

D42 DPF Engine

Safety, Operation, Maintenance & Parts Manual

LT70 Series

rev. F3.03



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

Form #2555

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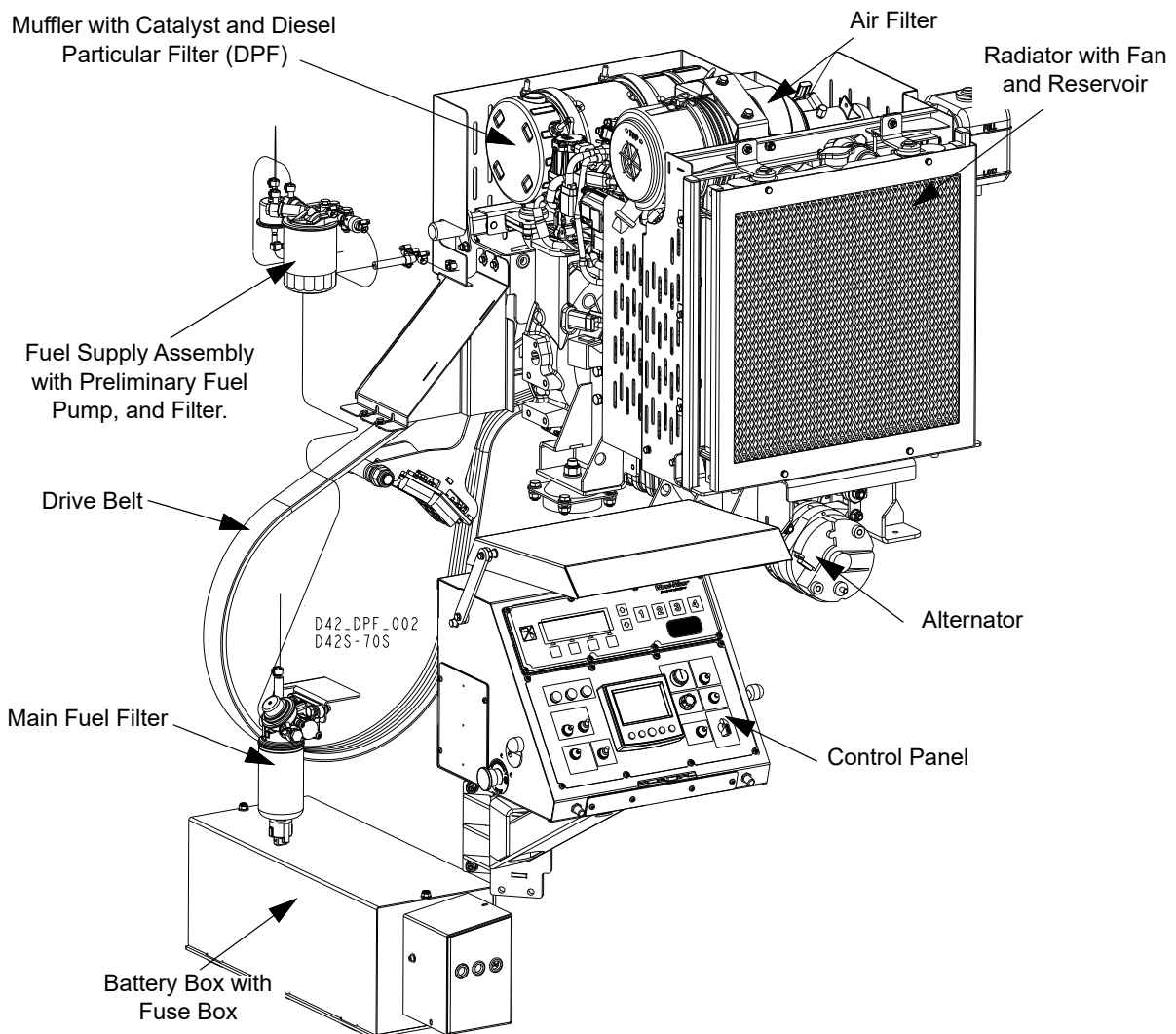
ABOUT THIS MANUAL

This manual is provided as a supplement to the equipment manufacturer's manual. 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.

 **Battery Charge Indicator:** It lights up if the alternator is not charging the battery.



 **Diagnostic Indicator:** A diagnostic light is provided to help troubleshoot problems with engine operation. See [Engine error screen](#) for details.



 **Blade Lube Indicator:** It lights up/blinks if the blade lube is on.

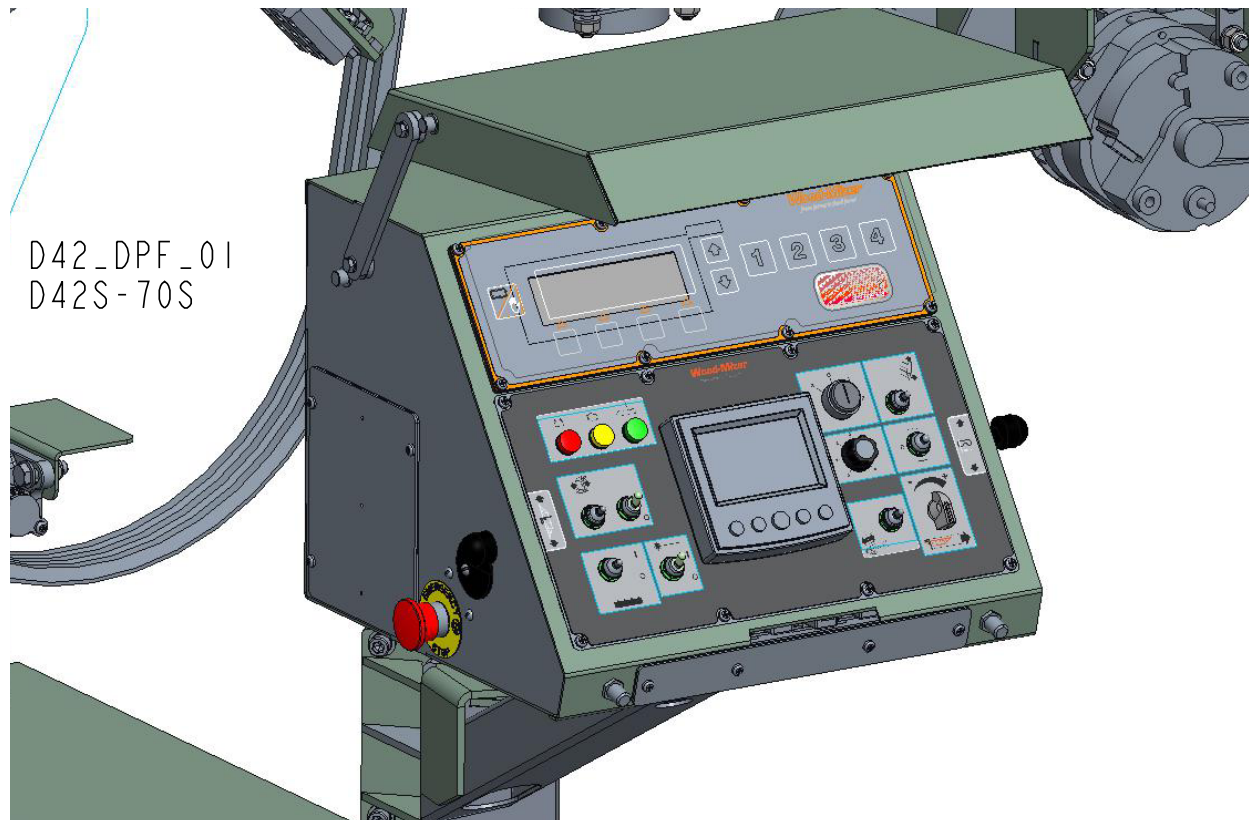


FIG. 1-1

Emergency stop button (D).



CAUTION! If at any time you need to immediately stop the machine, press the emergency stop button. To re-start the machine twist and release the emergency stop button first.



IMPORTANT! Wait 7 seconds before re-starting the machine.

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 may 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 provided.

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 burst into flames.



WARNING! Be sure the power feed switch is in the neutral position before turning the key switch to the position “1”, “2” or “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.



IMPORTANT! Let the engine run idle for 3 minutes to warm up before applying load. To avoid damage to the turbo-charger, allow the engine to idle for 2-3 minutes before shut-off.

- Be sure the blade drive switch is in position 0.
- Turn the key switch to position 1. Check if the diagnostic indicator light is ON.
- Turn the key switch to position 2 and release.

- Check if the battery charge indicator, the oil pressure indicator (located on the HMI display) and the diagnostic indicator are OFF. If not, stop the engine immediately.

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

Engine Shut-off

- Set the blade drive switch to position 0.
- Let the engine run idle for 2 minutes to cool the turbocharger down.
- Turn the key switch to position 0.

1 Operation

HMI Display

1.2 HMI Display

Start-up

After switching the key switch to position 1 (or 3), the initial welcome “Wood-Mizer” screen will appear.

The HMI display contains four main screens available for the sawmill operator:



FIG. 1-3

Screen #1



FIG. 1-4

1. Current engine load.
2. Current engine RPM.
3. Current engine coolant temperature.
4. Debarker status (ON when debarker is working).
5. Auto Clutch status (ON when auto clutch is engaged).
6. *Diagnostic indicator*: A diagnostic light is provided to help troubleshoot problems with engine operation. See [Engine error screen](#) for details.
7. Warning light. It indicates problems with engine operation.
8. Oil pressure icon (ON when the oil pressure is too low). The icon should be ON when the engine ignition is ON and should go out immediately after the engine is started.
9. Debarker status. It indicates debarker operation.
10. DPF filter status icons. Icons displayed in white color are inactive.



- Icon in green color indicates that automatic burning off soot mode in the DPF filter is active.

1 Operation

HMI Display



- Icon in red color indicates that the DPF filter reached the temperature of 600°C.



- Icon in orange color indicates that the manual DPF burning off process has been started.



- Icon in red color indicates that the DPF burning off process is required.

- Voltage of the sawmill electric circuit. When the engine is running it should indicate 14,2-14,6V. When the engine is OFF - above 12V. If the value is lower than 12V, the battery should be charged.
- Temporary fuel consumption (in liters per hour).
- Requested blade linear speed. It can be changed from 21m/s to 37m/s. c
- Buttons used to increase and decrease the blade linear speed.
- Press to save the requested blade speed.
- Press to switch between the HMI screens.

Screen #2



FIG. 1-5




1. Current engine load.
2. Current engine RPM.
3. Current engine coolant temperature.
4. Oil pressure icon (ON when the oil pressure is too low). The icon should be ON when the engine ignition is ON and should go out immediately after the engine started.
5. *Diagnostic indicator*: A diagnostic light is provided to help troubleshoot problems with engine operation. See [Engine error screen](#) for details.
6. Warning light. It indicates problems with engine operation.
7. Debarker status. It indicates debarker normal operation.
8. Voltage of the sawmill electric circuit.
9. Temporary fuel consumption (in liters per hour)/Hour meter parameters.
10. DPF filter status icons. Icons displayed in white color are inactive.



