

G38 Engine

Safety, Operation, Maintenance & Parts Manual

LX250

rev. A2.02



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

Form #2377

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**.



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**.

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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 2 OPERATION

2.1 Starting The Engine

MOTOR CONTROL LIGHTS (SEE FIG. 2-1.)



Alternator Charge Indicator: Lights if the alternator is not charging the battery.



Key Switch Indicator: Lights when the key is in either the on or accessory (1 or 3) position.

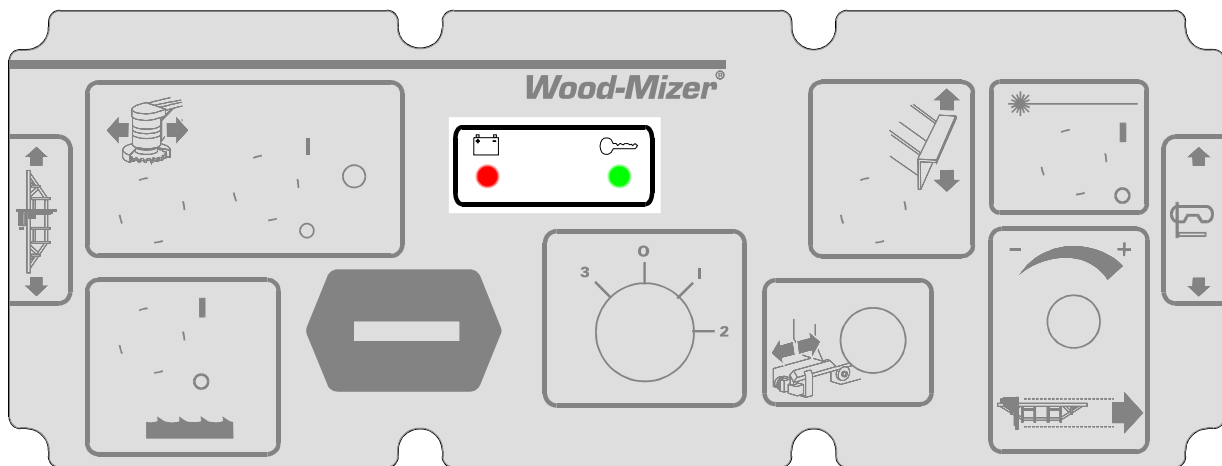


FIG. 2-1

MOTOR START



WARNING! Always be sure the blade is disengaged and all persons are out of the path of the blade before starting the motor. Failure to do so will result in serious injury.

Ensure the power feed switch is in the neutral position before turning the key switch to the on (1) or accessory (3) position. This prevents accidental carriage movement.

Turn the key switch to the start (2) position and release.

For more information, see the engine manufacturer's operation manual.

MOTOR SHUTOFF

Turn the key switch to the off (0) position.

SECTION 3 MAINTENANCE

3.1 Maintenance Section Safety

Use caution when performing maintenance or service to the engine. 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.



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.



WARNING! Keep a safe distance from rotating members and ensure that loose clothing or long hair does not engage rotating members. Failure to follow this may result in serious injury or death.

WARNING! Remove the blade before performing any engine service. Failure to follow this may result in serious injury or death.

WARNING! Do not touch or perform service functions on a hot engine; allow the engine to cool sufficiently before beginning any service function. Failure to follow this may result in serious injury.

WARNING! Wear proper and necessary safety equipment when performing service functions. Failure to follow this may result in serious injury.

NOTICE: Refer to the manufacturer's manual for maintenance intervals and procedures unless otherwise instructed in this manual.

NOTICE: Follow the manufacturer's recommendations for service while operating in dusty conditions.

NOTICE: 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.

3.2 Cooling System

EVERY 50 HOURS OF OPERATION:

Wash the engine or brush off sawdust and debris.

Clean the debris screen, cooling fins, and external surfaces.

Remove any dust, dirt, or oil.

See engine manual for further instructions.

3.3 Fuel Filter

Replace the fuel filter every **100 HOURS OF OPERATION** or as required for engine performance.

3.4 Air Cleaner

Replace the outer air cleaner cartridge if engine performance indicates a new cartridge is necessary.

