

# D42 Engine

## Safety, Operation, Maintenance & Parts Manual

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LT60HD  
LT70HD

rev. A1.00 - A7.00  
rev. A1.00 - A7.00

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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 #1067*

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***Wood-Mizer***

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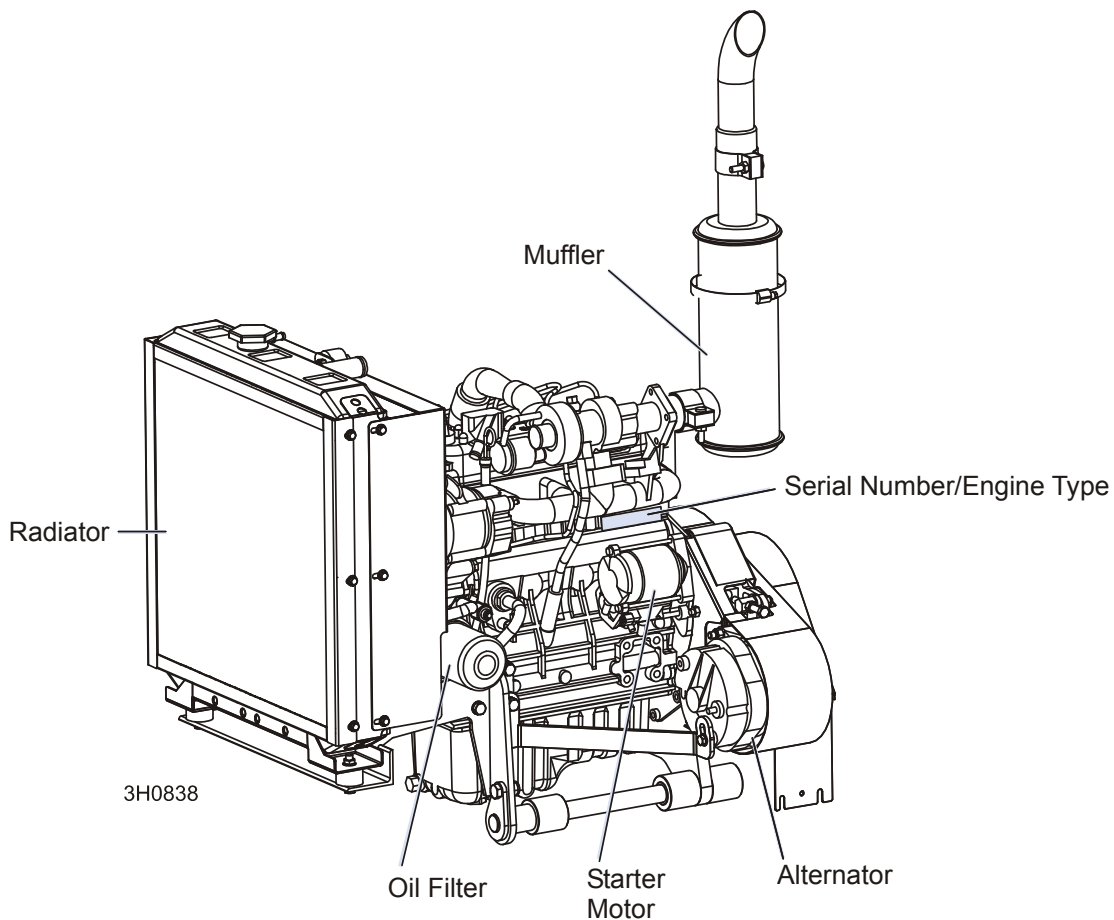
## ABOUT THIS MANUAL

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<sup>®</sup> 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.




### **ENGINE COMPONENTS**

## SECTION 1 OPERATION



### 1.1 Starting The Engine

#### Engine Control Lights



See **Figure 1-1**. The following indicator lights are located on the sawmill control panel.

- 



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


- 



**Engine Temperature Indicator:** Lights up if the engine is overheating. A circuit breaker assembly in the engine harness will shut the engine off if the engine overheats. Turn the key switch off and allow the engine to cool for a period of time before restarting. If the overheating condition persists, stop operating the engine until the condition is corrected. The engine will automatically switch to low idle if an overheating condition occurs.


- 


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

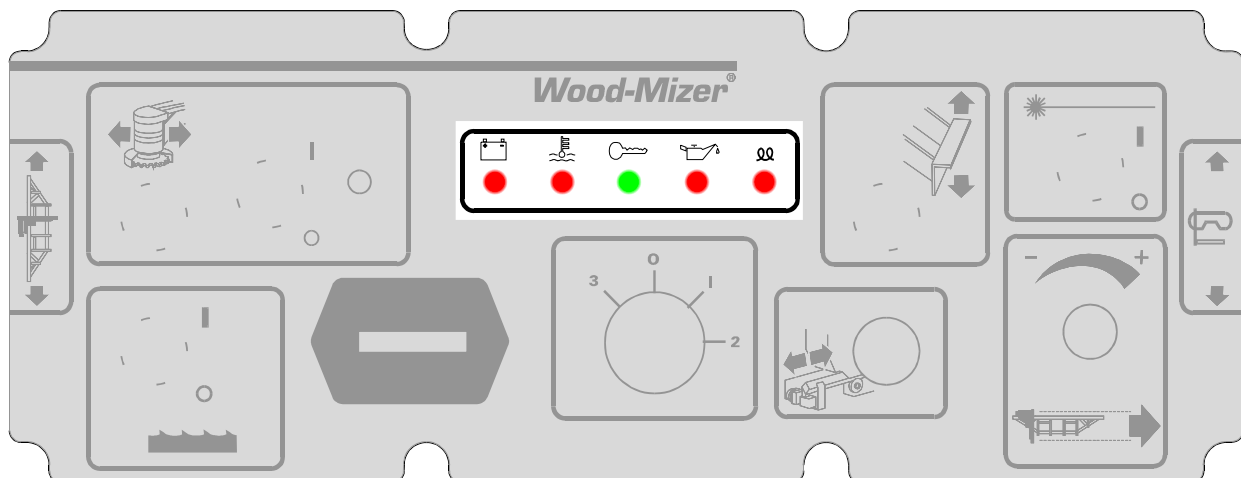

- 

**Oil Indicator:** Lights up if the oil pressure is too low. The engine will automatically switch to low idle if a low oil condition occurs.


- 

**Glow Plug Indicator:** Lights up after the key has been turned to the on (#1) position.





**FIG. 1-1**

See Table 1-1. **IMPORTANT!** The glow plug sensing relay is disconnected to provide manual control of glow plug operation. See the table for recommended glow plug on times.

On Times For Manually Operated Glow Plugs	
Ambient Temperature	Suggested Glow Plug On Time
Less Than 32° F (0° C)	30 Seconds
32 - 60° F (0 -15° C)	25 Seconds
60 - 80° F (15 - 27° C)	15 Seconds
Above 80° F (27° C)	10 Seconds

TABLE 1-1

### Engine Start



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

**DANGER!** Operate your engine/machine only in well ventilated areas. The exhaust gases of your engine 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!** Be sure 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, which may cause serious injury or death.

**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!** Do not crank starter for more than 7 seconds at one time during starting attempts. Allow the starter motor to cool for 2 minutes before cranking the starter again. Damage to the engine may result.

**CAUTION!** Let engine idle for 2 minutes before applying load to prevent engine damage.

1. See the engine manufacturer's manual for lubricating oil recommendations for specific temperature ranges.
2. Use #2 or better quality diesel fuel for above freezing starting. Use a #1 quality diesel fuel for below freezing starting.
3. Turn the key switch on the control panel to the on (#1) position.
4. Wait the recommended glow plug on time ([See Table 1-1.](#))
5. Be sure all persons are clear of the blade and turn the key switch to the start (#2) position and release.

### Engine Shutoff



**CAUTION!** A minimum 2 minute idle time is recommended to allow the battery charge to recover before the engine is shut off.