- Icon in red color indicates the necessity of burning off soot in the DPF filter.

1 Operation

HMI Display

-  ■ Icon in red color indicates that the DPF filter reached the temperature of 600°C.
-  ■ Icon in orange color indicates that the DPF burning off process has just begun.
-  ■ Icon in red color indicates that the DPF burning off process is in progress.

11. Press to switch between the “Engine hours” and “Fuel rate” parameters.
12. Press to enter the “Setting language” screen. [See Section Language settings screen.](#)
13. Press to switch between the day and night modes.
14. Press to switch between the HMI screens.

Screen #3



FIG. 1-6

1. Ambient air pressure.
2. Ambient air temperature.

3. Air temperature in the air inlet.
4. Voltage of the sawmill electric circuit. When the engine is running, it should indicate 14,2-14,6V. When the engine is OFF - above 12V. If the value is lower than 12V, the battery needs to be charged.
5. Pressure of the engine oil - nominal value: 200kPa.
6. Total fuel used from the first engine start-up.
7. Intake manifold air temperature.
8. Boost pressure generated by the turbocharger.
9. Total engine working hours.
10. Soot mass. Amount of the soot inside the dpf filter.
11. Air temperature in the air inlet.
12. Engine starter mode:
 - 0 - engine start not requested,
 - 2 - starter active,
 - 4 - starter inhibited due to engine running,
 - 12 - starter inhibited.
13. Press to switch between the HMI screens.
14. Press to switch between the day and night modes.
15. Press to enter the engine error screen. [See Section Engine error screen.](#)
16. Press to enter the DPF diagnostic screen. [See Section DPF \(Diesel Particulate Filter\) Diagnostic Screen](#)

NOTE: If the values for the parameters described above are displayed in red color, it means that the controller has lost the connection with the sensor.

Screen #4



FIG. 1-7

1. Temperature of the engine cooling liquid. Working temperature: 60-95°C.
2. Actual fuel temperature. Acceptable fuel temperature is from -25°C to 80°C.
3. Actual engine r.p.m.
4. Service parameter.
5. Position of the throttle lever (in percents: 0-100%).
6. Load of the engine (in percents 0-100%).
7. Intake manifold air temperature.
8. Actual amount of air which is supplied to the engine.
9. Service parameter.
10. Position of the blade drive switch.
11. Temporary fuel consumption.
12. Press to switch between the HMI screens.
13. Press to switch between the day and night modes.

14. Press to enter the engine error screen. [See Section Engine error screen.](#)
15. Press to enter the diagnostic screen - for service purposes only. Access is password protected.

NOTE: If the values for the parameters described above are displayed in red color, it means that the controller has lost the connection with the sensor.

Language settings screen.

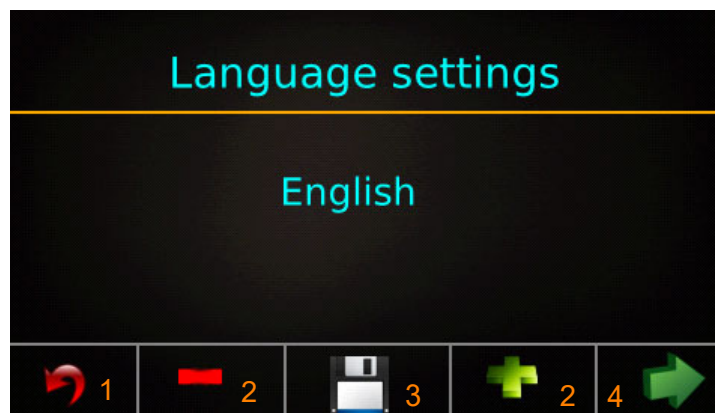



FIG. 1-8

1. Back to screen #2.
2. Press to toggle between the available languages.
3. Save the selected language.
4. Press to enter the brightness screen.

Brightness settings screen



FIG. 1-9

1. Switching between the day and night brightness settings.
2. Use “-” and “+” buttons to change the percentage value of brightness.
3. This button saves the selected brightness value. Saving brightness value is confirmed by displaying  icon.
4. Back to screen #1.

Engine error screen

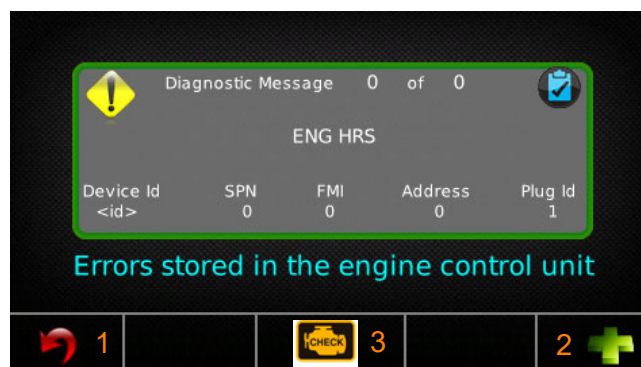



FIG. 1-10

1. Back to screen #3

2. Toggle the errors stored in the controller memory.
3. Engine errors clearing.

 Enter this screen if the diagnostic indicator light is on. Note down the SPN and FMI codes and pass this information to the Wood-Mizer Customer Service. When the Diagnostic Indicator light is on, the engine RPM can be limited to about 2500 or forced to idle to avoid engine damage.

DPF (Diesel Particulate Filter) Diagnostic Screen

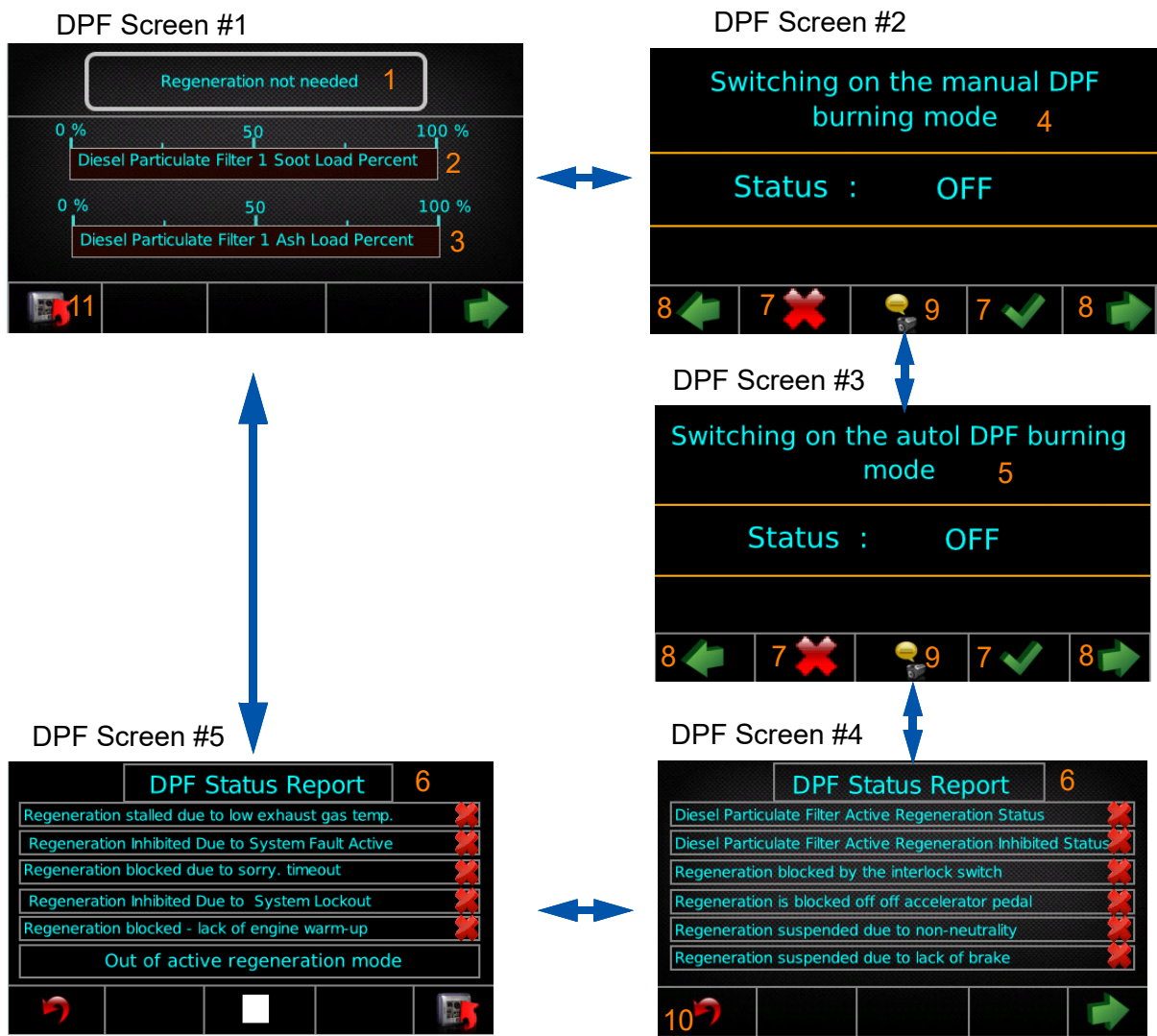




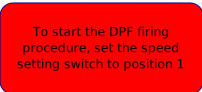
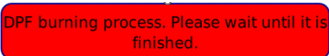
FIG. 1-11

1. Message window. It informs about the necessity of starting the DPF burnout procedure.
2. Informs about the soot level in the DPF. When it reaches about 25%, the message  will be displayed.

When the soot level in the DPF reaches 75%, the engine power can be limited to about 2500 or forced to run idle to avoid the DPF filter damage.

3. It indicates the ash level in the DPF. When it reaches 100% (after about 6000 hours), the DPF filter has to be replaced or regenerated by the Wood-Mizer or Kubota Customer Service. Ash cannot be burned out.
4. Manual DPF burnout mode.

Recommended in most cases.

- Press the  button to activate this mode.
 - Message  will be displayed.
 - Set the blade drive switch to position “I”.
 - Message  will be displayed. Engine RPM will be raised and can vary. The process can take up to 30 minutes and will be finished when the engine RPM will drop to idle.
 - Set the blade drive switch to position “0”.
5. Automatic DPF burnout mode.

Not recommended because of the engine load specification of bandsaw sawmill.

Automatic and Manual DPF burnout modes cannot be activated simultaneously.

6. DPF Status Report

Parameters used to troubleshoot the DPF burnout procedure.

