

D30 Engine

Safety, Operation, Maintenance & Parts Manual

LT30	rev. F7.00 - G8.00
LT40	rev. F8.00 - G9.00
LT30HD	rev. G1.00 - H2.00
LT40HD	rev. G1.00 - H2.00



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

February 1998

Form #774

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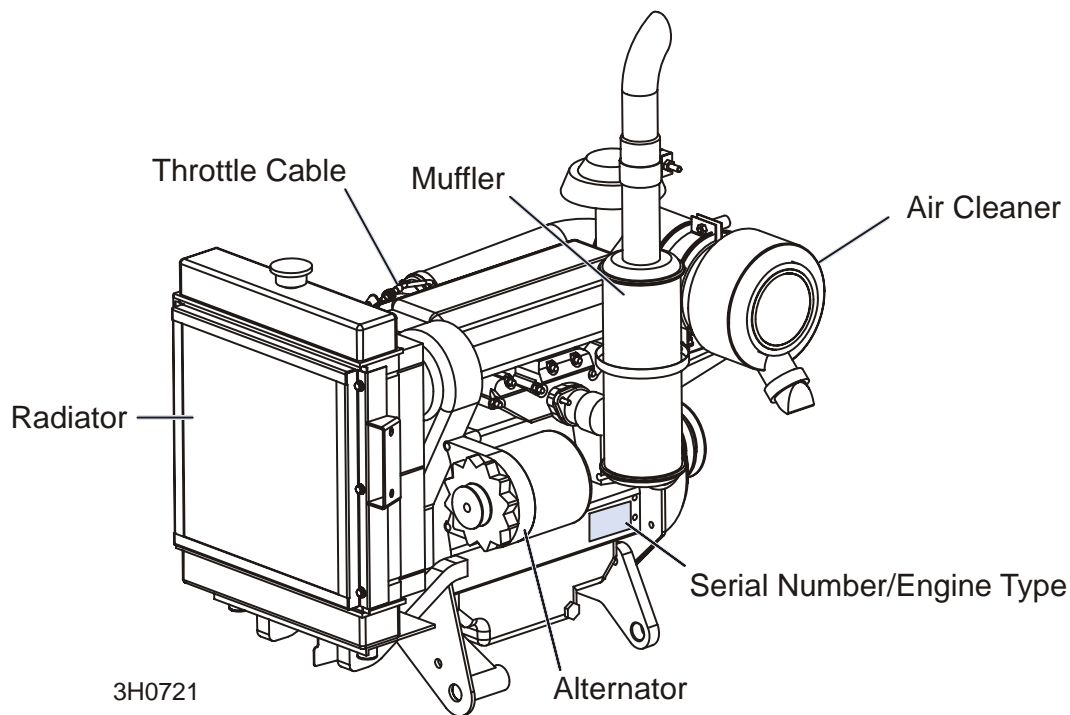
ABOUT THIS MANUAL

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® 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. See the manufacturer's engine manual for troubleshooting tips.



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



NOTE: Indicator also lights up when engine is started and remains lit until engine initially reaches approximately 1300RPM.



Engine Temperature Indicator: Lights up if the engine is overheating. **LT30 Rev. G7.00, LT40 Rev. G8.00, and LT30HD/40HD Rev. H1.00 and later only:** 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.



1 Operation

Starting The Engine

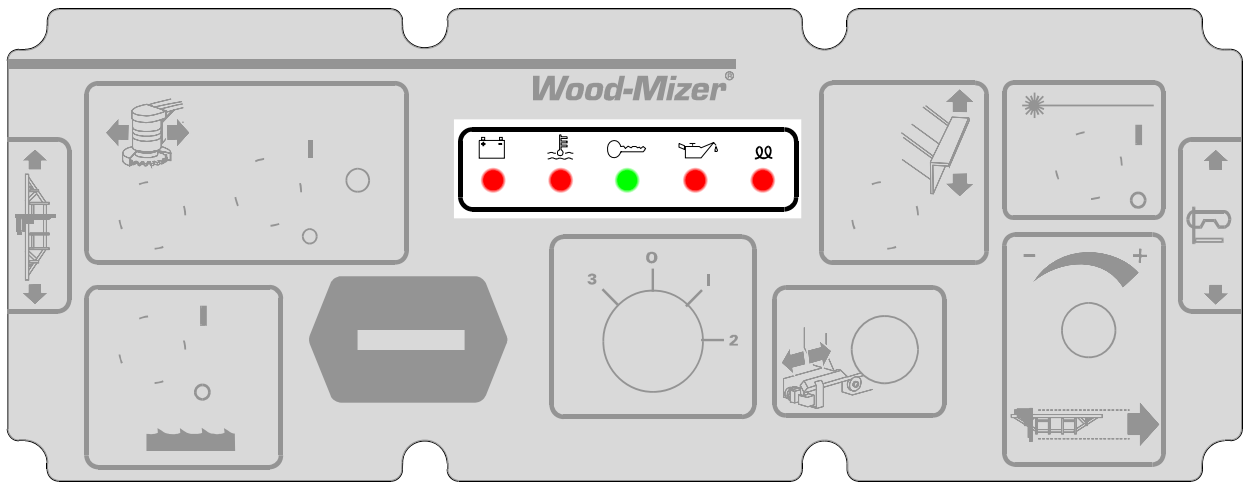


FIG. 1-1

See Table 1-1. IMPORTANT! The glow plug sensing relay is disconnected on LT30 Rev. F9.00, LT40 Rev. G1.00, LT30HD and LT40HD Rev. G3.00 to provide manual control of glow plug operation. Previous revisions can be modified to improve hot starting performance ([see form #250](#)). 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

NOTE: The glow plug light will stay on indefinitely when the key is in the pre-start (1) position. The glow plug light will go out after the engine is started.



CAUTION! Avoid leaving the key in the pre-start (1) position for more than 30 seconds while the engine is not running. Doing so will drain the sawmill battery which may reduce its service life.

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

Engine Shutoff

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

1.2 Cold Weather Operation

When sawing in extremely cold weather, you may need to use a different engine oil. Lombardini recommends using 0W30 for operating temperatures between -13° F (-25° C) and -31° F (-35° C). When sawing in temperatures below -31° F (-35° C), Lombardini recommends using a synthetic-based oil such as Mobil Delvac 1 5W40.

NOTE: Wood-Mizer offers a fuel additive (Stanadyne Performance Formula) which helps eliminate contaminants and water in fuel, prevents gelling in cold weather, and improves lubrication of fuel system parts. One 16 oz. bottle (WM Part #004878) treats 60 gallons of diesel fuel.

Wood-Mizer also offers an accessory engine water heater for Lombardini diesel engines. The heater unit installs around the lower radiator hose. When plugged into a grounded 120V outlet, the heater will keep the engine coolant warm enough to allow easy starts in cold climates.

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 Air Cleaner



Empty the air debris collector every 8 hours of operation.

See Figure 2-1. Squeeze the rubber tip of the collector to open it. After all debris has been emptied from the collector, release the tip and allow it to close.



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.

