starting The Engine



**DANGER!** Always be sure the blade is disengaged and clear the path of the blade before starting the engine. Failure to do so will result in serious injury or death.



**DANGER!** Operate your engine/machine only in well ventilated areas. Exhaust gases can cause nausea, delirium and potentially death unless adequate ventilation is present.



**DANGER!** Never operate an engine with a fuel or oil leak. The leaking fuel or oil could potentially come in contact with hot surfaces and ignite into flames.



**WARNING!** Do not operate engine without proper and operational spark arrester/muffler. Sparks emitted from the engine exhaust could ignite surrounding materials, causing serious injury or death.



**CAUTION!** EPA Compliant Gas Tanks Only: Always relieve all fuel pressure inside the tank prior to filling or connecting fuel fittings. Failure to do so may result in fuel spillage.



**CAUTION!** EPA Compliant Gas Tanks Only: Disconnect the fuel tank when not in use, or engine flooding or fuel spillage may result.

1. Close the engine choke by moving the choke lever to the start position.
2. Turn the key switch to the START position and release. Release the key switch to the RUN position after the engine starts.
3. When the engine starts, slowly open the choke all the way by moving the choke lever to the off position.

#### ENGINE SHUTOFF

1. Disengage the clutch handle to stop the blade if necessary.
2. Run the engine for 15 seconds with no load, then turn the key switch to the OFF position.

## SECTION 2 MAINTENANCE

### 2.1 Maintenance

Refer to the manufacturer's manual for maintenance intervals and procedures unless otherwise instructed in this manual. Follow the manufacturer's recommendations for dusty conditions.



**IMPORTANT!** This manual only provides information about additional procedures or procedures to be performed at different time intervals than found in the manufacturer's manuals. Refer to the manufacturer's manual for complete maintenance instructions.



**WARNING!** Clean sawdust from all guards, vents, control boxes, or any area where sawdust may gather **after every shift**. Failure to do so may result in fire, causing death or serious injury.



### 2.2 Safety

Use caution when performing maintenance or service to the engine.



**DANGER!** Always be aware of and take proper protective measures against rotating shafts, pulleys, fans, etc. Always stay a safe distance from rotating members and make sure that loose clothing or long hair does not engage rotating members resulting in possible injury.



**DANGER!** Engine components can become very hot during operation. Avoid contact with any part of a hot engine. The exhaust components of your engine are especially hot during and following operation. Contact with hot engine components can cause serious burns. Therefore, never touch or perform service functions on a hot engine. Allow the engine to cool sufficiently before beginning any service function.



**WARNING!** Remove the blade before performing any engine service. Failure to do so may result in serious injury.



**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.



**This symbol** identifies the interval (hours of operation) at which each maintenance procedure should be performed. "AR" signifies maintenance procedures which should be performed as required.

## 2.3 Cooling System



Wash the engine or brush off sawdust and debris every 50 hours of operation. Clean the grass screen, cooling fins, and external surfaces. Remove any dust, dirt or oil. See engine manual for further instructions.

## 2.4 Air Filter & Pre-Cleaner



**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.



Service the pre-cleaner every four hours of operation. Service by gently shaking excess sawdust and debris from the foam piece.



Clean the air filter (air cleaner element) and pre-cleaner (element wrapper) every eight hours of operation. See the engine manual for further instructions.



Replace the air filter (cleaner) every 200 hours of operation.




Replace the pre-cleaner (element wrapper) every 2000 hours of operation.


## 2.5 Fuel Filter




Replace the fuel filter every 100 hours of operation or as required for engine performance.


## 2.6 Battery

 Check the battery electrolyte level every 50 hours of operation. See manufacturer's manual for instructions.

 **DANGER!** Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always wear safety goggles and a face shield when working near batteries. Failure to do so will cause serious injury.<sup>1</sup>

 **WARNING!** Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

## 2.7 RPM Adjustments

 **WARNING!** Remove the blade before performing any engine service. Failure to do so may result in serious injury.

 Check the RPM with a tachometer every 200 hours of operation.

See Table 2-1.

Engine	High End RPM	Low End RPM
G18	3750	1800

TABLE 2-1

Before checking the RPM, make sure belt and brake strap tensions are correct (See Sawmill Maintenance). Also check oil, fuel, and coolant levels.