7. Buttons used to change the status of the manual and automatic burnout modes.

8. Press to switch between the DPF diagnostic screens.
9. Information concerning manual and automatic burnout modes.
10. Back to DPF screen #1.
11. Back to the main menu.

1.3 Engine Specifications

D42 DPF Kubota	
Type	Liquid cooled, 4-cycle, Direct Injection Diesel Engine with Common Rail Injection System
Number of cylinders	4
Bore and stroke (mm)	78 x 78,4
Total displacement (cm3)	1498
Aspiration	Turbocharged
After-treatment	Diesel Oxidation Catalyst (DOC)+Diesel Particulate Filter (DPF)
Power H.P. (SAEJ 1995) [HP/min⁻¹ (rpm)]	44,3/3000
Max Torque [Nm /min⁻¹ (rpm)]	118,6/2000
Dry Weight (kg) [lbs.]¹	173 [381]
Fuel	Ultra-Low Sulfur Diesel
Lubricating Oil	CJ-4, CK-4
Lubricating Oil Capacity (w/filter) (l.)	6,7

¹ Muffler with DPF included, cooling fan excluded.

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 parts 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 Engine Oil & Filter

8

Check the oil level every 8 hours of operation. Add oil as necessary. See the engine manual for oil viscosity and grade recommendations.

150



IMPORTANT! During initial break-in, change the oil and the oil filter after the first 50 hours and every 200-250 hours thereafter. Continue to check oil level every 8 hours of operation and refill as necessary.

NOTE: Engine is factory filled with 10W/30 CJ-4 API class oil.

2.3 Cooling System

50

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

2.4 Air Cleaner

8

Empty the air debris collector every 8 hours of operation.

Open the air filter intake cover by loosening latches and remove all debris and dust. After all debris has been emptied close the cover.



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.

250

Replace the outer air cleaner cartridge and check the inner cartridge every 250 hours of operation or more often if operating the sawmill in dirty conditions or if engine performance indicates a new cartridge is necessary.



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

1200

Replace the inner air cleaner cartridge every 1200 hours of operation or more often if operating the sawmill in dirty conditions.

2 Maintenance

Fuel Filter

2.5 Fuel Filter



Replace the fuel filter every 400 hours of operation or as required for engine performance.

2.6 Battery



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



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



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

2.7 Alternator Belt



Adjust the alternator belt as needed. Check the alternator belt for tension and wear when battery is not charging properly or when the alternator belt is squeaking.

To tighten the belt:

1. Loosen the mounting bolts **(B)** and the locking bolt **(C)**.

See Figure 2-1.

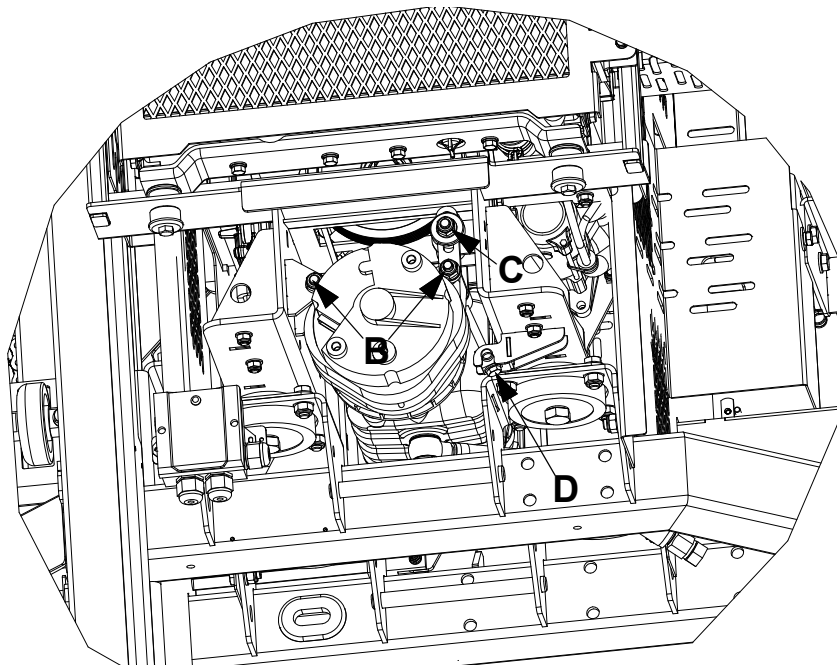


FIG. 2-1

2. Using the adjustment bolt **(D)**, set the alternator belt tension until the belt has 5 mm deflection with a 2.5 kg deflection force. Re-tighten the locking nut.

3 REPLACEMENT PARTS

How To Use The Parts List

SECTION 3 REPLACEMENT PARTS

3.1 How To Use The Parts List

- Use the index above to locate the assembly that contains the part you need.
- Go to the appropriate section and locate the part in the illustration.
- Use the number pointing to the part to locate the correct part number and description in the table.
- Parts shown indented under another part are included with that part.
- Parts marked with a diamond (◆) are only available in the assembly listed above the part.

See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond (◆) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond (◆) indicates M06666 is not available except in subassembly K05555.

3.2 Sample Assembly				
REF.	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY	
	SAMPLE ASSEMBLY, COMPLETE (INCLUDES ALL INDENTED PARTS BELOW)	A01111	1	
3	Sample Part	F02222-22	1	
	Sample Subassembly (Includes All Indented Parts Below)	A03333	1	
4	Sample Part (◆ Indicates Part Is Only Available With A03333)	S04444-4	1	◆
	Sample Subassembly (Includes All Indented Parts Below)	K05555	1	
5	Sample Part (◆ Indicates Part Is Only Available With K05555)	M06666	2	◆
6	Sample Part	F07777-77	1	

To Order Parts:

- From Europe call our European Headquarters and Manufacturing Facility in Kolo, Poland at **+48-63-2626000**. From the continental U.S., call our toll-free Parts hotline at **1-800-525-8100**. Have your customer number, vehicle identification number, and part numbers ready when you call. From other international locations, contact the Wood-Mizer distributor in your area for parts.

Office Hours:

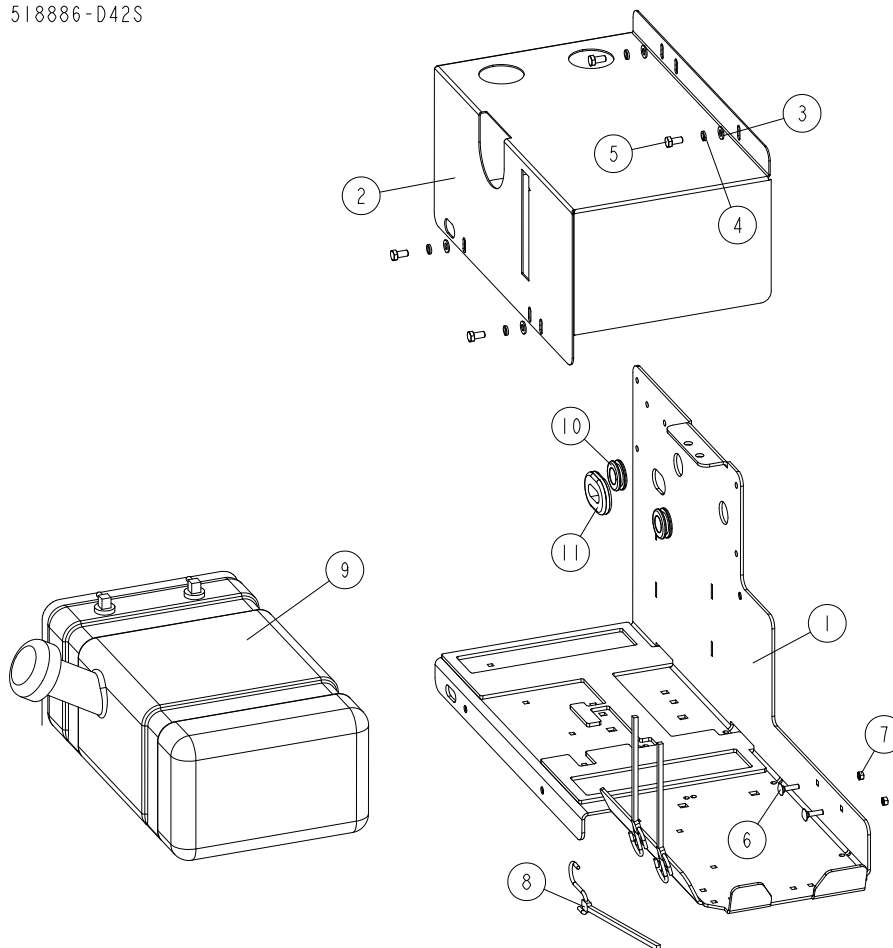
Country	Monday - Friday	Saturday	Sunday
POLAND	7-15	CLOSED	CLOSED
US	8 A.M.- 5 P.M.	8 A.M. - 5 P. M.	CLOSED



CAUTION! It is strongly recommended that only original spare parts be used.