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

## SECTION 2 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.

### 2.1 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.



## 2.2 Cooling System



Clean the radiator fins every 8 hours of operation. Spray the radiator with water from a hose or compressed air to clean sawdust from the radiator fins. Do not use a pressure sprayer.

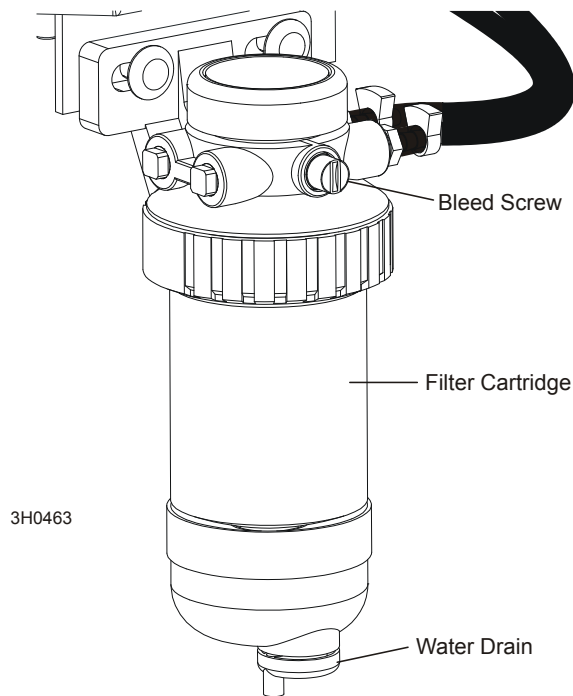


**CAUTION!** Failure to keep the radiator fins clear of sawdust and/or dirt may cause the engine to overheat resulting in damage to the engine.

### 2.3 Fuel Filter

1500

**See Figure 2-1.** Replace the primary fuel filter cartridge every 1500 hours or one year of operation. After replacing the filter cartridge, loosen the air bleed screw and operate the fuel pump bail until fuel begins to flow from the valve and is free of air bubbles. Tighten the bleed screw. Inspect the water separator bowl periodically and drain the bowl as required by turning the drain cap counterclockwise as viewed from the bottom.



**FIG. 2-1**

## 2.4 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.

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1. Battery Council International, copyright 1987

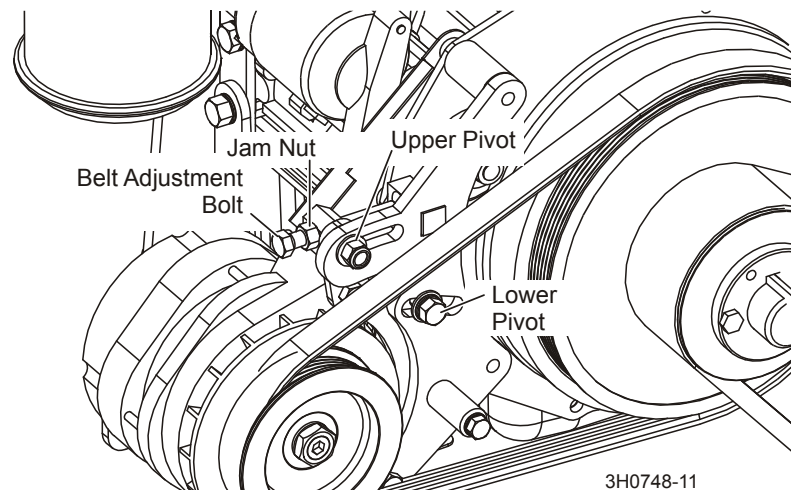
## 2.5 Alternator Belt

AR

The belt tension should be checked after the first 100 hours of operation, when the battery is not charging properly or when 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. Release the blade tension and remove the blade from the sawmill if necessary. Turn the key switch to OFF (0) and remove the key.
2. Remove the drive belt cover and alternator cover.

See Figure 2-2.



**FIG. 2-2**

3. Use a belt tension gauge to measure the belt tension. Place the gauge on the belt at the midpoint between the two pulleys. If the belt tension is less than 3/16" with 9 lb. of deflection, tighten the belt as described below.
4. Loosen the upper pivot, lower pivot and the adjustment bolt jam nut.
5. Turn the belt tension adjustment bolt clockwise to tighten the belt, counterclockwise to loosen the belt. Adjust the bolt until the proper belt tension is achieved.



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

6. After the alternator belt has been tensioned, tighten the adjustment bolt jam nut. Tighten the upper and lower pivots and replace the belt covers.



## 2.6 RPM Adjustments



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

200

Check the RPM with a tachometer after the first 20 hours of operation and every 200 hours thereafter. High-end RPM should be 3200 RPM and low-end RPM should be 1500 RPM.

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

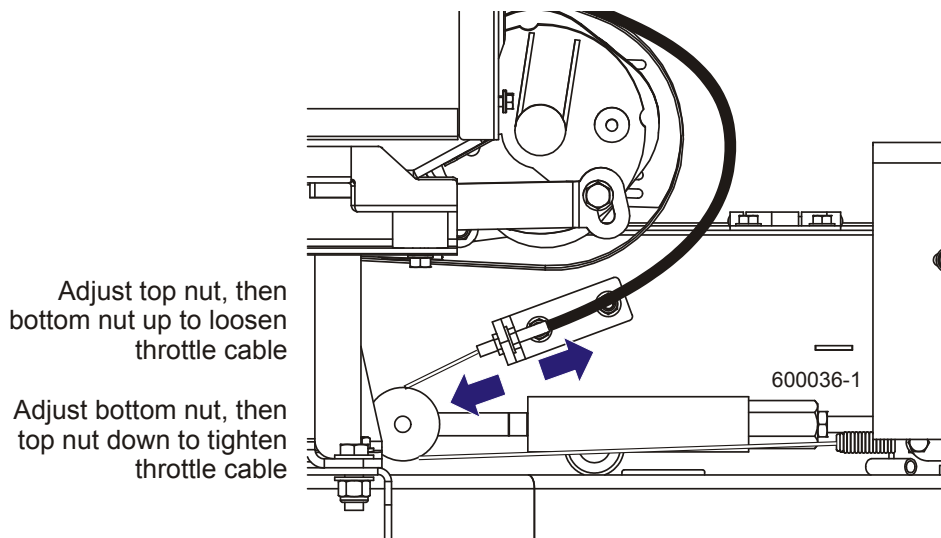
Make sure the throttle cable does not affect the engine RPM when the blade is disengaged. Make sure the cable is not bent or kinked.

1. Use the bottom threaded cable mount to adjust the throttle cable. When the blade is engaged, the throttle spring should extend 1/8" to 1/4". Once the throttle cable is adjusted properly, use the adjustments provided on the engine to adjust the engine RPM (3200[+0, -100] high-end, 1500[±100] idle).



**CAUTION!** Do not extend the throttle spring over 1/4". Excessive tension may cause the throttle cable to fail prematurely.

See Figure 2-3.



**FIG. 2-3**

2. Start the engine to measure the low-end RPM. Let idle for 10 minutes.
3. With the engine at idle, check the low-end RPM. Adjust to 1500. To decrease speed, loosen the idle adjustment screw. To increase speed, tighten the idle adjustment screw.

See Figure 2-4.

