

D35 Engine

Safety, Operation, Maintenance & Parts Manual

079324 Engine, D35 Diesel, Tier 4 rev. B

Safety is our #1 concern!

Form #1573

Used with *

	LTxxD35: beginning revision - current revision
LT40	rev. K1.03 - K5.03
LT40HD	rev. K3.01 - K7.04
LT40HD Super	rev. J9.02 - K4.02
LT40HD Super Remote	rev. J9.02 - K4.02
LT40HD Super Wireless	rev. J9.02 - K4.02
LT50HD	rev. A5.10 - A6.01
LT50HD Remote	rev. A5.10 - A6.01
LT50HD Wireless	rev. A5.10 - A6.01

* Includes Wide and International versions, if available.



WARNING! Read and understand this manual before using this machine.

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**.

Active Patents assigned to Wood-Mizer, LLC

Wood-Mizer, LLC has received patents that protect our inventions which are a result of a dedication to research, innovation, development, and design. Learn more at: woodmizer.com/patents

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SECTION 1 OPERATION

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.

NOTICE 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.

D35 Tier4 Engine -- For sale in the US and where requested

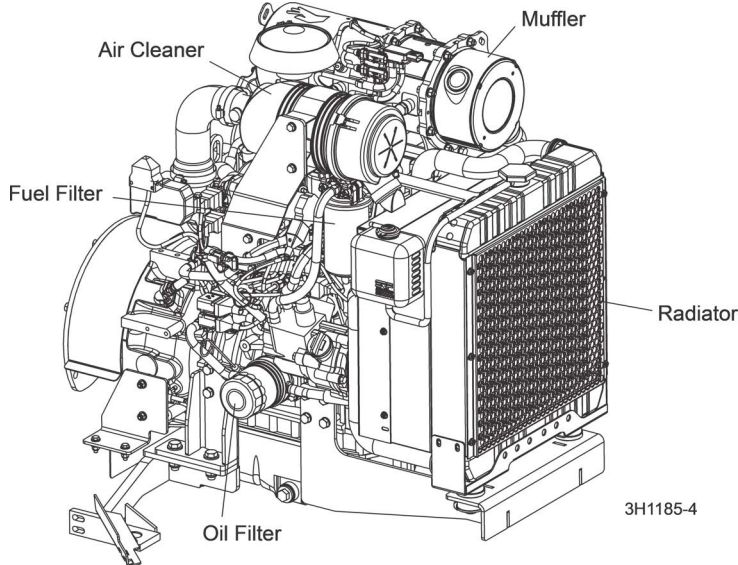
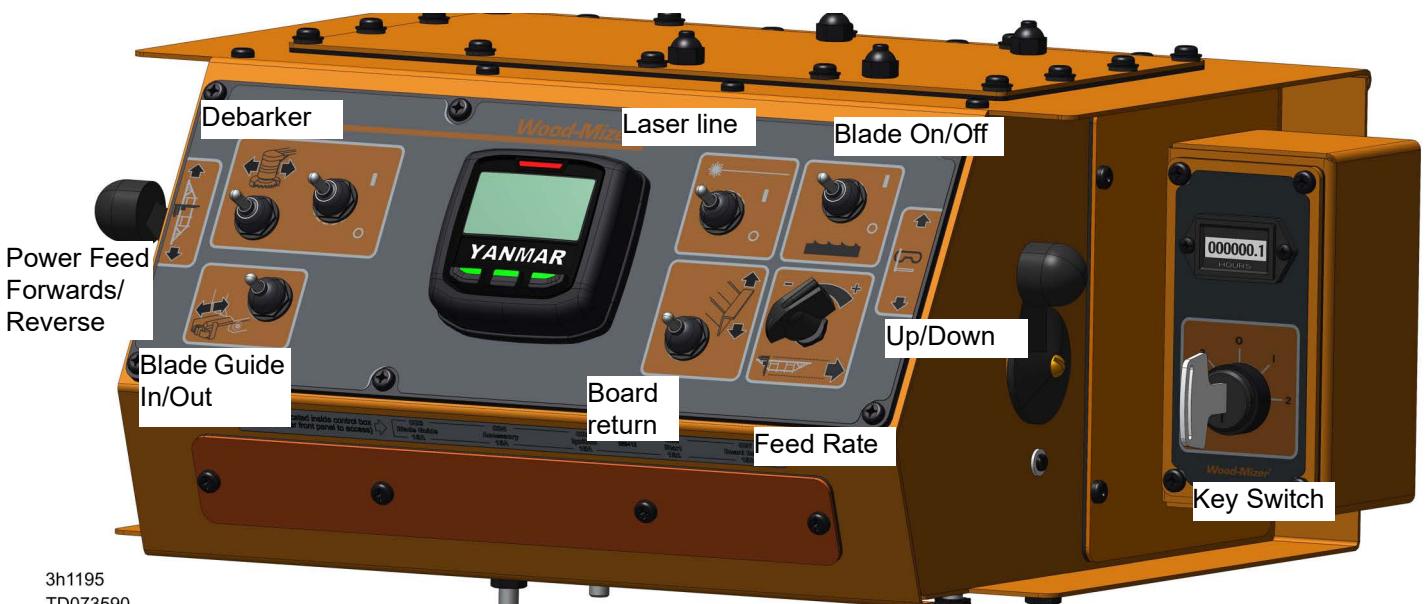


FIG. 1-1

1.1 Starting The Engine

Check the Manufacturer's Manual for the operation of the engine controller located on the sawmill control panel.



ENGINE START



DANGER! Disengage the blade and clear all persons are in the area 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 will cause death unless adequate ventilation is present.

DANGER! Never operate an engine with a fuel or oil leak.



WARNING! Set the power feed switch is in the neutral position before turning the key switch. This prevents accidental carriage movement which may cause serious injury or death.

WARNING! Do not operate engine without proper and operational spark arrester/muffler. Engine exhaust sparks could ignite surrounding materials.



CAUTION! Do not crank starter for more than 20 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 time as listed in the manufacturer's manual.
5. 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.

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



.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.



2.1 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.

2.2 Engine Oil & Filter

1. Check the oil level every 8 hours of operation.
2. Add oil as necessary.
3. See the engine manual for oil viscosity and grade recommendations.
4. Inspect the oil for indications of water in the oil.
 - a. If there is water present or the oil is cloudy, DO NOT start the engine.
 - b. Replace the oil and oil filter, run the engine at low idle for no more than 2 minutes and replace the oil and filter again.



CAUTION! Operating the engine with water in the engine oil will cause severe damage to the engine. Follow all maintenance procedures for checking oil level and oil/filter change intervals.

NOTICE The engine is equipped with a muffler rain cap to keep water out of the muffler and engine. If the sawmill is stored outside or transported during rainy weather, the muffler must be covered.

5. Change the engine oil and oil filter after the first 50 hours of operation, then every 250 hours of operation.

2.3 Cooling System

1. Clean the radiator fins every 8 hours of operation.
2. Spray the radiator with water from a hose or compressed air to clean sawdust from the radiator fins.
3. 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.

2.4 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.



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.

2.5 Alternator Belt

The alternator belt is self-tensioning and should not need adjustment.

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

1. Turn the key switch to OFF (0) and remove the key.
2. Release the blade tension and remove the blade from the sawmill if necessary.
3. Remove the drive belt cover and alternator cover.
4. Pry the belt idler up and remove the belt from the alternator and engine pulleys.
5. While holding the idler up, install the new belt around the alternator and engine pulleys.
6. Release the idler on top of the belt and reinstall the alternator and drive belt covers.

2.6 Air Cleaner

1. Replace the air cleaner cartridge every 200 hours of operation.
2. Change the cartridge more often if operating the sawmill in dirty conditions or if engine performance indicates a new cartridge is necessary.

2.7 RPM Adjustments



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

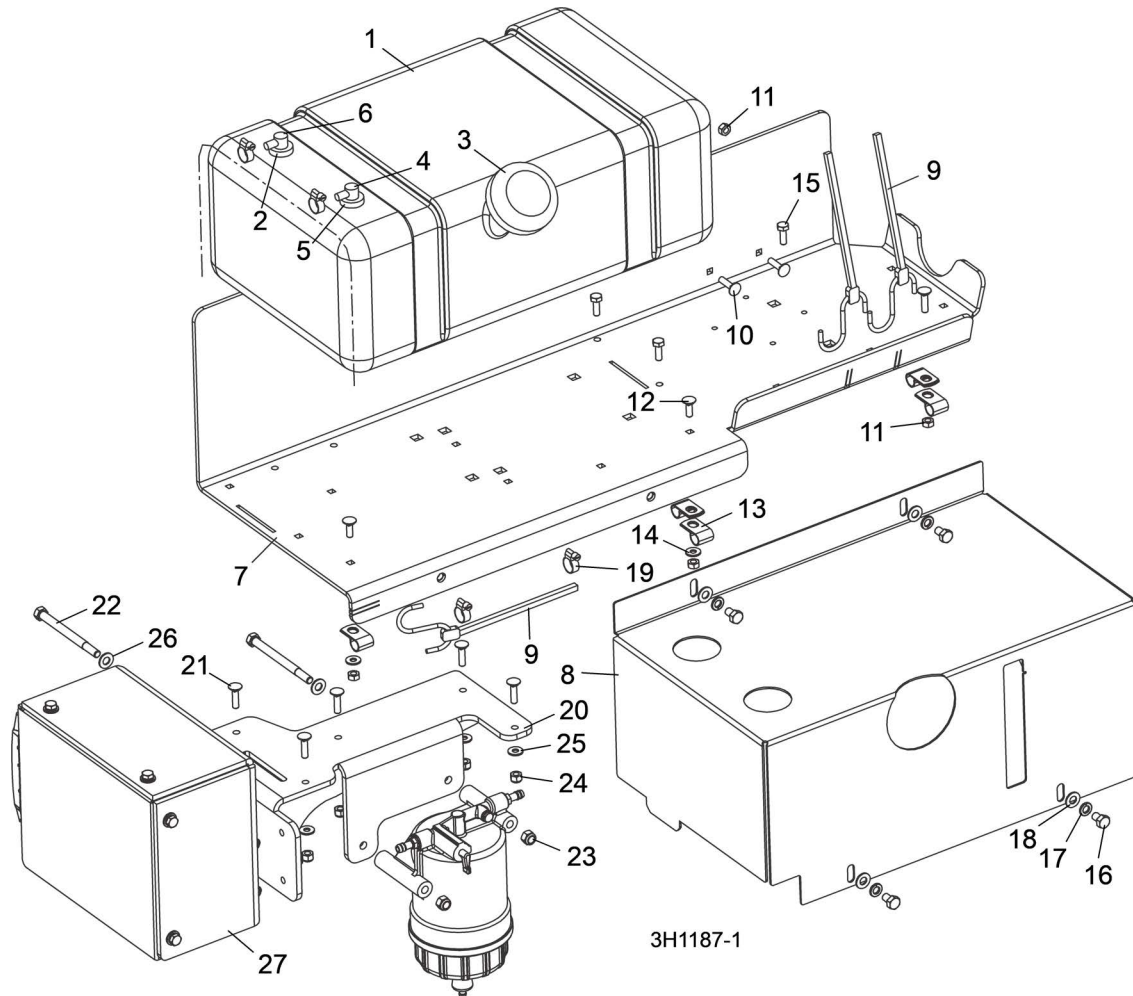
Engine	High End RPM	Low End RPM
D35	3000	1500

1. Check the RPM with a tachometer every 200 hours of operation
2. Before checking the RPM, make sure belt and brake strap tensions are correct (See Sawmill Maintenance).
3. Check oil, fuel, and coolant levels.
4. Check the Manufacturer's Manual to see if the RPM adjustment is necessary.

