

# **D42 Engine**

## **Safety, Operation, Maintenance & Parts Manual**

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**LT40 Series MH**  
**LT40 Series DH**

**rev. E2.00**  
**rev. E2.00**

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

*February 1998*

*Form #916*

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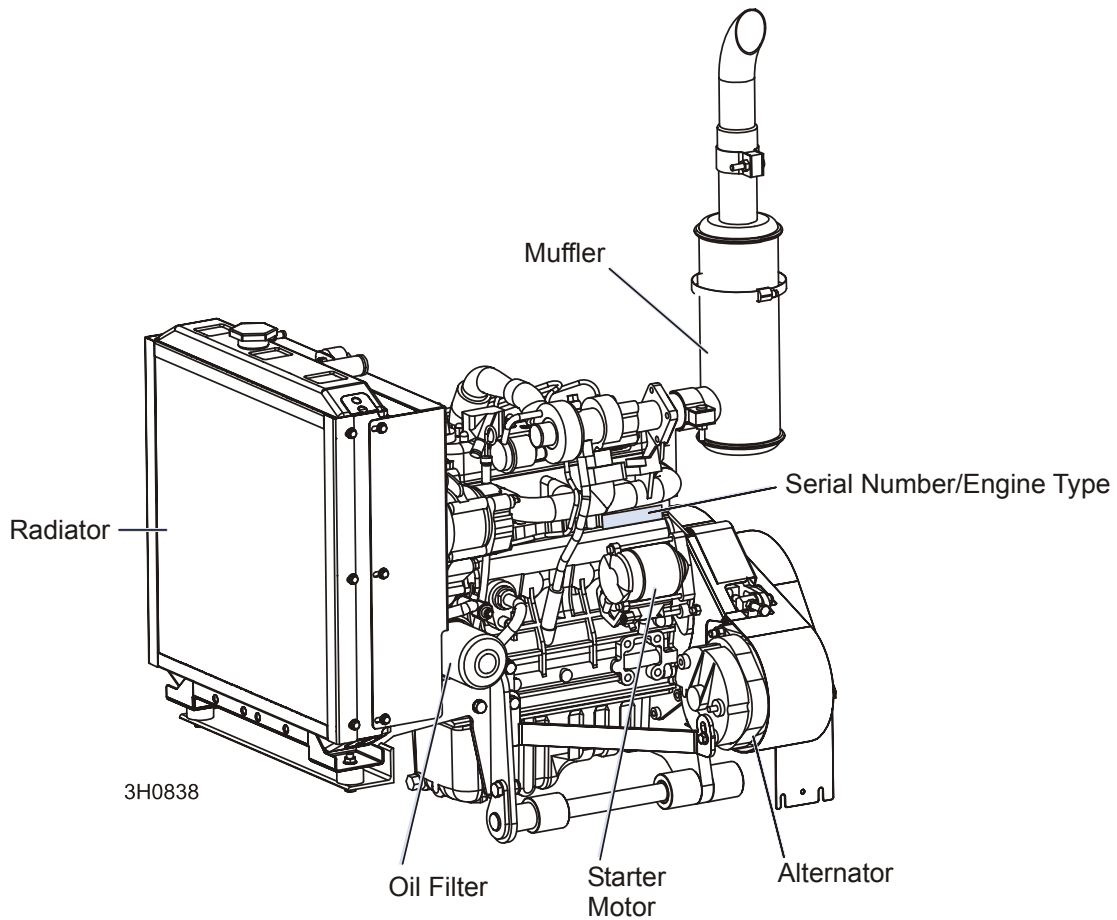
# ABOUT THIS MANUAL

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

#### Control Lights


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

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




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



 **Oil Indicator:** Lights up if the oil pressure is too low.



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

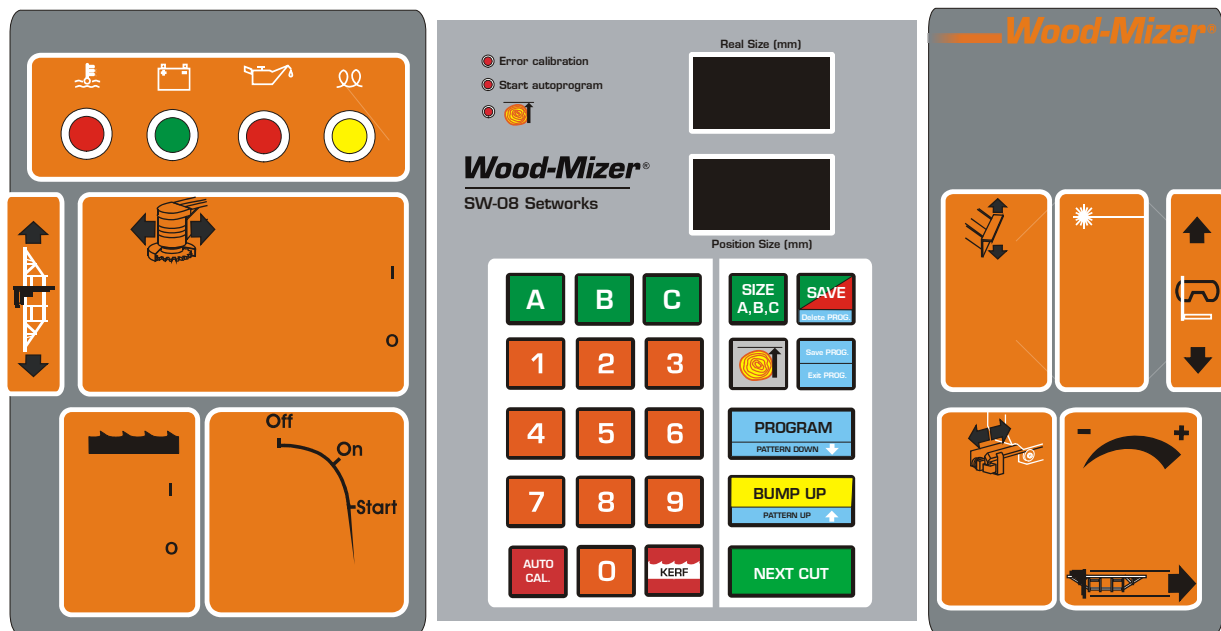


FIG. 1-1

## Engine Start



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

**DANGER!** Operate your engine/machine only in well ventilated areas. The exhaust gases of your engine can cause nausea, delirium and potentially death unless adequate ventilation is present.

**DANGER!** Never operate an engine with a fuel or oil leak. The leaking fuel or oil could potentially come in contact with hot surfaces and ignite into flames.



**WARNING!** Be sure the power feed switch is in the neutral position before turning the key switch to the on (#1) or accessory (#3) position. This prevents accidental carriage movement which may cause serious injury or death.

**WARNING!** Do not operate engine without proper and operational spark arrester/muffler. Sparks emitted from the engine exhaust could ignite surrounding materials, causing serious injury or death.



**CAUTION!** Do not crank starter for more than 7 seconds at one time during starting attempts. Damage to the engine may result.

**CAUTION!** Let cool 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 a best quality diesel fuel for below freezing starting.
3. Turn the key switch on the control panel to the on (#1) position.
4. Wait until the glow plug indicator goes out.
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 and the turbo-charger to cool down before the engine is shut off.

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

## SECTION 2 MAINTENANCE

Refer to the manufacturer's manual for maintenance intervals and procedures unless otherwise instructed in this manual. Follow the manufacturer's recommendations for dusty conditions.



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

### 2.1 Safety

Use caution when performing maintenance or service to the engine.



**DANGER!** Always be aware of and take proper protective measures against rotating shafts, pulleys, fans, etc. Always stay a safe distance from rotating members and make sure that loose clothing or long hair does not engage rotating members resulting in possible injury.

**DANGER!** Engine components can become very hot during operation. Avoid contact with any part of a hot engine. The exhaust components of your engine are especially hot during and following operation. Contact with hot engine components can cause serious burns. Therefore, never touch or perform service functions on a hot engine. Allow the engine to cool sufficiently before beginning any service function.



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

**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.



**This symbol** identifies the interval (hours of operation) at which each maintenance procedure should be performed. "AR" signifies maintenance procedures which should be performed as required.

## 2.2 Cooling System

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



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



**CAUTION!** Do not spray the radiator with water when the engine is hot.



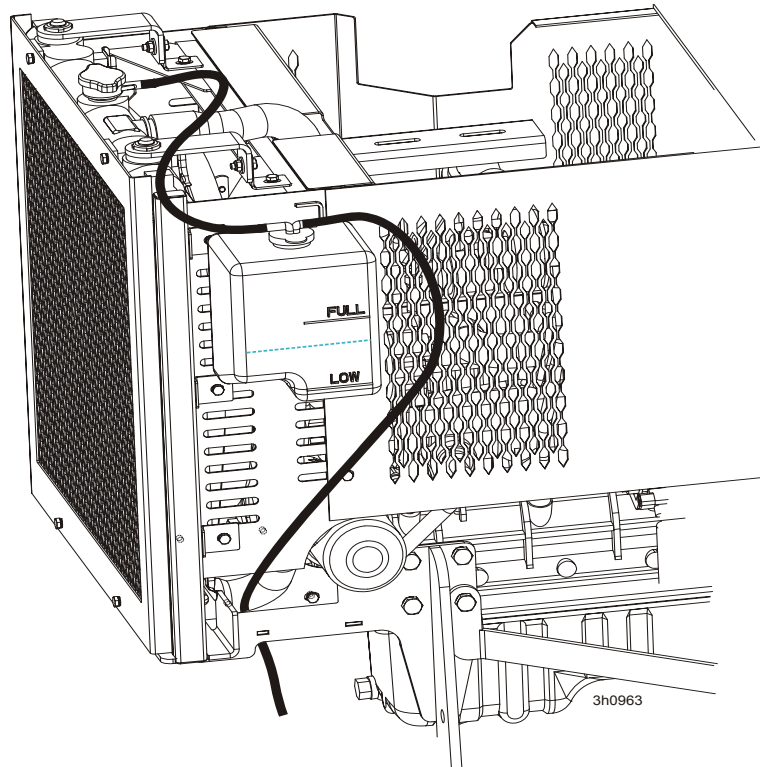
**CAUTION!** Do not open the radiator cap or reservoir cap when the engine is hot.

8 Every 8 hours of operation check the coolant level on the coolant reservoir. When engine is cold the coolant level should be above the LOW level.