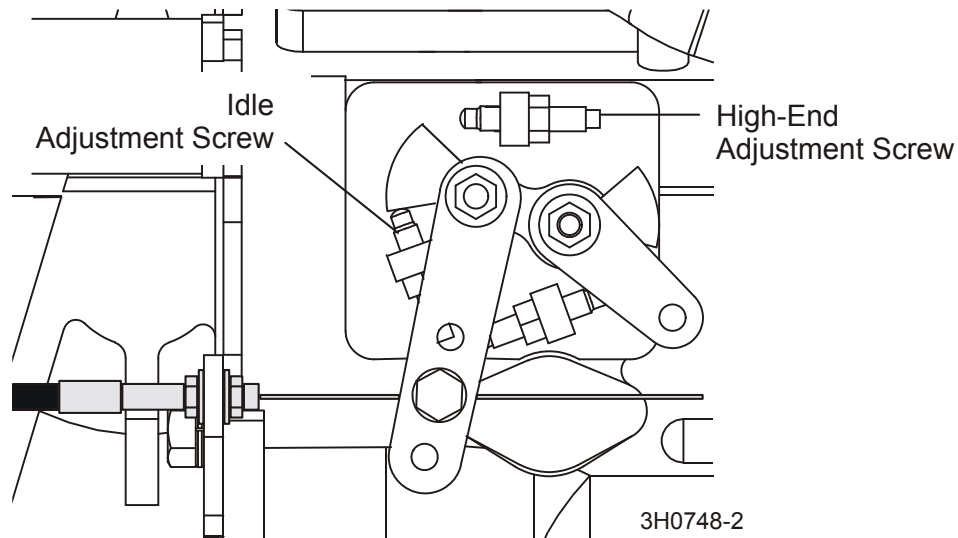


FIG. 2-4

4. Adjust the high-end RPM to 3200. To decrease speed, tighten the high-end adjustment screw. To increase speed, loosen the high-end adjustment screw.

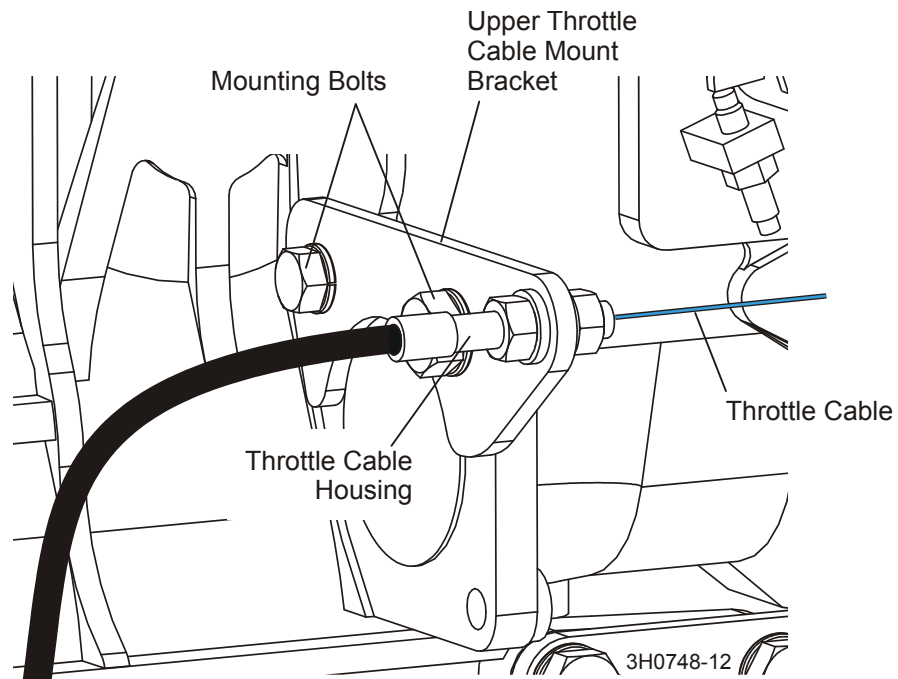


**CAUTION!** Do not adjust the high-end RPM above 3200. Doing so may cause damage to the engine.

5. After the RPM settings are made, shut the engine off.

Tighten the throttle cable by engaging the clutch handle. Check the throttle cable at the upper cable mounting bracket. The cable should be centered in the cable housing. If necessary, loosen the upper bracket mounting bolts and adjust the bracket so the cable housing is centered around the cable. Retighten the upper cable bracket mounting bolts.

See Figure 2-5.