SECTION 3 REPLACEMENT PARTS

3.1 Fuel Tank (2/2017-present)

LT40 Rev. K5.00+
LT40HD Rev. K7.00+
LT40HD SuperRev. K4.00+
LT50HD Rev. A6.00+

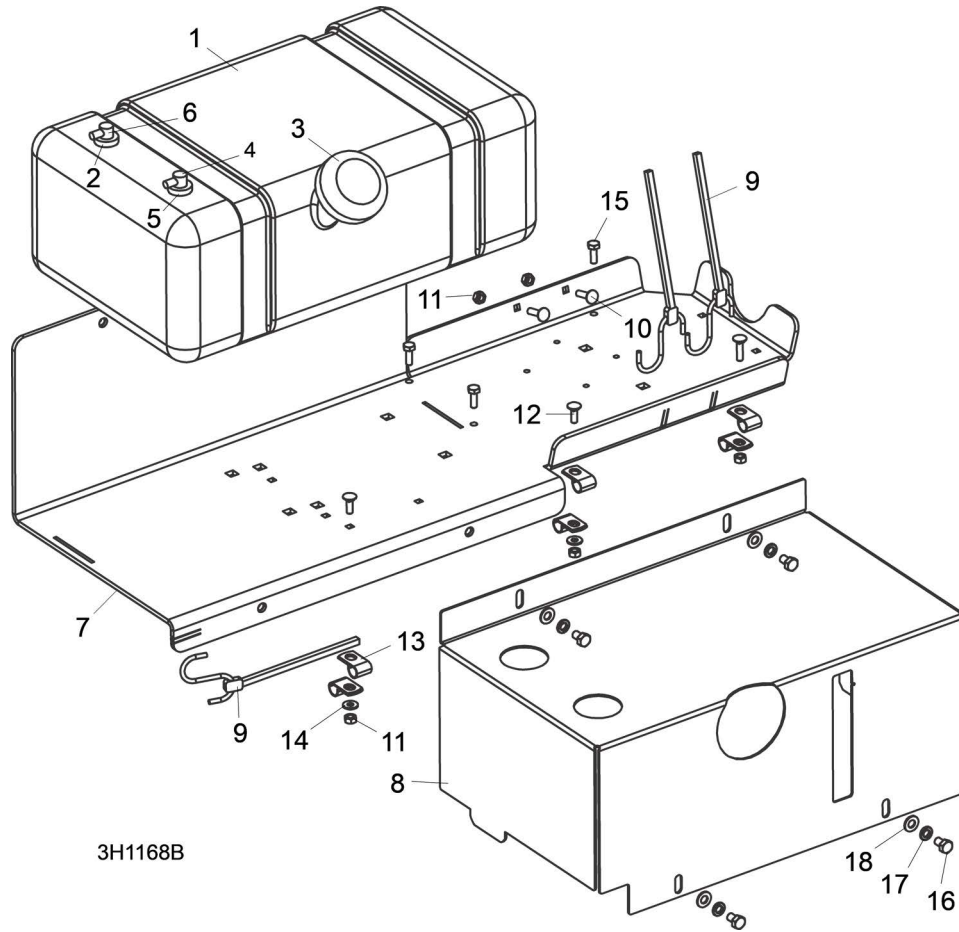


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	079637	TRAY ASSEMBLY, LT40/50 TIER4 DIESEL TANK		1
1	103928	Tank, 5 Gallon Low Pro Diesel		1
2	061250	Grommet, Shut Off 046881		1
3	061257	Cap, Fuel Tank Diesel 080185BE		1
4	061256	Fitting, Return/tube Diesel 468489		1
5	061250	Grommet, Shut Off 046881		1
6	061255	Fitting, Pick-Up/Tube Diesel 468871A		1
7	103943	Tank Weldment, Fuel LT40/50		1
8	103867	Cover, Fuel Tank		1
9	P11668	Strap, 20" Rubber		3
10	F05005-34	Bolt, 1/4-20 X 1" Carriage Head		3
11	F05010-21	Nut, 1/4-20 Hex Lock		5
12	F05005-113	Bolt, 1/4-20 x 3/4" Carriage		2

REF	PART #	DESCRIPTION	COMMENTS	QTY.
13	P07584	Clamp, 1/2" EMT Coated		6
14	F05011-11	Washer, 1/4" SAE Flat		2
15	F05005-123	Bolt, 1/4-20 x 3/4" Hex Head Grade 5		3
16	F05006-15	Bolt, 5/16-18 x 1/2" Hex Head Grade 5		4
17	F05011-13	Washer, 5/16" Split Lock		4
18	F05011-17	Washer, 5/16" SAE Flat		4
19	P649	Hose Clamp, 7/32in-5/8in		4
	079409	Separator Assembly, D35 T4 ECU F/W		1
20	079471	Mount Weldment, D35 T4 ECU F/W Separator		1
21	F05005-34	Bolt, 1/4-20x1 Carriage		5
22	F05006-109	Bolt, 5/16-18x4 Hex Head Grade 5		2
23	F05010-58	Nut, 5/16-18 Nylok Hex		2
24	F05010-69	Nut, 1/4-20 Nylock		5
25	F05011-11	Washer, 1/4 SAE Flat		5
26	F05011-17	Washer, 5/16 SAE Flat		2
27	079422	Relays/Fuse Assembly, D35 T4 ECU	(See Section 4.8)	1
	R02423-3	Hose, Fuel 5/16" EPA 15G CARB		7.5Ft
	R02423-2	Hose, Fuel 1/4" EPA 15G CARB		8 Ft.

3.2 Fuel Tank (11/2015-1/2017)

LT40 Rev. K4.09-K5.02
 LT40 Super Rev. J7.18-J7.19
 LT40HD Rev. K6.09 - K7.04
 LT40HD Super Rev. K3.17 - K4.01
 LT50 Rev. A5.17-A5.23

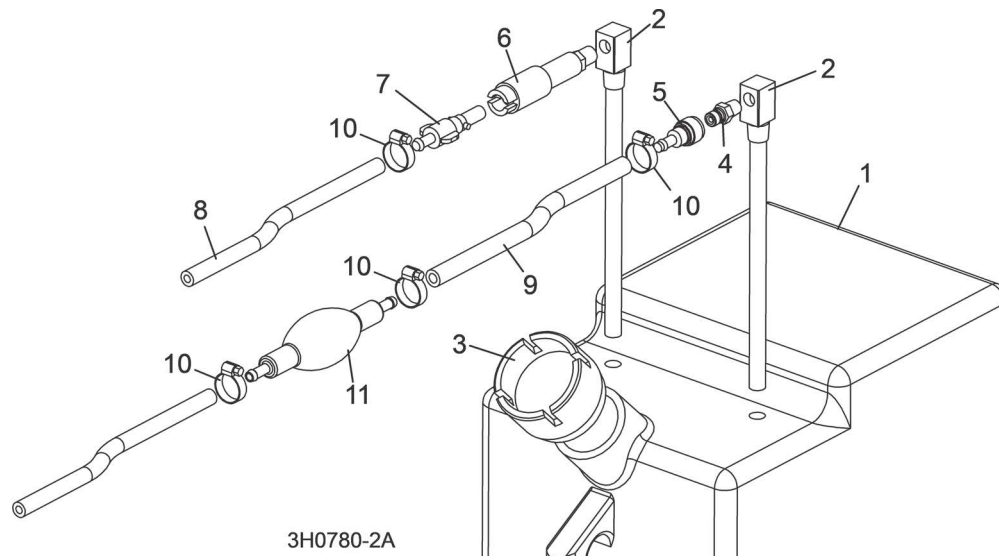


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	074830	TRAY ASSEMBLY, LT40/50 DIESEL TANK		1
1	103928	Tank, 5 Gallon Low Pro Diesel		1
2	061250	Grommet, Shut Off 046881		1
3	061257	Cap, Fuel Tank Diesel 080185BE		1
4	061256	Fitting, Return/tube Diesel 468489		1
5	061250	Grommet, Shut Off 046881		1
6	061255	Fitting, Pick-Up/Tube Diesel 468871A		1
7	103943	Tank Weldment, Fuel LT40/50		1
8	103867	Cover, Fuel Tank		1
9	P11668	Strap, 20" Rubber		3
10	F05005-34	Bolt, 1/4-20 X 1" Carriage Head		3
11	F05010-21	Nut, 1/4-20 Hex Lock		5
12	F05005-113	Bolt, 1/4-20 x 3/4" Carriage		2
13	P07584	Clamp, 1/2" EMT Coated		6
14	F05011-11	Washer, 1/4" SAE Flat		2

REF	PART #	DESCRIPTION	COMMENTS	QTY.
15	F05005-123	Bolt, 1/4-20 x 3/4" Hex Head Grade 5		3
16	F05006-15	Bolt, 5/16-18 x 1/2" Hex Head Grade 5		4
17	F05011-13	Washer, 5/16" Split Lock		4
18	F05011-17	Washer, 5/16" SAE Flat		4
	R02423-3	Hose, Fuel 5/16" EPA 15G CARB		7 Ft.
	R02423-2	Hose, Fuel 1/4" EPA 15G CARB		8 Ft.

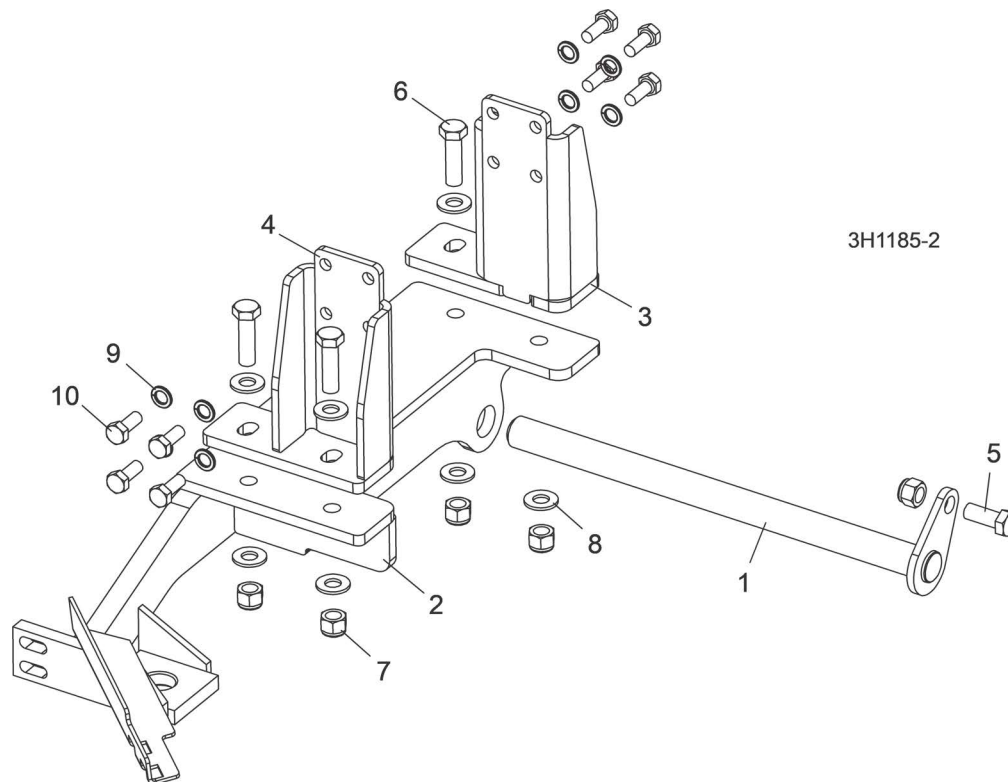
3.3 Fuel Tank (2008- 11/2015)