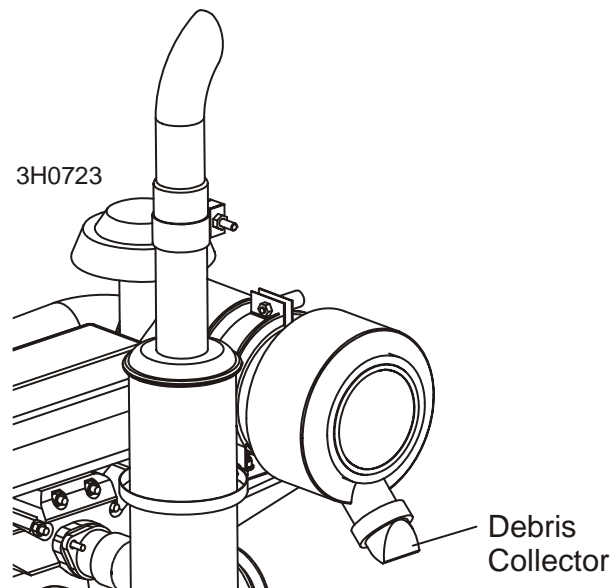






FIG. 2-1

2.3 Cooling System

-  Check the coolant level every 8 hours of operation.
-  Check the radiator fins every 8 hours of operation.
-  Clean the radiator fins every 250 hours of operation.
-  Replace the coolant every 1000 hours of operation or every 2 years, whichever comes first. Use a mixture of 50% antifreeze and 50% water.

2.4 Fuel Filter

LT30 Rev. G1.00+
 LT40 Rev. G2.00+
 LT30HD Rev. G4.00+
 LT40HD Rev. G4.00+

1500

See Figure 2-2. 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.

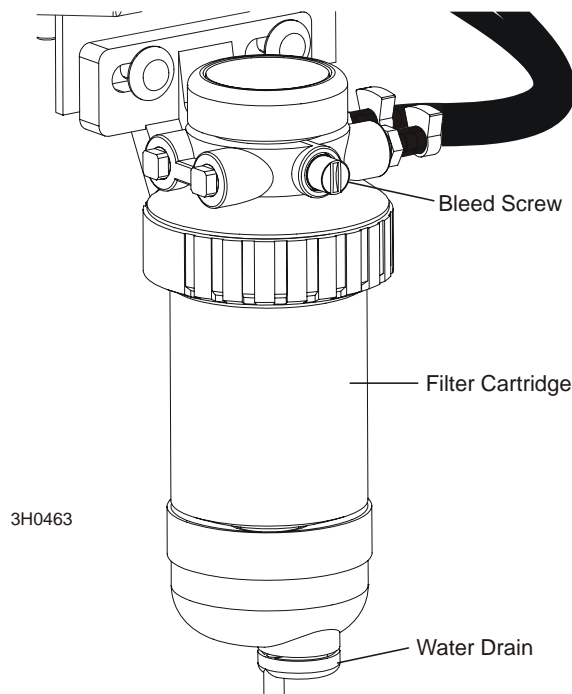


FIG. 2-2

LT30 Rev. F7.00 - F9.00
 LT40 Rev. F8.00 - G1.00
 LT30HD Rev. G1.00 - G3.00
 LT40HD Rev. G1.00 - G3.00

250

Replace the in-line fuel filter every 250 hours of operation. It is recommended that the in-line fuel filter be replaced with the primary cartridge filter/water separator system ([See above](#)). This system will eliminate water and particles that can cause premature failure of injection system components.

2

Maintenance

Fuel Filter

2.5 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.¹



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.

1. Battery Council International, copyright 1987

2.6 Alternator Belt

1000

Replace the alternator belt every 1000 hours.

500

Check the alternator belt tension every 500 hours. Also check the alternator belt for tension and wear when battery is not charging properly or when the alternator belt is squealing. Adjust as needed.

2.7 Miscellaneous Maintenance



Perform a partial overhaul inspection as detailed in the engine manual every 2500 hours of operation.



Perform a complete overhaul inspection as detailed in the engine manual every 5000 hours of operation.

2.8 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 after the first 20 hours of operation and every 200 hours thereafter.

See Table 2-1.

Engine	High End RPM	Low End RPM
D30	3200	1500

TABLE 2-1

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 clutch handle 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 clutch handle is disengaged, the throttle cable should be taut but the spring not extended. When the clutch handle 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.

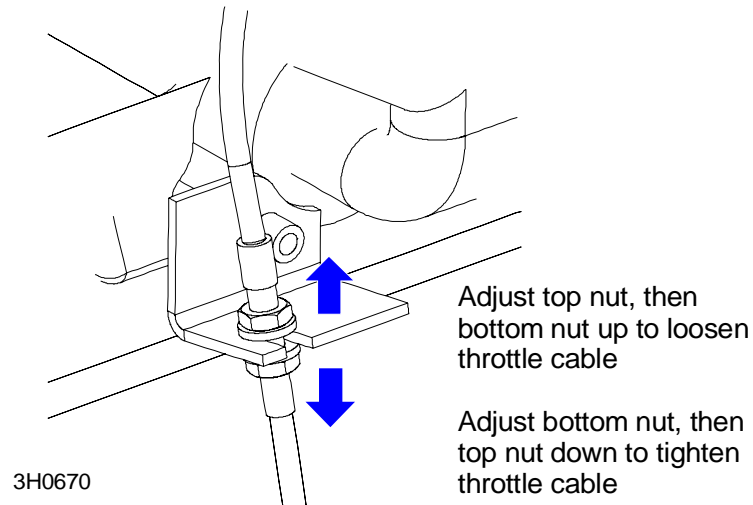


FIG. 2-3

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 bolt. To increase speed, tighten the idle adjustment bolt. Tighten the lock nut to hold the bolt in place.

2 Maintenance

RPM Adjustments

See Figure 2-4.

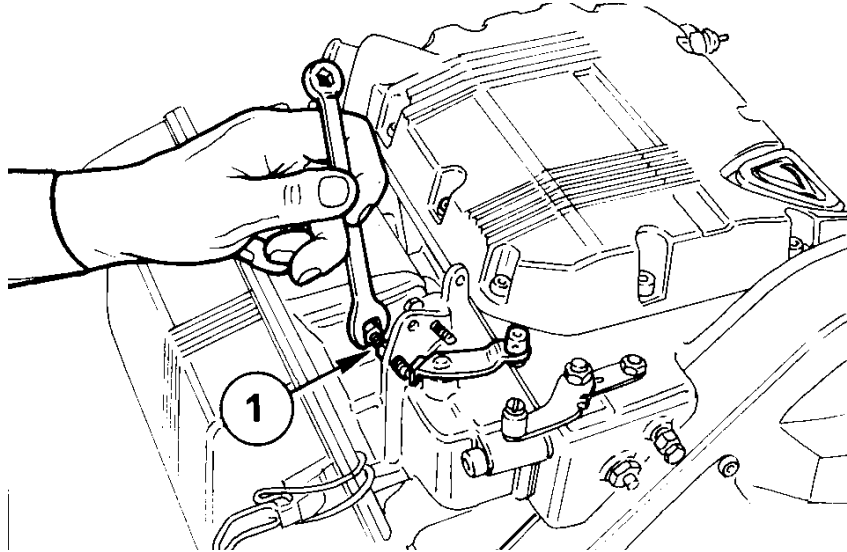


FIG. 2-4

4. Adjust the high-end RPM to 3200. To decrease speed, tighten the high-end adjustment bolt. To increase speed, loosen the high-end adjustment bolt. Tighten the lock nut to hold the bolt in place.



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

See Figure 2-5.