For the aluminium radiator use only glycol solution (1l. of glycol concentrate for 1l. of dis-



tilled water).

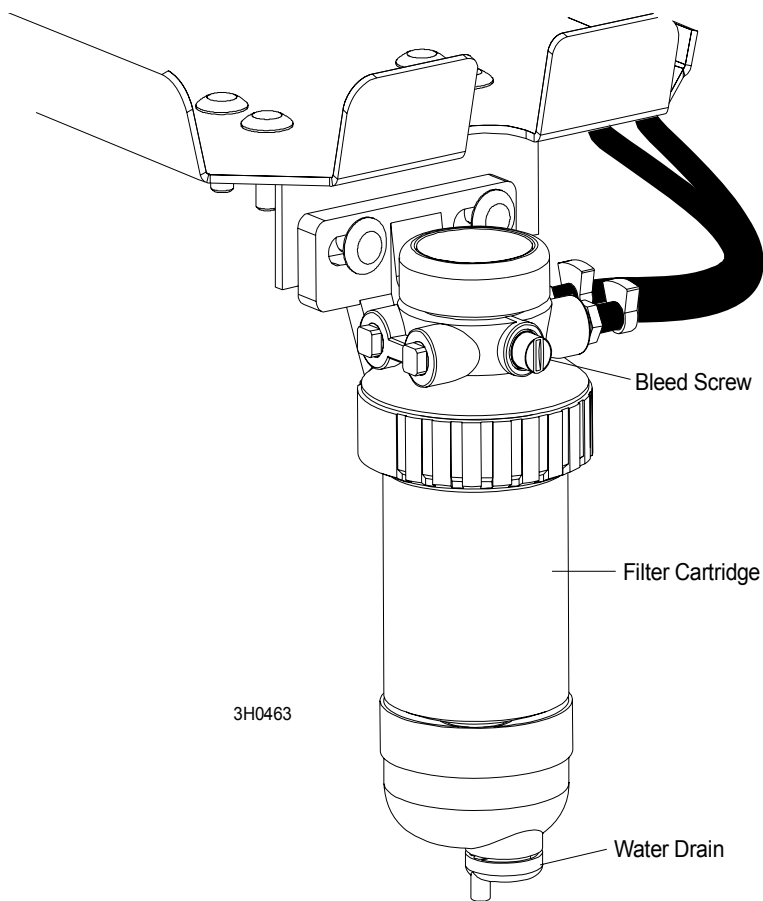


**FIG. 2-0**

### 2.3 Fuel Filter

1500

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



**FIG. 2-1**

## 2.4 Battery



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



**DANGER!** Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Always wear safety goggles and a face shield when working near batteries. Failure to do so will cause serious injury.<sup>1</sup>



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

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1. Battery Council International, copyright 1987

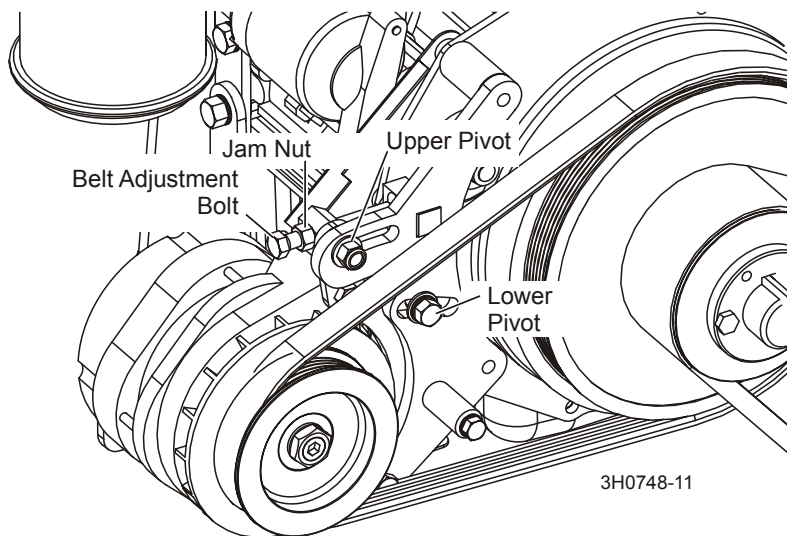
## 2.5 Alternator Belt



The belt tension should be checked after the first 100 hours of operation, when the battery is not charging properly or when the alternator belt is squealing. If the battery continues to not charge properly or the belt continues to squeal after the initial belt adjustment, replace the belt.

1. Release the blade tension and remove the blade from the sawmill if necessary. Turn the key switch to OFF (0) and remove the key.
2. Remove the drive belt cover and alternator cover.

See Figure 2-2.



**FIG. 2-2**

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



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

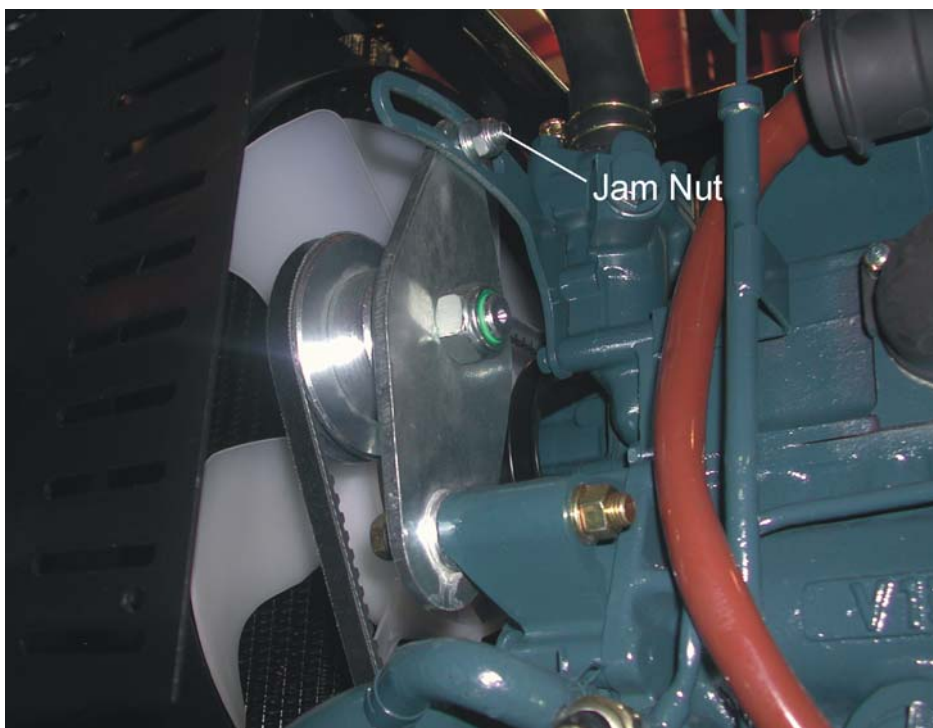
6. After the alternator belt has been tensioned, tighten the adjustment bolt jam nut. Tighten the upper and lower pivots and replace the belt covers.

## 2.6 Radiator Fan Belt Adjustment

**AR** The fan belt tension should be checked after the first 100 hours of operation, when the engine is overheating or when the fan belt is squealing. If the engine continues overheating 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. Remove the radiator covers.
3. Loosen the jam nut ( shown below ).
4. Tension the fan belt properly by hand.
5. Tighten the jam nut and replace the radiator covers.


See Figure 2-3.



**FIG. 2-3**

## 2.7 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. High-end RPM should be 3200 RPM and low-end RPM should be 1500 RPM.

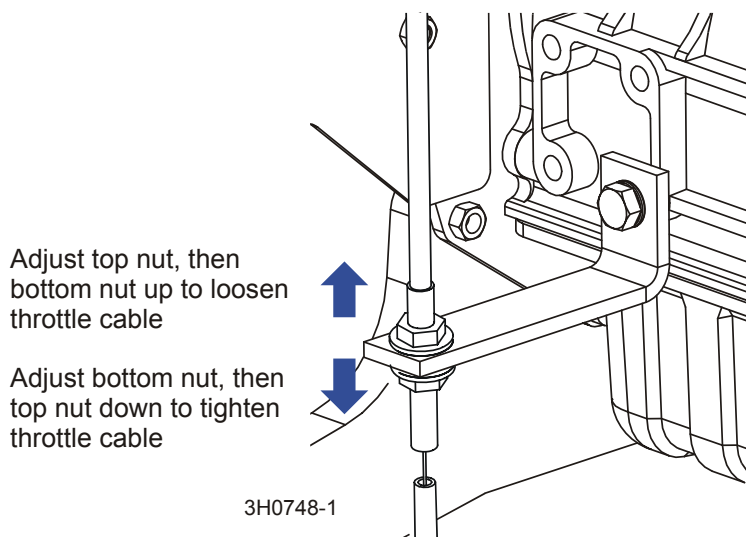
Before checking the RPM, make sure belt and brake strap tensions are correct (See Saw-mill Maintenance). Also check oil, fuel, and coolant levels.

Make sure the throttle cable does not affect the engine RPM when the 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 2-4.



**FIG. 2-4**

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

See Figure 2-5.

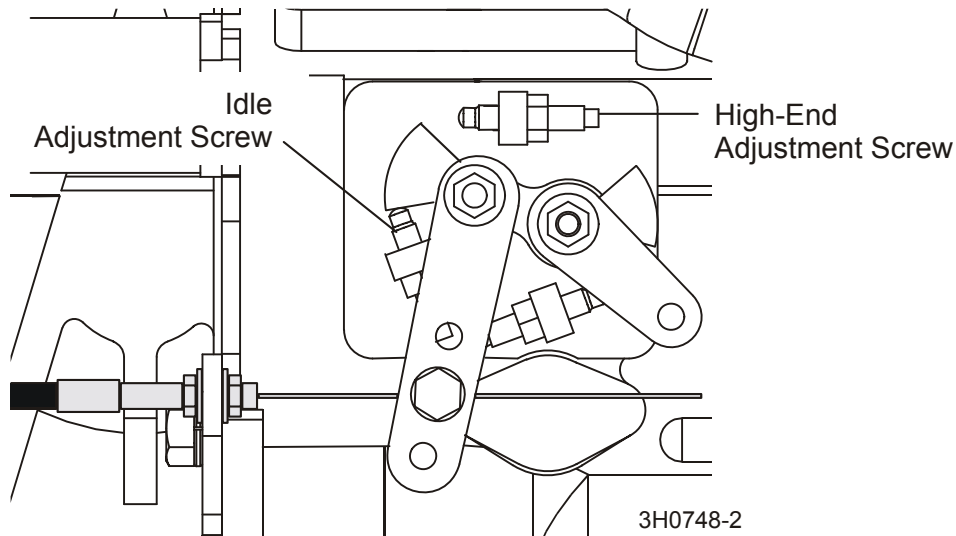


FIG. 2-5

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



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

5. After the RPM settings are made, shut the engine off. Tighten the throttle cable by engaging the clutch handle. Check the throttle cable at the upper cable mounting bracket. The cable should be centered in the cable housing. If necessary, loosen the upper bracket mounting bolts and adjust the bracket so the cable housing is centered around the cable. Retighten the upper cable bracket mounting bolts.