3.3 D42S Engine Fuel Tank Assembly

518886-D42S_001
518886-D42S

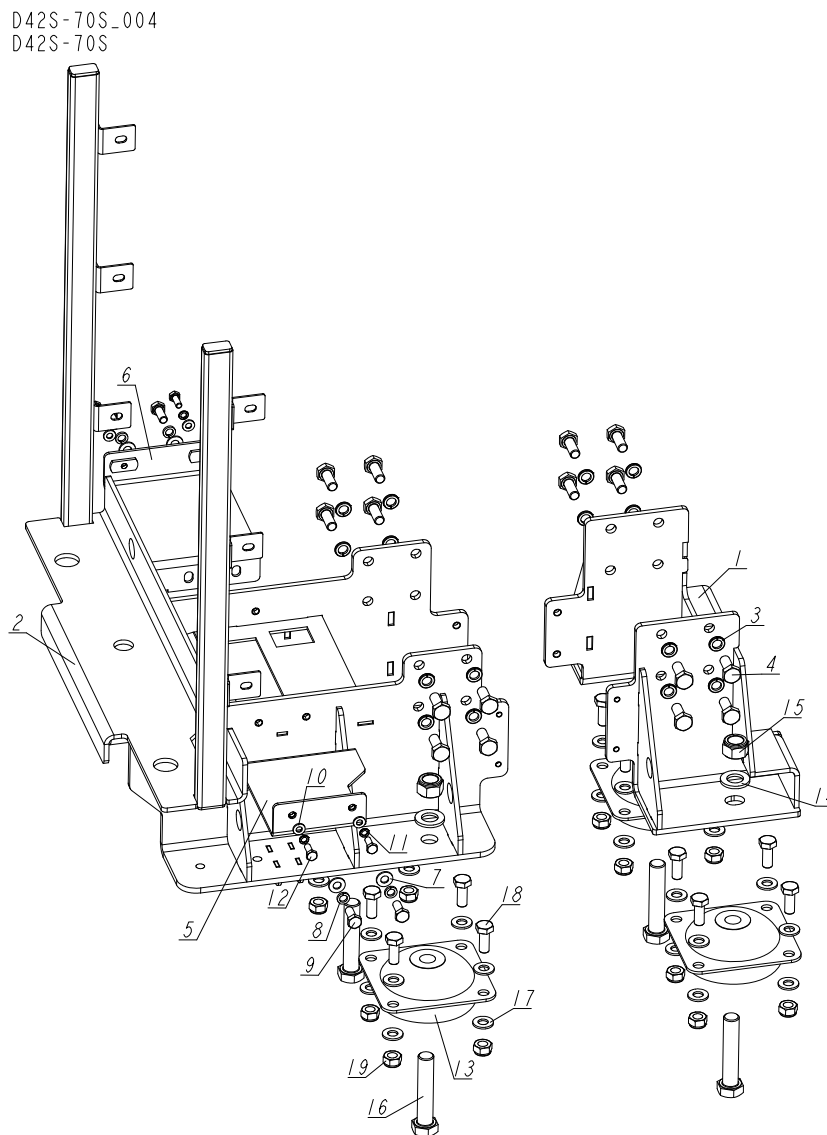


REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	TANK ASSEMBLY, LT70S/D42S FUEL	518886-D42S	1
1	PLATE WELDMENT, FUEL TANK MOUNT	580507-1	1
2	COVER, FUEL TANK	518303-1	1
3	WASHER, 8.4 FLAT ZINC	F81054-1	4
4	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	4
5	BOLT, M8X16-8.8-B HEX HEAD FULL THREAD Z	F81002-20	4
6	BOLT, M6X25-8.8 ZINC	F81001-20	2
7	NUT, M6 8 HEX ZINC	F81031-1	2
8	STRAP, 20" RUBBER W/HOOK	P11668	3
9	TANK, /33/42 5-GALON FUEL	103928	1
10	GROMMET, 22MM RUBBER	087400	2
11	GROMMET, 1 X 1 3/4 OVAL RUBBER	085613	1

3 REPLACEMENT PARTS

Engine Bracket Set

3.4 Engine Bracket Set



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	BRACKET SET, ENGINE	555255	1
1	MOUNT WELDMENT, FRONT D42S ENGINE	555263-1	1
2	BRACKET WELDMENT, D42S ENGINE REAR	555254-1	1
3	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	16
4	BOLT, M10X1.25X25-8.8-A HEX HEAD FULL TH	F81003-29	16
5	GUARD, BOTTOM	555295-1	1
6	GUARD, BOTTOM LEFT	555297-1	1
7	WASHER, 8.4 FLAT ZINC	F81054-1	4

REPLACEMENT PARTS*Engine Bracket Set***3**

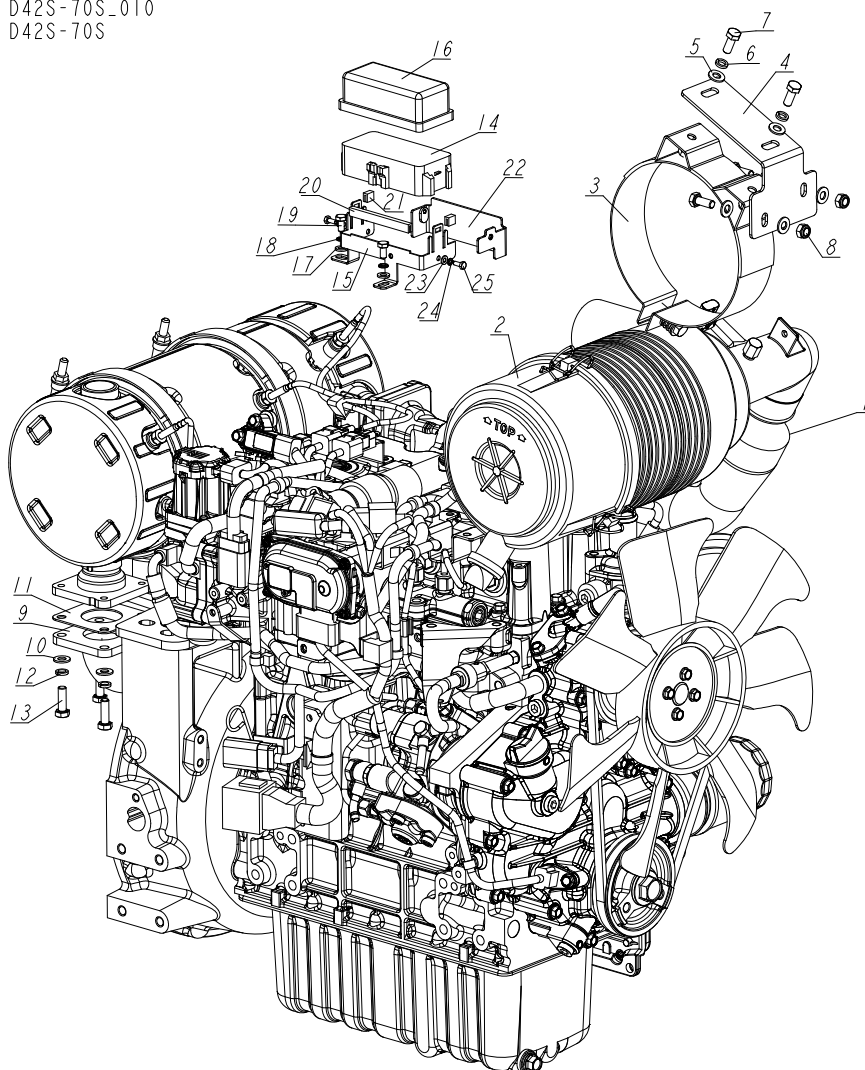
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
8	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	4	
9	BOLT, M8X20MM, HEX HEAD,GR 5.8 ZINC,	F81002-4	4	
10	WASHER, 6.4 FLAT ZINC	F81053-1	4	
11	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	4	
12	BOLT, M6X16-8.8 HEX HEAD FULL THREAD ZIN	F81001-15	4	
13	VIBROISOLATOR, RUBBER-METAL(70 SH)	100080	4	
14	WASHER, 17 FLAT ZINC	F81058-1	4	
15	NUT, M16-8 HEX NYLON ZINC LOCK	F81036-2	4	
16	BOLT, M16X80 8.8-B- HEX HEAD FULL THREAD	F81006-11	4	
17	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	32	
18	BOLT, M10X25 8.8 HEX HEAD FULL THREAD	F81003-31	16	
19	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	16	

3 REPLACEMENT PARTS

Kubota D42S Engine

3.5 Kubota D42S Engine

D42S-70S_010
D42S-70S



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	ENGINE, KUBOTA D42S	555251	1
-	AIR FILTER ASSEMBLY, D42S ENGINE	555275	1
1	FITTING	555277	1
2	AIR FILTER, D42S ENGINE	555276	1
3	BRACKET, AIR FILTER	555278	1
4	PLATE, MOUNT	580514-1	1
5	WASHER, 8.4 FLAT ZINC	F81054-1	6
6	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	2
7	BOLT, M8X20MM, HEX HEAD,GR 5.8 ZINC,	F81002-4	4
8	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	4
-	EXHAUST ASSEMBLY	555310	1
9	EXHAUST	555311	1

REPLACEMENT PARTS*Kubota D42S Engine***3**

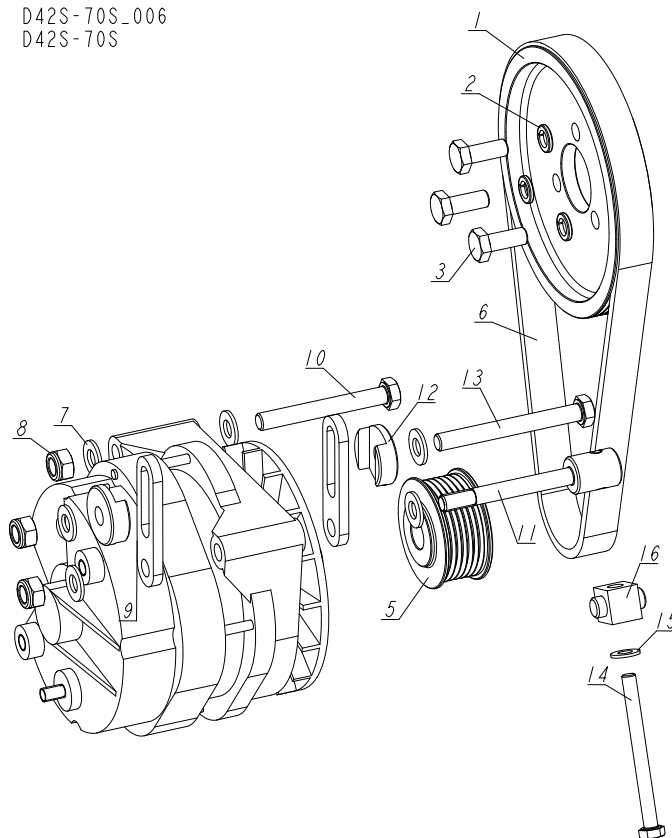
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
10	WASHER, 8.4 FLAT ZINC	F81054-1	4	
11	GASKET, EXHAUST	555315	1	
12	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	4	
13	BOLT, M8X25-8.8-B HEX HEAD FULL THREAD Z	F81002-5	4	
-	BLOCK, FUSE	555425	1	
14	SLOT, FUSE	570001	1	
15	MOUNT,FUSE	555422-1	1	
16	COVER, FUSE	570002	1	
17	WASHER, 6.4 FLAT ZINC	F81053-1	2	
18	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	2	
19	BOLT, M6X12-8.8 HEX HEAD FULL THREAD ZIN	F81001-7	2	
20	GASKET, U-TYPE RUBBER 1.5X9X80	555423	1	
21	GASKET, U-TYPE RUBBER 1.5X9X10	555424	2	
22	COVER	555249-1	1	
23	WASHER, 4.3 FLAT ZINC	F81051-2	2	
24	WASHER, Z 4.1 SPLIT LOCK ZINC	F81051-1	2	
25	BOLT, M4X10 DIN933(A2)/ISO 4017 STAINLES	F81000-27	2	
	FILTER, OIL	018050	1	
	FILTER, FUEL, KUBOTA D42 DPF	584905	1	
	FILTER, FUEL SEPARATOR, KUBOTA D42 DPF	584906	1	
	FILTER, AIR, INNER, KUBOTA D42 DPF	584907	1	
	FILTER, AIR, OUTER, KUBOTA D42 DPF	584908	1	
	BELT, KUBOTA D42 DPF	584909	1	