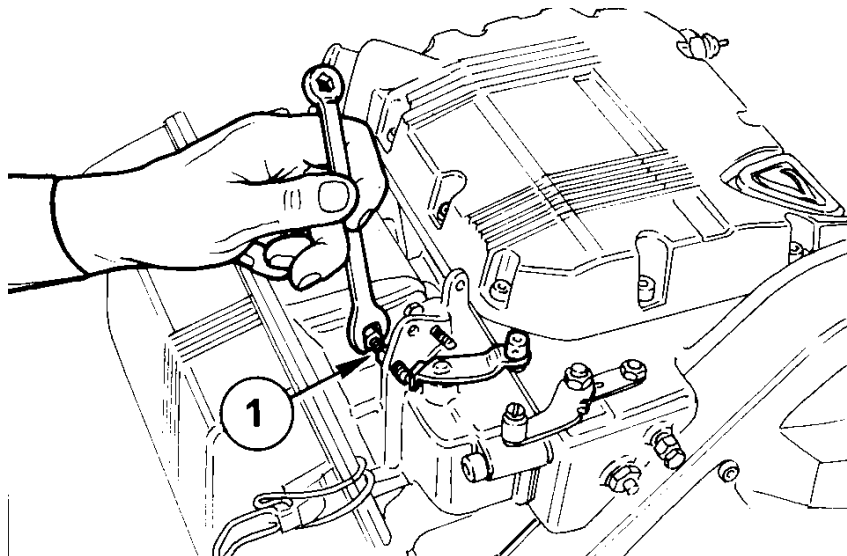


FIG. 2-5

See Figure 2-6.

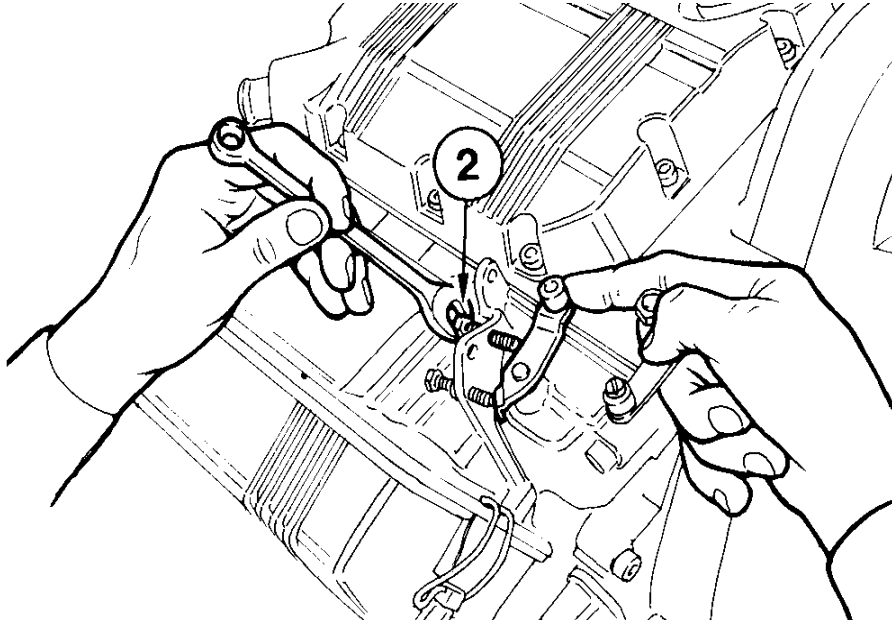
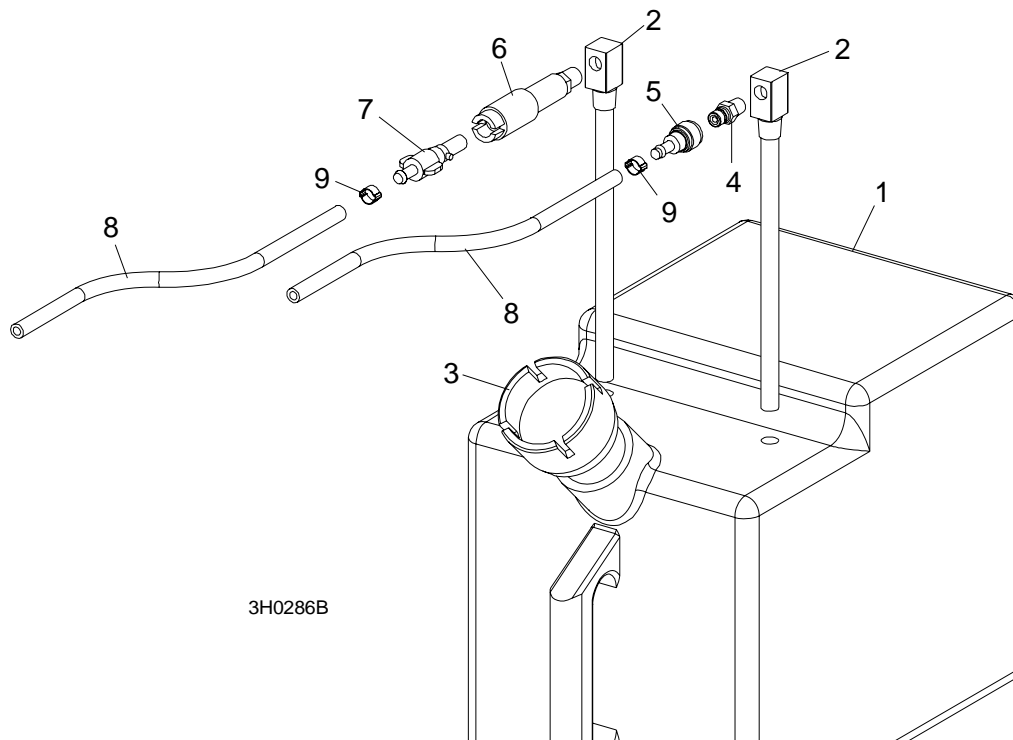


FIG. 2-6

SECTION 3 REPLACEMENT PARTS

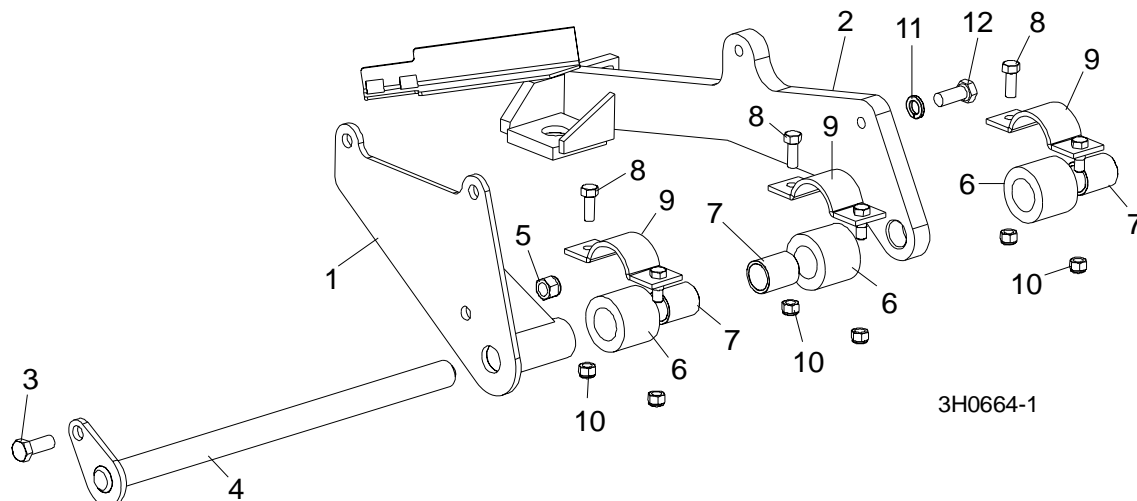
3.1 Fuel Tank



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	TANK ASSEMBLY, 5 GALLON GREEN DIESEL	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	HOSE, 1/4" ID FUEL	P642	15.6 Ft	
9	CLAMP, 7/32 - 1/2 HOSE	P649	6	
	ADDITIVE, DIESEL FUEL 16OZ BOTTLE	004878 ¹	1	

¹ 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.