LT30 Rev. J9.03 - K3.01 (OBS)
 LT30HD Rev. K1.03 - K4.01 (OBS)
 LT40 Rev. K1.03 - K4.08
 LT40 Super Rev. J6.00 - J7.17
 LT40HD Rev. K3.01 - K6.09
 LT40HD SuperRev. K2.00 - K3.17
 LT50 Rev. A3.00 - A5.17



REF	PART #	DESCRIPTION	COMMENTS	QTY.
	A12132	TANK ASSEMBLY, 5 GALLON DIESEL		1
1	P12166	Tank, 5 Gallon Fuel	Available in assemblies only.	1
2	P12172	Pickup, 9" Fuel		2
3	P09683	Cap, 3/5 Gallon Fuel Tank		1
4	015583	Fitting, 1/4" NPT Male Quick Disconnect		1
5	015582	Fitting, Female Quick Disconnect Barb		1
6	P12175	Fitting, 1/4" NPT Plastic Female Disconnect		1
7	P12176	Fitting, 1/4" Barb Plastic Male Disconnect		1
8	P642	HOSE, 1/4" ID FUEL		7.17 Ft
9	R02423-3	HOSE, FUEL 5/16" EPA 15G CARB	R02423-3 replaced 016338 with increased length of 12" after 1/22/2021 per ECN 37785.	10 Ft.
	016338	HOSE, 5/16" ID FUEL		9 Ft.
10	P649	CLAMP, 7/32 - 1/2 HOSE	Bulb 006687 and (2) P649 deleted after 1/22/2021 per ECN 37785.	2
11	006687	BULB, 5/16" FUEL LINE PRIMER		1
	004878	ADDITIVE, DIESEL FUEL 16OZ BOTTLE		1
	061080	BULB KIT, DIESEL PRIMER		1

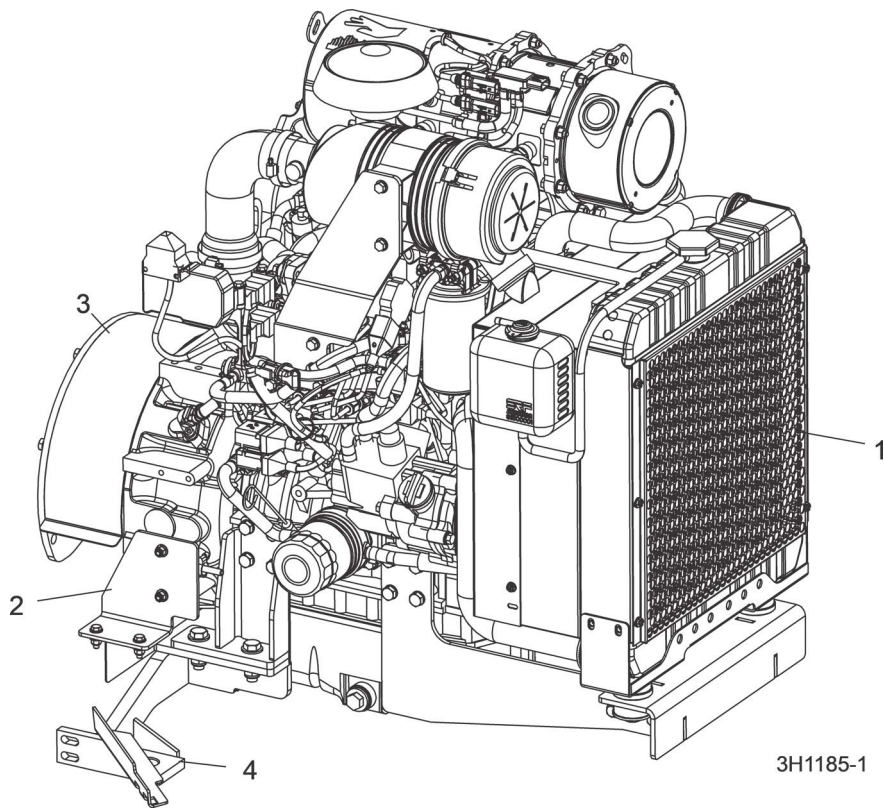
3.4 Engine Mount Assembly



REF	PART #	DESCRIPTION	COMMENTS	QTY.
1	015855	Pin Weldment, Motor Pivot Kubota		1
2	079365	Pivot Weldment, D35 T4 Engine Pivot		1
3	079372	Mount Weldment, D35 T4 Left Engine Mount		1
4	079377	Mount Weldment, D35 T4 Right Engine Mount		1
5	F05008-37	Bolt, 1/2-13x1 1/4 Hex Head Grade 5		1
6	F05008-88	Bolt, 1/2-13x1 3/4 Hex Head Grade 5 FT		4
7	F05010-8	Nut, 1/2-13 Nylon Hex Lock		5
8	F05011-2	Washer, 1/2 SAE Flat		8
9	F05011-88	Washer, 10mm Split Lock		16
10	F81003-11	Bolt, M10-1.5x25mm Hex Head Grade 8.8		16

3.5 Engine Assembly (6/2017 - present) Tier 4

LT40 Rev. K5.00+
 LT40HD Rev. K7.00+
 LT40HD Super Rev. K4.00+
 LT50HD Rev. A6.00+

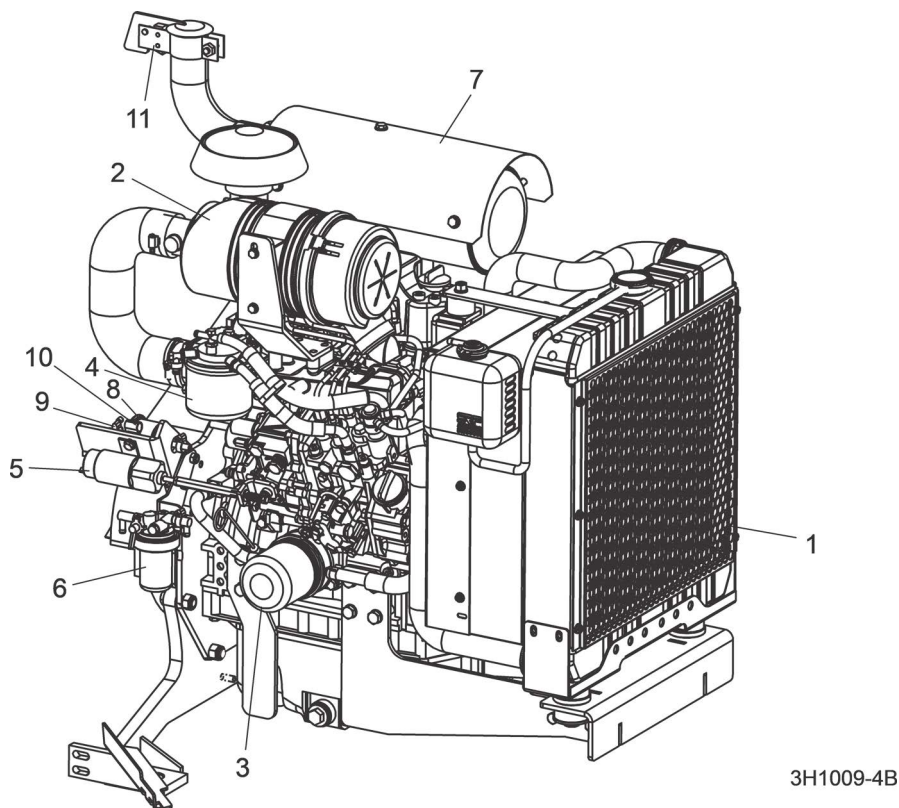


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	CED34	Cover, Engine		1
	079323	Engine, 35.9HP Yanmar Diesel (Tier4)		1
1	n/a	Radiator Parts	(See Section 3.7)	1
	006541	Air Cleaner Assembly, 35.9HP Yanmar		1
	057948	Air Filter, Yanmar 3TNV88 #129087-12510		1
	061100	Cap, Air Filter Assembly Yanmar		1
	057935	Filter, Oil #129150-35170		1
	061308	Filter, Fuel #129A00-55800		1
	n/a	Throttle Solenoid/Relay Parts	(See Section 4.8)	1
	061309	Filter Assembly, Fuel/Water Separator #129A00-59700		1
	006561	Bracket, Fuel/Water Separator Mount		1
	061436	Cup Assembly, Fuel/water Separator		1
	061318	Seal, Fuel/water Separator		1
	061310	Filter, Water Separator Yanmar #129A00-55730		1
	006543	Muffler Assembly, 35.9HP Yanmar Diesel		1
2	079418	Assy, D35 T4 Fuel Feed Pump		1
	078705	Pump, D35 T4 Fuel Feed		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
	079417	Plate, D35 T4 Fuel Feed Pump Mnt		1
	F05005-101	Bolt, 1/4-20x1 Hex Head Grade 5		2
	F05005-123	Bolt, 1/4-20x3/4 Hex Head Grade 5		2
	F05010-69	Nut, 1/4-20 Nylock		4
	F05011-11	Washer, 1/4 SAE Flat		8
	P649	Hose Clamp, 7/32in-5/8in		2
	P649	Hose Clamp, 7/32"-5/8"		4
	P07584	Clamp, 1/2" EMT Coated		1
	061304	Cap, Rain D35 Tier 4 KDPF-1		1
3	n/a	Drive Parts	(See Section 4.10)	1
	n/a	Alternator Parts	(See Section 4.14)	1
4	n/a	Bearing Support Parts	(See Section 3.10)	1
5	n/a	Engine Mount Parts	(See Section 4.4)	1
	061773	Gasket, Yanmar Bonnet #129004-11310		1
	057931	Gasket Set, Yanmar Engine #719823-92960		1
	057932	Seal, Yanmar Front Main #119934-01800		1
	078716	Injector Assembly, Yanmar #129A00-53100		1
	061245	Switch, Yanmar Oil Pressure #119761-39450		1
	061311	Seal, Yanmar Rear Main #129795-01780		1
	057937	Starter Motor, Yanmar #129242-77010		1
	057938	Thermostat, Yanmar #129155-49801		1
	061312	Gasket, Thermostat #129150-49811		1
	044652	Gasket, Thermostat Cover #129795-49551		1
	061313	Pump, Yanmar Water #129A01-42000		1
	057940	Gasket, Yanmar Water Pump #129486-42021		1
	061172	Sender, Yanmar Water Temperature #129927-44900		1
	AP0114	Fan, Engine 7 Blade 360mm #121267-44741		1
	057943	Plug, Yanmar Oil Drain #119640-01640		1
	057944	Seal, Yanmar Oil Drain and Water Temp Sensor #22190-120002		1
	057945	Plug, Yanmar Glow #129008-77800		1
	057946	Dip Stick, Yanmar Oil #129004-34802		1
	044668	Belt, Yanmar Fan #25132-003600		1
	061078	Heater, Yanmar Engine Block #171015-77900		1
	061226	Cable, Heater Engine Block D35/D47		1
	061438	Plug Assembly, Yanmar		1
	061439	Float, Yanmar (red ring)		1

3.6 Engine Assembly (7/08 - 6/17)

LT40 Rev. K1.03 - K5.00
 LT40HD Rev. K3.01 - K7.00
 LT40HD Super Rev. K1.01 - K4.00
 LT50HD Rev. A2.02 - A6.00