**FIG. 2-5**

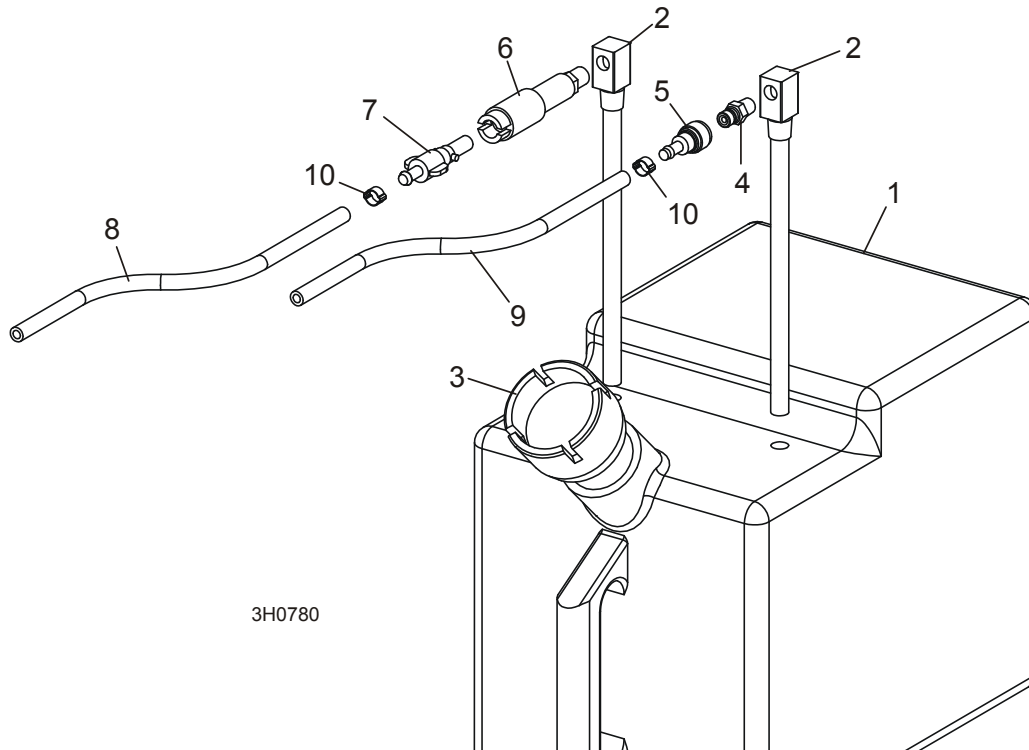


**CAUTION!** Failure to properly center the throttle cable in the cable housing may result in premature cable wear.



## SECTION 3 REPLACEMENT PARTS

### 3.1 Fuel Tank Assembly



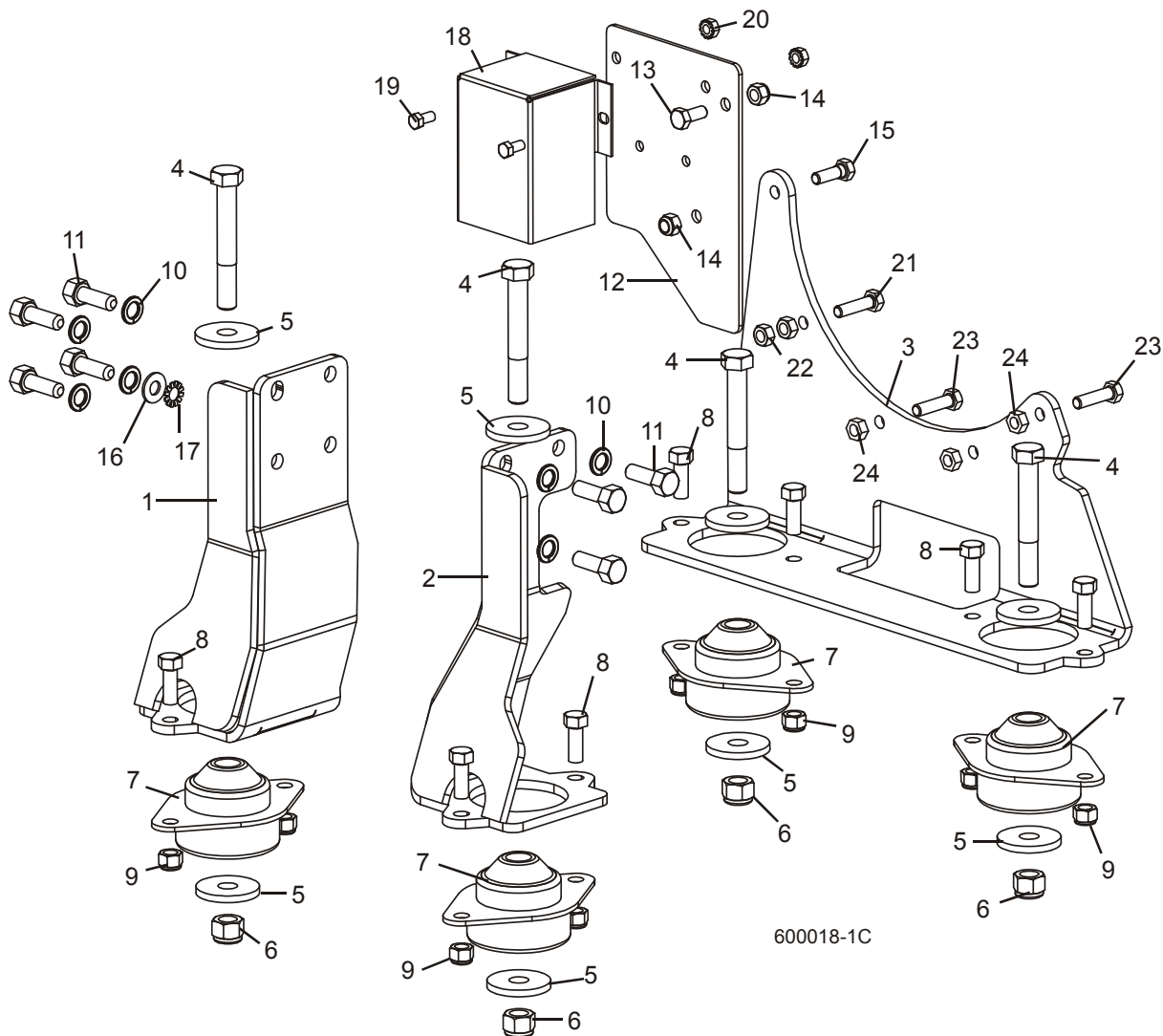
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	<b>TANK ASSEMBLY, 5 GALLON GREEN DIESEL</b>	A12132	1	
1	Tank, 5 Gallon Green Fuel	P12166	1	◆
2	Pickup, 9" Fuel	P12172	2	
3	Cap, 3/5 Gallon Fuel Tank	P09683	1	
4	Fitting, 1/4" NPT Male Quick Disconnect	015583	1	
5	Fitting, Female Quick Disconnect Barb	015582	1	
6	Fitting, 1/4" NPT Plastic Female Disconnect	P12175	1	
7	Fitting, 1/4" Barb Plastic Male Disconnect	P12176	1	
8	<b>HOSE, 1/4" ID FUEL</b>	P642	4 Ft	
9	<b>HOSE, 5/16" ID FUEL</b>	016338	7 Ft.	
10	<b>CLAMP, 11/16" HOSE</b>	P12739	2	
	<b>ADDITIVE, DIESEL FUEL 16OZ BOTTLE</b>	004878 <sup>1</sup>	1	

<sup>1</sup> Stanadyne Performance Formula helps eliminate contaminants and water in fuel, prevents gelling in cold weather, and improves lubrication of fuel system parts. 16 oz. bottle treats 60 gallons of diesel fuel.

# 3 Replacement Parts

## Engine Mount Assembly

### 3.2 Engine Mount Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
	<b>MOUNT KIT, LT60HD/70HD D42 ENGINE RETROFIT</b>	036045 <sup>1</sup>	1
1	Mount Weldment, Kubota Engine Right	036092 <sup>1</sup>	1
2	Mount Weldment, Kubota Engine Left	036093 <sup>1</sup>	1
3	Mount Plate, Kubota Engine Rear	036091 <sup>1</sup>	1
4	Bolt, 1/2-13 x 3 1/2" Hex Head Grade 5	F05008-61 <sup>1</sup>	4
5	Washer, .52" x 1.69"	014632 <sup>2</sup>	8
6	Nut, 1/2-13 Hex Nylon Lock	F05010-8	4
7	Bushing, Vibration Isolator	036095 <sup>1</sup>	4
8	Bolt, 3/8-16 x 1" Hex Head	F05007-7 <sup>1</sup>	8

<b>9</b>	Nut, 3/8-16 Hex Nylon Lock	F05010-10 <sup>1</sup>	8	
	Instruction Sheet, LT60HD/70HD D42 Engine Mount Retrofit	036045-1123	1	
<b>10</b>	<b>WASHER, 10MM SPLIT LOCK</b>	F05011-88	7	
<b>11</b>	<b>BOLT, M10-1.25 X 30MM HEX HEAD FULL THREAD GRADE 8.8</b>	F81003-25	7	
<b>12</b>	<b>PLATE, RELAY MOUNT</b>	015854	1	
<b>13</b>	<b>BOLT, 5/16-18 X 3/4" HEX HEAD FULL THREAD</b>	F05006-5	1	
<b>14</b>	<b>NUT, 5/16-18 HEX NYLON LOCK</b>	F05010-58	2	
<b>15</b>	<b>BOLT, 5/16-18 X 1" HEX HEAD</b>	F05006-1	1	
<b>16</b>	<b>WASHER, 3/8" SAE FLAT</b>	F05011-3	1	
<b>17</b>	<b>WASHER, 3/8" EXTERIOR STAR LOCK</b>	F05011-36	1	
<b>18</b>	<b>BOX, RELAY HOUSING</b>	014199	1	
<b>19</b>	<b>BOLT, 1/4-20 X 1/2" HEX HEAD</b>	F05005-15	2	
<b>20</b>	<b>NUT, 1/4-20 SELF-LOCKING HEX</b>	F05010-9	2	
<b>21</b>	<b>BOLT, 5/16-18 X 1 1/4" HEX HEAD FULL THREAD GRADE 5</b>	F05006-93 <sup>3</sup>	1	
<b>22</b>	<b>NUT, 5/16-18 HEX</b>	F05010-17	2	
<b>23</b>	<b>BOLT, M8-1.25 X 1" HEX HEAD FULL THREAD</b>	F05004-40	3	
<b>24</b>	<b>NUT, M8-1.25 HEX</b>	F05010-162	3	

<sup>1</sup> Mounting brackets 034661, 034662, 034600 and hardware replaced to accommodate isolator bushings (Rev. A1.06). Use kit 036045 to retrofit previous revisions.