3.2 Engine Mount Assembly

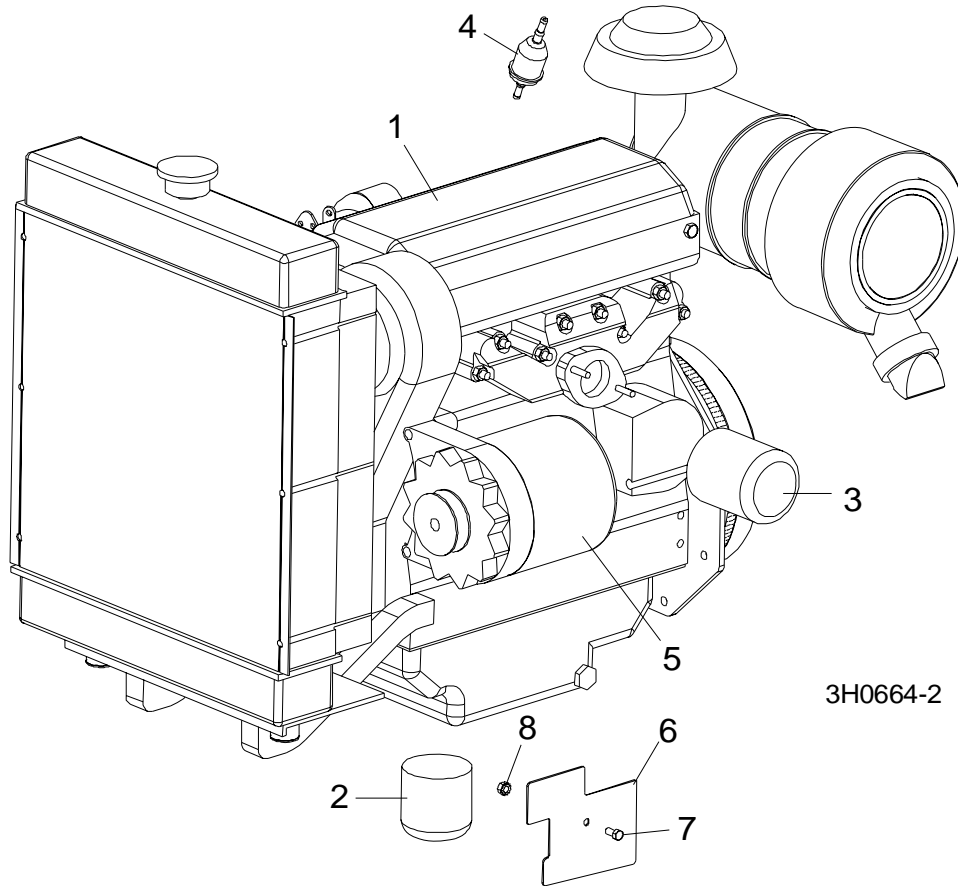


REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	MOUNT, FRONT MOTOR	014237	1	
	MOUNT KIT, LOMBARDINI DIESEL ENGINE	016321 ¹	1	
2	Mount Weldment, Lombardini Diesel Engine	014219	1	◆
3	BOLT, 1/2-13 X 1 1/4" HEX HEAD GRADE 5	F05008-37	1	
4	PIN WELDMENT, MOTOR PIVOT	014056	1	
5	NUT, 1/2-13 HEX NYLON LOCK	F05010-8	1	
	BUSHING ASSEMBLY, MOTOR MOUNT	016380 ²	3	
6	Bushing, 2" OD x 2"	016378	1	◆
7	Bearing, 1" x 1 1/4" x 2"	016379	1	◆
8	BOLT, 3/8-16 X 1" HEX HEAD	F05007-7	3	
9	CLAMP WELDMENT, MOTOR MOUNT	014540	3	
10	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	6	
11	WASHER, 1/2" SPLIT LOCK	F05011-9	1	
12	BOLT, 1/2-13 X 1 1/4" SOCKET HEAD	F05008-38	1	

¹ Mount Kit 016321 includes new rubber clutch handle mount bushings and hardware standard after 6/99 (See Clutch Handle parts in Sawmill Parts Manual).

² New assembly 016380 replaces original rubber pivot bushing P12164 and bronze bushing P05041 originally supplied. NOTE: When replacing original components with new assembly, it is best to replace all three assemblies at the same time.

3.3 Engine Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	ENGINE ASSEMBLY, 30HP LOMBARDINI DIESEL	015457 ¹	1	
1	Engine, 30HP Lombardini Diesel LDW-1204	014638	1	◆
2	Filter, Diesel Fuel	014209	1	
3	Filter, Oil	014211	1	
4	Filter, In-Line Fuel	P07570 ²	1	
5	Alternator, Lombardini 65 Amp #1157-270	014277	1	
	Belt, Alternator V	014212	1	
	Guard, Lombardini Fan Left #6927-346	014747	1	
	Guard, Lombardini Fan Right #6927-350	014748	1	
	Belt, Lombardini Timing #2440-298	016289 ³	1	
	Plug, Diesel Glow	014278	1	
	Starter, Lombardini Diesel Engine	014286	1	
6	Plate, Lombardini Dust Shield	014400	1	
7	Bolt, 1/4-20 x 1/2" Hex Head	F05005-15	1	
8	Nut, 1/4-20 Self-Locking	F05010-9	1	

3 Replacement Parts

Engine Assembly

	Harness Assembly, Lombardini Diesel Engine	024452 ⁴	1	
	Breaker Assembly, Water Temp Max Circuit	024453 ⁴	1	

¹ Complete engine assembly includes engine, mounts, alternator, radiator, throttle, relay, and muffler.

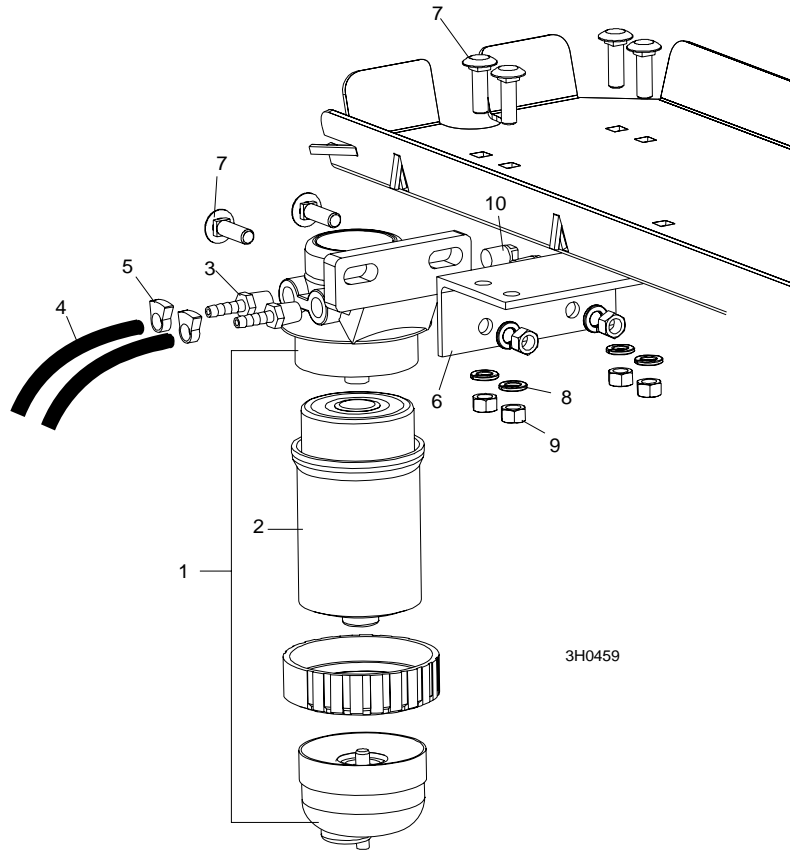
² In-Line fuel filter replaced by primary cartridge system on LT30 Rev. G1.00, LT40 Rev. G2.00, LT30HD and LT40HD Rev. G4.00.