Make sure the throttle cable does not affect the engine RPM when the clutch handle is disengaged. Make sure the cable is not bent or kinked.

1. Start the engine to measure the low-end RPM.
2. Refer to the engine manual to adjust the low-end RPM.


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1. Battery Council International, copyright 1987



3. Engage the clutch handle to throttle the engine and measure the high-end RPM. The high-end RPM is factory-set at 3750. Readjust the throttle cable if necessary to increase or reduce the high-end engine speed.

## 2.8 Miscellaneous Maintenance

 Inspect the spark plugs every 100 hours of operation. Remove any deposits and adjust gap if necessary. See engine manual for further information.

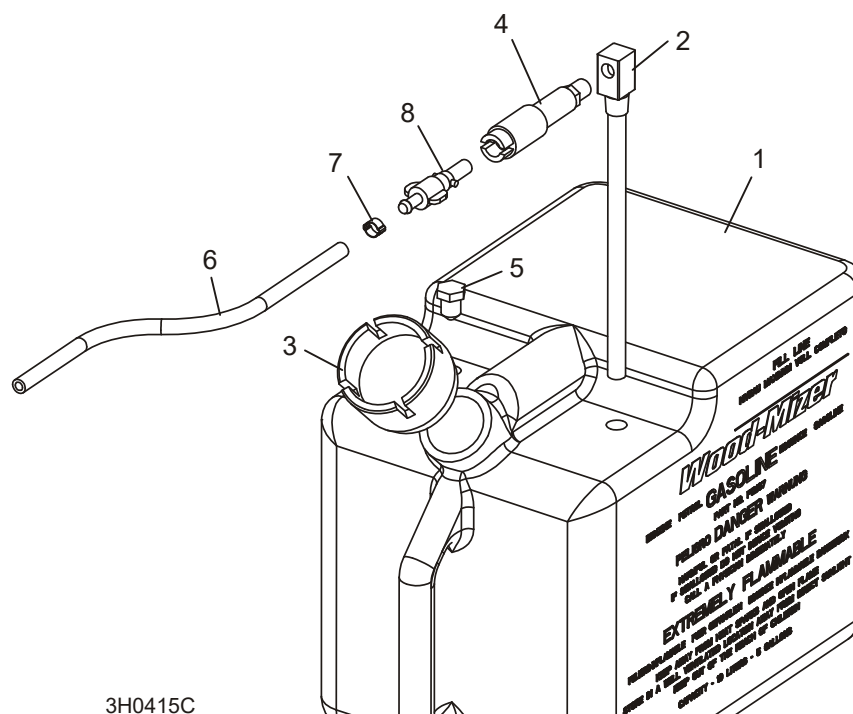
Review the manufacturer's engine manual for maintenance intervals.

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## 3 Replacement Parts Fuel Tank