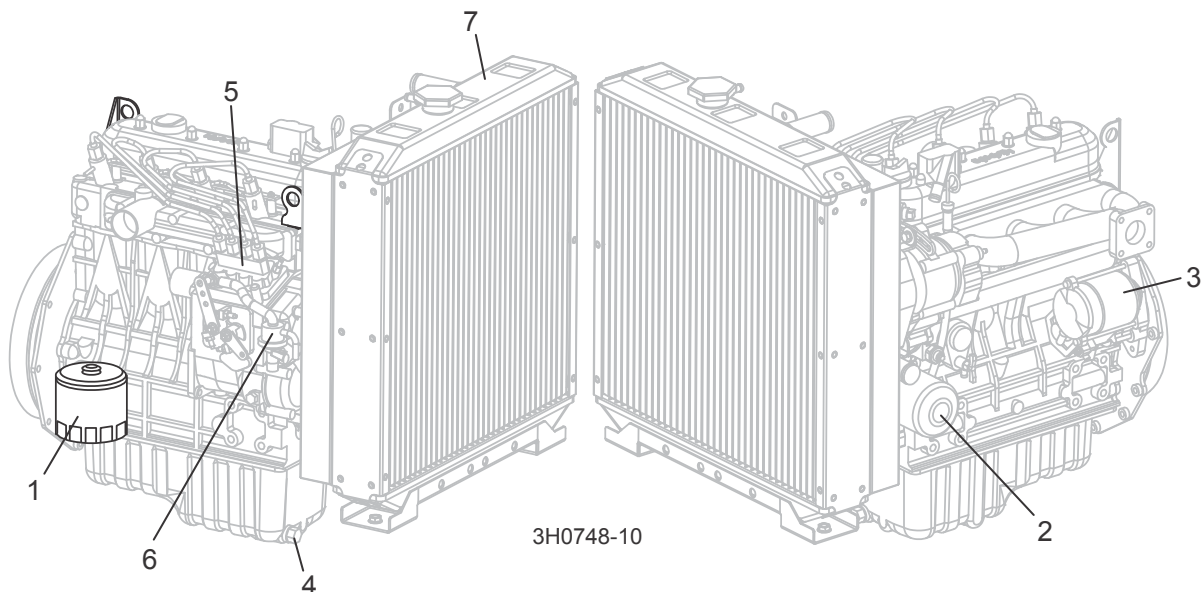
<sup>2</sup> Replaces 8 F05011-2 1/2" SAE Flat Washers supplied prior to Rev. A1.04.

<sup>3</sup> Replaces F05009-62 supplied prior to Rev. A1.05. to commonize hardware used in assembly.

# 3 Replacement Parts

## Engine Assembly

### 3.3 Engine Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
	<b>ENGINE, KUBOTA 1505TE</b>	015921	1
	Belt, Kubota Fan #16282-97010	028514	1
	Filter, Kubota Air #17351-11083	028568	1
1	Filter, Kubota Fuel #70000-43081	028560 <sup>1</sup>	1
2	Filter, Kubota Oil #16271-32090	018050	1
	Gasket Kit, Kubota Lower #07916-29265	028519	1
	Gasket Kit, Kubota Upper #16285-99352	028572	1
	Gasket, Kubota Exhaust #15263-12370	028513	1
	Gasket, Kubota Fuel Injector #15841-53622	028516	1
	Gasket, Kubota Fuel Transfer Pump #16264-52140	028518	1
	Gasket, Kubota Head #16292-03310	028571	1
	Gasket, Kubota Muffler #15263-12371	028549	1
	Gasket, Kubota Oil Drain Plug #15451-96670	028543	1
	Gasket, Kubota Stop Solenoid #16299-60150	028544	1
	Gasket, Kubota Thermostat #15313-7320	028545	1
	Gasket, Kubota Valve Cover #16241-14520	028524	1
	Gasket, Kubota Water Pump #16259-73430	028526	1
	Glow Plug, Kubota #16851-65510	028562	1
	Injector, Kubota Fuel #16032-53000	028515	1
3	Motor, Kubota Starter #37560-63010	028522	1
4	Plug, Kubota Oil Drain #16541-33750	028542	1
5	Pump, Kubota Fuel Injector #16060-51010	028540	1
6	Pump, Kubota Fuel Transfer #16285-52032	028517	1

	Pump, Kubota Water #16241-73032	028525	1	
<b>7</b>	Radiator Parts ( <a href="#">See Section 3.8</a> )			
	Sending Unit, Kubota Heat Sensor #TM9A230RQCG	028510	1	
	Solenoid Kit, Kubota Fuel Stop #17208-60012	046951 <sup>2</sup>	1	
	Switch, Kubota Oil Pressure #15841-39010	028547	1	
	Thermostat, Kubota #19434-73010	028546	1	
	<b>HARNES ASSEMBLY, KUBOTA DIESEL ENGINE</b>	050846 <sup>3</sup>	1	
	<b>HARNES ASSEMBLY, KUBOTA DIESEL ENGINE</b>	024594 <sup>3</sup>	1	
	Breaker Assembly, Water Temp Max Circuit	024453	1	
	Relay, Glow Plug	023359 <sup>4</sup>	1	
	Socket Kit, Glow Plug Relay	053048 <sup>5</sup>	1	
	Fuse, 50A Kubota Glow Plug	024597	1	

<sup>1</sup> Two isolator bushings 036137 added to reduce vibration of fuel filter. Replace mounting hardware with two each F05006-93 5/16-18 x 1 1/4" Hex Head Full Thread Grade 5 Bolts and F05010-58 5/16-18 Hex Nylon Lock Nuts.

<sup>2</sup> Fuel Stop Solenoid Kit 046951 replaces 028523 supplied before 7/04. Three-wire Solenoid #17454-60010 no longer available. Kit includes Solenoid #17208-60012 and two-wire adaptor plug.

<sup>3</sup> Use 050846 harness for LT60/70 Rev. A1.05+ with new Kubota fuel solenoid. Use 024594 harness for previous revisions with old fuel solenoid.

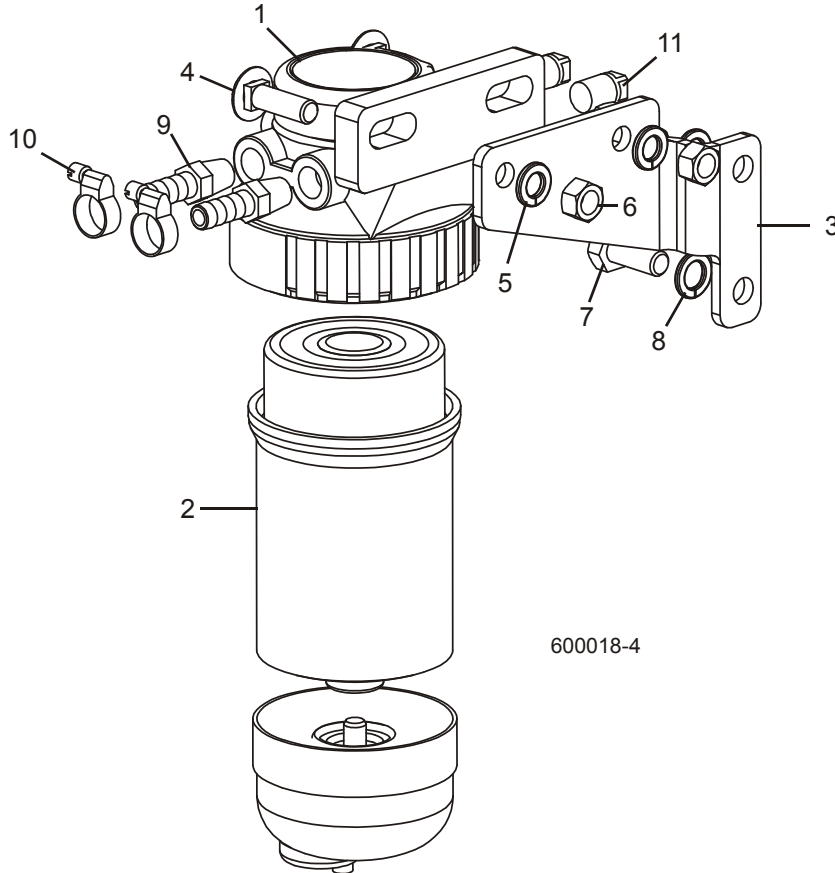
<sup>4</sup> Lombardini Glow Plug Relay 023359 replaces Bosch Relay 024598 to improve durability (Rev. A2.03). New relay requires manual operation of the glow plugs ([See Form #1151](#)).

<sup>5</sup> Replaces 024554 originally supplied. Kit includes pre-assembled socket with applicable wires, terminals and fuse.