Upgrade to cartridge system is recommended for previous revisions. [See Section 3.4.](#)

³ Lombardini part 2440-298 replaces original timing belt 2440-338.

⁴ Engine harness with water temperature circuit breaker assembly added on LT30 Rev. G7.00, LT40 Rev. G8.00 and LT30HD/40HD Rev. H1.00.

3.4 Primary Fuel Filter Retrofit



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	FILTER ASSEMBLY, STANDADYNE FUEL #33816	015897 ¹	1	
2	Filter, Standadyne Fuel Cartridge #31865	015898	1	
3	FITTING, 1/4" NPT TO 1/4" HOSE BARB	P05393	2	
4	HOSE, 1/4" ID FUEL	P642 ²	7 Ft	
5	CLAMP, 7/32 - 1/2 HOSE	P649 ³	2	
6	BRACKET, DIESEL FUEL FILTER MOUNT	015905	1	
7	BOLT, 3/8-16 X 1 1/4" CARRIAGE HEAD	F05007-11	6	
8	WASHER, 3/8" SPLIT LOCK	F05011-4	6	
9	NUT, 3/8-16 HEX	F05010-1	6	
10	FITTING, 1/4" NPT PLUG	P05498	2	
	INSTRUCTION SHEET, DIESEL FUEL FILTER RETROFIT	015906-348	1	

¹ Use Retrofit Kit 015906 to replace in-line filter P07570 originally supplied before LT30 Rev. G1.00, LT40 Rev. G2.00, LT30HD Super and LT40HD Rev. G4.00.

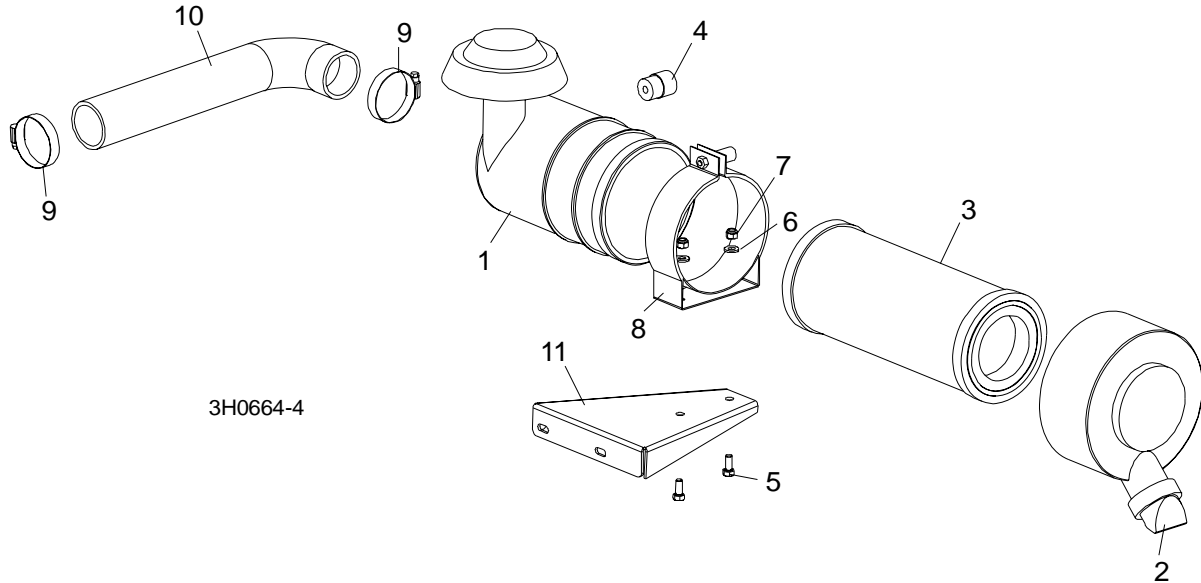
² Replaces R01890-1 originally supplied.

³ Replaces 016040 originally supplied.

3 Replacement Parts

Air Cleaner Assembly

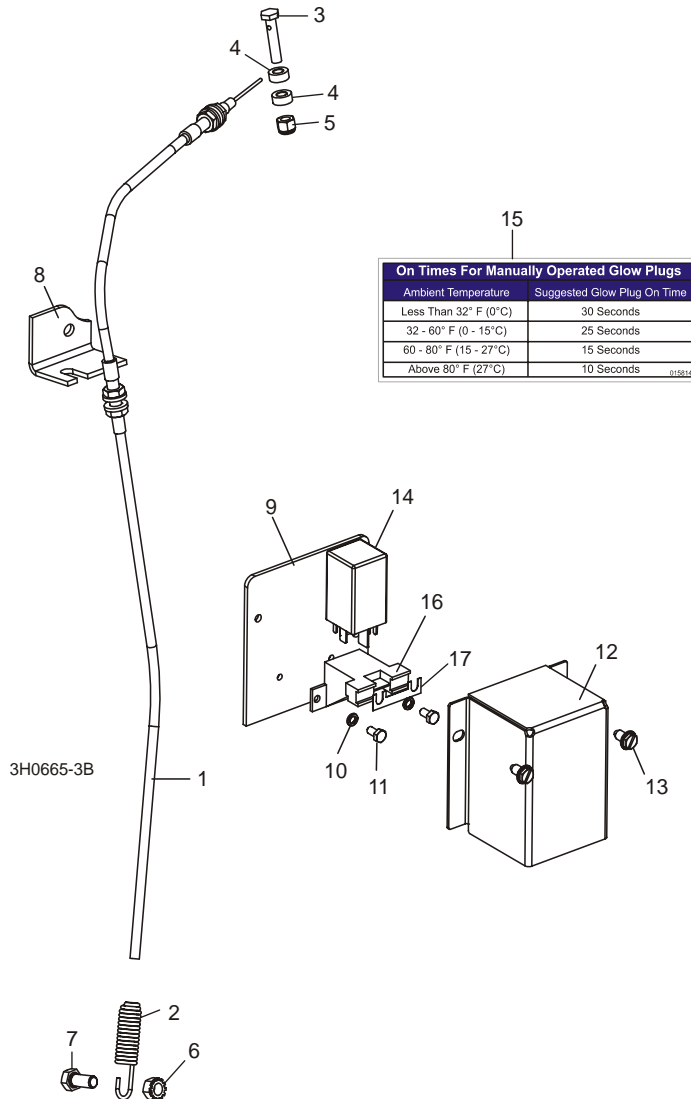
3.5 Air Cleaner Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	CLEANER ASSEMBLY, DONALDSON AIR COMPLETE	N/A	1
2	Boot, Air Cleaner Evacuator	014287	1
3	Element, Donaldson Air Filter	014763	1
4	INDICATOR, AIR CLEANER RESTRICTION	014336	1
5	BOLT, 5/16-18 X 3/4" HEX HEAD	F05006-5	2
6	WASHER, 5/16" SAE FLAT	F05011-17	2
7	NUT, 5/16-18 HEX NYLON LOCK	F05010-58	2
8	CLAMP, 7" SPRING	014160	1
9	CLAMP, 2 1/2" HOSE	P09895	1
10	TUBE, D30 AIR INTAKE	015452	1
11	BRACKET, AIR CLEANER MOUNT	015450	1

3.6 Relay/Throttle Assembly

LT30 *Rev. G5.00+*
LT40 *Rev. G6.00+*
LT30HD *Rev. G8.00+*
LT40HD *Rev. G8.00+*



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	CABLE ASSEMBLY, D30/D40 THROTTLE	016125 ¹	1
	Cable Wire, D30/D40 .078" Throttle	016149 ¹	1
2	Spring, Throttle	016033	1
3	BOLT, D30/D40 THROTTLE CABLE	015985	1
4	WASHER, .266 X .50 X .28" AL-BRONZE	015986	2