See Figure 2-6.

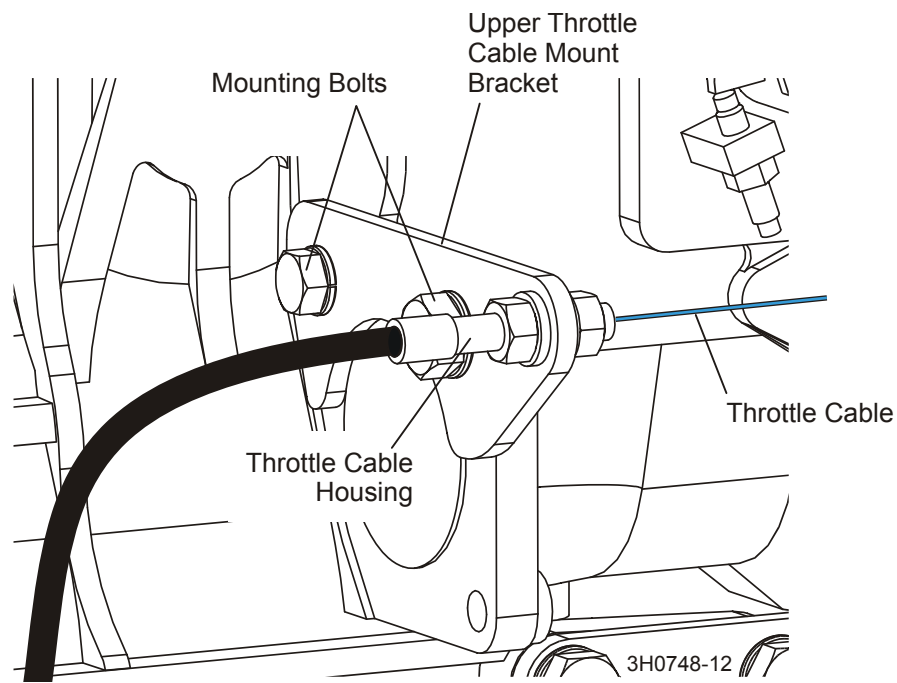


FIG. 2-6

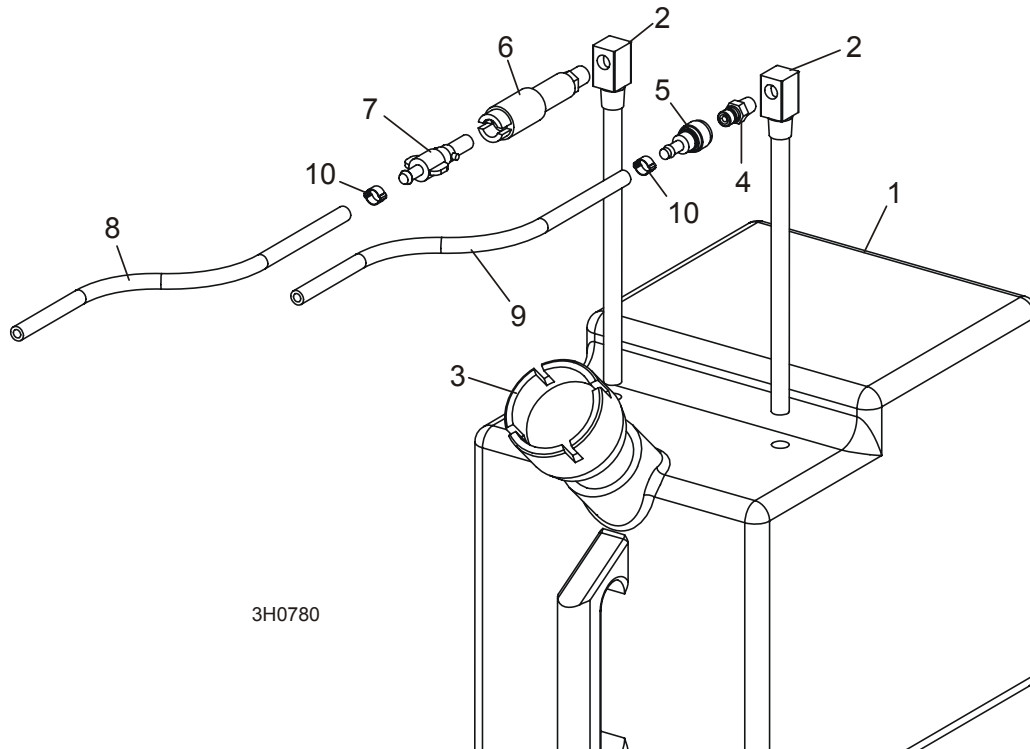


**CAUTION!** Failure to properly center the throttle cable in the cable housing may result in premature cable wear.



## SECTION 3 REPLACEMENT PARTS

### 3.1 Fuel Tank



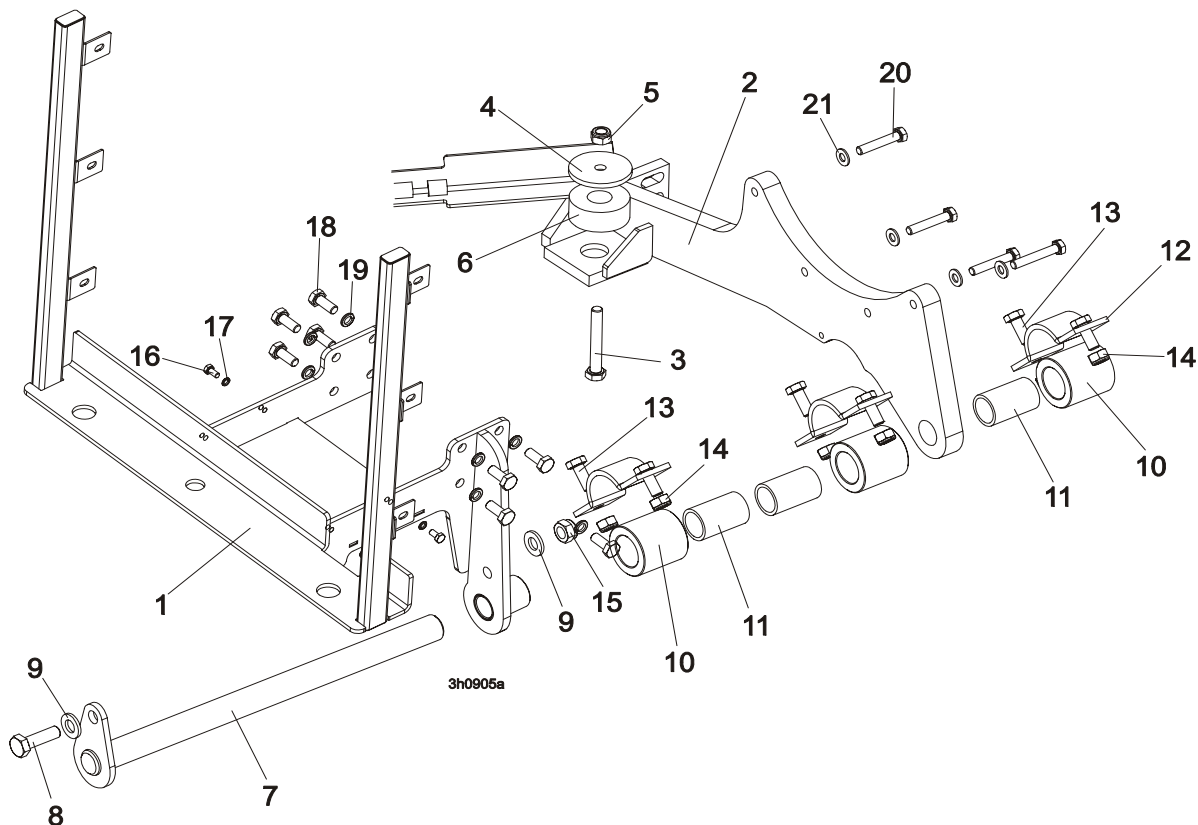
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| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #              | QTY.    |   |
|-----|--|---------------------|---------|---|
|     | <b>TANK ASSEMBLY, 5 GALLON GREEN DIESEL</b>                  | A12132              | 1       |   |
| 1   | Tank, 5 Gallon Green Fuel                                    | P12166              | 1       | ◆ |
| 2   | Pickup, 9" Fuel  | P12172              | 2       |   |
| 3   | Cap, 3/5 Gallon Fuel Tank                                    | P09683              | 1       |   |
| 4   | Fitting, 1/4" NPT Male Quick Disconnect                      | 015583              | 1       |   |
| 5   | Fitting, Female Quick Disconnect Barb                        | 015582              | 1       |   |
| 6   | Fitting, 1/4" NPT Plastic Female Disconnect                  | P12175              | 1       |   |
| 7   | Fitting, 1/4" Barb Plastic Male Disconnect                   | P12176              | 1       |   |
| 8   | <b>HOSE, 1/4" ID FUEL</b>                                    | P642                | 7.17 Ft |   |
| 9   | <b>HOSE, 5/16" ID FUEL</b>                                   | 016338              | 9 Ft.   |   |
| 10  | <b>CLAMP, 7/32 - 1/2 HOSE</b>                                | P649                | 6       |   |
|     | <b>ADDITIVE, DIESEL FUEL 16OZ BOTTLE</b>                     | 004878 <sup>1</sup> | 1       |   |