Replace the outer air cleaner cartridge and check the inner cartridge every **250 HOURS OF NORMAL OPERATION** or (more often if operating the sawmill in dirty conditions).



CAUTION! Do not clean elements with water or compressed air. Do not handle the inner element unless it is to be changed. Handle new elements carefully. Contact with the element could cause damage and prevent the filter from operating properly.

Replace the inner air cleaner cartridge every **1200 HOURS OF NORMAL OPERATION** (more often if operating the sawmill in dirty conditions).

3.5 Fuel Filter

Replace the fuel filter every **100 HOURS OF OPERATION** or as required for engine performance.

3.6 Miscellaneous Maintenance

Clean and inspect the spark arrester every **50 HOURS OF OPERATION**. Replace if damaged.

3.7 RPM Adjustments

Check the RPM with a tachometer every **200 HOURS OF OPERATION**.

Before starting, check:

- drive belt tension
- throttle cable is not bent or kinked
- oil, fuel, and coolant levels.

See Table 3-1.

Engine	High End RPM	Low End RPM
G38	3600	1500

TABLE 3-1

Ensure the and does not affect the engine RPM when the throttle solenoid is disengaged.

NOTE: It is important that the above components are aligned. Proper alignment allows any slack in the cable (when engine is idling) to slide down into the cable spring. This maintains free operation of the cable and prevents the cable from kinking. Make sure the shoulder bolt does not rub against the crankcase vent tube.

1. Start the engine to measure the low-end RPM.
2. Refer to the engine manual to adjust the low-end RPM.
3. Engage the throttle solenoid to throttle the engine and measure the high-end RPM. The high-end RPM is factory-set at 3600. Readjust the throttle cable if necessary to increase or reduce the high-end engine speed.

The throttle cable should be tensioned just enough so that the engine revs as soon as the clutch/brake handle is engaged. NOTE: A properly adjusted throttle will extend the cable spring 1/4" to 3/8" (6.4 - 9.5 mm) when running and have a slight amount of slack in the cable when idling.

3.8 Alternator Belt

The belt tension should be checked:

- After the first 100 hours of operation,
- If the battery is not charging properly, or
- If the alternator belt is squealing.

If the battery continues to not charge properly, or the belt continues to squeal after the initial belt adjustment, replace the belt.

1. Lower the saw head to gain easy access to the alternator area.
2. Turn the key switch to OFF (0) and remove the key.
3. Remove the alternator drive belt cover.
4. Check the belt tension with the Tension Tester (part number 016309) supplied with your Wood-Mizer.
 - 1). Zero out the pounds indicator by sliding the small "O" ring against the yellow flange.
 - 2). Set the deflection indicator to the deflection depth.
 - 3). Place the gauge on the belt at the midpoint between the two pulleys.

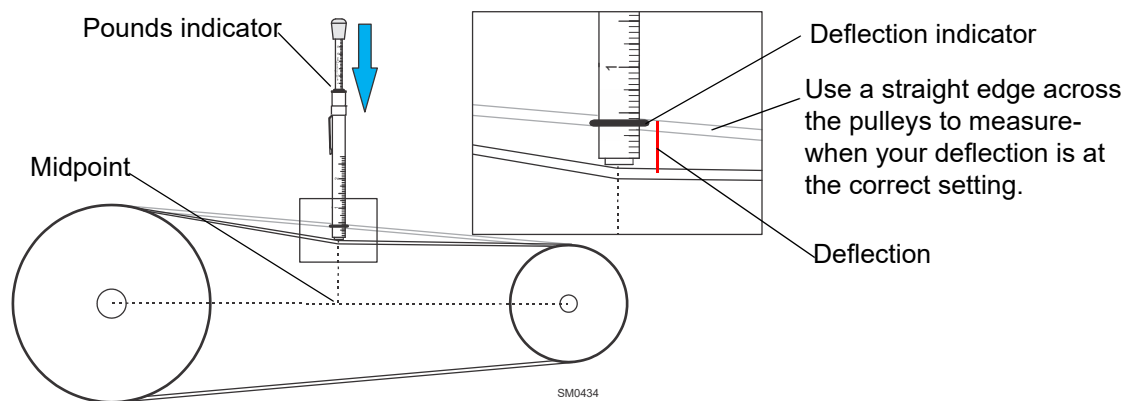


FIG. 3-0

- 4). Press down on the rubber boot while the bottom of the gauge is against the belt.