3**Replacement Parts**
Relay/Throttle Assembly

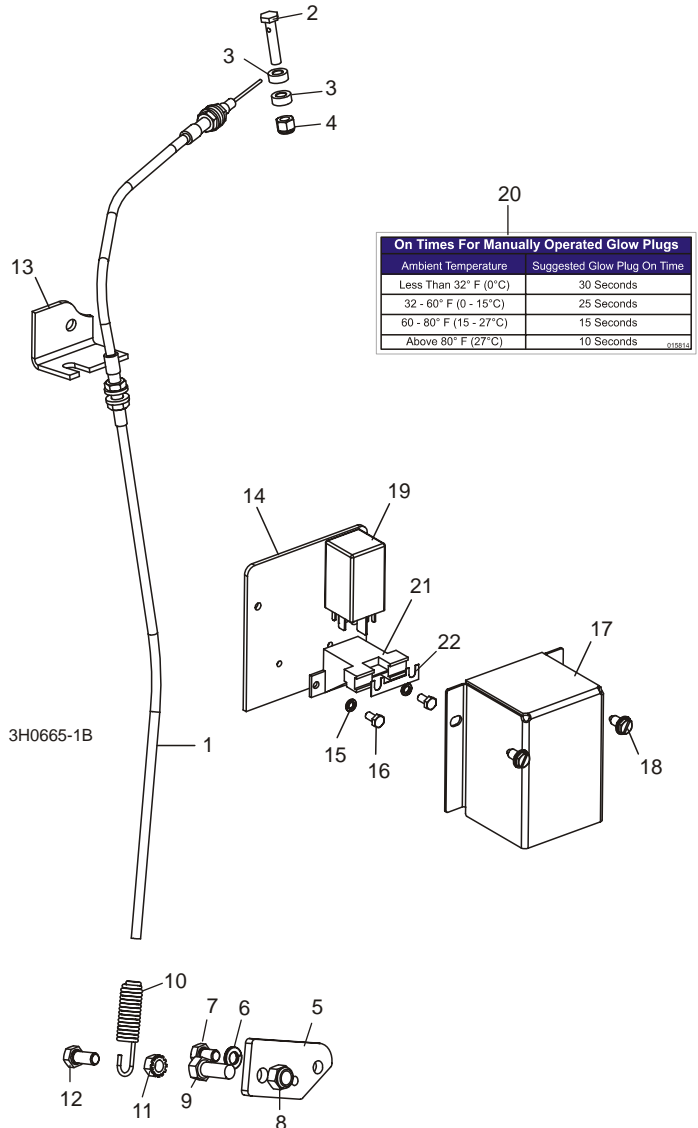
5	NUT, 1/4-20 NYLON LOCK	F05010-69	1	
6	NUT, 5/16-18 SELF-LOCKING HEX	F05010-20	1	
7	BOLT, 5/16-18 X 3/4" HEX HEAD	F05006-5	1	
8	BRACKET, THROTTLE CABLE MOUNT	015566	1	
9	PLATE WELDMENT, DIESEL RELAY BOX MOUNT	014197	1	
10	WASHER, #10-24 SPLIT LOCK	F05011-20	2	
11	BOLT, #10-32 X 1/2" HEX HEAD	F05004-60	2	
12	BOX, D40 GLOW PLUG RELAY	014199	1	
13	BOLT, 1/4-20 X 1/2" SLOTTED HEX HEAD	F05015-1	2	
14	RELAY, GLOW PLUG	023359	1	
15	DECAL, LOMBARDINI GLOW PLUG ON TIME (LOCATED ON CONTROL BOX)	015814	1	
16	SOCKET KIT, GLOW PLUG RELAY	053049 ²	1	
17	Fuse, 80A Lombardini Glow Plug	014350	1	

¹ Use throttle cable retrofit kit 016015 for revisions prior to LT30 Rev. G5.00, LT40 Rev. G6.00, and LT30HD/40HD Rev. G8.00. [See Section 3.7.](#)

² Replaces 023358 originally supplied. Kit includes pre-assembled socket with applicable wires, terminals and fuse.

3.7 Relay/Throttle Assembly

LT30 Rev. F7.00 - G4.01
 LT40 Rev. F8.00 - G5.01
 LT30HD Rev. G1.00 - G7.01
 LT40HD Rev. G1.00 - G7.01



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	CABLE KIT, D30/D40 THROTTLE REPLACEMENT	016015 ¹	1
	Cable Wire, D30/D40 .078" Throttle	016149 ¹	1
2	Bolt, D30/D40 Throttle Cable	015985 ²	1
3	Washer, .266 x .50 x .28" Al-Bronze	015986 ²	2

3

Replacement Parts Relay/Throttle Assembly

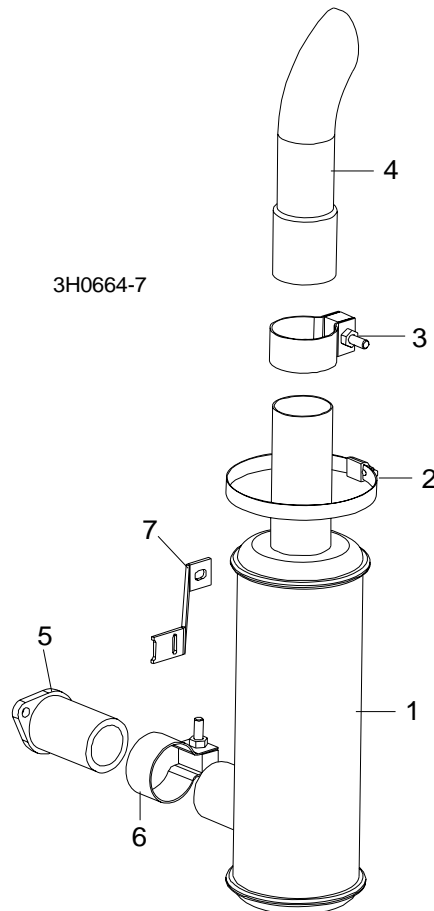
4	Nut, 1/4-20 Nylon Lock	F05010-69 ²	1	
5	Plate, Throttle Cable Retrofit	016128	1	
6	Bolt, 5/16-18 x 1/2" Hex Head Grade 5	F05006-15	1	
7	Washer, 5/16" Split Lock	F05011-13	1	
8	Bolt, 3/8-16 x 1 Hex Head	F05007-7	1	
9	Nut, 3/8-16 Nylon Lock	F05010-10	1	
	Instruction Sheet, D30/D40/G35 Throttle Cable Retrofit Installation	016015-840	1	
10	SPRING, THROTTLE	016033	1	
11	NUT, 5/16-18 SELF-LOCKING HEX	F05010-20	1	
12	BOLT, 5/16-18 X 3/4" HEX HEAD	F05006-5	1	
13	BRACKET, THROTTLE CABLE MOUNT	015566	1	
14	PLATE WELDMENT, DIESEL RELAY BOX MOUNT	014197	1	
15	WASHER, #10-24 SPLIT LOCK	F05011-20	2	
16	BOLT, #10-32 X 1/2" HEX HEAD	F05004-60	2	
17	BOX, D40 GLOW PLUG RELAY	014199	1	
18	BOLT, 1/4-20 X 1/2" SLOTTED HEX HEAD	F05015-1	2	
19	RELAY, GLOW PLUG	023359	1	
20	DECAL, LOMBARDINI GLOW PLUG ON TIME (LOCATED ON CONTROL BOX)	015814	1	
21	SOCKET KIT, GLOW PLUG RELAY	053049 ³	1	
22	Fuse, 80A Lombardini Glow Plug	014350	1	

¹ Replaces 014097 originally supplied prior to LT30 Rev. G5.00, LT40 Rev. G6.00, and LT30HD/40HD Rev. G8.00. .078" dia. cable 016149 replaces .059" dia. cable 015831 to provide improved durability. Kit includes hardware required to retrofit previous revisions. [See Section 3.6](#) for replacement components if throttle cable has been retrofitted.