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

# 3 Replacement Parts Engine Mount Assembly

## 3.2 Engine Mount Assembly



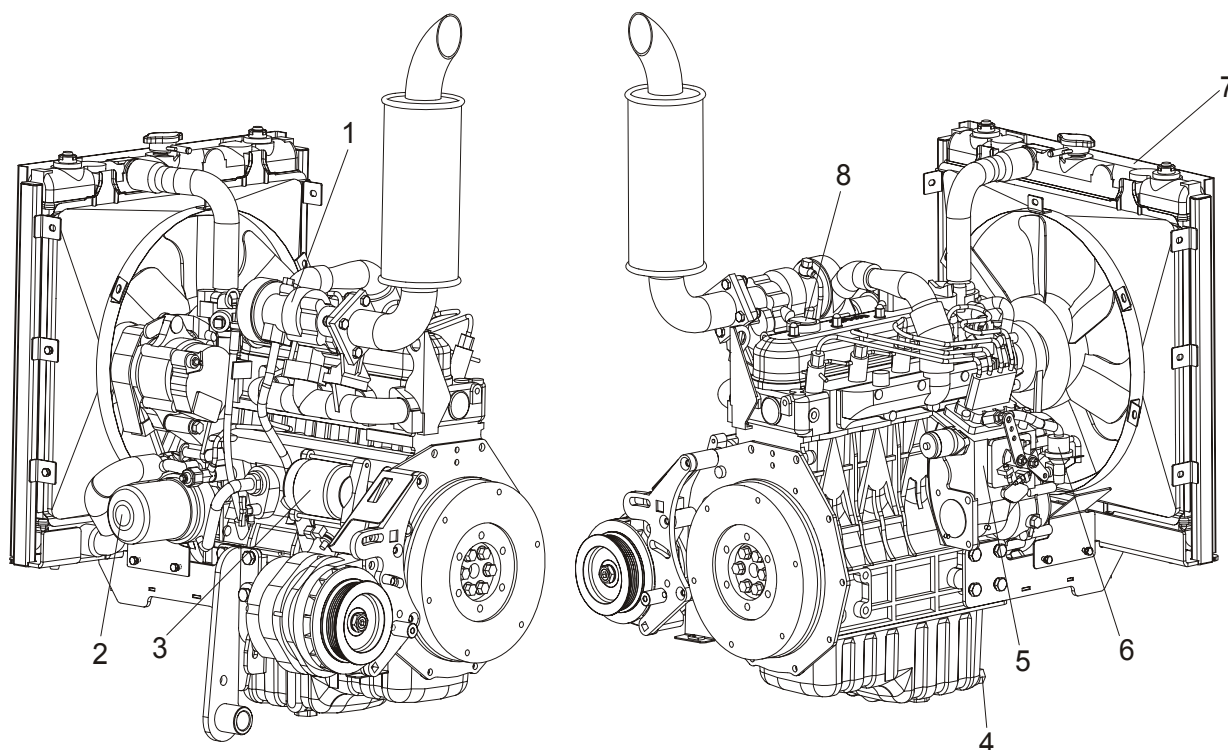
| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | <b>MOUNT WELDMENT, FRONT KUBOTA ENGINE</b>                   | 097154-1  | 1    |
| 2   | <b>MOUNT WELDMENT, REAR KUBOTA ENGINE</b>                    | 087945-1  | 1    |
|     | <b>VIBRATION ABSORBER, CLUTCH</b>                            | 090666-1  | 1    |
| 3   | Bolt, M10X70-8.8 HEX HEAD, ZINC                              | F81003-20 | 1    |
| 4   | Washer, 3/8" I.D. X 2 1/4" O.D. X 3/16" THICK                | S12412-0  | 1    |
| 5   | Nut, M10-8-B Hex Nylon Lock                                  | F81033-1  | 1    |
| 6   | <b>BUSHING, MOTOR MOUNT VIBRATION</b>                        | P05032    | 1    |
| 7   | <b>PIN WELDMENT, KUBOTA ENGINE MOUNT PIVOT</b>               | 087955-1  | 1    |
| 8   | <b>BOLT, M12 X 40-8.8 HEX HEAD</b>                           | F81004-4  | 1    |
| 9   | <b>WASHER, 13 FLAT ZINC</b>                                  | F81056-1  | 1    |
|     | <b>BUSHING ASSEMBLY, MOTOR MOUNT</b>                         | 016380    | 3    |
| 10  | Bushing, 2" OD x 2"  | 016378    | 1    |
| 11  | Bearing, 1" x 1 1/4" x 2"                                    | 016379    | 1    |
| 12  | <b>CLAMP WELDMENT, MOTOR MOUNT</b>                           | 086200    | 1    |
| 13  | <b>BOLT, M10-1.5X25MM HH GR8.8</b>                           | F81003-11 | 1    |
| 14  | <b>NUT, M10, NYLON HEX ZINC LOCK</b>                         | F81033-1  | 2    |
| 15  | <b>NUT, M12-8-B NYLON LOCK</b>                               | F81034-2  | 1    |

|           |   |           |   |  |
|-----------|---|-----------|---|--|
| <b>16</b> | <b>BOLT M6x12-8.8-Fe/Zn5</b>              | F81001-7  | 4 |  |
| <b>17</b> | <b>WASHER, 10.2 SPLIT LOCK ZINC</b>       | F81053-3  | 4 |  |
| <b>18</b> | <b>BOLT M10x1,25x25-8.8-A-Fe/Zn5</b>      | F81003-29 | 8 |  |
| <b>19</b> | <b>WASHER, 10.2 SPLIT LOCK ZINC</b>       | F81055-2  | 8 |  |
| <b>20</b> | <b>BOLT, M8X45 - 8.8 HEX HEAD GRADE 5</b> | F81002-14 | 4 |  |
| <b>21</b> | <b>WASHER, M8, FLAT ZINC</b>              | F81054-1  | 4 |  |

# 3 Replacement Parts

## Engine Assembly

### 3.3 Engine Assembly



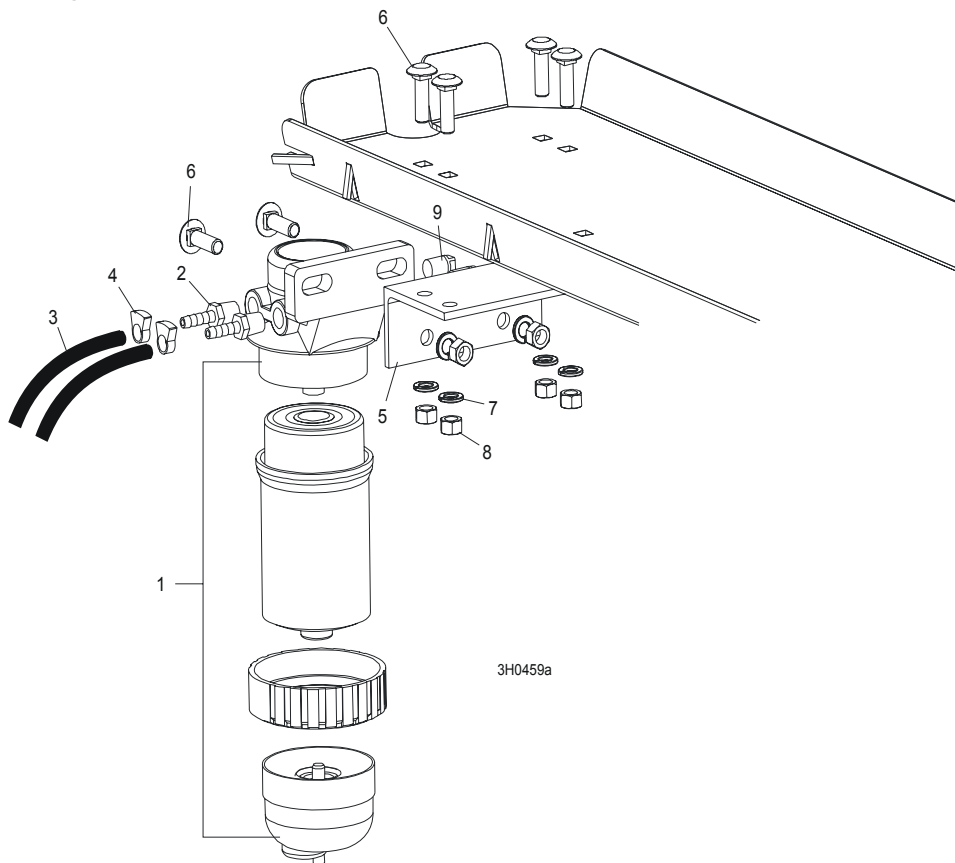
| REF      | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #        | QTY. |
|----------|--|---------------|------|
|          | <b>ENGINE, KUBOTA 1505TE</b>                                 | 088022        | 1    |
| <b>1</b> | <b>Turbocharger, Kubota</b>                                  | <b>097738</b> | 1    |
|          | Belt, Kubota Fan   | 097739        | 1    |
|          | <b>Radiator Fan</b>  | <b>097740</b> | 1    |
|          | Filter, Kubota D42 Air B53/207                               | 088025        | 1    |
|          | Filter Cartridge, Kubota D42 Air                             | 097741        | 1    |
|          | Filter, Kubota D42 fuel                                      | 088024        | 1    |
|          | Filter Cartridge, Kubota Fuel D42                            | 097742        | 1    |
| <b>2</b> | Filter, Kubota Oil   | 097743        | 1    |
|          | Gasket Kit, Kubota Lower                                     | 097744        | 1    |
|          | Gasket Kit, Kubota Upper                                     | 097745        | 1    |
|          | Gasket, Kubota Muffler                                       | 097746        | 1    |
|          | Gasket, Kubota Fuel Injector                                 | 097747        | 1    |
|          | Gasket, Kubota Fuel Transfer Pump                            | 097748        | 1    |
|          | Gasket, Kubota Head  | 097749        | 1    |
|          | Gasket, Kubota Oil Drain Plug                                | 097750        | 1    |
|          | Gasket, Kubota Stop Solenoid                                 | 097751        | 1    |
|          | Gasket, Kubota Thermostat                                    | 097752        | 1    |

|   |  |        |   |  |
|---|--|--------|---|--|
|   | Gasket, Kubota Valve Cover                         | 097753 | 1 |  |
|   | Gasket, Kubota Water Pump                          | 097754 | 1 |  |
|   | Gasket, Kubota Exhaust Manifold                    | 097755 | 1 |  |
|   | Glow Plug, Kubota                                  | 097756 | 1 |  |
|   | Injector, Kubota Fuel                              | 097757 | 1 |  |
|   | Injection Sprayer, Fuel Kubota                     | 097758 | 1 |  |
| 3 | Motor, Kubota Starter                              | 097759 | 1 |  |
| 4 | Plug, Kubota Oil Drain                             | 097760 | 1 |  |
| 5 | Pump, Kubota Fuel Injector                         | 097761 | 1 |  |
| 6 | Pump, Kubota Fuel Transfer                         | 097762 | 1 |  |
|   | Pump, Kubota Water                                 | 097763 | 1 |  |
| 7 | Radiator Parts ( <a href="#">See Section 3.8</a> ) |        |   |  |
|   | Sending Unit, Kubota Heat Sensor                   | 097764 | 1 |  |
|   | Solenoid, Kubota Stop                              | 097765 | 1 |  |
|   | Switch, Kubota Oil Pressure                        | 097766 | 1 |  |
|   | Thermostat, Kubota                                 | 097767 | 1 |  |
| 8 | Oil Filling Cap Kubota                             | 097768 | 1 |  |
|   | Coolant Temperature Sensor                         | 097769 | 1 |  |
|   | <b>HARNESS ASSEMBLY, KUBOTA DIESEL ENGINE</b>      | 088144 | 1 |  |
|   | Breaker Assembly, Water Temp Max Circuit           | N/A    | 1 |  |
|   | Socket, Glow Plug Relay w/Fuse Holder              | N/A    | 1 |  |
|   | Fuse Link, 50 Amp                                  | N/A    | 1 |  |
|   | Relay, Glow Plug                                   | 088143 | 1 |  |