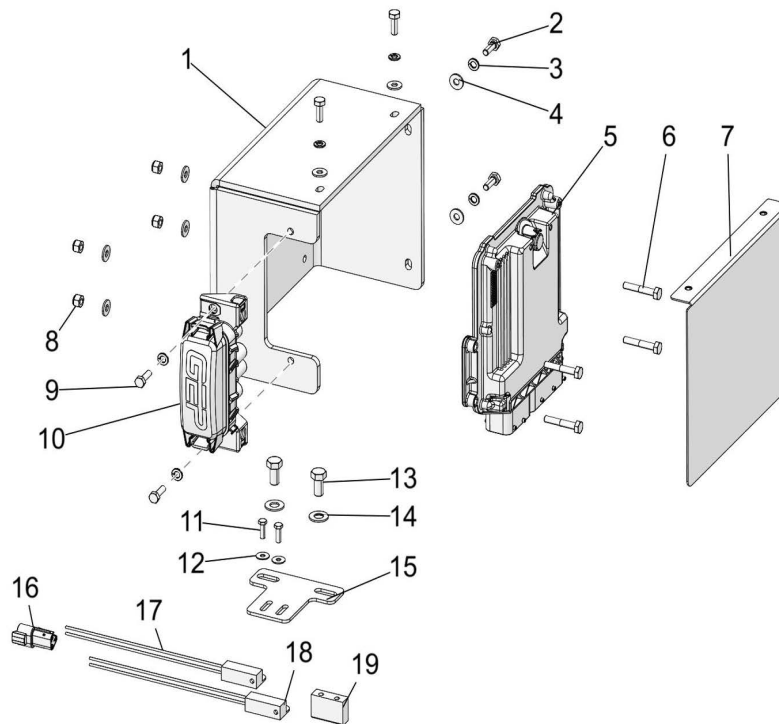


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	CED34	Cover, Engine		1
	074236	Engine, 35.9HP Yanmar Diesel Tier 2	Tier2 Engine For Outside U.S. Only as of 1/15	1
1		Radiator Parts	(See Section 3.8)	
2	006541	Air Cleaner Assembly, 35.9HP Yanmar		1
	028597	Air Filter, E1 Primary Element Enginaire		1
	061100	Cap, Air Filter Assembly Yanmar		1
3	057935	Filter, Oil #129150-35153-12		1
4	057933	Filter, Fuel #119802-55801		1
5		Throttle/Fuel Pump Parts	(See Section 4.9)	
6	040345	Filter Assembly, Fuel/Water Separator		1
	006561	Bracket, Fuel/Water Separator Mount		1
	061099	Filter, Water Separator Yanmar		1
7	006543	Muffler Assembly, 35.9HP Yanmar Diesel		1
8	061074	Pump, Yanmar Fuel Feed		1
9	P649	Hose Clamp, 7/32"-5/8"		4
10	P07584	Clamp, 1/2" EMT Coated		1
11	061073	Cap, Yanmar D35 Rain #129087-13530		1
		Drive Parts	(See Section 4.11)	

REF	PART #	DESCRIPTION	COMMENTS	QTY.
		Alternator Parts	(See Section 3.8)	
		Bearing Support Parts	(See Section 3.10)	
		Engine Mount Parts	(See Section 4.5)	
	061773	Gasket, Yanmar Bonnet #129004-11310		1
	057931	Gasket Set, Yanmar Engine #719823-92960		1
	057932	Seal, Yanmar Front Main #119934-01800		1
	057934	Injector Assembly, Yanmar #729604-53200		1
	057936	Switch, Yanmar Oil Pressure #114250-39450		1
	057057	Seal, Yanmar Rear Main #129120-01780		1
	057937	Starter Motor, Yanmar #129242-77010		1
	057938	Thermostat, Yanmar #129155-49801		1
	044652	Gasket, Yanmar Thermostat #129795-49551		1
	057939	Pump, Yanmar Water #129004-42001		1
	057940	Gasket, Yanmar Water Pump #129486-42021		1
	044655	Sender, Yanmar Water Temperature #121250-44901		1
	044656	Solenoid, Yanmar Fuel #119653-77950		1
	044657	Diode, Yanmar Solenoid Relay #119643-66900		1
	057941	Timer, Yanmar Air Heater #128300-77920		1
	AP0114	Fan, Engine 7 Blade 360mm #121267-44741		1
	057942	Gasket, Yanmar Head #129001-01340		1
	057943	Plug, Yanmar Oil Drain #119640-01640		1
	057944	Seal, Yanmar Oil Drain #22190-220002		1
	057945	Plug, Yanmar Glow #129008-77800		1
	057946	Dip Stick, Yanmar Oil #129004-34802		1
	044668	Belt, Yanmar Fan #25132-003600		1
	057947	Pipe, Yanmar Fuel Return #129004-49610		1
	061053	Spring, Governor Yanmar #129573-61700		1
	056587	Strainer, Yanmar Fuel		1
	061078	Heater, Yanmar Engine Block #171015-77900		1
	061226	Cable, Heater Engine Block D35/D47		1

3.7 ECU & Relay/Fuse Assembly (6/17 - present)

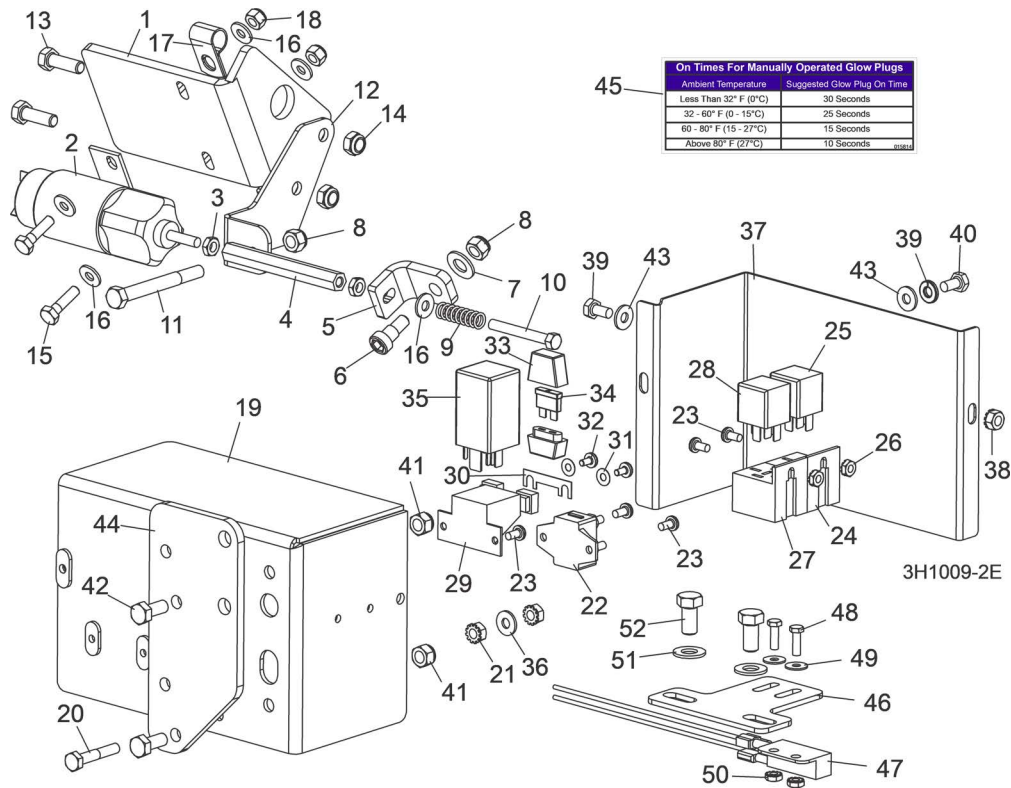
LT40 Rev. K5.00+
LT40HD Rev. K7.00+
LT40HD SuperRev. K4.00+
LT50HD Rev. A6.00+



REF	PART #	DESCRIPTION	COMMENTS	QTY.
	079422	Assembly, D35 T4 ECU & Relays/Fuse		1
1	079420	Plate, D35 T4 ECU Mount Plate		1
2	F05005-123	Bolt, 1/4-20x3/4 HH Gr5		4
3	F05011-14	Washer, 1/4 Split Lock		6
4	F05011-11	Washer, 1/4 SAE Flat		8
5	079267	Yanmar T4 Final ECU		1
6	F05005-124	Bolt, 1/4-20x1 1/2 HH Gr5		4
7	079428	Weldment, D35 T4 Relays/Fuse Cover		1
8	F05010-69	Nut, 1/4-20 Nylock		4
9	F05020-6	Bolt, M6-1x20 HH Class 8		2
10	079340	Assembly, D46 T4 Fuse/Relay		1
11	F05004-18	Screw, 10-24x5/8 Unsl Indnt HH Machine		2
12	F05011-18	Washer, #10 SAE Flat		2
13	F05007-27	Bolt, 3/8-16x3/4 HH Gr2		2
14	F05011-3	Washer, 3/8 Flat SAE		2
15	016617	Plate, Sensor Bracket		1
	073599-1	Switch Assembly, Tier 4 Magnetic Throttle		1
16	069474	Connector, 3P Pin Trig DT Deutsch Male		1
17	114048	Sensor, Proximity Magnetic Reed		1
18	024626	Sensor, Proximity Magnetic Reed		1
19	130277	Spacer, Throttle Sensor		1

3.8 Relay/Throttle Assembly (7/08-6/17)

LT40 rev. K1.03 - K4.12
 LT40HD rev. K3.01 - K6.14
 LT40HD Super rev. J9.02 - K3.22
 LT50HD rev. A5.10 - A5.23