### SECTION 3 REPLACEMENT PARTS

#### 3.1 Fuel Tank



3H0415C

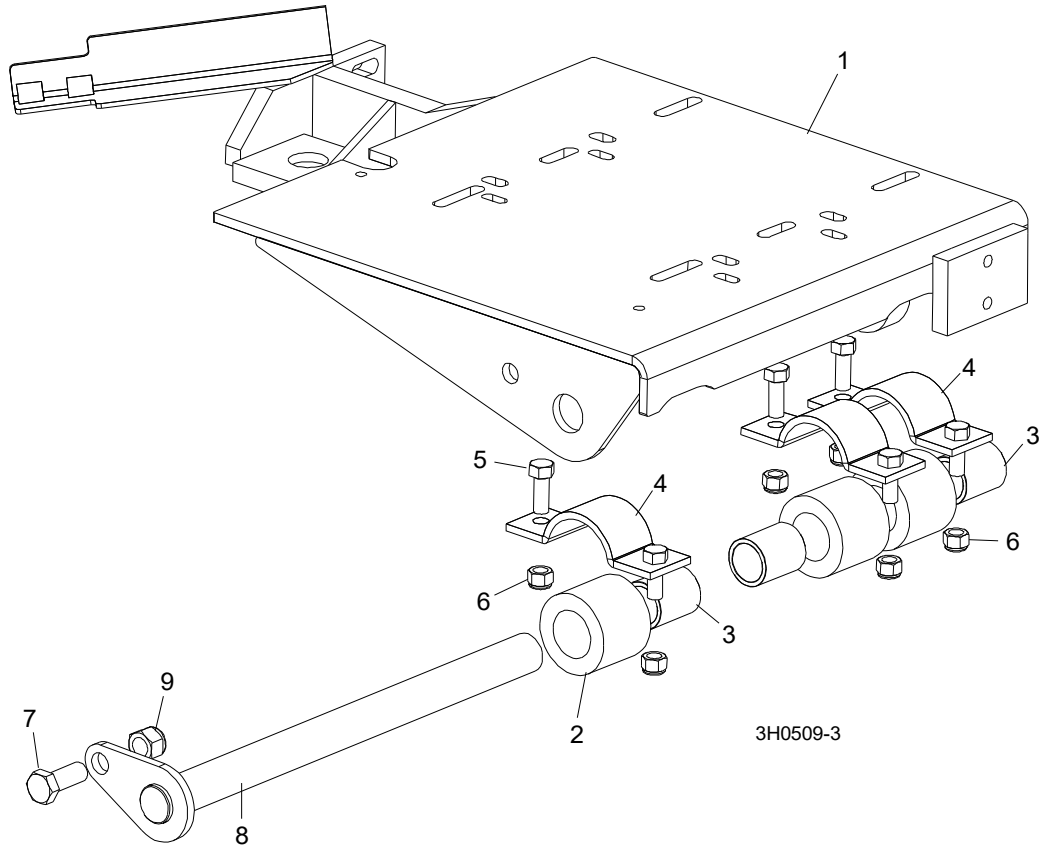
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	<b>TANK ASSEMBLY, 5-GALLON RED GASOLINE</b>	A12285 <sup>1</sup>	1	
1	Tank, 5-Gallon Red Fuel	P12167	1	◆
2	Pickup, 9" Fuel	P12172	1	
3	Cap, 3 or 5-Gallon Fuel Tank	P09683	1	
4	Fitting, 1/4" NPT Plastic Female Disconnect	P12175	1	
5	Fitting, 3/8" NPT Hex Plug	P10367 <sup>2</sup>	1	
6	<b>HOSE, 1/4" ID FUEL</b>	P642	6.5 Ft	
7	<b>CLAMP, 7/32 - 1/2 HOSE</b>	P649	2	
8	<b>FITTING, 1/4" NPT PLASTIC MALE DISCONNECT</b>	P12176 <sup>3</sup>	1	

<sup>1</sup> 5 gallon gas can assemblies are available only for customers with sawmills and edgers manufactured prior to 2010. Customers with sawmills and edgers manufactured in 2010 and later need to use new EPA approved 3 or 6 gallon gas can assemblies.

<sup>2</sup> Plug fitting P10367 added 11/03. Hole added to fuel tank to accommodate return line for fuel injected engines.

<sup>3</sup> Replacement requires qty. 1 hose clamp (P649).