# 3 Replacement Parts

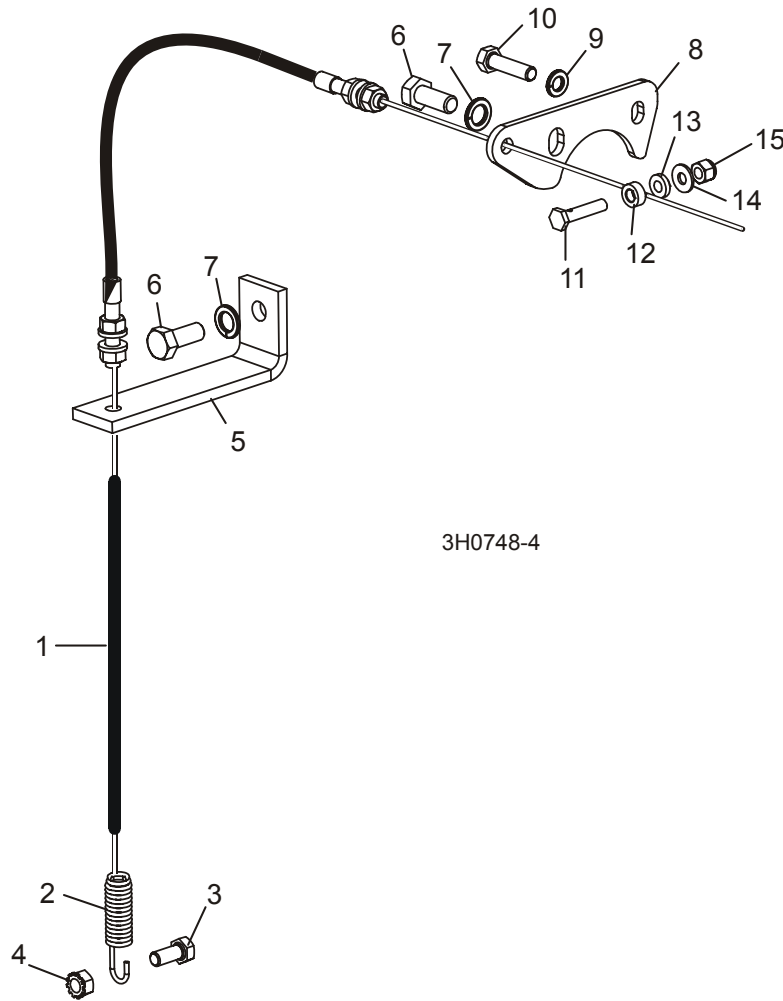
## Primary Fuel Filter

### 3.4 Primary Fuel Filter



| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | FILTER ASSEMBLY, STANDADYNE FUEL FPV-5,7 04WP40/3            | 088101    | 1    |
| 2   | FITTING, 3.4/3, 8MM, FILTR FPV-5,7                           | 088094    | 2    |
| 3   | HOSE, 5/16" ID FUEL  | R80703-2  | 9 Ft |
| 4   | CLAMP, 11-17MM HOSE  | F81080-3  | 2    |
| 5   | BRACKET, DIESEL FUEL FILTER MOUNT                            | 015905    | 1    |
| 6   | BOLT, 3/8-16 X 1 1/4" CARRIAGE HEAD                          | F05007-11 | 6    |
| 7   | WASHER, 3/8" SPLIT LOCK                                      | F05011-4  | 6    |
| 8   | NUT, 3/8-16 HEX  | F05010-1  | 6    |
| 9   | FITTING, 1/4" NPT PLUG                                       | P05498    | 2    |

### 3.5 Throttle Assembly



3H0748-4

| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | CABLE, KUBOTA THROTTLE                                       | 015857    | 1    |
| 2   | Spring, Throttle   | 016033    | 1    |
| 3   | BOLT, 5/16-18 X 3/4" HEX HEAD                                | F05006-5  | 1    |
| 4   | NUT, 5/16-18 HEX SELF-LOCKING                                | F05010-20 | 1    |
| 5   | BRACKET, LOWER THROTTLE CABLE MOUNT                          | 015853    | 1    |
| 6   | BOLT, M10-1.5 X 25MM HEX HEAD FULL THREAD GRADE 5            | F05009-52 | 2    |
| 7   | WASHER, 10MM SPLIT LOCK                                      | F05011-88 | 2    |
| 8   | BRACKET, UPPER THROTTLE CABLE MOUNT                          | 019009    | 1    |
| 9   | WASHER, 5/16" SPLIT LOCK                                     | F05011-13 | 1    |
| 10  | BOLT, M8-1.25 X 1" HEX HEAD                                  | F05004-40 | 1    |
| 11  | BOLT, THROTTLE CABLE   | 015985    | 1    |
| 12  | WASHER, .266 X .50 X .28 AL-BRONZE                           | 015986    | 1    |

### **3** Replacement Parts

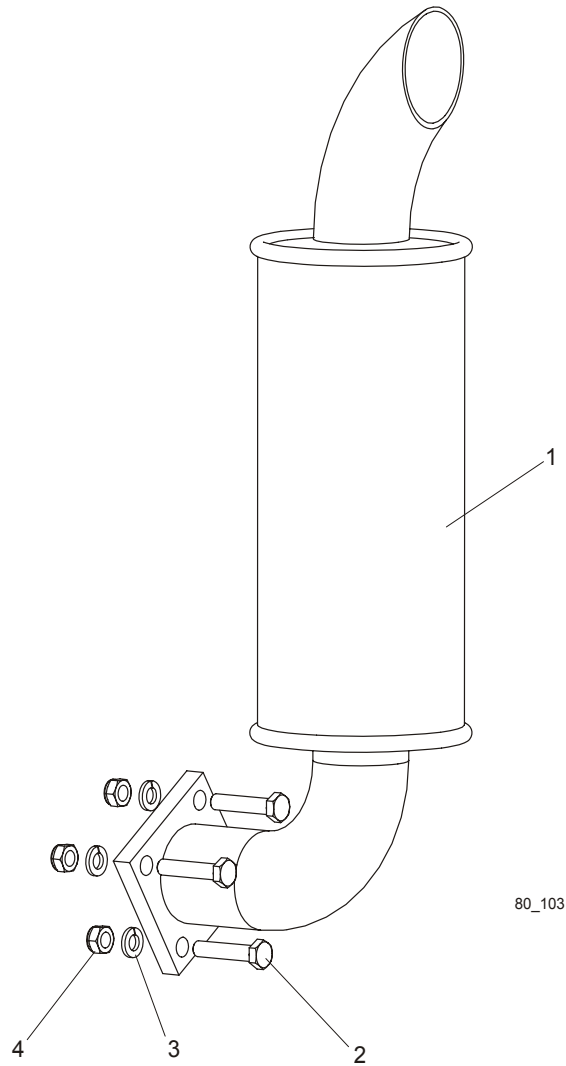
*Throttle Assembly*

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|    |   |           |   |  |
|----|---|-----------|---|--|
| 13 | BOSS, 1/4 X 1/2 X .26" AL-BRONZE            | 016339    | 1 |  |
| 14 | WASHER, .25ID X .62OD X .06THK, PLATED      | 016175    | 1 |  |
| 15 | NUT, 1/4-20 NYLON LOCK                      | F05010-69 | 1 |  |
| 16 | NUT, 1/4-20 NYLON LOCK                      | F05010-69 | 1 |  |
| 17 | NUT, 5/16-18 SELF-LOCKING HEX               | F05010-20 | 1 |  |
| 18 | BOLT, 5/16-18 X 1 1/4" HEX HEAD FULL THREAD | F05006-18 | 1 |  |
| 19 | NUT, 5/16-18 HEX LOCK                       | F05010-6  | 1 |  |



### 3.6 Muffler Assembly



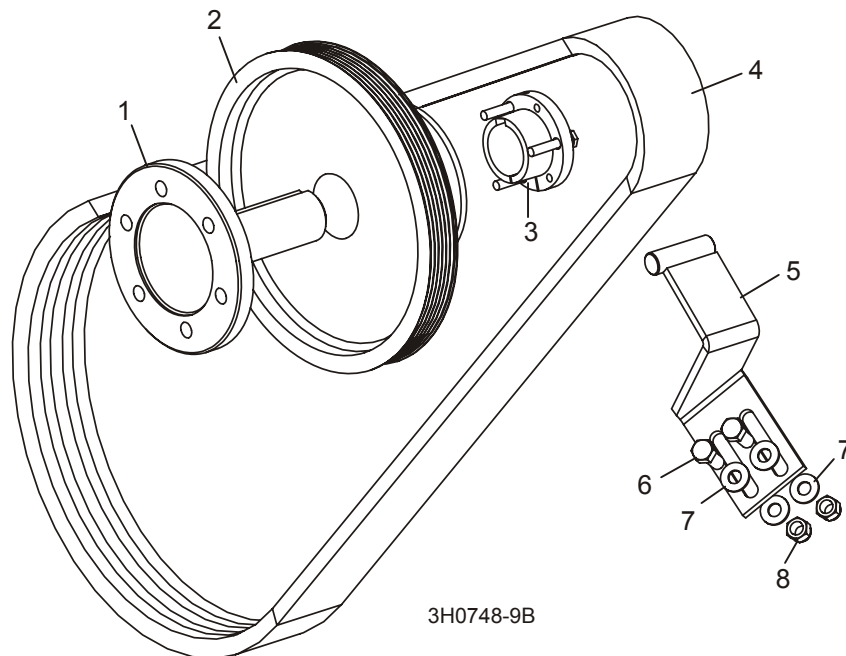
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| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |  |
|-----|--|-----------|------|--|
| 1   | MUFFLER, KUBOTA ENGINE                                       | 088100    | 1    |  |
| 2   | BOLT, M8X40-8.8 HEX HEAD FULL THREAD ZINC                    | F81002-15 | 4    |  |
| 3   | WASHER, 8.2 ZINC SPLIT LOCK                                  | F81054-4  | 4    |  |
| 4   | NUT, M8 HEX WELD   | F81032-3  | 4    |  |