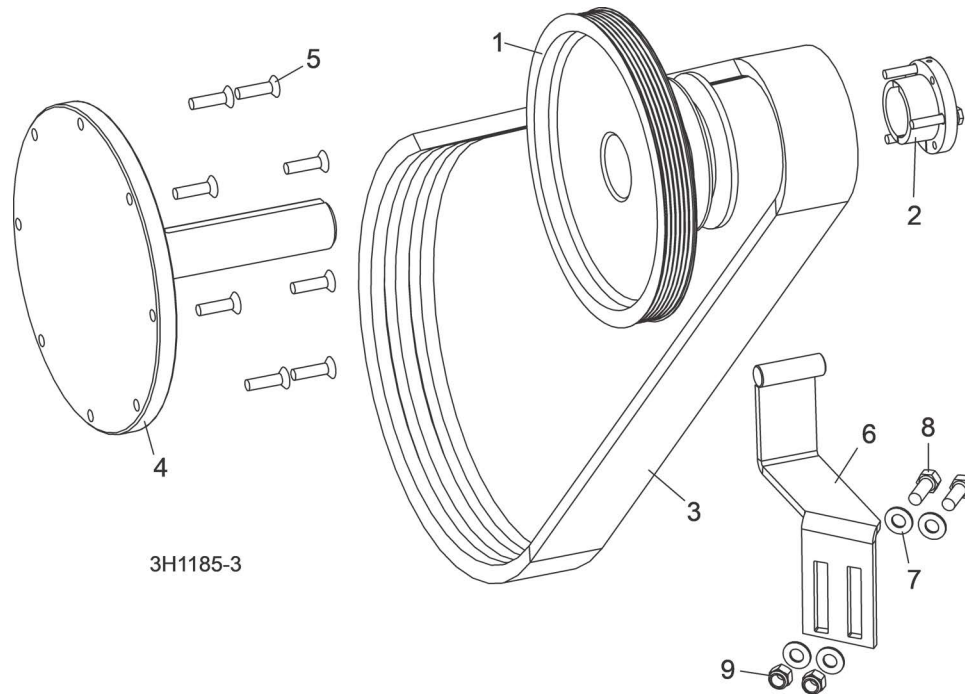


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	074248	Pump Assembly, 35.9HP Throttle/Fuel		1
1	006566	Plate, Yanmar Throttle Solenoid Mount		1
	074475	Solenoid Kit, Throttle, Yanmar/Cat	Service Parts	1
2	045848	Solenoid, Throttle		1
	074475-2058	Instruction Sheet, Solenoid Adjustment		1
3	F05010-113	Nut, 1/4-28 Hex Jam		2
4	045850	Link, Throttle Actuator		1
5	006567	Plate, Short Throttle Connecting		1
6	F05007-159	Bolt, 3/8" X 5/16-18" Socket Head Shoulder		1
7	F05011-3	Washer, 3/8" SAE Flat		1
8	F05010-58	Nut, 5/16-18 Hex Nylon Lock		2
9	P11644	Spring, .42" x 1.34" x .061"		1
10	F05005-188	Bolt, 1/4-28 x 2" Hex Head Grade 5		1
11	F05006-62	Bolt, 5/16-18 x 3" Hex Head Grade 5		1
12	006561	Bracket, Fuel/Water Separator Mount		1
13	F05004-40	Bolt, M8-1.25 x 1mm Hex Head		2
14	F05010-132	Nut, M8 Hex Nylon Lock		2
15	F05005-101	Bolt, 1/4-20 x 1" Hex Head Grade 5		2
16	F05011-11	Washer, 1/4" Sae Flat		5
17	P07584	Clamp, 1/2" EMT Coated		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
18	F05010-69	Nut, 1/4-20 Hex Nylon Lock		2
	074232	Relay Assembly, Yanmar w/Cover		1
	069625	Bracket Assembly, Yanmar Relay (2012)		1
19	036269	Bracket Weldment, Glow Plug Relay Mount		1
20	F05005-31	Bolt, 1/4-20 x 1 1/2" Hex Head Full Thread		1
21	F05010-9	Nut, 1/4-20 Self-Locking Hex		2
22	E20430	Breaker, 15A Manual Reset Circuit		1
23	F05004-3	Screw, #10-24 x 3/8" Phillips Head		6
	053234	Relay Assembly, Yanmar Throttle (2008)		1
24	050033	Socket, Relay Plug		1
25	051335	Relay, ISO 12V Coil w/Diode		1
26	F05010-14	Nut, #10-24 Hex		2
	053233	Relay Assembly, Yanmar Starter (2008)		1
27	050033	Socket, Relay Plug		1
28	051335	Relay, ISO 12V Coil w/Diode		1
	069624	Relay Assembly, Yanmar Glow Plug (2012)		1
29	024554	Socket, Glow Plug Relay w/Fuse Holder		1
30	024597	Fuse Link, 50 Amp		1
31	F81052-4	Washer, M5 Wave		2
32	F81000-14	Screw, M5-0.8 x 8mm Phillips Head Black Oxide		2
33	024555	Fuseholder, In-Line 3-20A ATC w/Cover		1
34	024150-4	Fuse, 4A ATO Blade (Pink)		1
	052662	Resistor Assembly, 3K Cat Glow Plug Wire		1
35	023359	Relay, Diesel Glow Plug		1
36	F05011-11	Washer, 1/4" SAE Flat		1
37	045824	Cover, Relay Assembly		1
38	F05010-9	Nut, 1/4-20 Self-Locking Hex		1
39	F05011-14	Washer, 1/4" Split Lock		1
40	F05005-15	Bolt, 1/4-20 X 1/2" Hex Head		2
41	F05010-58	Nut, 5/16-18 Hex Nylon Lock		2
42	F05006-5	Bolt, 5/16-18 x 3/4" Hex Head		2
43	F05011-11	Washer, 1/4" SAE Flat		2
44	006523	Plate, Glow Plug Relay Mount Adaptor		1
45	015814	Decal, Glow Plug Operation		1
46	016617	Bracket, Sensor Mount		1
47	051436-1	Sensor Assy, Throttle	051436-1 replaced 051436 after 1/14/2021 per ECN 38178.	1
	051436	Sensor, Caterpillar Throttle		1
48	F05004-18	Bolt, #10-24 x 5/8" Hex Head		2
49	F05011-18	Washer, #10 SAE Flat		2
50	F05010-14	Nut, #10-24 Self-Locking Hex		2
51	F05011-3	Washer, 3/8" SAE Flat		2
52	F05007-27	Bolt, 3/8-16 x 3/4" Hex Head		2

3.9 Drive Assembly (06/17 - present)

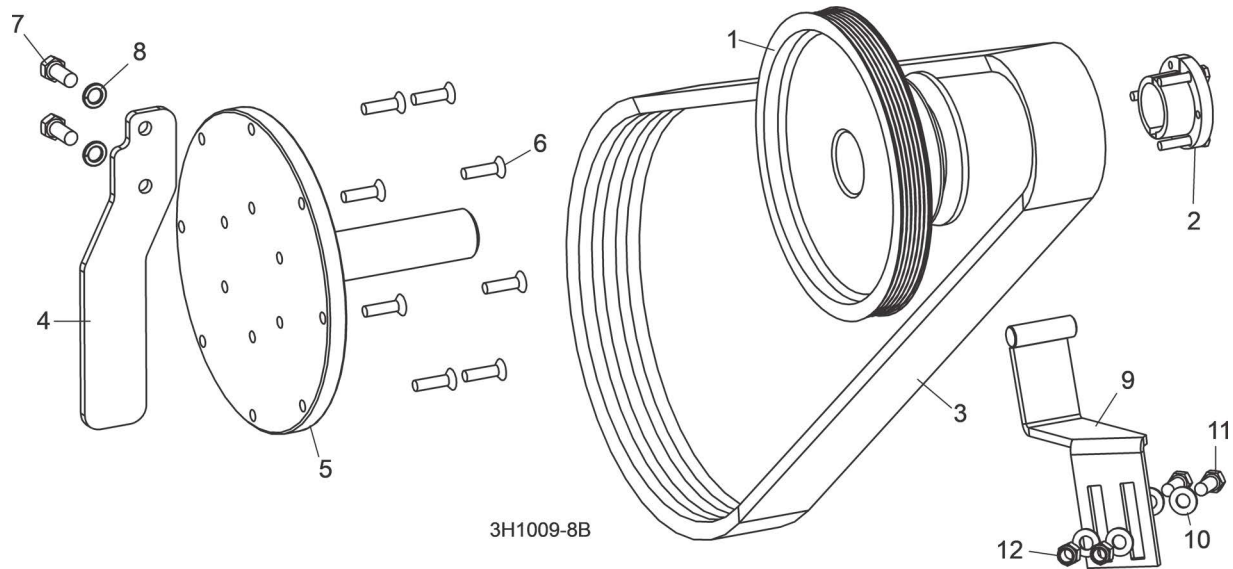
LT40 Rev. K5.00+
LT40HD Rev. K7.00+
LT40HD SuperRev. K4.00+
LT50HD Rev. A6.00+



REF	PART #	DESCRIPTION	COMMENTS	QTY.
1	016533	Sheave, 5V x 4.46" Poly V (Gas/Diesel)		1
2	016535	Bushing, SH x 1 7/16"		1
3	110268	Belt, 3/5VFL765 Kevlar		1
4	079481	Shaft, D35 T4 Yanmar Large Stub		1
5	F05004-245	Bolt, M8-1.25 x 30mm Flat Socket Head		8
6	016364	Bracket, Drive Belt Support		1
7	F05011-3	Washer, 3/8" SAE Flat		4
8	F05007-7	Bolt, 3/8-16 x 1" Hex Head		2
9	F05010-10	Nut, 3/8-16 Hex nylon Lock		2

3.10 Drive Assembly (7/08 - 6/17)

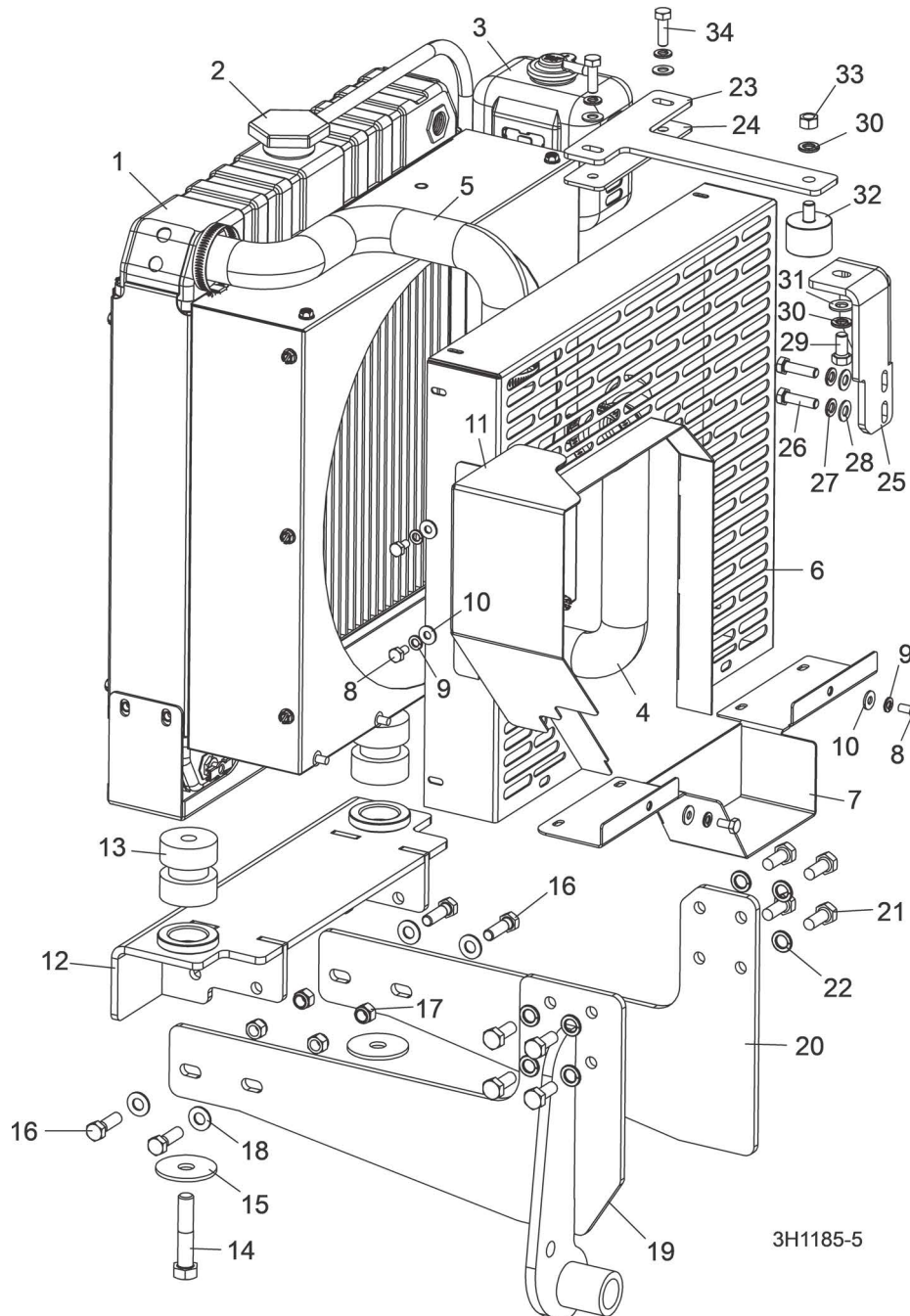
LT40 rev. K1.03 - K4.12
 LT40HD rev. K3.01 - K6.14
 LT40HD Super rev. J9.02 - K3.22
 LT50HD rev. A5.10 - A5.23