# 3 Replacement Parts

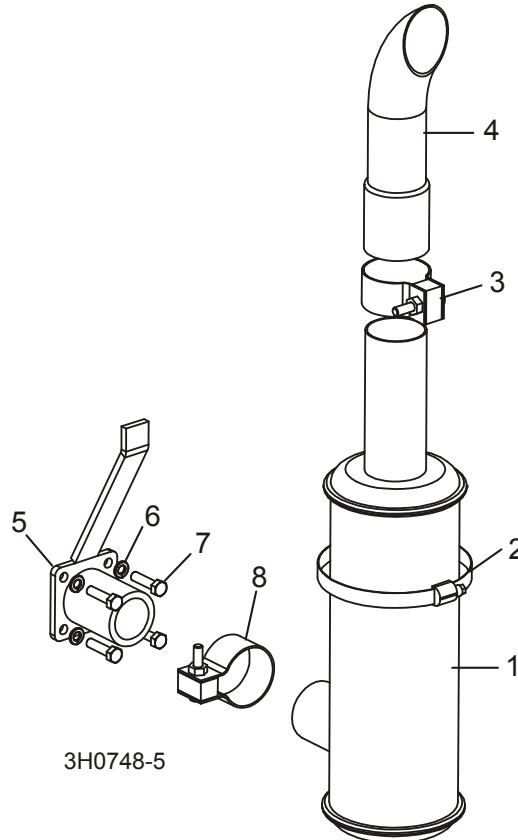
## Fuel Filter Assembly

### 3.4 Fuel Filter Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	<b>FILTER ASSEMBLY, PRIMARY DIESEL FUEL</b>	015897	1	
2	Filter, 30 Micron Diesel Fuel Cartridge	015898	1	
3	<b>BRACKET, FUEL FILTER MOUNT</b>	033958	1	
4	<b>BOLT, 3/8-16 X 1 1/4" CARRIAGE HEAD</b>	F05007-11	2	
5	<b>WASHER, 3/8" SPLIT LOCK</b>	F05011-4	2	
6	<b>NUT, 3/8-16 HEX</b>	F05010-1	2	
7	<b>BOLT, M10 X 1.25 X 25MM HEX HEAD GRADE 10.9</b>	F05009-52	2	
8	<b>WASHER, 7/16" SPLIT LOCK</b>	F05011-48	2	
9	<b>FITTING, 1/4" NPT X 3/8" HOSE BARB</b>	014685	2	
10	<b>CLAMP, 7/32"-5/8" HOSE</b>	P649	2	
11	<b>FITTING, 1/4" NPT PIPE PLUG</b>	P05498	2	

### 3.5 Muffler Assembly

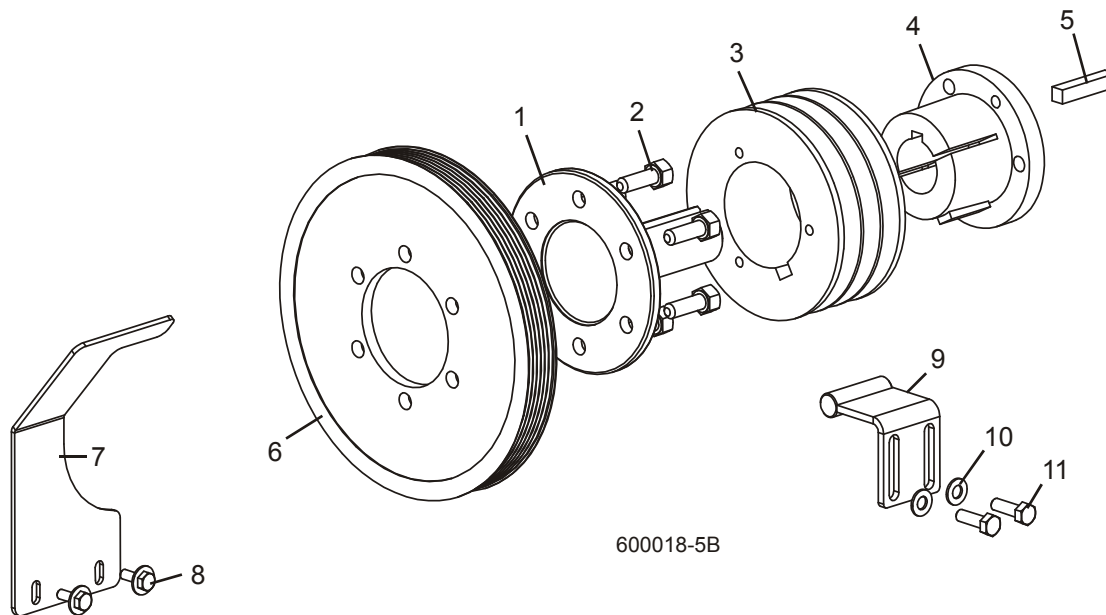


REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	MUFFLER	014093	1	
2	CLAMP, 5" WORM	014096	1	
3	CLAMP, MUFFLER	014095	1	
4	STACK, MUFFLER	014094	1	
5	BRACKET WELDMENT, D42 MUFFLER MOUNT	015878	1	
6	WASHER, 5/16" SPLIT LOCK	F05011-13	4	
7	BOLT, M8-1.25 X 1" HEX HEAD	F05004-40	4	
8	CLAMP, MUFFLER 2" NELSON 90869A	014205	1	

# 3 Replacement Parts

## Drive Assembly

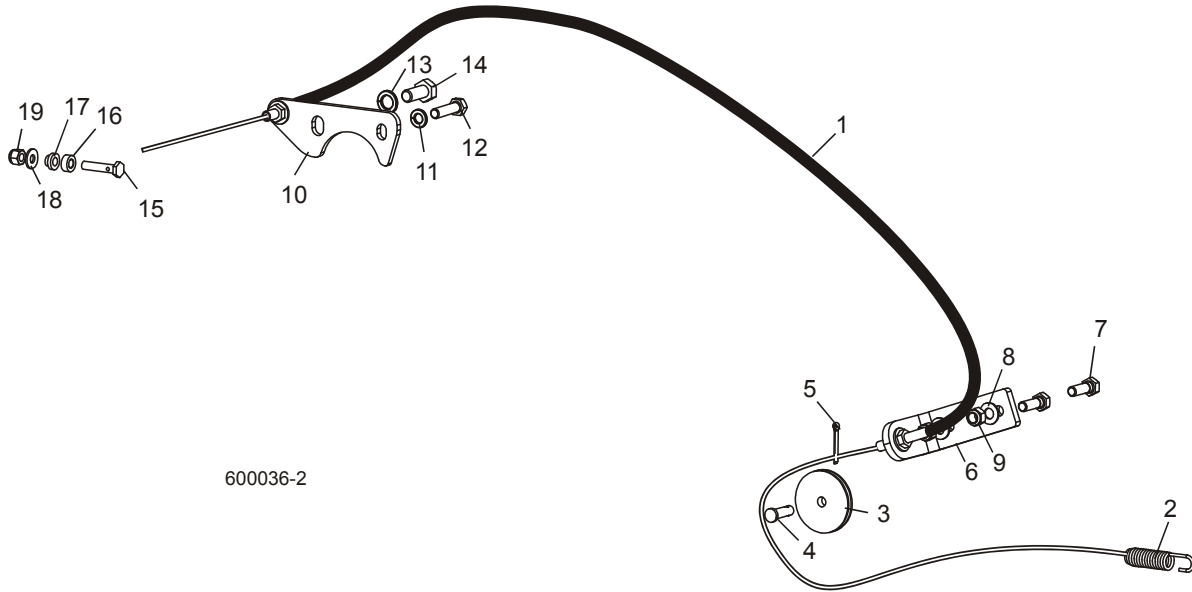
### 3.6 Drive Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	SHAFT, KUBOTA DRIVE	015866	1
2	Bolt, M10 x 1.25 x 30mm Hex Head Full Thread Grade 8.8	F81003-25	6
3	PULLEY, 3Q5V55 DRIVE	034693	1
4	BUSHING, 1 7/16" Q1	034697	1
5	KEY, 3/8" X 3/8" X 1 7/8"	014693	1
6	PULLEY, 9" OD POLY-V	033878	1
7	PLATE, KUBOTA LEFT BELT GUARD	033313	1
8	BOLT, 1/4-20 X 3/4" CONICAL WASHER HEAD	F05005-134	2
9	BRACKET WELDMENT, BELT SUPPORT	034590	1
10	WASHER, 5/16" SAE FLAT	F05011-17	2
11	BOLT, 5/16-18 X 1" HEX HEAD GRADE 5	F05006-48	2
	BELT, 3/5VFX950 DRIVE	045190	1