# 3 Replacement Parts

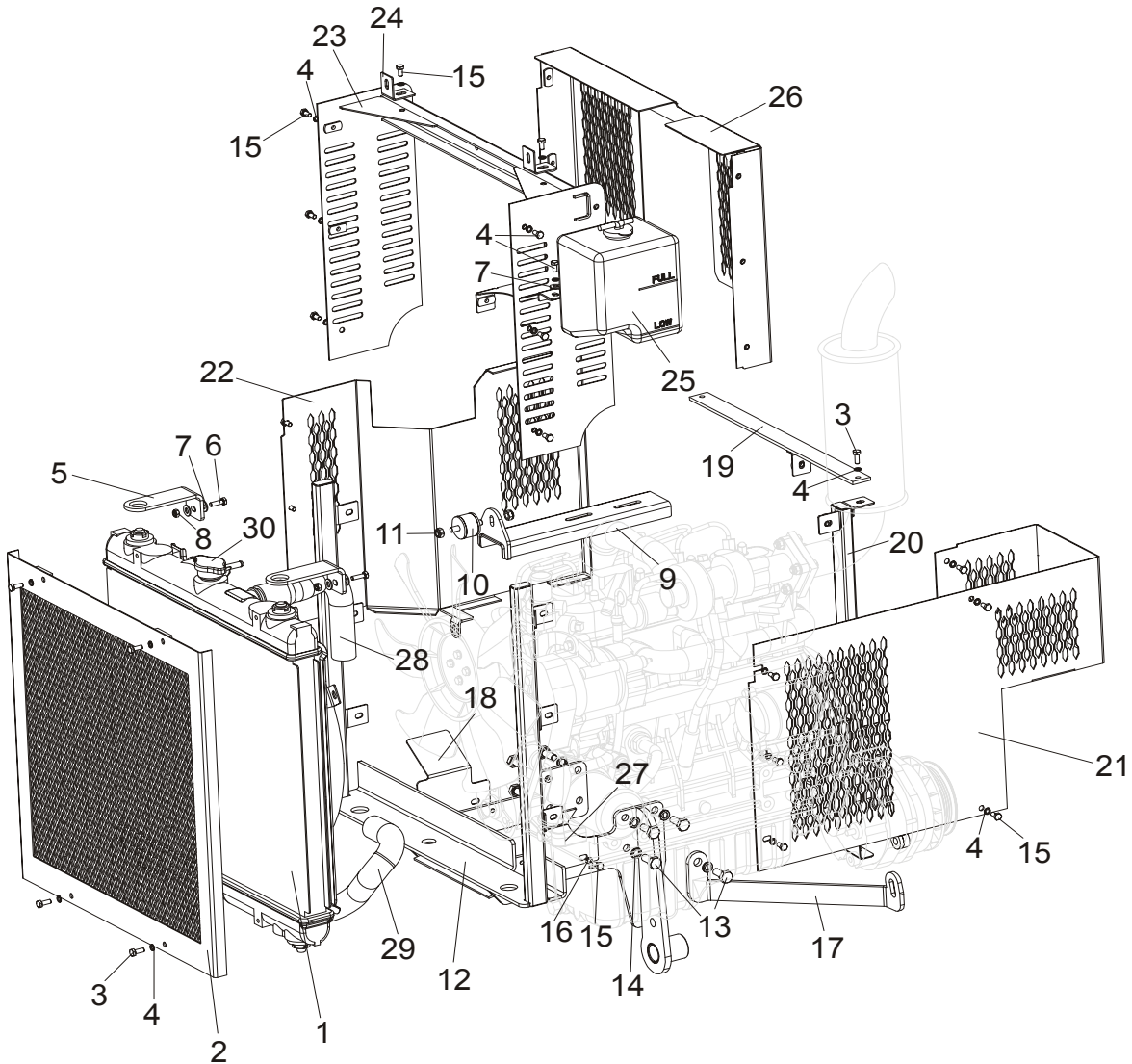
## Drive Assembly

### 3.7 Drive Assembly



| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | SHAFT, KUBOTA POWER  | 087953    | 1    |
| 2   | SHEAVE, 5V X 4.46" POLY V (GAS/DIESEL)                       | 085921    | 1    |
| 3   | BUSHING, SH X 1 7/16"  | 085714    | 1    |
| 4   | BELT, 3BX72  | 014085    | 1    |
| 5   | BRACKET, DRIVE BELT SUPPORT                                  | 016364    | 1    |
| 6   | BOLT, 3/8-16 X 1" HEX HEAD                                   | F05007-7  | 2    |
| 7   | WASHER, 3/8" SAE FLAT  | F05011-3  | 4    |
| 8   | NUT, 3/8-16 HEX NYLON LOCK                                   | F05010-10 | 2    |

### 3.8 Radiator Assembly & D42 Engine Guards



| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | RADIATOR, KUBOTA D42 ENGINE                                  | 097148    | 1    |
| 2   | RADIATOR GUARD, KUBOTA D42 ENGINE                            | 097201-1  | 1    |
| 3   | BOLT M6X16 8.8 FE/ZN5  | F81001-15 | 4    |
| 4   | WASHER, M6 SPLIT LOCK ZINC                                   | F81053-3  | 21   |
| 5   | BRACKET, UPPER, RADIATOR D42                                 | 097305-1  | 2    |
| 6   | BOLT, M6X20MM, HH, FULL THREAD, ZINC                         | F81001-2  | 2    |
| 7   | WASHER, M8, FLAT,ZINC  | F81054-1  | 6    |
| 8   | NUT, M6, HEX,NYLON LOCK ZINC                                 | F81031-2  | 2    |
| 9   | BRACKET, KUBOTA RADIATOR, PTD                                | 089481-1  | 1    |