### 3.2 Engine Mount Assembly

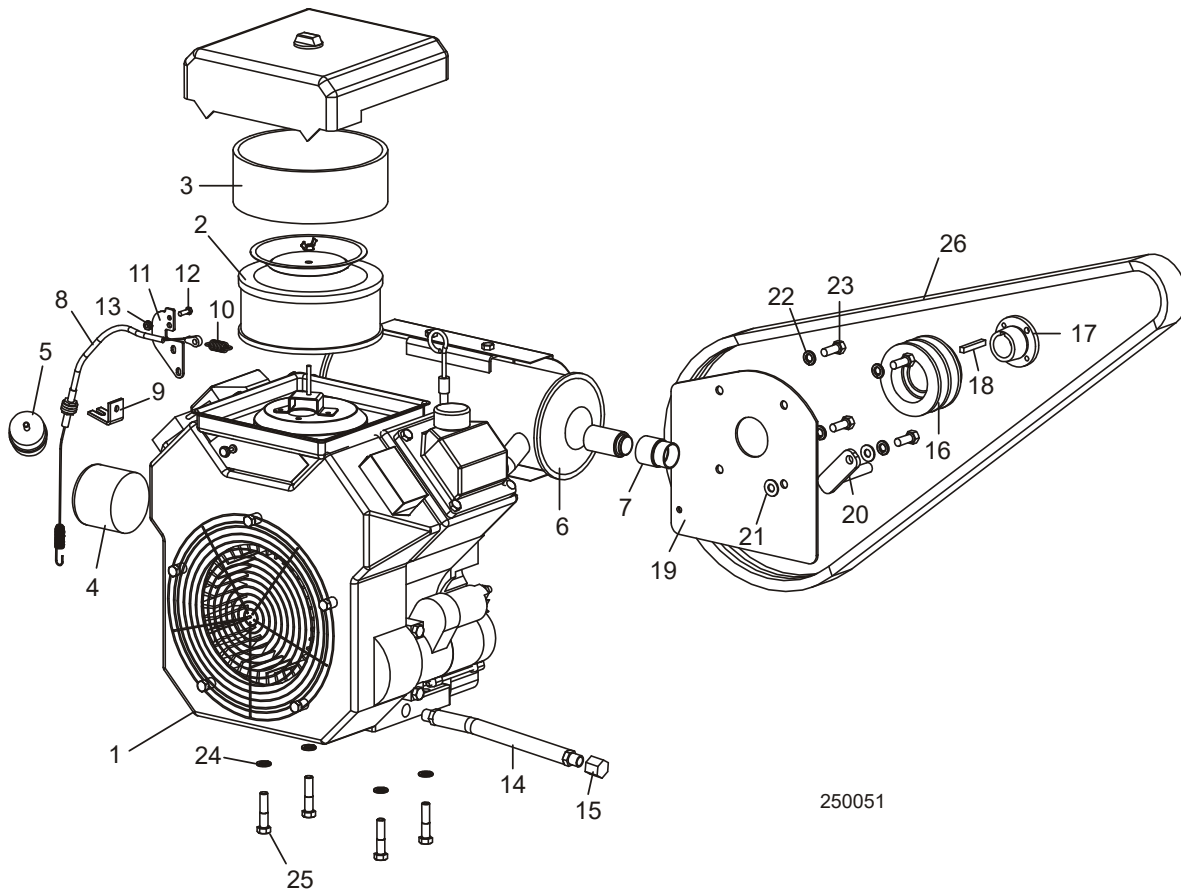


REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	<b>MOUNT KIT, KOHLER ENGINE</b>	016319	1	
1	Mount Weldment, Kohler Engine	014514	1	◆
	<b>BUSHING ASSEMBLY, MOTOR MOUNT</b>	016380	3	
2	Bushing, 2" OD x 2"	016378	1	◆
3	Bearing, 1" x 1 1/4" x 2"	016379	1	◆
4	<b>CLAMP WELDMENT , MOTOR MOUNT PIVOT BUSHING</b>	014540	3	
5	<b>BOLT, 3/8-16 X 1" HEX HEAD</b>	F05007-7	3	
6	<b>NUT, 3/8-16 HEX NYLON LOCK</b>	F05010-10	6	
7	<b>BOLT, 1/2-13 X 1 1/4" HEX HEAD GRADE 5</b>	F05008-37	1	
8	<b>PIN WELDMENT, ENGINE MOUNT PIVOT</b>	014154	1	
9	<b>NUT, 1/2-13 NYLON LOCK</b>	F05010-8	1	

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## 3 Replacement Parts Engine Assembly

### 3.3 Engine Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	<b>COVER, ENGINE</b>	P12393	1	
	<b>ENGINE ASSEMBLY, 18HP KOHLER</b>	017626	1	
1	Engine, 18HP Kohler #PA62590	016899	1	◆
2	Filter, Kohler Air #47-083-03	006907	1	
3	Pre Cleaner, Kohler #24-083-02	006931	1	
	Plug, RC12YC Kohler Spark #12-132-02	P12757	2	
4	Filter, Kohler Oil #52-050-02	014717	1	
5	Filter, Kohler Fuel #24-050-13	P12758 <sup>1</sup>	1	
	Pump, Kohler Fuel #24-393-16S	048391	1	
6	Muffler, Kohler #		1	
7	Spark Arrestor, Kohler #			
	Switch, Ignition G18/25	061150	1	
8	Cable, 18" Throttle	P12313	1	
	Spring, Throttle	016033	1	

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## Replacement Parts Engine Assembly