### 3.7 Throttle Assembly



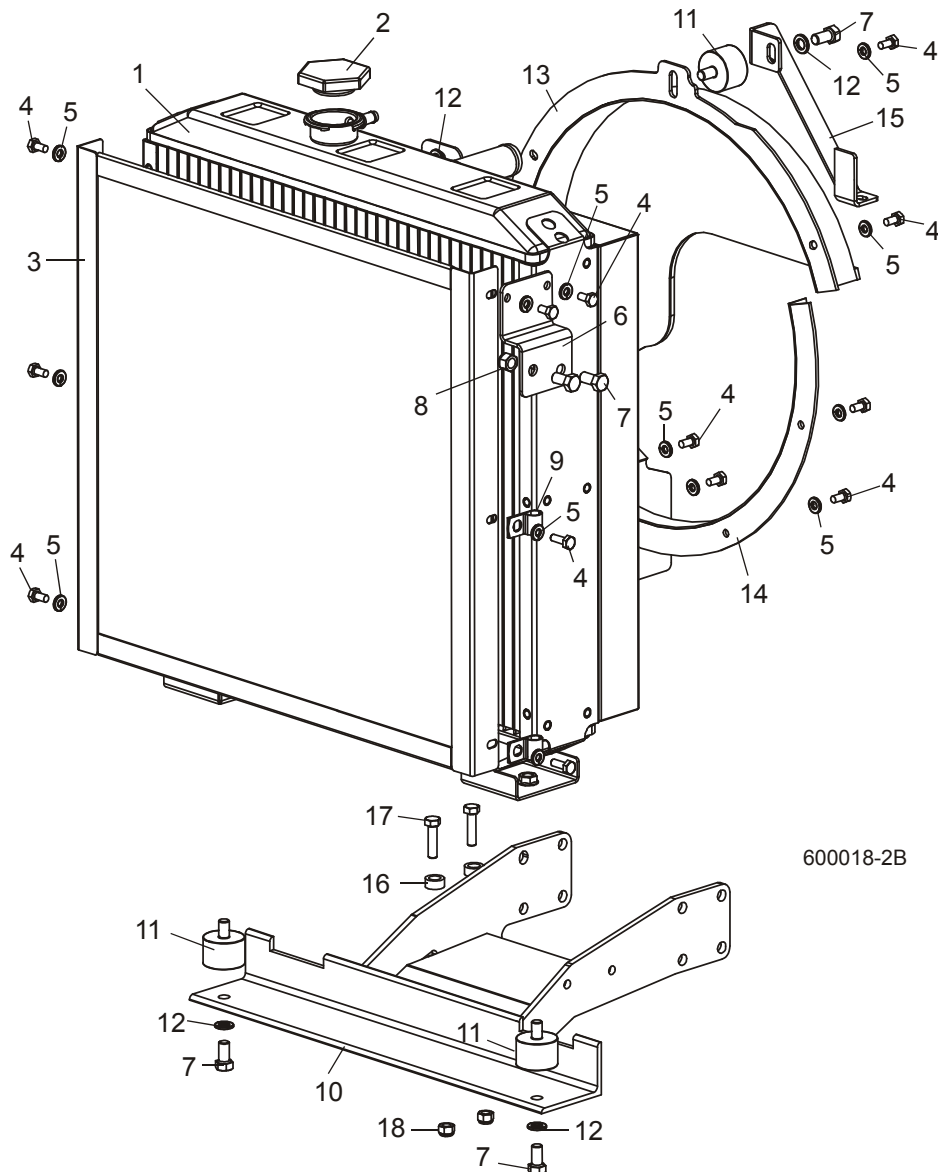
600036-2

REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	CABLE, KUBOTA THROTTLE	017757	1
2	Spring, Throttle	016033	1
3	ROLLER, THROTTLE CABLE GUIDE	017751	1
4	PIN, 5/16" X 1 1/4" CLEVIS	F05012-87	1
5	PIN, 1/8" X 1" COTTER	F05012-1	1
6	BRACKET, LOWER THROTTLE CABLE MOUNT	017752	1
7	BOLT, 5/16-18 X 1" HEX HEAD	F05006-1	2
8	WASHER, 5/16" SAE FLAT	F05011-17	2
9	NUT, 5/16-18 HEX NYLON LOCK	F05010-58	2
10	BRACKET, UPPER THROTTLE CABLE MOUNT	019009	1
11	WASHER, 5/16" SPLIT LOCK	F05011-13	1
12	BOLT, M8-1.25 X 1" HEX HEAD	F05004-40	1
13	WASHER, 10MM SPLIT LOCK	F05011-88	1
14	BOLT, M10-1.25 X 25MM HEX HEAD GRADE 10.9	F05009-52	1
15	BOLT, THROTTLE CABLE	015985	1
16	WASHER, .266 X .50 X .28 AL-BRONZE	015986	1
17	BOSS, 1/4 X 1/2 X .26" AL-BRONZE	016339	1
18	WASHER, .25ID X .62OD X .06THK, PLATED	016175	1
19	NUT, 1/4-20 NYLON LOCK	F05010-69	1

# 3 Replacement Parts

## Radiator Assembly

### 3.8 Radiator Assembly



600018-2B

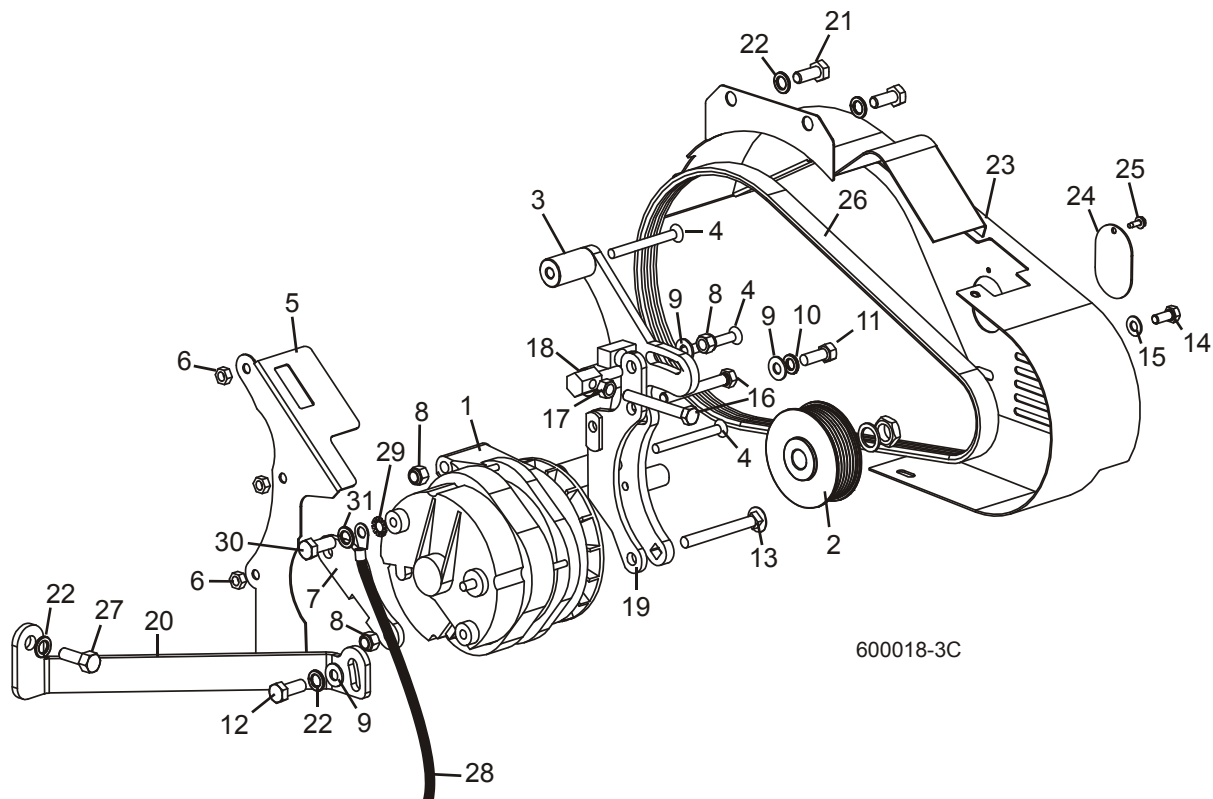
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	RADIATOR, KUBOTA TURBO #A99-060	028569	1
2	Cap, Kubota Radiator #15272-72020	028529	1
	TANK KIT, COOLANT RECEIVER KUBOTA #19059-92090 (NOT SHOWN)	028558	1
3	GUARD, RADIATOR	015864	1
4	BOLT, 1/4-20 X 1/2" HEX HEAD	F05005-15	11
5	WASHER, 1/4" SPLIT LOCK	F05011-14	13
6	PLATE, COOLANT TANK MOUNT	034698	1
7	BOLT, 3/8-16 X 3/4" HEX HEAD	F05007-27	5