5. If the belt tension is less than 3/16" with 9 lb. of deflection, tighten the belt as described below:
 - 1). Loosen the alternator mounting and adjustment bolts.
 - 2). Turn the belt tension adjustment bolt clockwise to tighten the belt, counterclockwise to loosen the belt.
 - 3). Tighten the adjustment bolt when the proper belt tension is achieved.

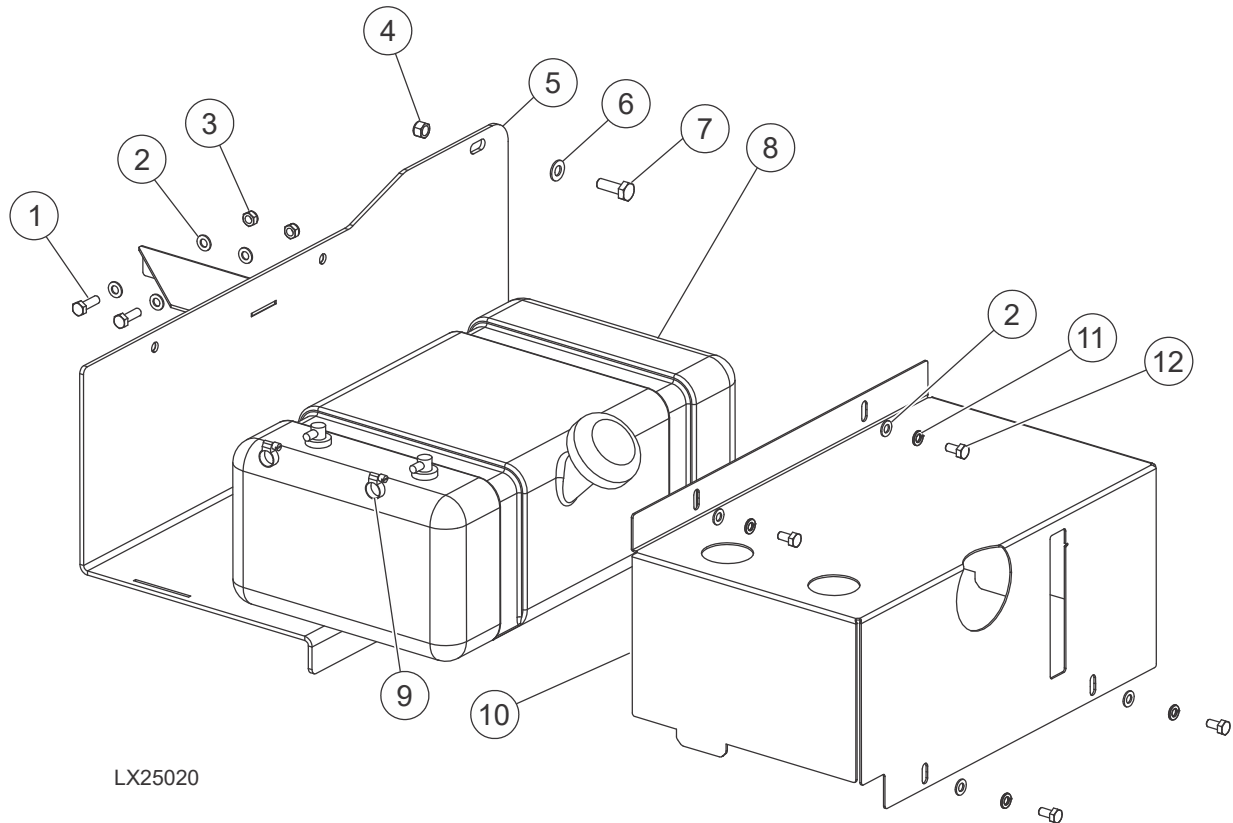


CAUTION! Do not overtighten the alternator belt. Damage to the alternator will occur.