² Replaces 014608 clamp supplied prior to LT30 Rev. G2.02, LT40 Rev. G3.02, LT30HD/LT40HD Rev. G5.02. *NOTE: 015985 cable bolt requires (2) 015986 washers and (1) F05010-69 nut.*

³ Replaces 023358 originally supplied. Kit includes pre-assembled socket with applicable wires, terminals and fuse.

3.8 Muffler Assembly



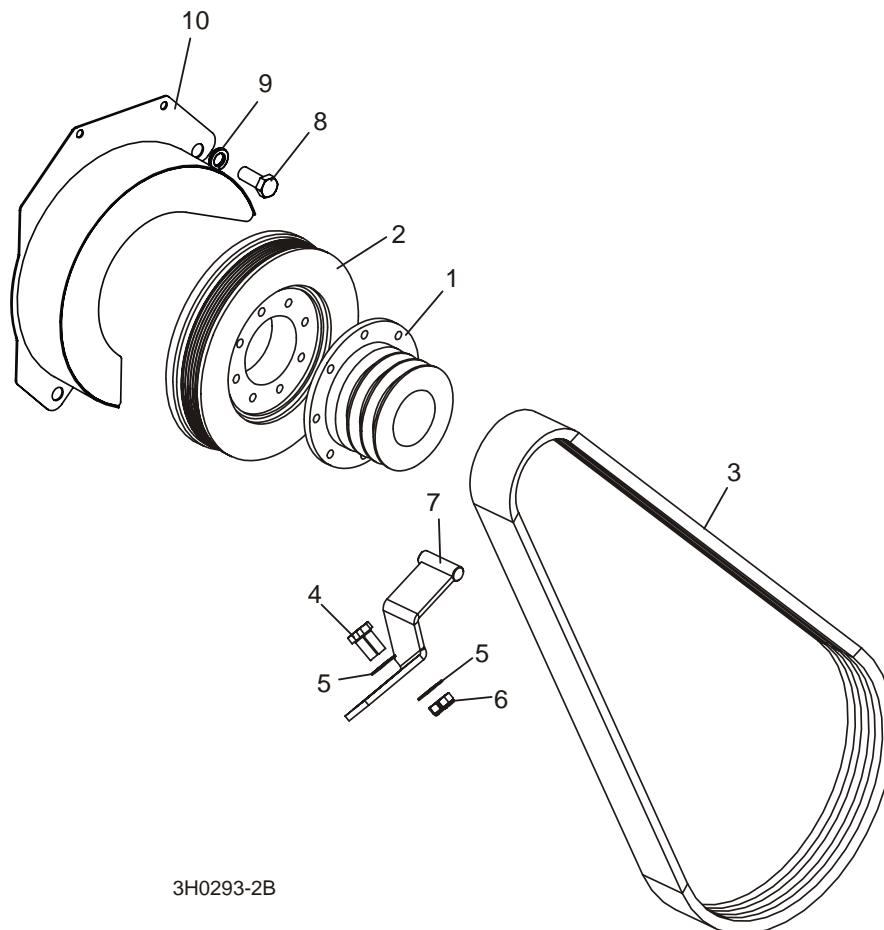
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	MUFFLER	014093	1	
2	CLAMP, 5" WORM	014096	2	
3	CLAMP, MUFFLER	014095	1	
4	STACK, MUFFLER	014094	1	
5	TUBE WELDMENT, D30 EXHAUST	015469	1	
6	CLAMP, MUFFLER 2" NELSON 90869A	014205	1	
7	BRACKET, D30 MUFFLER	015451	1	

3 Replacement Parts

Drive Assembly

3.9 Drive Assembly

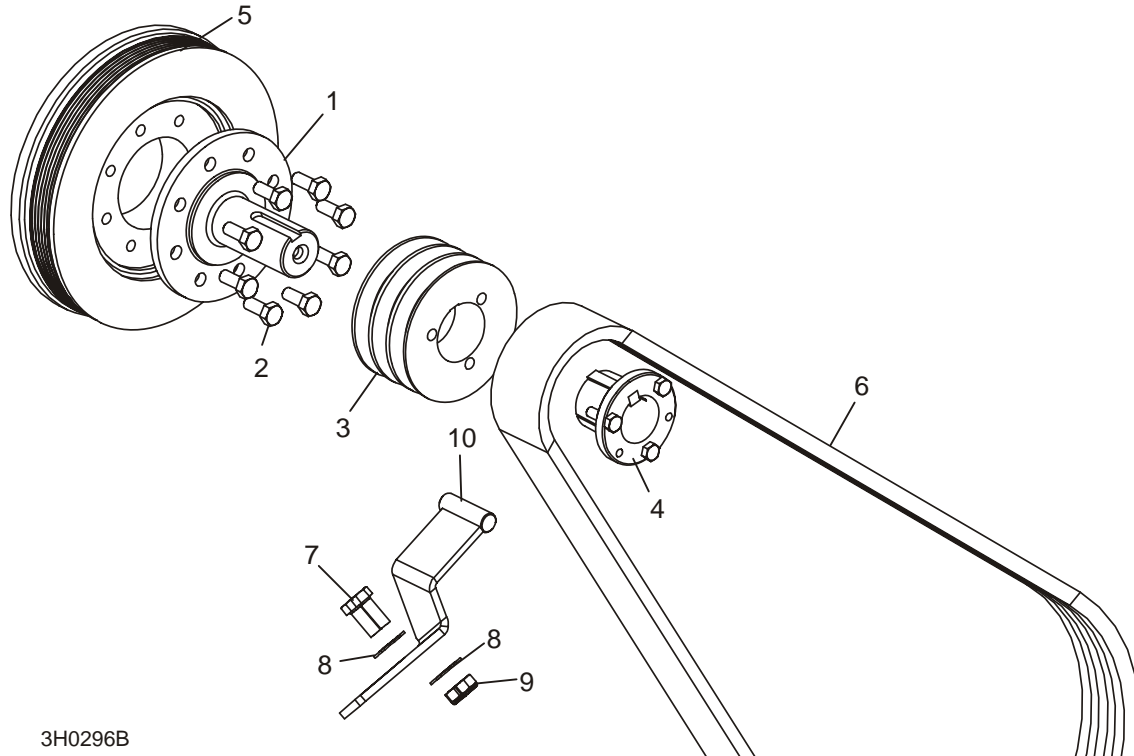
LT30 Rev. G7.00 - G8.00
 LT40 Rev. G8.00 - G9.00
 LT30HD Rev. H1.00 - H2.00
 LT40HD Rev. H1.00 - H2.00



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	SHEAVE, LOMBARDINI DRIVE	016124	1	
2	FLYWHEEL, ALTERNATOR BELT	015309	1	
3	BELT, 3BX72	014085	1	
4	BOLT, 3/8-16 X 1 1/4" CARRIAGE	F05007-11	2	
5	WASHER, 3/8" SAE FLAT	F05011-3	4	
6	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	2	
7	SUPPORT, DRIVE BELT	015058	1	
8	BOLT, 1/2-13 X 1 1/4" HEX HEAD GRADE 5	F05008-37	1	
9	WASHER, 1/2" SPLIT LOCK	F05011-9	1	
10	COVER WELDMENT, FLYWHEEL	014065	1	

3.10 Drive Assembly

LT30 Rev. F8.00 - G6.00
 LT40 Rev. F9.00 - G7.00¹
 LT30HD Rev. G1.00 - G9.00
 LT40HD Rev. G1.00 - G9.00