3 REPLACEMENT PARTS

D42S Engine Alternator Assembly

3.6 D42S Engine Alternator Assembly

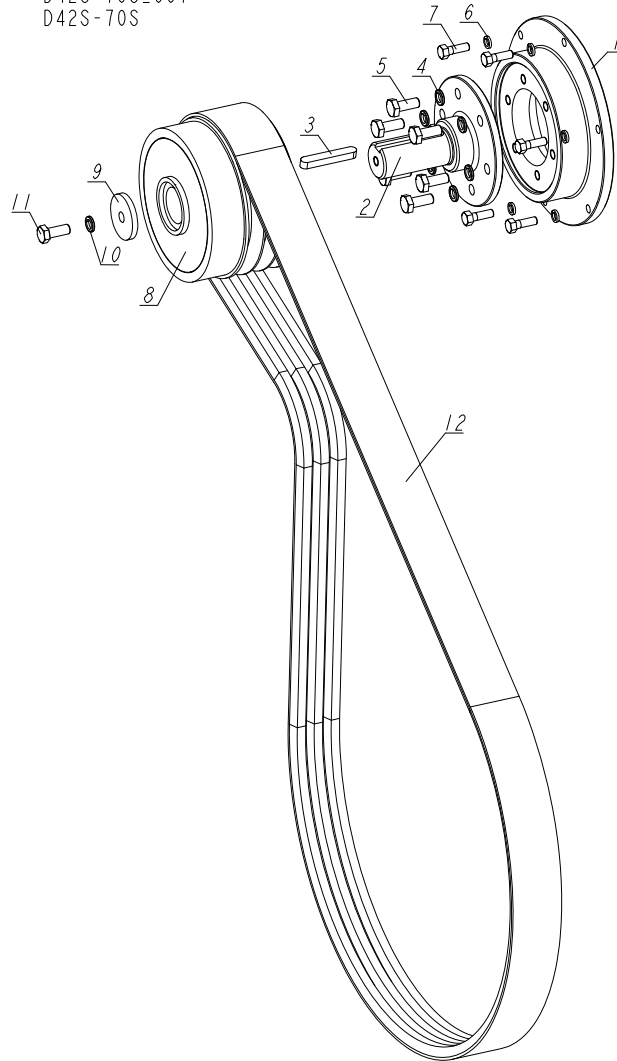
D42S-70S_006
D42S-70S



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	ALTERNATOR ASSEMBLY, D42S	555252	1
1	PULLEY, ALTERNATOR DRIVE ZINC-PLATED	089458-1	1
2	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	3
3	BOLT, M10X1.25X25-8.8-A HEX HEAD FULL TH	F81003-29	3
4	ALTERNATOR, 190A LT60 COMPLETE	089466	1
5	SHEAVE, 190A ALTERNATOR ZINC-PLATED	089441-1	1
6	BELT, 6PK 775 ALTERNATOR	089465	1
7	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	6
8	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	3
9	PLATE, D190 ALTERNATOR BELT TENSIONER	088933-1	2
10	BOLT, M10 X 80 -8.8- FE/ZN5 HEX HEAD	F81003-50	1
11	BOLT, M10 SPECIAL	089472-1	1
12	WASHER, SPECIAL ZINC-PLATED	088932-1	2
13	BOLT, M10X90-8.8-B HEX HEAD ZINC	F81003-66	1
14	BOLT, M8X90-8.8-HEX HEAD FULL THREAD ZIN	F81002-16	1
15	WASHER, 8.4 FLAT ZINC	F81054-1	1
16	BLOCK, ALTERNATOR BELT TENSIONER	089473-1	1

3.7 D42S Engine Shaft Assembly

D42S-70S-007
D42S-70S



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	SHAFT ASSEMBLY, D42 ENGINE	555282	1
1	PLATE, MOUNT	555283-1	1
2	SHAFT, KUBOTA ENGINE OUTPUT	088732	1
3	KEY, A10X8X63, PARALLEL	088130	1
4	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	6
5	BOLT, M10X1.25X25-8.8-A HEX HEAD FULL TH	F81003-29	6
6	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	6
7	BOLT, 5/16-18X1 HH UNPL	F05006-51	6
8	CLUTCH, CENTRIFUGAL 160.236NM	089467	1
9	WASHER, BLADE DRIVE WHEEL	088956-1	1
10	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	1

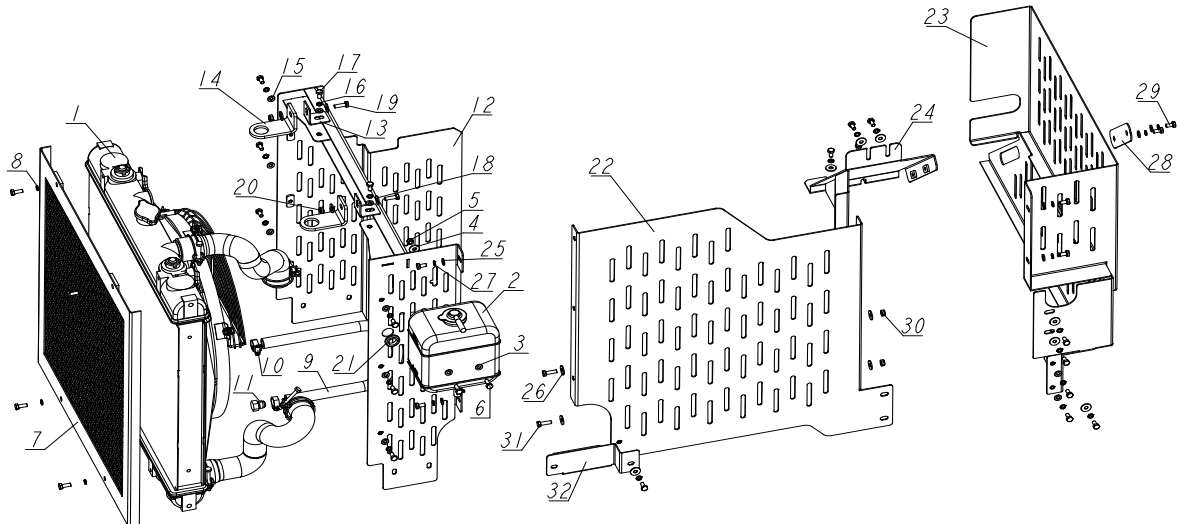
3 REPLACEMENT PARTS

D42S Engine Shaft Assembly

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
11	BOLT, M10X25 8.8 HEX HEAD FULL THREAD	F81003-31	1	
12	BELT, 3BX 2437 LP	089464	1	

3.8 Radiator w/ Guards

D42S-70S_003
D42S-70S



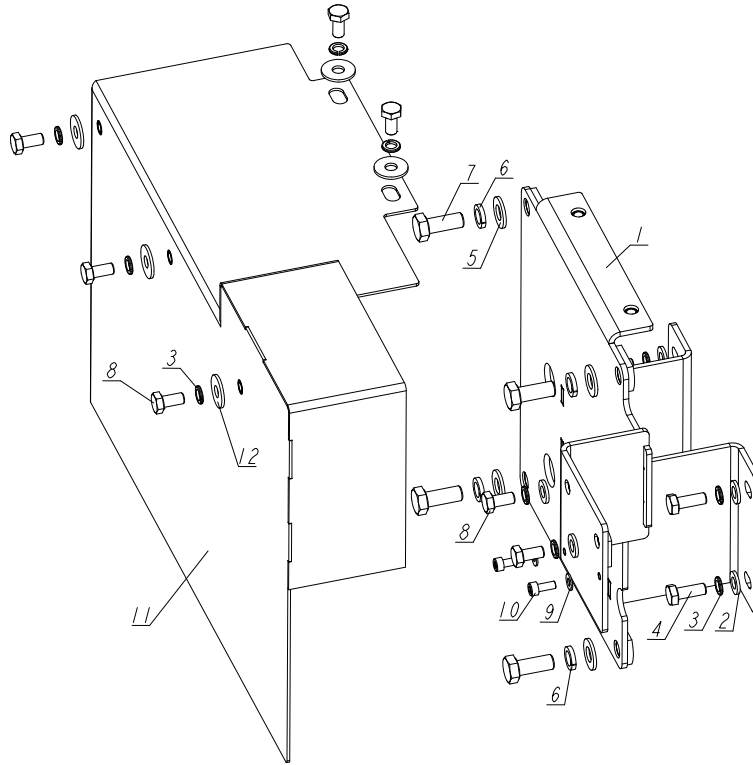
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	RADIATOR ASSEMBLY, D42S	555285	1
1	RADIATOR, D42S	555284	1
2	BOTTLE, D42S ENGINE WATER TANK	555288	1
3	WASHER, 6.4 FLAT ZINC	F81053-1	2
4	WASHER, 6.5 SPECIAL FLAT ZINC-PL.	F81053-11	2
5	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	2
6	BOLT, M6X16-8.8 HEX HEAD FULL THREAD ZIN	F81001-15	6
7	GUARD, KUBOTA RADIATOR	097201-1	1
8	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	4
9	HOSE, RADIATOR	580509	1
10	CLAMP, 12-20	F81080-3	2
11	PLUG, 9/16"	095491	1
-	BRACKET ASSEMBLY, RADIATOR UPPER	555290	1
12	BRACKET, RADIATOR UPPER	555291-1	1
13	BRACKET HOLDER	097306-1	2
14	BRACKET, RADIATOR UPPER	555499-1	2
15	WASHER, 6.4 FLAT ZINC	F81053-1	8
16	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	8
17	BOLT, M6X12-8.8 HEX HEAD FULL THREAD ZIN	F81001-7	8
18	WASHER, 8.4 FLAT ZINC	F81054-1	4
19	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZIN	F81001-2	2
20	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	2
21	GROMMET, 5/8" RUBBER WIRE	P11764	1
-	GUARDS ASSEMBLY, SIDE AND FRONT	555335	1

3**REPLACEMENT PARTS***Radiator w/ Guards*

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
22	GUARD, RIGHT	555336-1	1	
23	PLATE, FRONT GUARD	555340-1	1	
24	PLATE, SIDE GUARD	555329-1	1	
25	WASHER, 6.4 FLAT ZINC	F81053-1	9	
26	WASHER, 6.5 SPECIAL FLAT ZINC-PL.	F81053-11	12	
27	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	17	
28	WASHER	545971-1	1	
29	BOLT, M6X12-8.8 HEX HEAD FULL THREAD ZIN	F81001-7	17	
30	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	2	
31	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZIN	F81001-2	2	
32	COVER	555260-1	1	