6. Tighten the upper and lower mounting bolts.
7. Replace the belt cover.

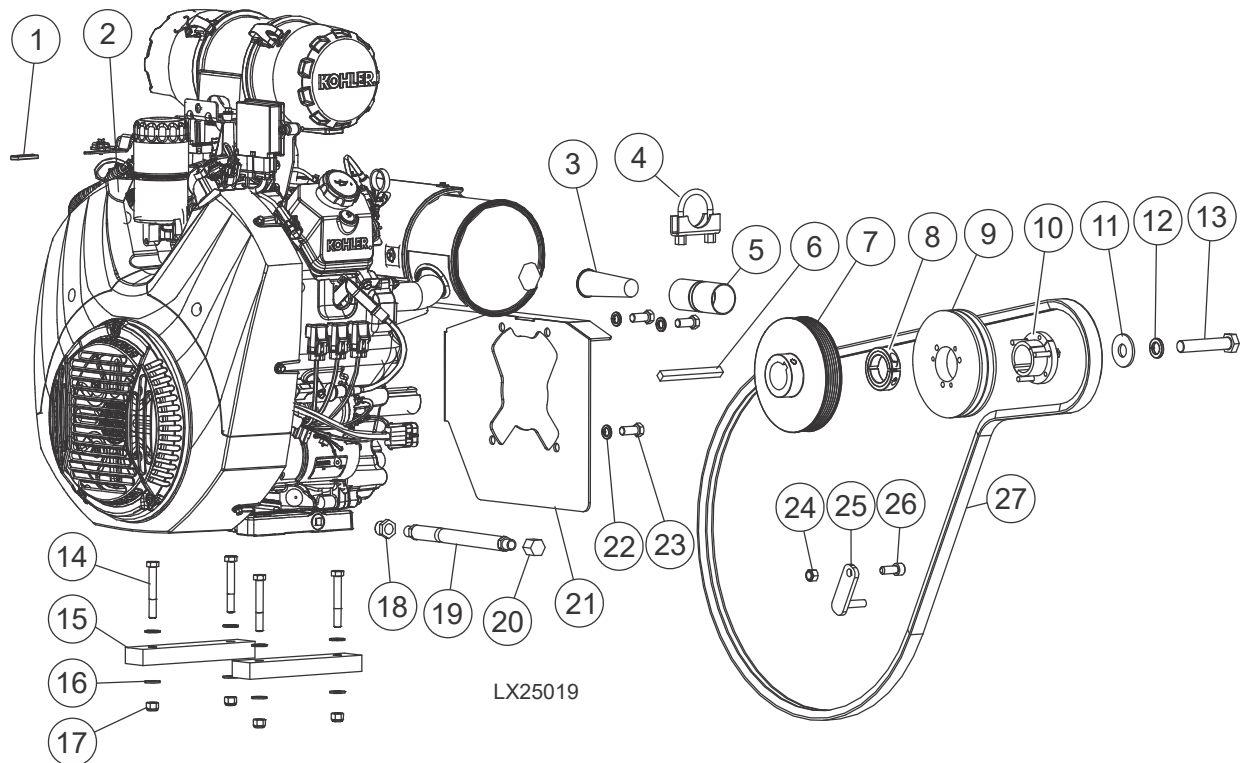
SECTION 4 REPLACEMENT PARTS

4.1 Fuel Tank Assembly



REF	DESCRIPTION (♦ Indicates Parts Available in Assemblies Only)	PART #	QTY.	
	TRAY ASSY, FUEL TANK	117091	1	
1	Bolt, M8x1.25x25mm C/S 8.8 Din 933 HH	F05004-40	2	
2	Washer, M8 Flat	F05026-4	8	
3	Nut, M8-1.25 Hex Nylock	F05010-132	2	
4	Nut, M10-1.50 Hex Nyl Lock	F05004-270	2	
5	Tray Wldmt, Fuel Tank	011480	1	
6	Washer, M10 Flat SAE	F05011-134	2	
7	Bolt, M10-1.5x30 Class 8 HH	F05022-3	2	
8	Tank, 5 Gallon Low Pro EPA Fuel	103878	1	
9	HOSE CLAMP, 7/32IN-5/8IN	P649	2	
10	Cover, Fuel Tank	103867	1	
11	Washer, M8 Split Lock	F05011-45	4	
12	Bolt, M8x1.25x16mm HH	F05004-47	4	
	Hose, Fuel 3/16" EPA 15G CARB	R02423-1	10 ft	
	Hose, Fuel 1/4" EPA 15G CARB	R02423-2	10 ft	