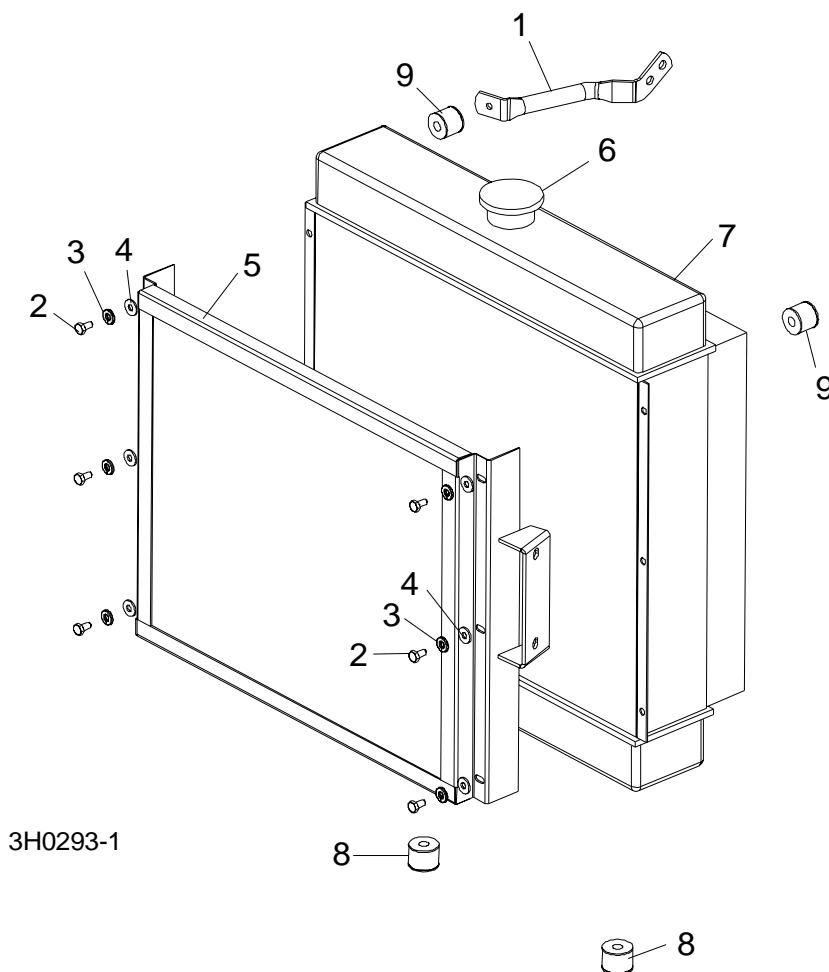
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REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	SHAFT, OUTPUT	014024 ¹	1
2	BOLT, M10X25 GRADE 10.9 HEX HEAD	F05009-52	8
3	SHEAVE, 3TB42 MOTOR DRIVE	014007 ¹	1
4	BUSHING, SPLIT TAPER, P1 1 9/16"	014003 ¹	1
5	FLYWHEEL, ALTERNATOR BELT	015309	1
6	BELT, 3BX72	014085	1
7	BOLT, 3/8-16 X 1 1/4" CARRIAGE	F05007-11	2
8	WASHER, 3/8" SAE FLAT	F05011-3	4
9	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	2
10	SUPPORT, DRIVE BELT	015058	1

¹ Output Shaft, Sheave and Bushing replaced with single-piece sheave provided by Lombardini ([See Section 3.9](#)).

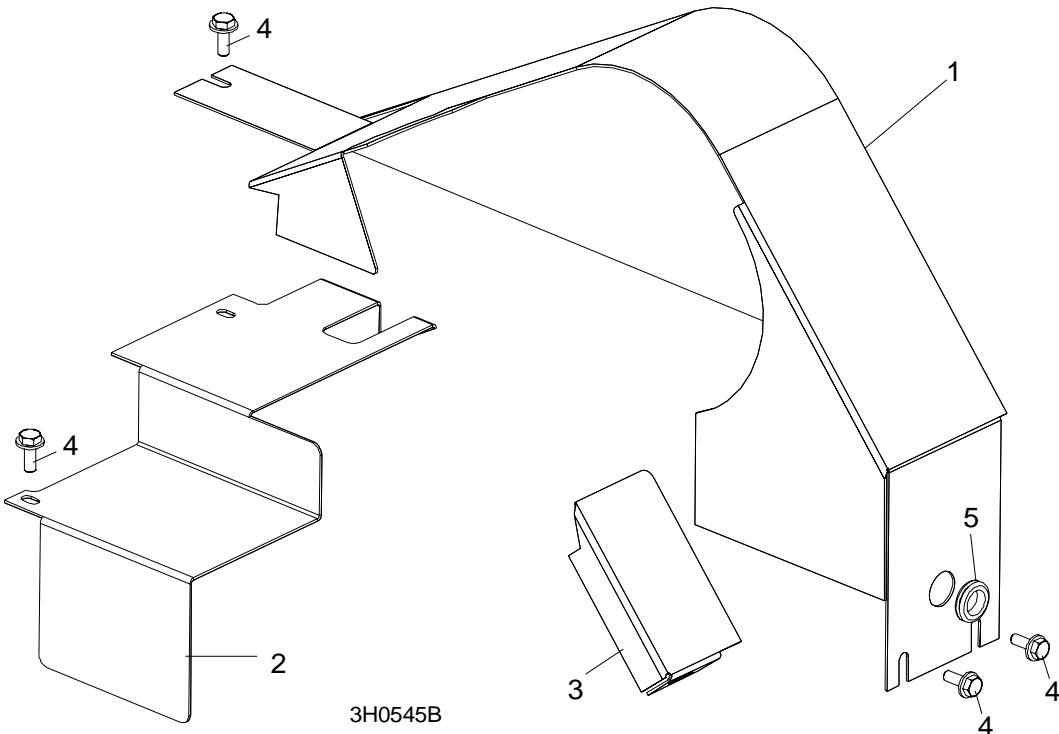
¹ Except LT40 G7143 built with new-style output shaft ([See Section 3.9](#)).

3.11 Radiator Assembly



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	BRACE, LOMBARDINI RADIATOR SUPPORT #9265-162	016171	1
	BRACE, LOMBARDINI RADIATOR SUPPORT #9265-161 (NOT SHOWN)	016172	1
2	SCREW, M6X12 HEX HEAD CAP FULL THREAD	F05005-99	6
3	WASHER, 1/4" SPLIT LOCK	F05011-14	4
4	WASHER, 1/4" SAE FLAT	F05011-11	4
5	GRILL, RADIATOR	015500	1
6	CAP, RADIATOR FILL	014295	1
7	RADIATOR, LOMBARDINI	N/A	1
8	BUSHING, RADIATOR VIBRATION LOWER	016143	2
9	BUSHING, RADIATOR VIBRATION UPPER	016144	2

3.12 Engine Pulley Guards



REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.
1	GUARD WELDMENT, D30 ENGINE PULLEY	014519	1
2	GUARD, D30 SIDE ENGINE PULLEY	015159	1
3	GUARD, D30 BOTTOM ENGINE PULLEY	015454	1
4	BOLT, 1/4-20 X 3/4" HEX HEAD WITH CONICAL WASHER	F05005-134 ¹	4
5	GROMMET, 5/8" ID RUBBER	P11764	1

¹ Replaces 1/4-20 x 3/4" hex head bolt (F05005-1) and 1/4" SAE flat washer (F05011-11) originally supplied prior to LT30 rev. G6.00, and LT40 rev. G7.00 and LT30HD/40HD rev. G9.00.

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