3.9 ECU Mount

D42S-70S_005
D42S-70S

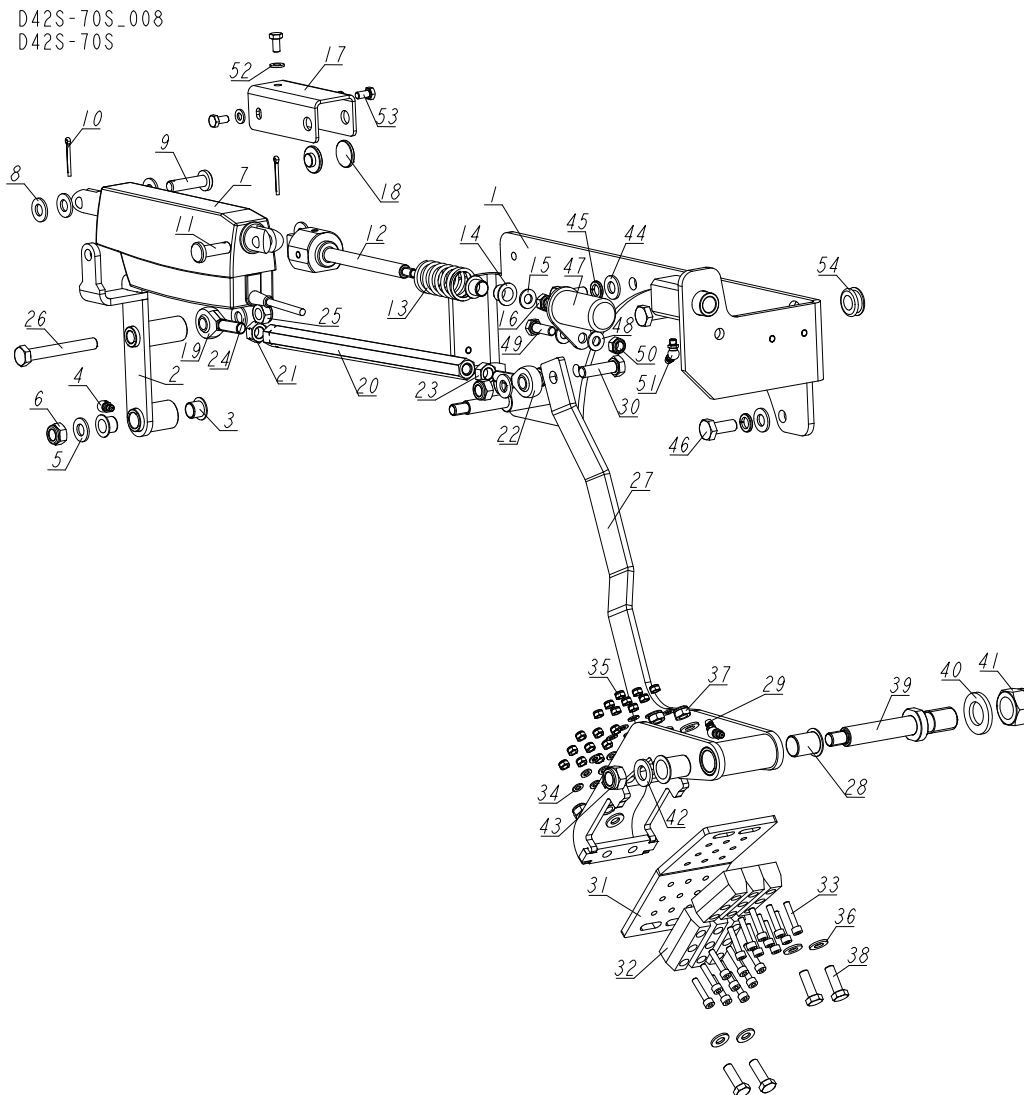


REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	MOUNT, ECU W/GUARD	555326	1
1	MOUNT	555325-1	1
2	WASHER, 6.4 FLAT ZINC	F81053-1	6
3	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	11
4	BOLT, M6X16-8.8 HEX HEAD FULL THREAD ZIN	F81001-15	4
5	WASHER, 8.4 FLAT ZINC	F81054-1	4
6	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	4
7	BOLT, M8X20MM, HEX HEAD,GR 5.8 ZINC,	F81002-4	4
8	BOLT, M6X12-8.8 HEX HEAD FULL THREAD ZIN	F81001-7	7
9	WASHER, 4.3 FLAT ZINC	F81051-2	2
10	BOLT, M4X10 8.8 FE/ZN5	F81011-67	2
11	GUARD, ECU	580510-1	1
12	WASHER, 6.5 SPECIAL FLAT ZINC-PL.	F81053-11	5

3 REPLACEMENT PARTS

D42S Acceleration/Brake Assembly

3.10 D42S Acceleration/Brake Assembly



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	ACCELERATION/BRAKE ASSEMBLY, D42S	555300	1
1	MOUNT WELDMENT, ACCELERATION AND BRAKING	555301-1	1
-	LEVER ASSEMBLY	555307	1
2	LEVER	555305-1	1
3	BUSHING, XFM-1214-12 FLANGED	088934	2
4	FITTING, M6 "B" TYPE PN-M/86003 GREASE	094213	1
5	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	1
6	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	1
-	ACTUATOR ASSEMBLY	555309	1

REPLACEMENT PARTS

D42S Acceleration/Brake Assembly

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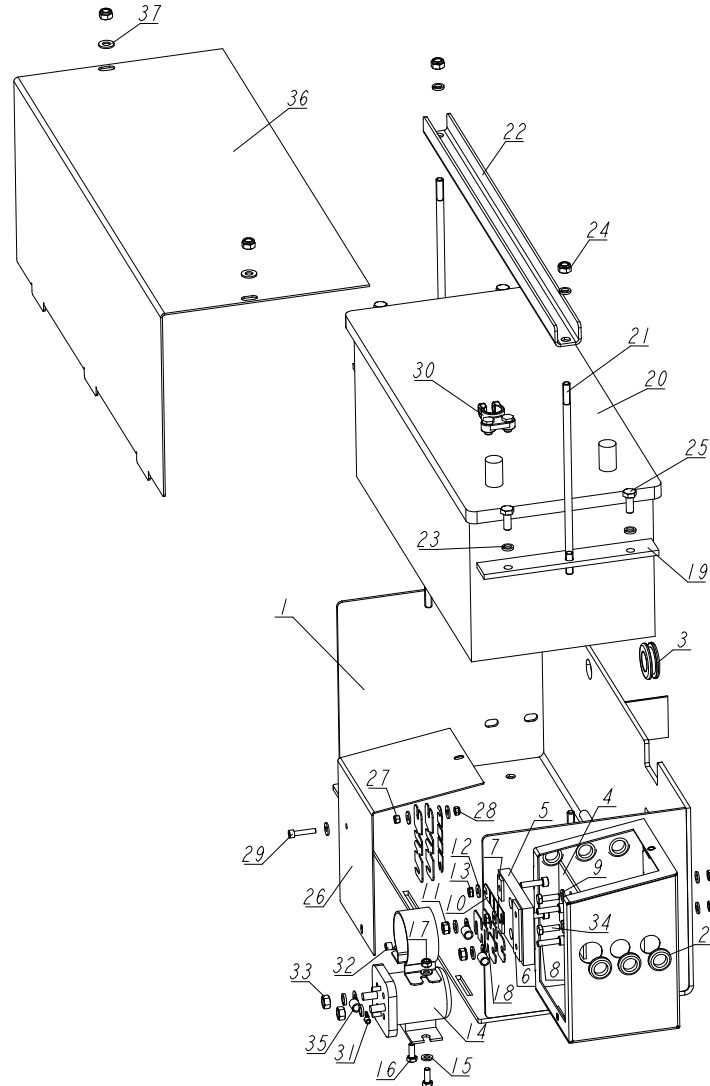
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
7	ACTUATOR, LA121000-20401210 LINEAR	091309	1	
8	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	4	
9	PIN, PN-EN 22341-B-10X42X3.2X33-ST-A2 ZI	F81047-2	1	
10	PIN, 3.2X25 COTTER	F81043-4	2	
11	PIN, PN-EN 22341-B-10 X32 X3,2 X26-ST-A2	F81047-1	1	
12	BLOCK, ACTUATOR MOUNT W/SHAFT ZINC LA12	091342-1	1	
13	SPRING, 60X23X3 ZINC	088992	1	
14	BUSHING, XFM-1214-12 FLANGED	088934	2	
15	WASHER, 8.4 FLAT ZINC	F81054-1	1	
16	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	1	
17	COVER, SPRING	089435-1	1	
18	PAD, LINEAR ACTUATOR SLIDE	089436	2	
-	LEVER ASSEMBLY, BRAKE	555308	1	
19	END, SAL10 ROD THREAD	096431	1	
20	TURNBUCKLE, M10	096433-1	1	
21	NUT, M10L-8-B HEX ZINC	F81033-12	1	
22	ROD END, SA10	094236	1	
23	NUT, M10-8-B HEX ZINC	F81033-3	1	
24	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	2	
25	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	2	
26	BOLT, M10X75-8.8-FE/ZN5 PN-M/82101	F81003-15	1	
-	LEVER, BRAKE - COMPLETE	096418	1	
27	LEVER, BRAKE	096419-1	1	
28	BUSHING, GFM 1719-25 (IGUS)	094142	2	
29	FITTING, M6 "B" TYPE PN-M/86003 GREASE	094213	1	
30	BOLT, M10X35-8.8 HEX HEAD FULL THREAD ZI	F81003-17	1	
-	PLATE ASSEMBLY, BRAKE BLOCK	096438	1	
31	PLATE, BRAKE BLOCK	096420-1	1	
32	BLOCK, F9353 106 BRAKE NARROW	096432	6	
33	SCREW, M5X25 8.8 HEX SOCKET HEAD CAP ZIN	F81000-7	18	
34	WASHER, 5.3 FLAT ZINC	F81052-1	18	
35	NUT, M5-8 DIN985 HEX NYLON ZINC LOCK	F81030-2	18	
36	WASHER, 8.4 FLAT ZINC	F81054-1	8	
37	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	4	
38	BOLT, M8X25-8.8-B HEX HEAD FULL THREAD Z	F81002-5	4	
39	SHAFT, BRAKE LEVER PIVOT ZINC-PLATED	096424-1	1	
40	WASHER, 21 FLAT ZINC	F81059-2	1	
41	NUT, M20-8 DIN985 HEX NYLON ZINC LOCK	F81037-2	1	
42	WASHER, 13 FLAT ZINC	F81056-1	1	
43	NUT, M12 8 HEX NYLON ZINC LOCK	F81034-2	1	
44	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	4	
45	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	4	