4.2 Engine Assembly



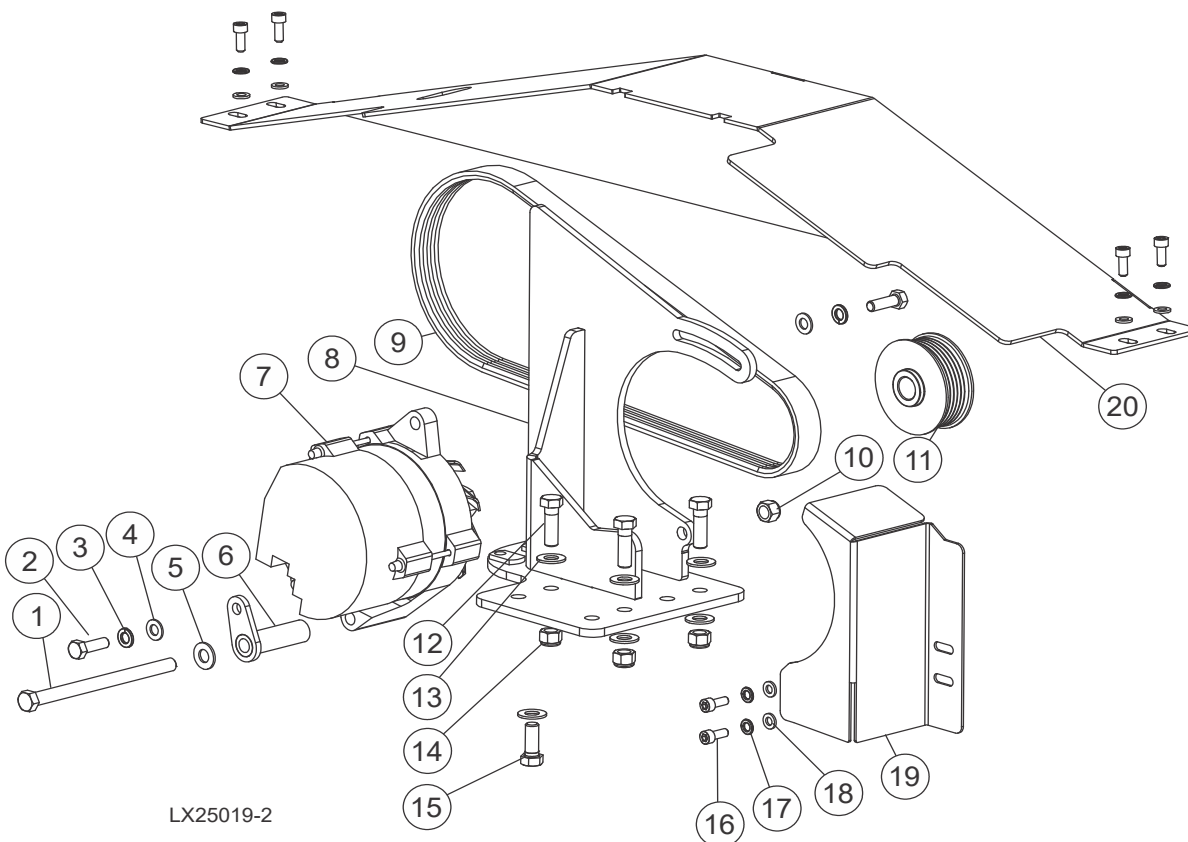
REF	DESCRIPTION (♦ Indicates Parts Available in Assemblies Only)	PART #	QTY.
1	Grip, 1/16x3/8x1 1/2 Black	003229	1
2	Engine, 38HP Kohler EFI Gas	079384	1
	Air Cleaner, Kohler 38HP	N/A	1
	Filter, Kohler Primary Air #25-083-01-S	046553	1
	Filter, Kohler Secondary Air #25-083-04-S	046554	1
	Filter, Kohler Oil #52-050-02-S	014717	1
	Plug, Kohler G38 Spark #62-132-04-S	061003	2
	Filter, Kohler Fuel #24-050-13	P12758	1
	Pump, Fuel #62-559-01S	061156	1
	Muffler	110658	1
3	Spark Arrestor, 1 1/2" Dia	110660	1
4	Clamp, 1 1/2 Muffler	P09900	1
5	Pipe, 1 1/2 Exhaust Connector	110659	1
6	Key, 3/8x3/8x1 7/8 LX250	128067	1
7	Pulley, Engine Alternator	106567	1
8	Collar, 2-1/4OD x 1-7/16ID x 9/16	128035	1
9	Sheave, 3V5.6x2-SH	047742	1