### 3

9	Bracket, Throttle Cable Mount	S12312	1	
10	Spring, .5" x .08" x 1 3/8" Extension	015952	1	
11	Bracket, G25 Throttle	015964	1	
12	Bolt, #10-24 x 5/8" Hex Head	F05004-18	1	
13	Nut, #10-24 Self-Locking	F05010-14	1	
14	Hose, 7" Oil Drain	P10082	1	
15	Cap, Oil Drain 3/8" Pipe	P04332	1	
	Oil, 10W30 Type CD	L04869-1	.5 Gal	◆
16	Pulley, 2BK36H Engine	015973	1	
17	Bushing, 1 1/8" Split Taper	P04306	1	
18	Key, 1/4" x 1/4" x 1 11/16"	S04124	1	
19	Plate, G20 Rear Engine Guard	016420	1	
20	Bracket Weldment, Drive Belt Support Painted	015963	1	
21	Washer, 3/8" SAE Flat	F05011-3	2	
22	Washer, 3/8" Split Lock	F05011-4	4	
23	Bolt, 3/8-16 x 1" Hex Head	F05007-7	4	
	Switch Kit, Kohler Kit	017625	1	
	Decal, Kohler Key Switch	017639	1	
	<b>HARNES ASSEMBLY, BATTERY TO ENGINE</b>	024718	1	
24	<b>WASHER, 3/8" SPLIT LOCK</b>	F05011-4	4	
25	<b>BOLT, 3/8-16 X 1 3/4" HEX HEAD</b>	F05007-119	4	
26	<b>BELT, 2BX71 DRIVE</b>	036163 <sup>2</sup>	1	

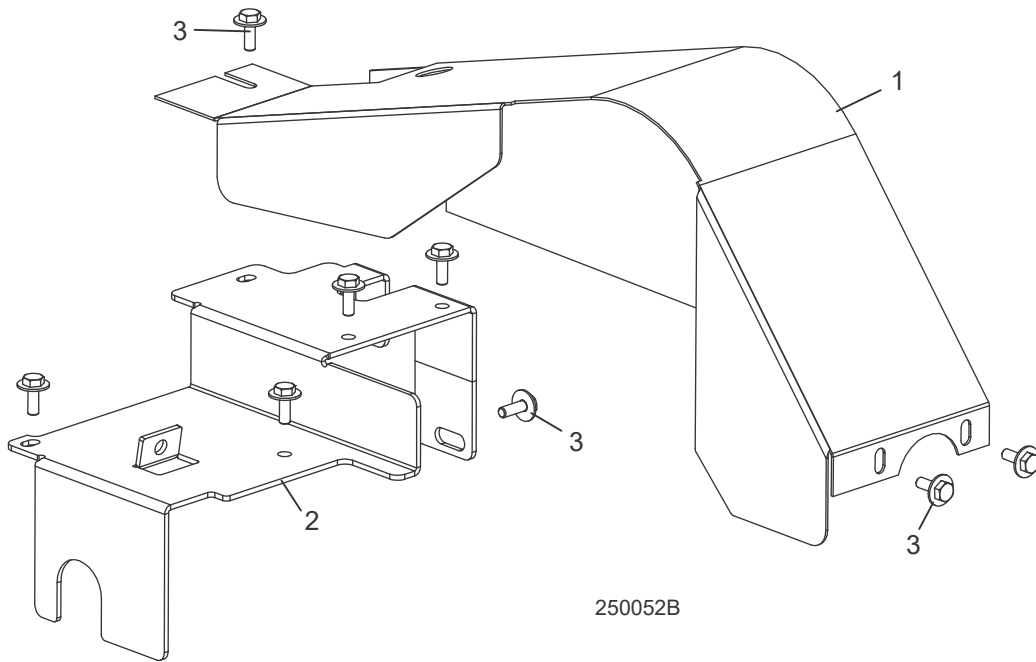
<sup>1</sup> Kohler #24-050-13 9-12 micron filter replaces #240-050-10 8-10 micron filter originally supplied.

<sup>2</sup> 036163 Kevlar 2BXF71 belt replaces P12949 2BX71 belt supplied prior to 9/03. Kevlar belt reduces stretch and provides greater range of adjustment.

# 3 Replacement Parts

## Engine Pulley Guards

### 3.4 Engine Pulley Guards



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	GUARD WELDMENT, KOHLER ENGINE PULLEY	015343	1
2	GUARD, G20/G25 SIDE ENGINE PULLEY	015962	1
3	BOLT, 1/4-20 X 3/4" HEX HEAD WITH CONICAL WASHER	F05005-134	8

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