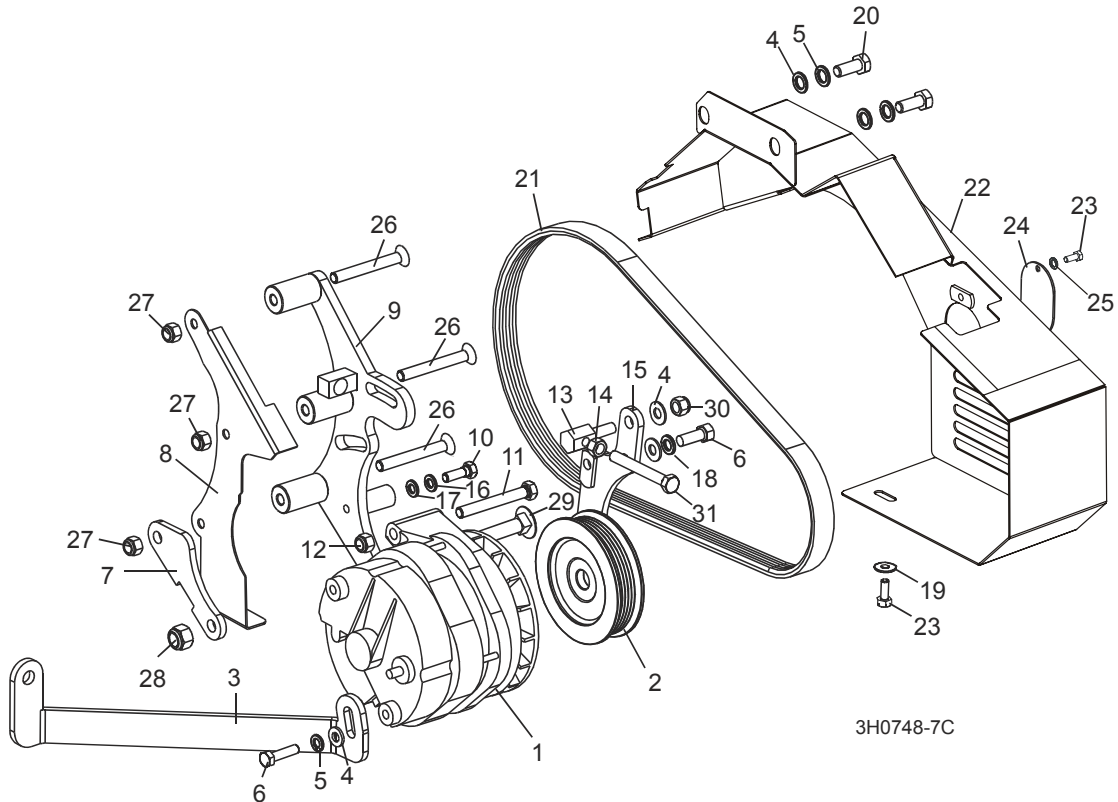
# 3

## Replacement Parts

### Radiator Assembly & D42 Engine Guards

|    |  |           |   |  |
|----|--|-----------|---|--|
| 10 | RADIATOR JOINT, METAL-RUBBER                   | 088183    | 1 |  |
| 11 | NUT, M8,HEXAGON,NYLON LOCK ZINC                | F81032-2  | 2 |  |
| 12 | FRONT RADIATOR BRACKET, PTD                    | 097154-1  | 1 |  |
| 13 | BOLT M10-1.5X50MM H/H PART/THR G5 ZINC         | F81003-29 | 8 |  |
| 14 | WASHER, M10 SPLIT LOCK ZINC                    | F81055-2  | 8 |  |
| 15 | BOLT, M6X12MM HEX HEAD ZINC                    | F81001-7  | 4 |  |
| 16 | WASHER, M6 SPLIT LOCK ZINC                     | F81053-3  | 4 |  |
| 17 | BRACE, KUBOTA ALTERNATOR REAR                  | 093215-1  | 1 |  |
| 18 | GUARD, FAN BELT, RIGHT                         | 097310-1  | 1 |  |
| 19 | MOUNTING BRACE                                 | 097206-1  | 1 |  |
| 20 | BRACKET, SIDE GUARD                            | 097211-1  | 1 |  |
| 21 | GUARD, RIGHT                                   | 097307-1  | 1 |  |
| 22 | GUARD, LEFT                                    | 097197-1  | 1 |  |
| 23 | BRACKET, RADIATOR MOUNT                        | 097156-1  | 1 |  |
| 24 | MOUNTING BRACKET, UPPER                        | 097306-1  | 2 |  |
| 25 | RESERVOIR TANK, D42 ENGINE                     | 097157    | 1 |  |
| 26 | INNER D42 ENGINE COVER                         | 097308-1  | 1 |  |
| 27 | COVER, FAN BELT, D42 ENGINE                    | 097309-1  | 1 |  |
| 28 | RADIATOR HOSE, UPPER KUBOTA #1G669-72941 (D42) | N/A       | 1 |  |
| 29 | RADIATOR HOSE, LOWER KUBOTA #1G669-72851 (D42) | N/A       | 1 |  |
| 30 | RADIATOR CAP, KUBOTA                           | N/A       | 1 |  |

### 3.9 Alternator Assembly



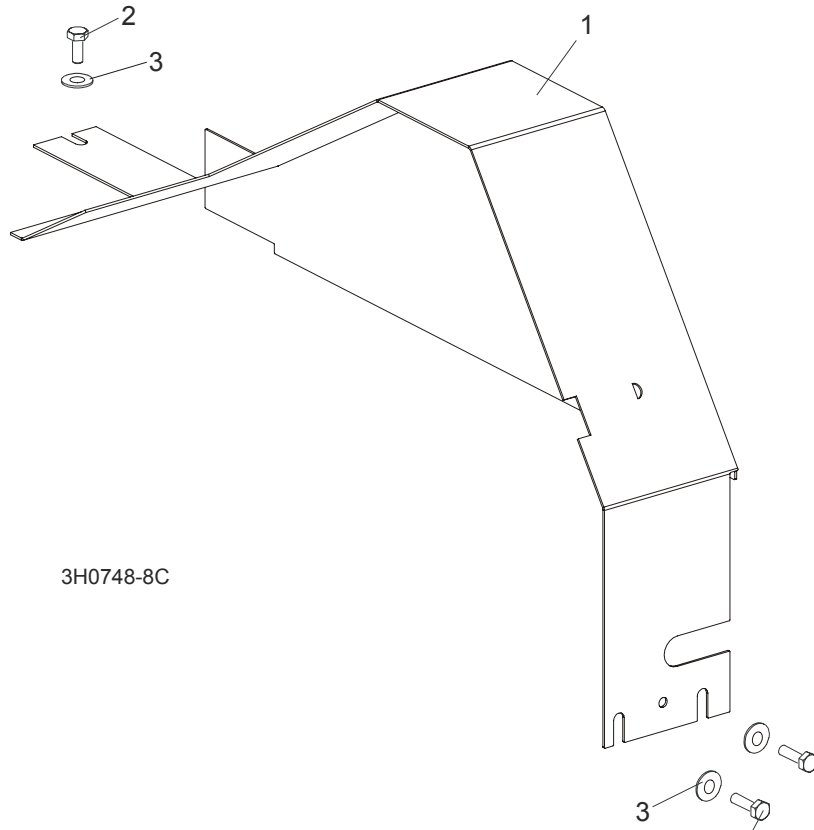
| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |   |
|-----|--|-----------|------|---|
|     | <b>WIRE ASSEMBLY, 61/140 AMP ALTERNATOR PLUG</b>             | 015969    | 1    |   |
|     | <b>ALTERNATOR ASSEMBLY, 140 AMP</b>                          | 023730    | 1    | ◆ |
| 1   | Alternator, 140 Amp  | 023695    | 1    |   |
| 2   | Pulley, 140 Amp Alternator                                   | 023694    | 1    |   |
| 3   | <b>BRACKET, ALTERNATOR SUPPORT</b>                           | 015923    | 1    |   |
| 4   | <b>WASHER, 10.5 SAE FLAT</b>                                 | F81055-1  | 3    |   |
| 5   | <b>WASHER, 10.2 SPLIT LOCK</b>                               | F81055-2  | 3    |   |
| 6   | <b>BOLT, M10X25 8.8 HEX HEAD</b>                             | F81003-11 | 1    |   |
| 7   | <b>PLATE, REAR ALTERNATOR MOUNT</b>                          | 091676-1  | 1    |   |
| 8   | <b>GUARD WELDMENT, REAR ALTERNATOR</b>                       | 091678-1  | 1    |   |
| 9   | <b>BRACKET WELDMENT, ALTERNATOR MOUNT</b>                    | 091675-1  | 1    |   |
| 10  | <b>BOLT, M10X20 8.8 HEX HEAD</b>                             | F81002-4  | 1    |   |
| 11  | <b>BOLT, 3/8-16 X 3" HEX HEAD FULL THREAD</b>                | F05007-1  | 2    |   |
| 12  | <b>NUT, 3/8-16 HEX NYLON LOCK</b>                            | F05010-10 | 1    |   |
| 13  | <b>STUD, ALTERNATOR BELT TENSION ADJUSTMENT</b>              | 091694-1  | 1    |   |
| 14  | <b>NUT, M10-8-B</b>  | F81033-3  | 1    |   |
| 15  | <b>PLATE WELDMENT, ALTERNATOR PIVOT</b>                      | 091678-1  | 1    |   |

**3****Replacement Parts***Alternator Assembly*

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|    |  |            |   |  |
|----|--|------------|---|--|
| 16 | WASHER, 8.2 SPLIT LOCK                   | F81054-4   | 1 |  |
| 17 | WASHER, 8.4 SAE FLAT                     | F81054-1   | 1 |  |
| 18 | WASHER, 10.2 SPLIT LOCK                  | F81055-2   | 1 |  |
| 19 | WASHER, 6.5 SAE FLAT                     | F81053-11  | 1 |  |
| 20 | BOLT, M10 X 1.25 X 25MM HEX HEAD         | F81003-29  | 2 |  |
| 21 | BELT, 6PK1080 FIBERGLASS ALTERNATOR      | 088181     | 1 |  |
| 22 | GUARD WELDMENT, ALTERNATOR BELT          | 093470-1   | 1 |  |
| 23 | BOLT, M6X12-8.8 HEX HEAD                 | F81001-7   | 2 |  |
| 24 | PLATE, ALTERNATOR BELT ACCESS COVER      | 093367-1   | 1 |  |
| 25 | WASHER, 6.4 SAE FLAT                     | F81053-1   | 1 |  |
| 26 | BOLT, M8 X 90 8.8 FLAT HEAD CAP GRADE 8  | F81002-92  | 3 |  |
| 27 | NUT, M8-8-B FREE ZINC PLATE              | F81032-2   | 3 |  |
| 28 | NUT, 3/8-16 HEX NYLON LOCK               | F05010-10  | 1 |  |
| 29 | BOLT, 3/8-16 X 3 1/2" CARRIAGE HEAD BOLT | F05007-161 | 1 |  |
| 30 | NUT, M10-8-B HEX NYLON LOCK              | F81033-1   | 1 |  |
| 31 | BOLT, M10X70-8.8 HEX HEAD                | F81003-20  | 1 |  |

### 3.10 Engine Pulley Guards



| REF | DESCRIPTION (◆ Indicates Parts Available In Assemblies Only) | PART #    | QTY. |
|-----|--|-----------|------|
| 1   | GUARD WELDMENT, KUBOTA ENGINE PULLEY                         | 095086-1  | 1    |
| 2   | BOLT, M6x12-8.8 HEX HEAD                                     | F81001-7  | 3    |
| 3   | WASHER, 6,5 ZINC   | F81053-11 | 3    |

## SECTION 4 ELECTRICAL WIRING DIAGRAMS, D42



**IMPORTANT!** When using a sawmill with the rewired control panel it is very important not to switch between saw head forward/backward movement until the saw head stops. Failure to do so may result in serious sawmill damage.



**WARNING!** When using the variable reverse speed wiring it is recommended that the operator should stop the head, turn the potentiometer to zero, engage reverse and then increase speed. Failure to do this may result in damage to the circuit. There is a protection in the circuit and if this is activated it will not allow the head to start the return movement until the potentiometer is set to zero.