REF	DESCRIPTION (♦ Indicates Parts Available in Assemblies Only)	PART #	QTY.	
10	Bushing, SHx1 7/16	016535	1	
11	Washer, 5/8 Standard Flat	F05011-40	1	
12	Washer, 5/8 Split Lock	F05011-27	1	
13	Bolt, 5/8-18x1 1/2 HH GR5 Zinc	F05009-19	1	
14	Bolt, 3/8-16x2 3/4 HH Gr5	F05007-206	4	
15	Spacer, G38 Engine	011460	2	
16	Washer, 3/8 Flat SAE	F05011-3	8	
17	Nut, 3/8-16 Hex Nyloc	F05010-10	4	
18	Bushing, 1/2 MPTx3/8 FPT Brass	003227	1	
19	Hose, 3/8NPTx9 5/8 Rubber	P10082	1	
20	Cap, 3/8 Pipe Galvanize	P04332	1	
21	Wldmnt, Engine Guard	110943	1	
22	Washer, 7/16 Split Lock	F05011-48	3	
23	Bolt, 7/16-14x1 HH Gr5	F05007-145	3	
24	Nut, M10-1.50 Hex Nyl Lock	F05004-270	1	
25	Support Wldmt, LT15G25 Belt	048237	1	
26	Bolt,M10-1.5 x 25 SHC	F05022-12	1	
27	Belt, 2/3VFL900 Drive	047751	1	
Not shown	Bracket, 1/8 G38 Throttle	003222	1	
	Cable, Throttle 23x26 Spring x Z Hook	011365	1	
	Parts Pak L250G38	061076	1	

4 Replacement Parts

Alternator Assembly

4.3 Alternator Assembly



REF	DESCRIPTION (♦ Indicates Parts Available in Assemblies Only)	PART #	QTY.
1	Bolt, M10-1.5x140 HH FT	F05022-21	1
2	Bolt, M8x1.25x25mm C/S 8.8 Din 933 HH	F05004-40	2
3	Washer, M8 Spring Lock Zinc 100PK	F05011-130	2
4	Washer, M8 Flat	F05026-4	2
5	Washer, M10 Flat SAE	F05011-134	1
6	Brace Wldmt, Alternator	W12761	1
7	Alternator, 105A 12V CS130	050287-1	1
8	Mount Wldmnt, LX250 G38 Alt	011455	1
9	Belt, 6PK0932 Fib	107116	1
10	Nut, M10-1.50 Hex Nyl Lock	F05004-270	1
11	Sheave Alternator, 2 3/4 OD	046402	1
12	Bolt, 3/8-16x1 1/4 FT HH Gr5	F05007-123	3
13	Washer, 3/8 Flat SAE	F05011-3	7
14	Nut, 3/8-16 Hex Nyloc	F05010-10	3
15	Bolt, 3/8-16x1 HH Gr5	F05007-87	1
16	Bolt, M6-1.0x16mm SHCS	F05004-206	6

REF	DESCRIPTION (♦ Indicates Parts Available in Assemblies Only)	PART #	QTY.	
17	Washer, M6 Split Lock	F05026-2	6	
18	Washer, M6 Flat Class 4	F05026-1	6	
19	Plate, LX250 Alt Cover	011510	1	
20	Weldment, Top Belt Cover	011411	1	