REF	PART #	DESCRIPTION	COMMENTS	QTY.
1	016533	Sheave, 5V x 4.46" Poly V (Gas/Diesel)		1
2	016535	Bushing, SH x 1 7/16"		1
3	046571	Belt, 3/5VL770		1
4	006620	Plate, Yanmar Engine Stop		1
5	071326	Shaft, Yanmar Large Drive Stub (long)		1
6	F05004-245	Bolt, M8-1.25 x 30mm Flat Socket Head		8
7	F81003-11	Bolt, M10-1.5 x 25mm Head Head Grade 8.8		2
8	F05011-88	Washer, 10mm Split Lock		2
9	016364	Bracket, Drive Belt Support		1
10	F05011-3	Washer, 3/8" SAE Flat		4
11	F05007-7	Bolt, 3/8-16 x 1" Hex Head		2
12	F05010-10	Nut, 3/8-16 Hex nylon Lock		2

3.11 Radiator Assembly (6/2017 - present)

LT40 Rev. K5.00+
LT40HD Rev. K7.00+
LT40HD SuperRev. K4.00+
LT50HD Rev. A6.00+

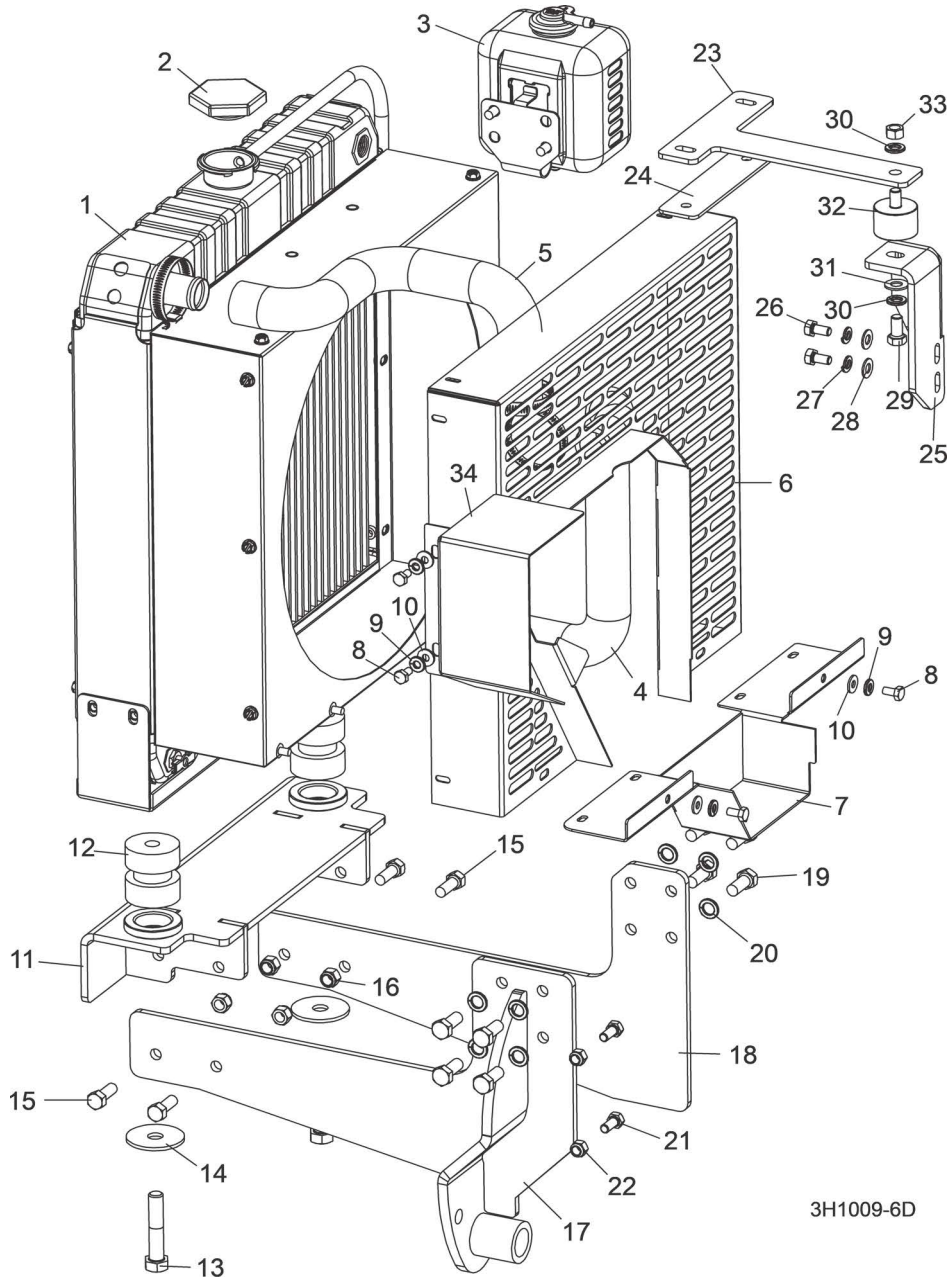


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	044804	Radiator kit, Yanmar #KR2		1
1	057949	Radiator, Diesel Engines #129689-44510		1
2	044660	Cap, Yanmar Radiator #129987-44570		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
3	040387	Bottle Assembly, Yanmar #123987-43600		1
4	057950	Hose, Yanmar Lower Radiator #129689-49020		1
5	057951	Hose, Yanmar Upper Radiator #129687-49010		1
	079627	Cover Assembly, D35 T4 Radiator		1
6	079477	Cover Weldment, D35 T4 Radiator		1
7	006604	Cover Weldment, Radiator Lower		1
8	F05005-15	Bolt, 1/4-20 x 1/2" Hex Head		4
9	F05011-14	Washer, 1/4" Split lock		4
10	F05011-11	Washer, 1/4" SAE Flat		4
11	079478	Plate, D35 T4 Yanmar Alt Cover		1
	074229	Mount Assembly, Yanmar Lower Radiator		1
12	006530	Mount Weldment, Yanmar Radiator		1
13	018734	Bushing, Rubber Mount		2
14	F05008-144	Bolt, 1/2-13 x 2 3/4" Hex Head Grade 5	F05008-144 replaced F05008-74 per ECN 38392 on 2/22/22	2
15	018751	Washer, Engine Mount		2
16	F05007-123	Bolt, 3/8-16x1 1/4 FT Hex Head Grade 5		4
17	F05010-10	Nut, 3/8-16 Hex Nylon Lock		4
18	F05011-3	Washer, 3/8 Flat SAE		4
19	079350	Mount Weldment, D35 T4 Front Engine		1
20	058714	Plate, Yanmar Front Engine Mount		1
21	F81003-11	Bolt, M10-1.5 x 25mm Hex Head Grade 8.8		8
22	F05011-88	Washer, 10mm Split Lock		8
	074228	Mount Assembly, 35.9HP Upper Radiator		1
23	006531	Plate, Yanmar Top Radiator support		1
24	006557	Plate, Top Radiator Mount Spacer		1
25	006558	Plate, Yanmar Top Radiator Mount		1
26	F05021-11	Screw, M8-1.25x30 HHC		2
27	F05011-45	Washer, 8mm Split Lock		4
28	F05011-17	Washer, 5/16" SAE Flat		4
29	F05007-27	Bolt, 3/8-16 x 3/4" Hex Head Grade 2		1
30	F05011-4	Washer, 3/8" Split Lock		2
31	F05011-3	Washer, 3/8" SAE Flat		1
32	028217	Bushing, Rubber Radiator Mount		1
33	F05010-1	Nut, 3/8-16 Hex		1
34	F05004-40	Bolt, M8x1.25x25mm C/S 8.8 Din 933 HH		2

3.12 Radiator Assembly (7/08 - 6/17)

LT40 rev. K1.03 - K4.12
 LT40HD rev. K3.01 - K6.14
 LT40HD Super rev. J9.02 - K3.22
 LT50HD rev. A5.10 - A6.00

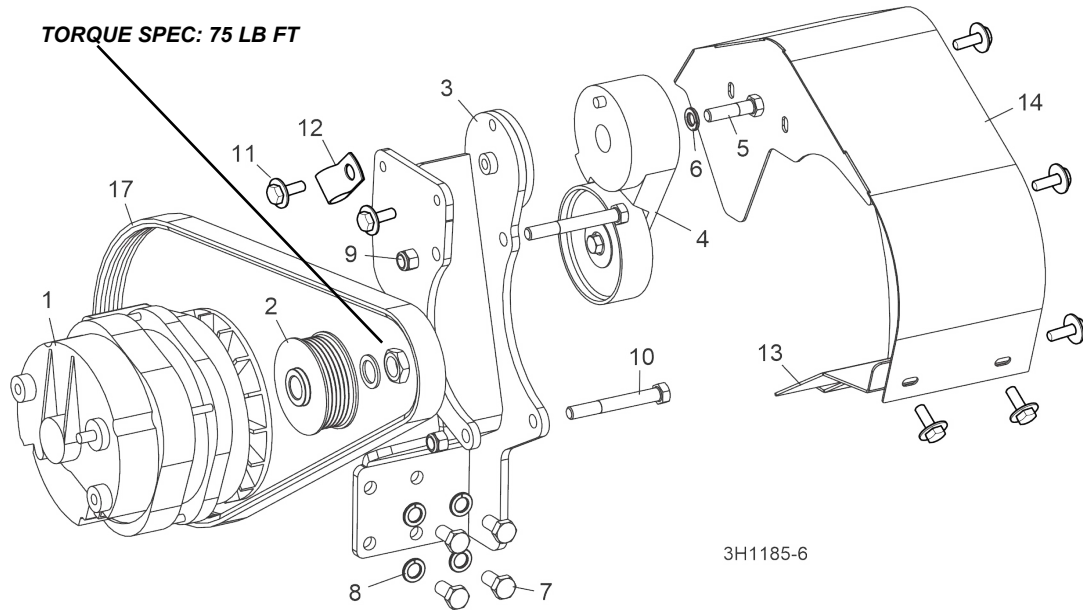


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	044804	Radiator kit, Yanmar #KR2		1
1	057949	Radiator, Diesel Engines #129689-44510		1
2	044660	Cap, Yanmar Radiator #129987-44570		1
3	040387	Bottle Assembly, Yanmar #123987-43600		1
4	057950	Hose, Yanmar Lower Radiator #129689-49020		1
5	057951	Hose, Yanmar Upper Radiator #129687-49010		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
6	006607	Cover Weldment, Radiator	Cover Weldment 006607 modified 3/10 to accept new cover 008913 to provide sufficient guarding for Yanmar engine with new-style alternator.	1
7	006604	Cover Weldment, Radiator Lower		1
8	F05005-15	Bolt, 1/4-20 x 1/2" Hex Head		4
9	F05011-14	Washer, 1/4" Split lock		4
10	F05011-11	Washer, 1/4" SAE Flat		4
	074229	Mount Assembly, Yanmar Lower Radiator		1
11	006530	Mount Weldment, Yanmar Radiator		1
12	018734	Bushing, Rubber Mount		2
13	F05008-144	Bolt, 1/2-13 x 2 3/4 Hex Head Grade 5	F05008-144 replaced F05008-74 per ECN 38392 on 2/22/22	2
14	018751	Washer, Engine Mount		2
15	F05007-7	Bolt, 3/8-16 x 1" Hex Head		4
16	F05010-10	Nut, 3/8-16 Hex Nylon Lock		4
17	058725	Mount Weldment, Yanmar Front		1
18	058714	Plate, Yanmar Front Engine Mount		1
19	F81003-11	Bolt, M10-1.5 x 25mm Hex Head Grade 8.8		8
20	F05011-88	Washer, 10mm Split Lock		8
21	F05006-5	Bolt, 5/16-18 x 3/4" Hex Head		2
22	F05010-58	Nut, 5/16-18 Hex Nylon Lock		2
	074228	Mount Assembly, 35.9HP Upper Radiator		1
23	006531	Plate, Yanmar Top Radiator support		1
24	006557	Plate, Top Radiator Mount Spacer		1
25	006558	Plate, Yanmar Top Radiator Mount		1
26	F05004-47	Bolt, M8 x 125 x 16mm Hex Head		2
27	F05011-45	Washer, 8mm Split Lock		2
28	F05011-17	Washer, 5/16" SAE Flat		2
29	F05007-27	Bolt, 3/8-16 x 3/4" Hex Head Grade 2		1
30	F05011-4	Washer, 3/8" Split Lock		2
31	F05011-3	Washer, 3/8" SAE Flat		1
32	028217	Bushing, Rubber Radiator Mount		1
33	F05010-1	Nut, 3/8-16 Hex		1
34	008913	Cover, Yanmar 35HP Alternator	Cover Weldment 006607 modified 3/10 to accept new cover 008913 to provide sufficient guarding for Yanmar engine with new-style alternator.	1