8	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	2	
9	CLAMP, 1/2" EMT	P07584	2	
10	BRACKET WELDMENT, RADIATOR SUPPORT	034468	1	
11	BUSHING, RUBBER RADIATOR MOUNT	028217	3	
12	WASHER, 3/8" SPLIT LOCK	F05011-4	4	
13	GUARD WELDMENT, KUBOTA FAN	033304	1	
14	GUARD WELDMENT, KUBOTA SMALL FAN	033310	1	
15	BRACKET, TOP RADIATOR	016406	1	
16	ISOLATOR, 7/16 ID X 11/16 OD X 5/16	036147	2	
17	BOLT, 5/16-18 X 1-1/4 HEX HEAD FT GR5	F05006-93	2	
18	NUT, 5/16-18 NYLON LOCK	F05010-58	2	

# 3 Replacement Parts

## Alternator Assembly

### 3.9 Alternator Assembly



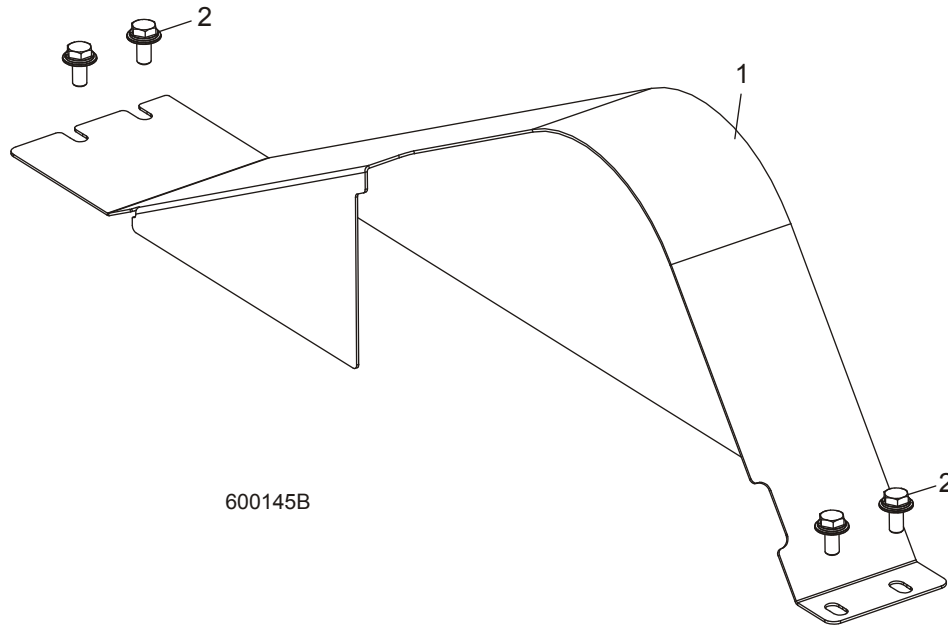
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
	<b>ALTERNATOR ASSEMBLY, 190 AMP</b>	034500	1
1	Alternator, 190 Amp	034499	1
2	Pulley, 2 3/4" O.D. Alternator	046402 <sup>1</sup>	1
3	BRACKET WELDMENT, FRONT ALTERNATOR MOUNT	015872	1
4	BOLT, M8 X 1.25 X 80MM FLAT SOCKET HEAD	F05004-169	3
5	BRACKET WELDMENT, REAR ALTERNATOR MOUNT	015924	1
6	NUT, M8 X 1.25 HEX	F05010-162	3
7	PLATE, ALTERNATOR MOUNT	023759	1
8	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	3
9	WASHER, 3/8" SAE FLAT	F05011-3	3
10	WASHER, 3/8" SPLIT LOCK	F05011-4	1
11	BOLT, 3/8-16 X 1" HEX HEAD	F05007-7	1
12	BOLT, M10 X 1.5 X 25MM HEX HEAD GRADE 8.8	F81003-11	1
13	BOLT, 3/8-16 X 3 1/2" CARRIAGE HEAD	F05007-161	1
14	BOLT, 5/16-18 X 3/4" HEX HEAD	F05006-5	1
15	WASHER, 5/16" SAE FLAT	F05011-17	1
16	BOLT, 3/8-16 X 3" HEX HEAD FULL THREAD	F05007-1	2
17	NUT, 3/8-16 HEX	F05010-1	1

18	STUD, ALTERNATOR BELT TENSIONER	023764	1	
19	BRACKET WELDMENT, ALTERNATOR MOUNT	015875	1	
20	BRACE, ALTERNATOR SUPPORT	015923	1	
21	BOLT, M10 X 1.25 X 25MM HEX HEAD GRADE 10.9	F05009-52	2	
22	WASHER, M10 SPLIT LOCK	F05011-88	4	
23	GUARD WELDMENT, 190A ALTERNATOR	034683	1	
24	COVER, ALTERNATOR BELT ADJUST ACCESS	015925	1	
25	BOLT, #10-24 X 1/2" SELF-TAPPING	F05015-7	1	
26	BELT, 6PK1015	015474 <sup>1</sup>	1	
	BELT, 6PK1055 FIBERGLASS	034513 <sup>1</sup>	1	
27	BOLT, M10-1.25 X 30MM HEX HEAD FULL THREAD 8.8	F81003-25	1	
	WIRE KIT, ALTERNATOR GROUND RETROFIT	051294 <sup>2</sup>	1	
28	Wire Assembly, Engine-To-Alternator Ground	050941	1	◆
29	Washer, 3/8" External Star Lock	F05011-36	1	
30	Bolt, M10 x 1.5 x 25mm Hex Head Grade 8.8	F81003-11	1	
31	Washer, M10 Split Lock	F05011-88	1	

<sup>1</sup> Use 6PK1055 belt 034513 with 3 1/2" pulley 033982 originally supplied prior to Rev. A2.02. Use 6PK1015 belt 015474 with 2 3/4" pulley 046402 on Rev. A2.02 and later. Smaller pulley increases alternator RPM to provide adequate charging during idle. 034513 description was 6PK415 (changed by Goodyear to metric 5/08).

<sup>2</sup> Ground wire added Rev. A1.08. Use kit 051294 to retrofit previous revisions. Kit includes wire, mounting bolt, lock washers and installation instructions (Form [#1147](#)).

### 3.10 Engine Pulley Guards



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	COVER WELDMENT, D42//D51/D62 TOP BELT	034520	1
2	WASHER, 5/16" SAE FLAT	F05011-17	4
3	WASHER, 5/16" SPLIT LOCK	F05011-13	4
4	BOLT, 5/16-18 X 1/2" HEX HEAD GRADE 5	F05006-15	4

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