3**REPLACEMENT PARTS***D42S Acceleration/Brake Assembly*

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
46	BOLT, M10X1.25X25-8.8-A HEX HEAD FULL TH	F81003-29	4	
47	COVER, ACTUATOR MOUNT BLOCK	096430-1	1	
48	WASHER, 8.4 FLAT ZINC	F81054-1	2	
49	BOLT, M8X25-8.8-B HEX HEAD FULL THREAD Z	F81002-5	1	
50	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	1	
51	FITTING, M6 "B" TYPE PN-M/86003 GREASE	094213	1	
52	WASHER, 6.4 FLAT ZINC	F81053-1	3	
53	BOLT, M6X12-8.8 HEX HEAD FULL THREAD ZIN	F81001-7	3	
54	GROMMET, 20/13 RUBBER	086188	1	

3.11 Battery Box

D42S-70S_001
D42S-70S



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	ENGINE KIT, LT70 D42S	D42S-70S	1
-	BATTERY BOX - COMPLETE	089794	1
1	BOX WELDMENT, BATTERY	088677-1	1
2	GROMMET, 5/8" RUBBER WIRE	P11764	6
3	GROMMET, 22MM RUBBER	087400	1
4	PAD, FUSE BOX INSULATOR	015287	1
-	FUSE BLOCK ASSEMBLY	017665	1
5	BLOCK, RYERTEX FUSE,HIGH AMP	017664	1
6	POST WDMT, FUSE BLOCK, HIGH AMP	017663	1
7	NUT, 1/4-20 CADMIUM PLATED WELD	S12392	2

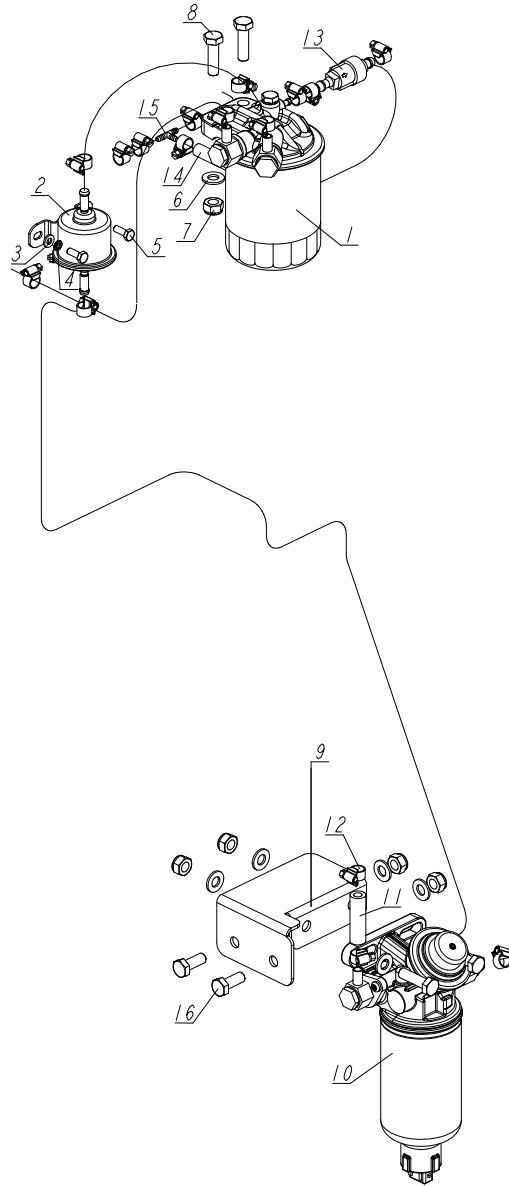
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REPLACEMENT PARTS*Battery Box*

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
8	SCREW, M6X25 -8.8-HEX SOCKET HEAD CAP ZI	F81001-41	4	
9	WASHER, 7.4 FLAT ZINC	F81056-11	4	
10	FUSE LINK, 12 VOLT 150 AMP	023361	2	
11	NUT, 1/4-20 SELF-LOCKING HEX ZINC	F05010-9	2	
12	WASHER, 5.5 SPECIAL FLAT ZINC	F81052-3	5	
13	NUT, #10-24 SELF-LOCKING	F05010-14	2	
14	SOLENOID, 200A 12V SPST HYDRAULIC PUMP	015470	1	
15	WASHER, 6.4 FLAT ZINC	F81053-1	6	
16	BOLT, M6X16-8.8 HEX HEAD FULL THREAD ZIN	F81001-15	2	
17	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	4	
18	FUSE LINK, 12 VOLT 225 AMP	P11550	4	
19	BAR, BATTERY RETAINER	088538-1	2	
20	BATTERY, 12V 180AH "BANNER"	089369	1	
21	BOLT, BATTERY HOLD-DOWN	088356-1	2	
22	BRACKET, BATTERY HOLD-DOWN	088357-1	1	
23	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	8	
24	NUT, M8-8-B HEX NYLON ZINC LOCK	F81032-2	4	
25	BOLT, M8X20MM, HEX HEAD,GR 5.8 ZINC,	F81002-4	4	
26	LID, FUSE BOX	092222-1	1	
27	NUT, M5 8 HEX ZINC	F81030-1	1	
28	NUT, M5-8 DIN985 HEX NYLON ZINC LOCK	F81030-2	1	
29	SCREW, M5X25 8.8 HEX SOCKET HEAD CAP ZIN	F81000-7	1	
30	TERMINAL, BATTERY	P05085	1	
31	TERMINAL, #10 RING 10-12GA NI LOOSE	F05092-1	1	
32	TERMINAL, 1/4 18GA RING NI LOOSE	F05092-7	1	
33	NUT, 5/16-24 HEX ZINC	F05010-28	2	
34	BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZIN	F81001-2	2	
35	TERMINAL, 35 RING #2 GAUGE	F81066-3	3	
36	COVER, HYDRAULIC BOX	088362	1	
37	WASHER, 8.4 FLAT ZINC	F81054-1	2	

3.12 D42S Engine Fuel System

D42S-70S_009
D42S-70S



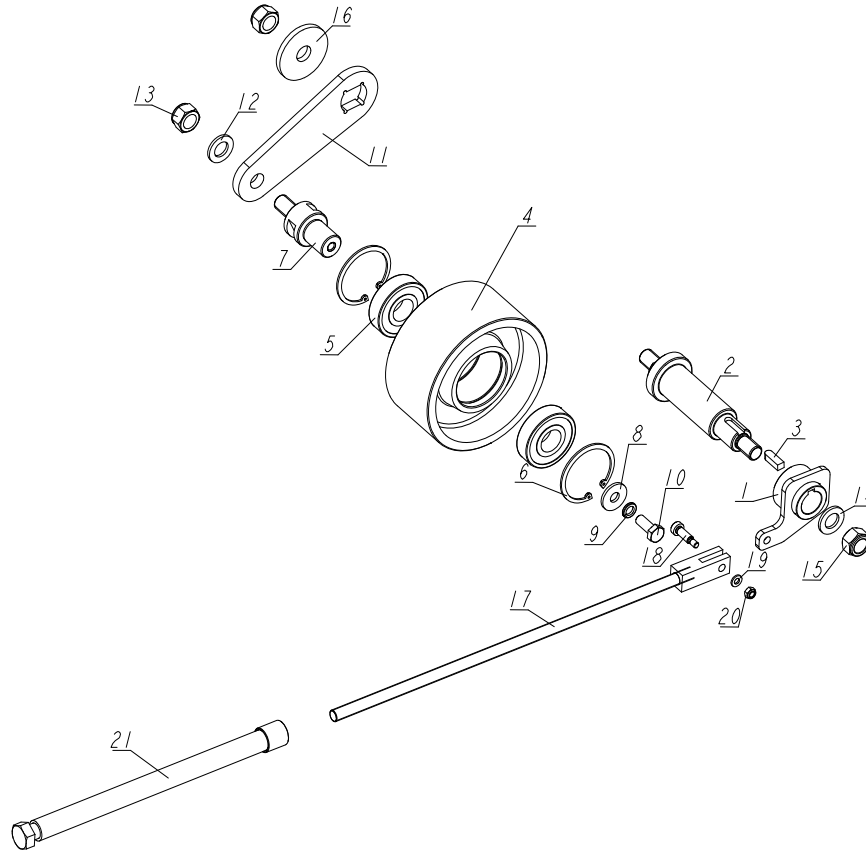
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	FUEL SYSTEM	555320	1
1	FILTER, FUEL	555318	1
2	PUMP, FUEL	555317	1
3	WASHER, 6.4 FLAT ZINC	F81053-1	2
4	WASHER 6,1 ZC SPRING LOCK DIN 127	F81053-3	2
5	BOLT, M6X16-8.8 HEX HEAD FULL THREAD ZIN	F81001-15	2

3**REPLACEMENT PARTS***D42S Engine Fuel System*

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
6	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	8	
7	NUT, M10-8-B HEX NYLON ZINC LOCK	F81033-1	6	
8	BOLT, M10X35-8.8 HEX HEAD FULL THREAD ZI	F81003-17	4	
9	BRACKET	555332-1	1	
10	FUEL PRE-FILTER, D42S ENGINE	555316	1	
11	FUEL HOSE 8MM, IV CARBUR /10-08	R80703-2	1	
12	CLAMP, 8-12MM DIA. WORM	F81080-1	16	
13	VALVE	555319	1	
14	HOSE, 5X12 FUEL	R80703-4	1	
15	FITTING, T	555322	1	
16	BOLT, M10X25-8.8-FE/ZN5	F81003-11	2	

3.13 Belt Tensioner Assembly

555270_001
555270



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
-	BELT TENSIONER ASSEMBLY	555270	1	
1	ARM WELDMENT, DRIVE BELT TENSIONER	555266-1	1	
2	SHAFT, BLADE TENSIONER ZINC-PLATED	518495-1	1	
3	KEY, AB 8X7X25 PARALLEL	099848	1	
-	WHEEL ASSEMBLY, LT70DC BELT TENSIONER	555265	1	
-	WHEEL, LT70DC BELT TENSION - COMPLETE	514843	1	
4	WHEEL, BELT TENSION	509882	1	
5	BEARING, .9843X2.4409X.6693	P08066	2	
6	RING, 62W INSIDE RETAINING	F81090-1	2	
7	SHAFT, TENSION WHEEL ZINC-PLATED	518052-1	1	
8	WASHER, 11/30-3 ZINC-PLATED	088787-1	1	
9	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	1	
10	BOLT, M10X25-8.8-FE/ZN5	F81003-11	1	
11	ARM, TENSION WHEEL ZINC-PLATED	518051-1-D42S	1	
12	WASHER, 17 FLAT ZINC	F81058-1	1	
13	NUT, M16-8 HEX NYLON ZINC LOCK	F81036-2	1	

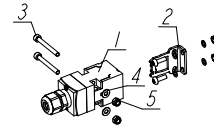
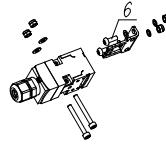
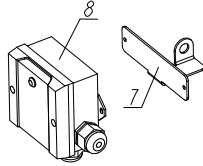
3 REPLACEMENT PARTS