3.13 Alternator Assembly (6/17 - present)

LT40 Rev. K5.00+
 LT40HD Rev. K7.00+
 LT40HD Super Rev. K4.00+
 LT50HD Rev. A6.00+



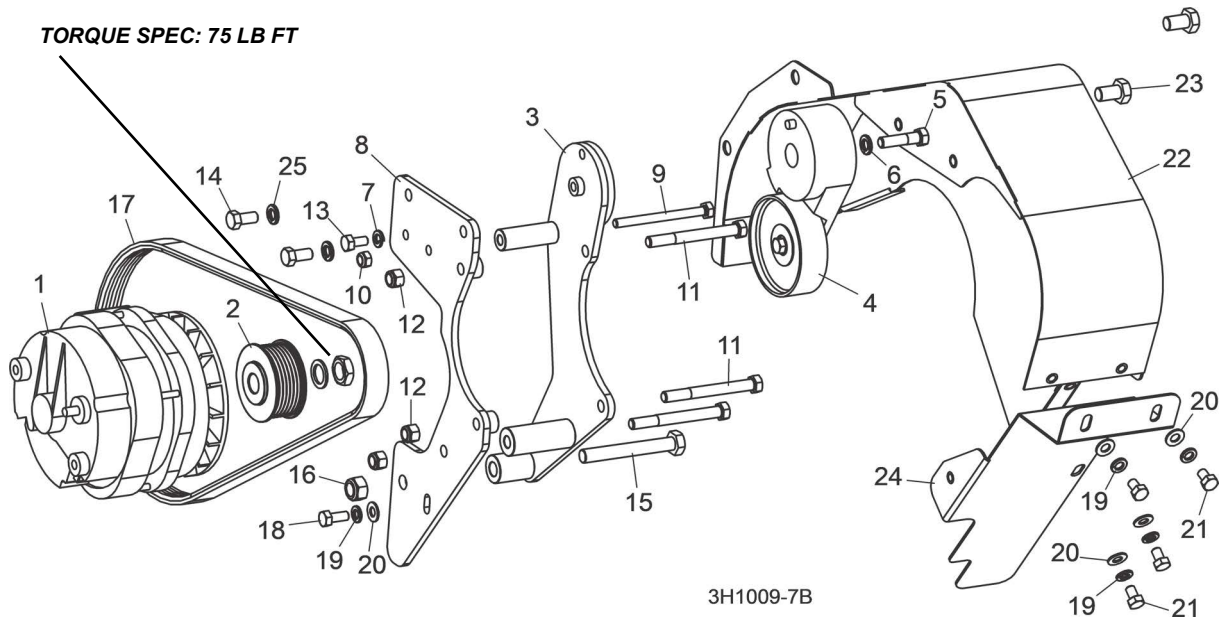
REF	PART #	DESCRIPTION	COMMENTS	QTY.
	024308	Wire Assembly, Starter to Alternator		1
	050941	Wire Assembly, Engine to Alternator Ground		1
	079399	Alternator Assembly, Yanmar		1
	046429	Alternator Assembly, 140 Amp	Available in assemblies only.	1
1	023695	Alternator, 140 Amp		1
2	046402	Pulley, 2 3/4" Dia. Alternator		1
3	079394	Mount Weldment, D35 T4 Alternator		1
4	034464	Tensioner, Alternator Belt		1
5	F05007-78	Bolt, 3/8-16 x 1 1/2" Hex Head Grade 5		1
6	F05011-4	Washer, 3/8" Split Lock		1
7	F05004-207	Bolt, M10-1.50x20mm HH FT 8.8		1
8	F05011-88	Washer, 10mm Split Lock		1
9	F05010-10	Nut, 3/8-16 Hex Nyloc		1
10	F05007-73	Bolt, 3/8-16x3 HH Gr5		1
	079544	Cover Assembly, D35 T4 Alternator		1
11	F05005-134	Bolt, 1/4-20x3/4 W/Conical Washer	Replaced F05011-11, F05011-14, F05005-15, & F05005-1 after 5/2/2024 per ECN 39385	10
	F05005-1	Bolt, 1/4-20x3/4 FT HHC		2
	F05011-14	Washer, 1/4 Split Lock		10
	F05011-11	Washer, 1/4 SAE Flat		10
	F05005-15	Bolt, 1/4-20x1/2 Hex Head		8

3**Replacement Parts***Alternator Assembly (6/17 - present)*

REF	PART #	DESCRIPTION	COMMENTS	QTY.
12	P07584	Clamp, 1/2EMT Coated	Added after 5/2/2024 per ECN 39385	1
13	079576	Cover Weldment, D35 T4 Lower Alt		1
14	079543	Cover Weldment, D35 T4 Alternator		1
15	006524	Belt, 6PK1145		1

3.14 Alternator Assembly (7/08 - 06/17)

LT40 rev. K1.03 - K4.12
 LT40HD rev. K3.01 - K6.14
 LT40HD Super rev. J9.02 - K3.22
 LT50HD rev. A5.10 - A5.23

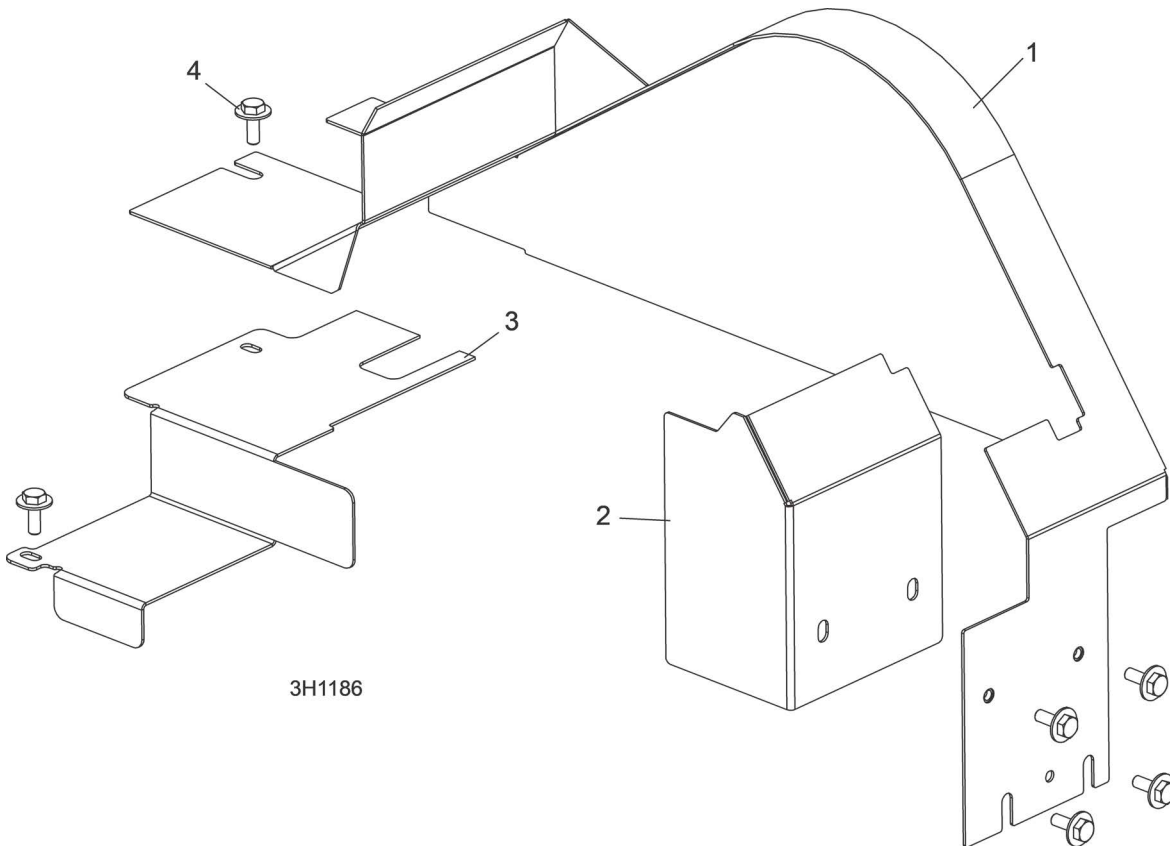


REF	PART #	DESCRIPTION	COMMENTS	QTY.
	024308	Wire Assembly, Starter to Alternator		1
	050941	Wire Assembly, Engine to Alternator Ground		1
	074234	Alternator Assembly, Yanmar		1
	046429	Alternator Assembly, 140 Amp	Available in assemblies only.	1
1	023695	Alternator, 140 Amp		1
2	046402	Pulley, 2 3/4" Dia. Alternator		1
3	057493	Mount Weldment, Yanmar Alternator Tensioner		1
4	034464	Tensioner, Alternator Belt		1
5	F05007-78	Bolt, 3/8-16 x 1 1/2" Hex Head Grade 5		1
6	F05011-4	Washer, 3/8" Split Lock		1
7	F05011-45	Washer, 8mm Split Lock		1
8	058708	Mount Weldment, Yanmar ALternator		1
9	F05004-247	Bolt, M8 x 1.25 x 90mm Hex Head Full TThread		1
10	F05010-132	Nut, M8 Hex Nylon Lock		1
11	F05004-123	Bolt, 3/8-16 x 3 1/2" Hex Head Grade 5		3
12	F05010-10	Nut, 3/8-16 Hex Nylon Lock		3
13	F05004-47	Bolt, M8 x 125 x 16mm Hex Head		1
14	F05007-27	Bolt, 3/8-16 x 3/4" Hex Head Grade 2		2
15	F05004-249	Bolt, M12 x 1.75 x 90mm Hex Head Full Thread		1
16	F05010-209	Nut, M12 x 1.75 Hex Nylon Lock		1
17	006524	Belt, 6PK1145		1
	074233	Cover Assembly, Yanmar Alternator		1
18	F05006-5	Bolt, 5/16-18 x 3/4" Hex Head		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
19	F05011-13	Washer, 5/16 Split Lock		5
20	F05011-17	Washer, 5/16 SAE Flat		5
21	F05006-15	Bolt, 5/16-18 x 1/2" Hex Head Grade 5		4
22	058704	Cover Weldment, Yanmar Alternator		1
23	F05007-27	Bolt, 3/8-16 x 3/4" Hex Head Grade 2		2
24	058712	Cover Weldment, Lower Yanmar Alternator		1
25	F05011-4	Washer, 3/8" Split Lock		2

3.15 Engine Pulley Guards (6/2017 - present)

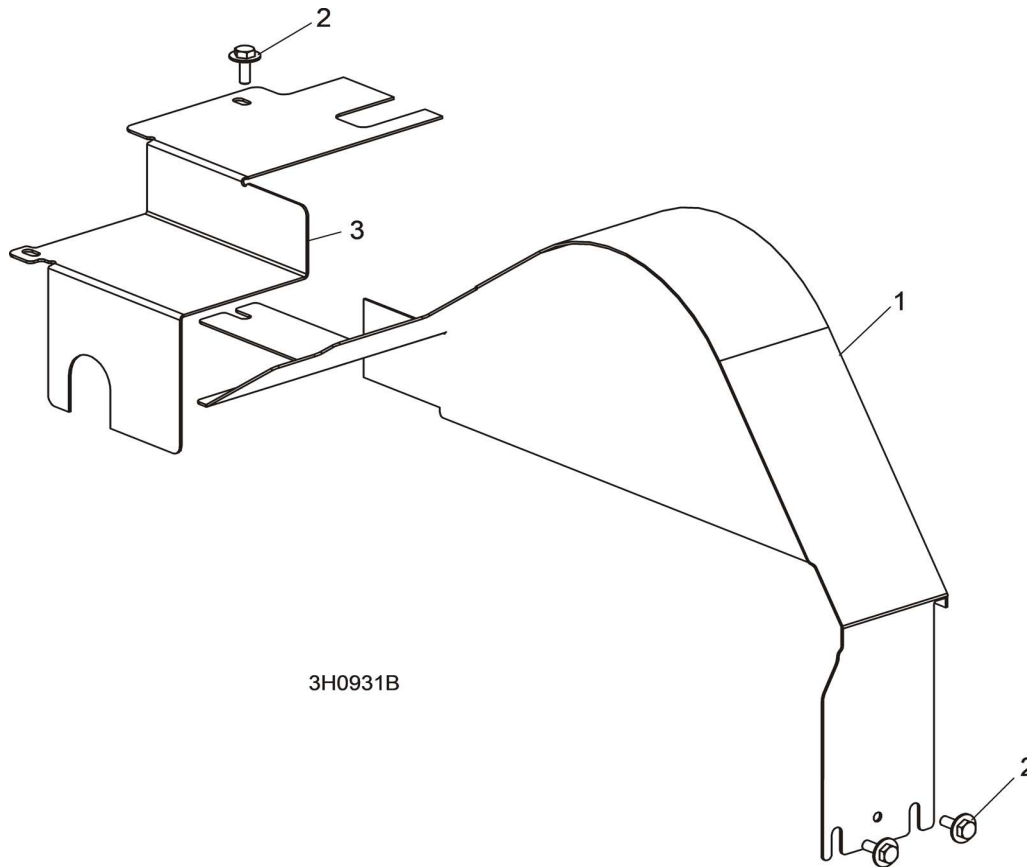
LT40 Rev. K5.00+
 LT40HD Rev. K7.00+
 LT40HD SuperRev. K4.00+
 LT50HD Rev. A6.00+



REF	PART #	DESCRIPTION	COMMENTS	QTY.
	079718	Cover Assembly, D35 T4 Top Pulley		1
1	079473	Cover Weldment, D35 T4 Top Pulley		1
2	079707	Plate, D35 T4 Cover		1
3	079714	Plate, D35 T4 Side Guard		1
4	F05005-134	Bolt, 1/4-20x3/4 HH w/Conical Washer		6

3.16 Engine Pulley Guards (7/08 - 6/17)

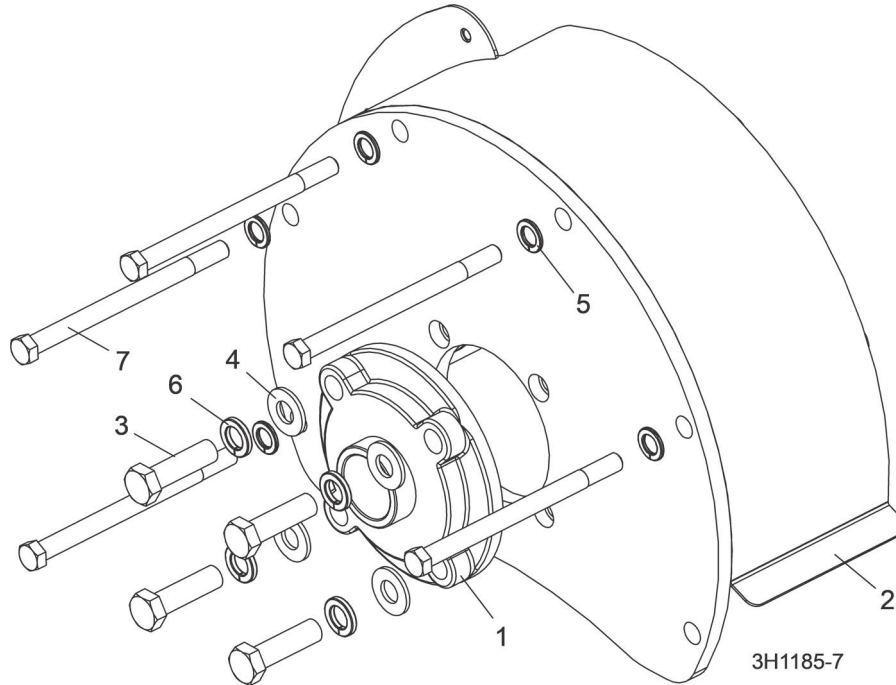
LT40 Rev. K1.03 - K4.04
 LT40HD Rev. K3.01 - K6.04
 LT40HD Super Rev. K1.01 - K3.12
 LT50HD Rev. A5.10 - A6.00



REF	PART #	DESCRIPTION	COMMENTS	QTY.
1	046560	Guard Weldment, Cat Engine Pulley		1
2	F05005-134	Bolt, 1/4-20 x 3/4" Hex Head With Conical Washer		3
3	016152	Guard, Side Engine Pulley		1

3.17 Bearing Support (6/2017 - present)

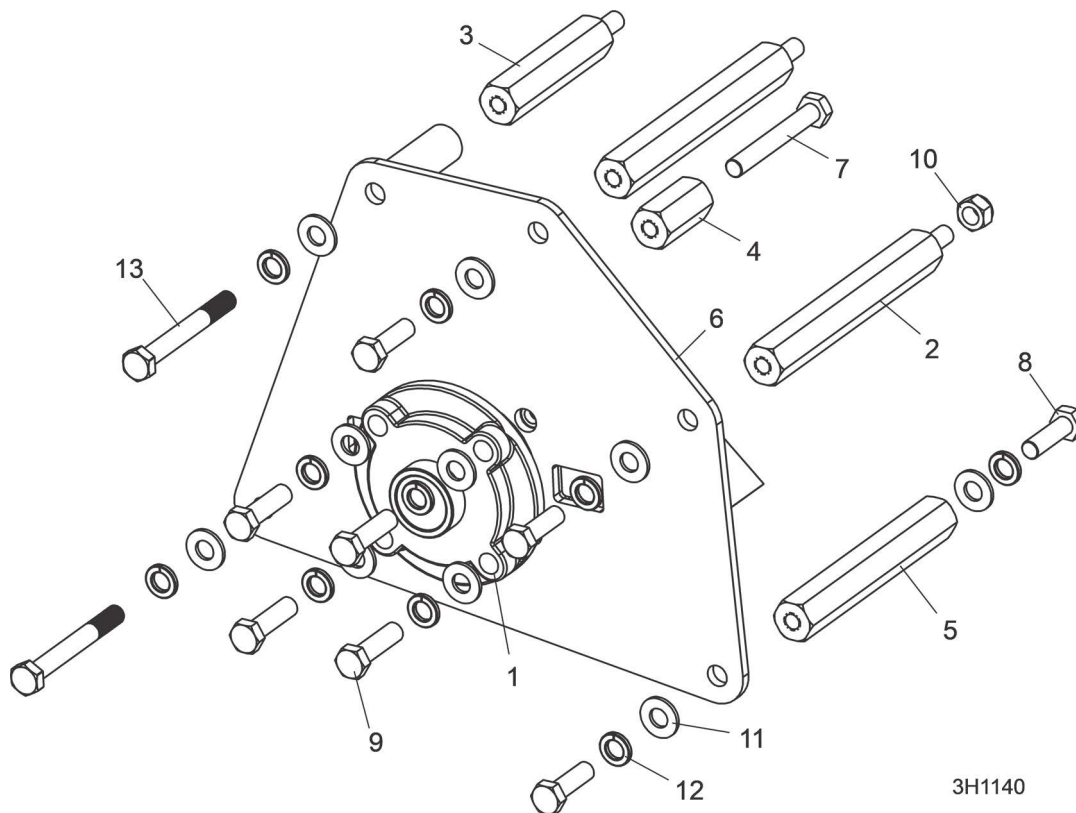
LT40 Rev. K5.00+
 LT40HD Rev. K7.00+
 LT40HD SuperRev. K4.00+
 LT50HD Rev. A6.00+



REF	PART #	DESCRIPTION	COMMENTS	QTY.
	079402	Support Assembly, D35 T4 Final Bearing		1
1	071491	Bearing, 1-7/16 4-Bolt Flange		1
2	079401	Support Weldment, D35 T4 Final Bearing		1
3	F05008-102	Bolt, 1/2-13x2 HH Gr5	Replaced (4) F05008-88 after 4/24/24 per ECN 39373	4
	F05008-88	Bolt, 1/2-13x1 3/4 Hex Head Grade 5 FT		4
4	F05011-2	Washer, 1/2 SAE Flat		4
5	F05011-88	Washer, 10mm Split Lock		5
6	F05011-9	Washer, 1/2 Split Lock		4
7	F05022-21	Bolt, M10-1.5x140 Hex Head FT		5

3.18 Bearing Support (7/08 - 6/17)

LT40 Rev. K1.03 - K4.04
 LT40HD Rev. K3.01 - K6.04
 LT40HD Super Rev. K1.01 - K3.12
 LT50HD Rev. A5.10 - A6.00



REF	PART #	DESCRIPTION	COMMENTS	QTY.
	074226	Support Assembly, Yanmar Bearing	Yanmar Bearing Support introduced (1/14). Use 075707 Yanmar Bearing Support Kit to upgrade Yanmar engines supplied prior to 1/14.	1
1	071491	Bearing, 1-7/16 4-Bolt Flange		1
2	071493	Spacer, 1 Hex x 7.31		2
3	071499	Spacer, 1 Hex x 4.38		1
4	075103	Spacer, 1 Hex x 2.03		1
5	075104	Spacer, 1 Hex x 6.63		1
6	075538	Weldment, Yanmar Bearing Support		1
7	F05004-249	Bolt, M12 x 1.75 x 90mm Hex Head Full Thread Cl10.9 Zinc		1
8	F05004-250	Bolt, M12 x 1.75 x 40mm Hex Head Full Thread Cl10.9 Zinc		4
9	F05008-102	Bolt, 1/2-13x2 HH Gr5	Replaced (4) F05008-88 after 4/24/24 per ECN 39373	4
	F05008-88	Bolt, 1/2-13 x 1 3/4" Hex Head Grade 5 Full Thread		4
10	F05010-209	Nut, M12 x 1.75 Hex Nylock Zinc		1

REF	PART #	DESCRIPTION	COMMENTS	QTY.
11	F05011-2	Washer, 1/2" SAE Flat		10
12	F05011-9	Washer, 1/2" Split Lock		10
13	F05023-7	Bolt, M12-1.75 x 100 Grade 8.8 Hex Head		2