Belt Tensioner Assembly

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
14	WASHER, 17 FLAT ZINC	F81058-1	1	
15	NUT, M16-8 HEX NYLON ZINC LOCK	F81036-2	2	
16	WASHER, 17.5/60-6 ZINC-PLATED	098012-1	1	
17	ROD WELDMENT, THREADED ZINC-PLATED	088789-1	1	
18	BOLT, 8/M6X20-12.9 ISO 7379 SHOULDER	F81001-25	1	
19	WASHER, 6.4 FLAT ZINC	F81053-1	1	
20	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	1	
21	TUBE WELDMENT, THREADED ZINC-PLATED	088782-1	1	

3.14 Switches Assembly

D42S-70S-011
D42S-70S



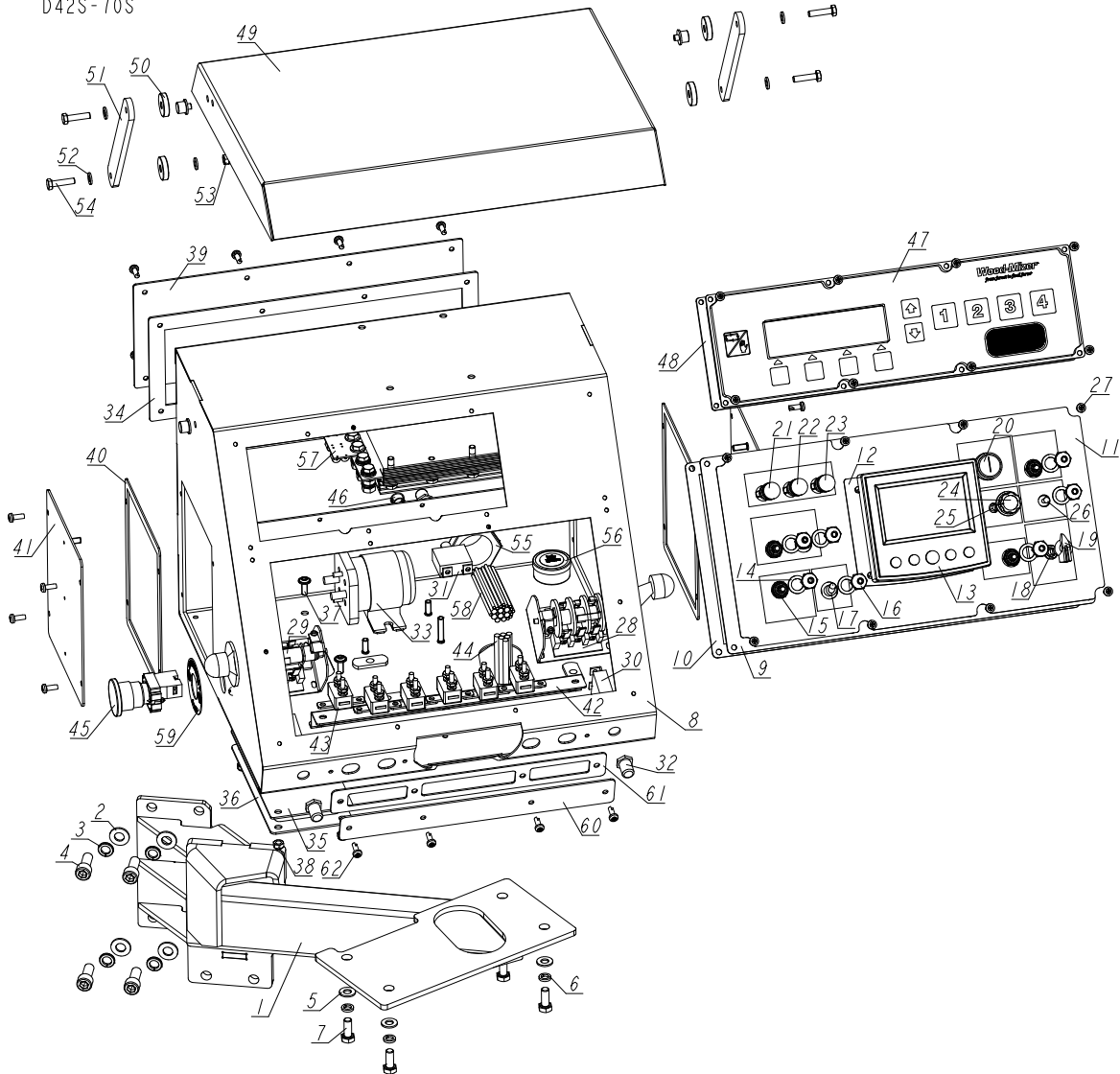
REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
1	SWITCH, AZ17-11ZRK SAFETY	094232	2
2	KEY, AZ17/170-B5 SAFETY SWITCH	094422	2
3	SCREW, M4X35 -8.8 HEX SOCKET HEAD CAP ZI	F81011-34	4
4	WASHER, 4.3 FLAT ZINC	F81051-2	4
5	NUT, M4-8 HEX NYLON ZINC LOCK	F81029-1	8
6	SCREW, M4X12 5,8-B CROSS RECESSED PAN HE	F81011-43	4
7	BRACKET, SAFETY SWITCH RELAY	096873-1	1
8	RELAY, SAFETY SWITCH	086486	1

3 REPLACEMENT PARTS

Control Box, LT70-D42S

3.15 Control Box, LT70-D42S

D42S-70S_002
D42S-70S



REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
-	ENGINE KIT, LT70 D42S	D42S-70S	1
-	MOUNT WELDMENT, LT 70 W/ACCUSET CONTROL BOX	580520	1
1	MOUNT WELDMENT, LT 70 W/ACCUSET CONTROL BOX	580521-1	1
2	WASHER 10,5 ZC DIN 126 ISO 7091	F81055-1	4
3	WASHER, 10.2 SPLIT LOCK ZINC	F81055-2	4
4	SCREW, M10X25 8.8 HEX SOCKET HEAD CAP ZI	F81003-32	4
5	WASHER, 8.4 FLAT ZINC	F81054-1	4
6	WASHER 8,2 ZC SPRING LOCK DIN 127	F81054-4	4
7	BOLT, M8X20MM, HEX HEAD,GR 5.8 ZINC,	F81002-4	4
-	LT70S-D42S, CONTROL PANEL	555334	1

REPLACEMENT PARTS

Control Box, LT70-D42S

3

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY
8	BOX WELDMENT, CONTROL	543540-1	1
-	PANEL, G57 CONTROL BOX FRONT	543531	1
9	PANEL, G57 W/ACCUSET CONTROL BOX FRONT	543532-1	1
10	GASKET	543529	1
11	DECAL, G57 CONTROL BOX FRONT PANEL	543533	1
12	GASKET FOR PV485	543534	1
13	DISPLAY, MURPHY PV485 78700639	539840	1
14	WASHER, 1/2X3/4X1/16 NYLON	P05251-1	7
15	SWITCH, TOGGLE 21A DPDT REV MOM SPADE	024200	4
16	BOOT, TOGGLE SWITCH RUBBER	P02575	7
17	SWITCH, SPST ON/OFF 15A .25 TABS TOGGLE	P03027	2
18	POTENTIOMETER, 1K	E20519	1
19	KNOB, FEED RATE WITH SET SCREW	P06257	1
20	SWITCH, KEY	P04350	1
21	LIGHT, XB6AV4BB RED	091099	1
22	LIGHT, XB6AV5BB YELLOW	089812	1
23	LAMP, CONTROL	087348	1
24	KNOB, 1/4"ID FLUTED ROUND PLASTIC	033478	1
25	POT, 500K 2W 10% CP PANEL MOUNT	024553	1
26	SWITCH, DPDT ON/OFF/ON 15A TOGGLE	024588	1
27	BOLT, #10-24 X 1/2 PH PAN HEAD TYPE 23	F05015-17	32
28	SWITCH, 1992 UP/DOWN	E20440	1
29	SWITCH ASSEMBLY, POWER FEED DRUM	E20438	1
30	BREAKER, 70 AMP MANUAL RESET PANEL MOUNT	015527	2
31	BREAKER, 30A MANUAL RESET PANEL MOUNT	024246	1
32	BOOT, CIRCUIT BREAKER	021253	3
33	SOLENOID, 200A 12V SPST HYDRAULIC PUMP	015470	1
34	GASKET	557007	1
-	GASKET ASSEMBLY	532368	1
35	PLATE, COVER	532367-1	1
36	GASKET, CORK	532366	1
37	SCREW, M6X16 BN 11252 "BOSSARD"	F81001-24	4
38	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	4
39	PLATE, COVER	557008-1	1
40	GASKET, SIDE PANEL	015274	2
41	COVER, CONTROL BOX SIDE	086699-1	2
42	RAIL, CIRCUIT BREAKER	525779-1	1
43	BREAKER, 15 AMP MANUAL RESET	E20430	6
44	HARNESS, D42 CONTROL BOX LOWER	090252	1
45	SWITCH EMERGENCY XB4 BS542	086556	1
46	CAP, 12.7 HEYMAN DP 500 #2643 HOLE	086773	1
47	PANEL ASSEMBLY, ACCUSET 2	069649	1

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REPLACEMENT PARTS*Control Box, LT70-D42S*

REF	DESCRIPTION (u indicates parts available in assemblies only)	PART #	QTY	
48	GASKET, ACCUSET FRONT PANEL	024870	1	
-	COVER, CONTROL BOX COMPLETE	543543	1	
49	COVER WELDMENT, CONTROL BOX	543542-1	1	
50	SPACER, WATER FILTER	088728	4	
51	BRACKET, CONTROL BOX MOUNT	088831-1	2	
52	WASHER, 6.4 FLAT ZINC	F81053-1	8	
53	NUT, M6-8-B HEX NYLON ZINC LOCK	F81031-2	4	
54	BOLT, M6X25 -8.8 HEX HEAD FULL THREAD ZI	F81001-3	4	
55	CONNECTOR, 1 1/4 STRAIGHT METAL CONDUIT	024402	1	
56	CUP ASSEMBLY, DRUM SWITCH GREASE	A20463	1	
57	CONTROL ASSEMBLY, ACCUSET2 DUAL AXIS	057821LS-FR	1	
58	UPPER HARNESS ASSY, D42S CONTROL PANEL	090251-D42S	1	
59	LEGEND, ZBY9320 E-STOP MARKED	086561	1	
-	PLATE, CIRCUIT BREAKER COVER - COMPLETE	543555	1	
60	PLATE	543556-1	1	
61	GASKET, COVER	543557	1	
62	BOLT, #10-24 X 1/2 PH PAN HEAD TYPE 23	F05015-17	4	