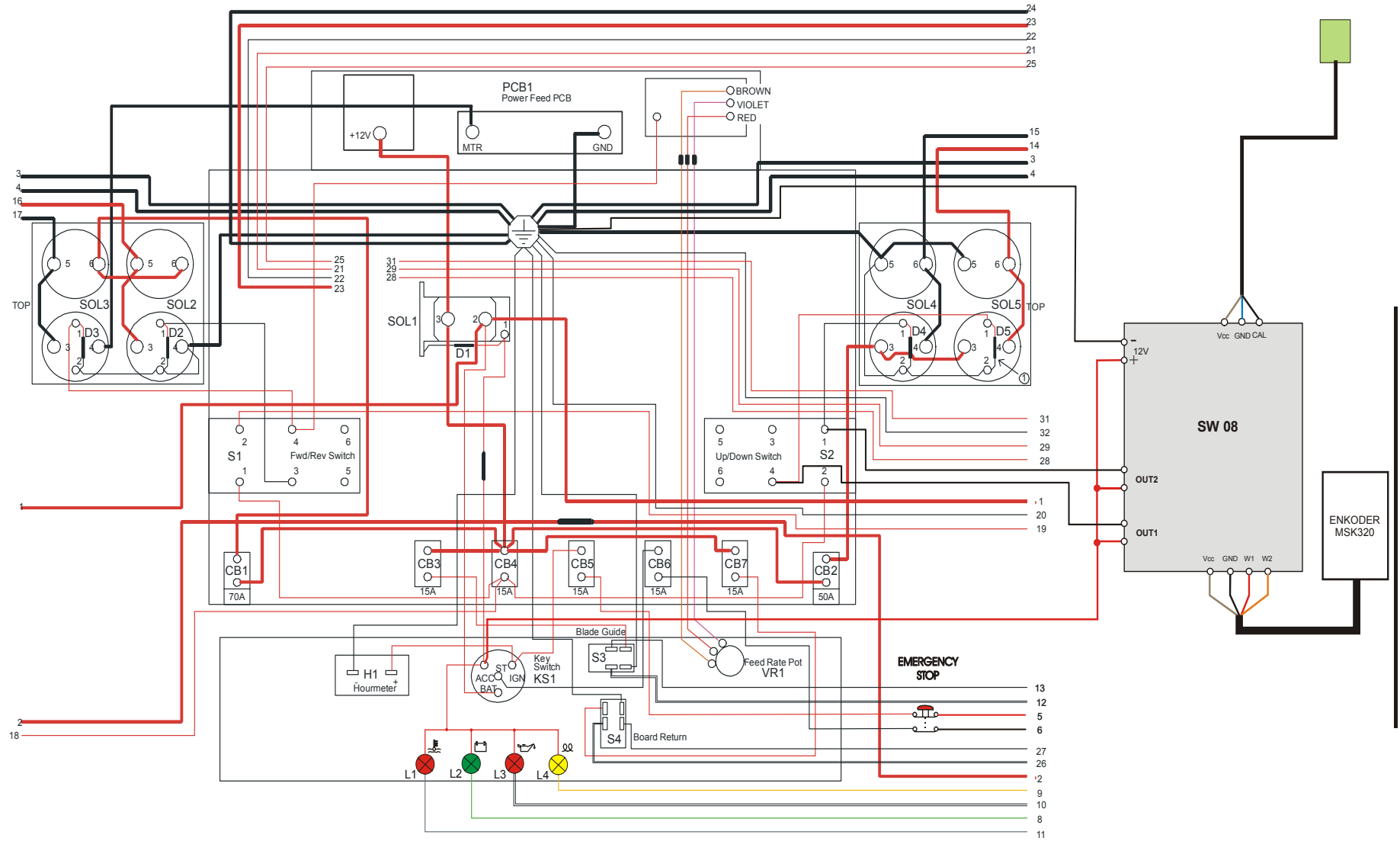


FIG. 4-1 D42 CONTROL BOX DIAGRAM).





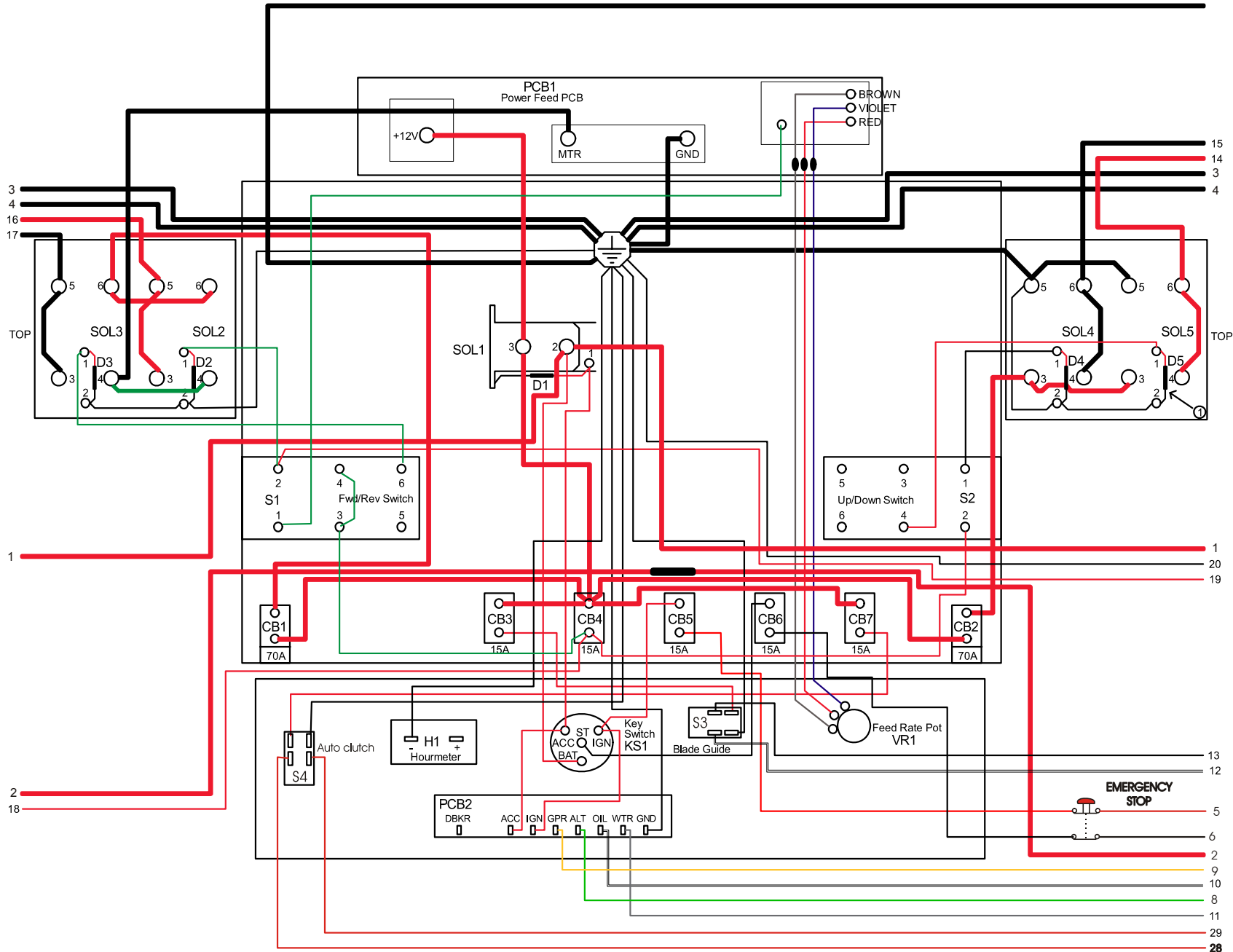


FIG. 4-4 D42 CONTROL BOX DIAGRAM (VARIABLE REVERSES MOVEMENT SPEED).

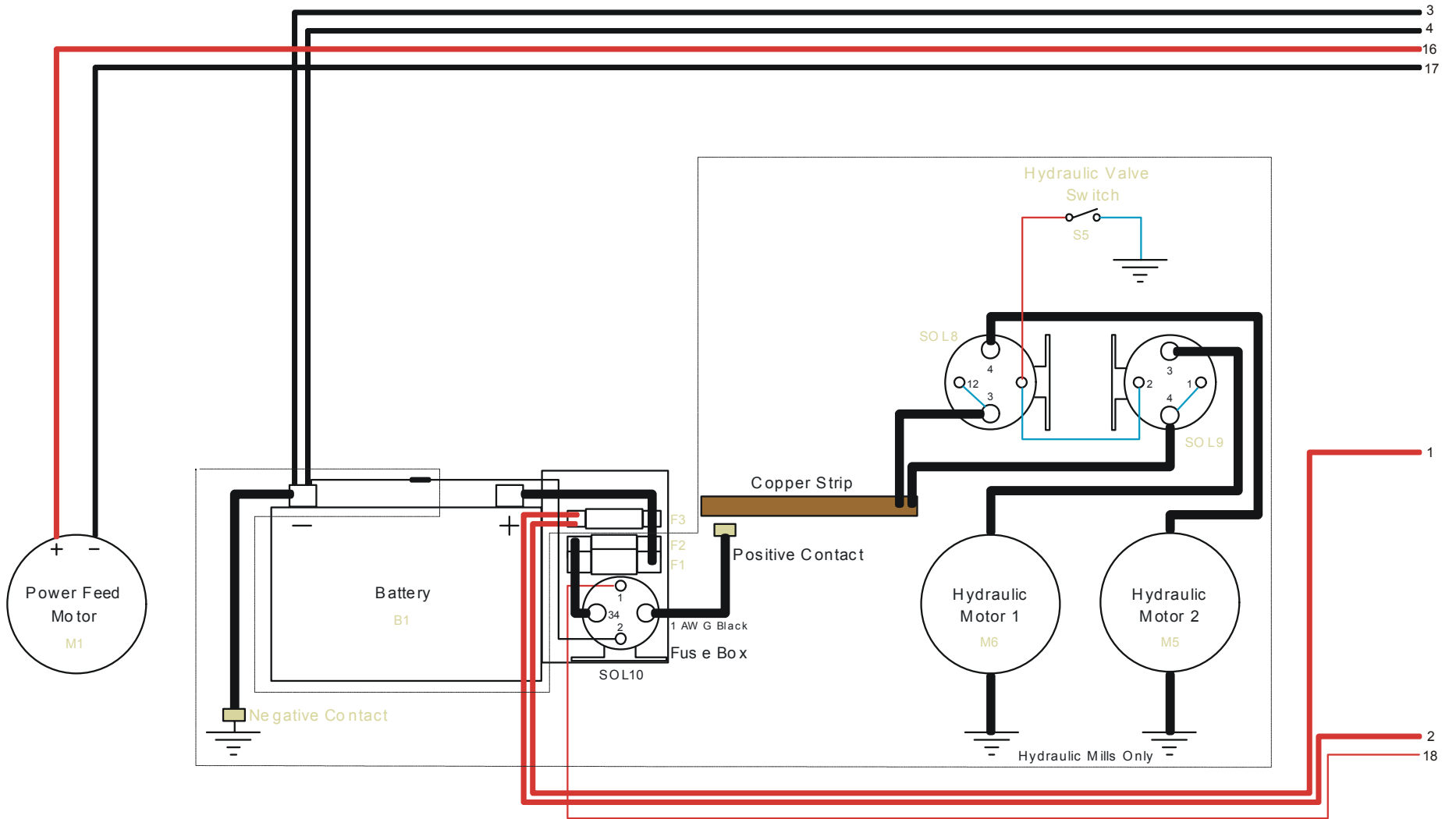


FIG. 4-5 D42 HYDRAULIC DIAGRAM.

| Component List                             |                  |             |                     |   |
|--|------------------|-------------|---------------------|---|
| Item                                       | Mfg. Part No.    | Mfg.        | Wood-Mizer Part No. | Description   |
| A1   | 023 73 0         | Wood-Mizer  | 023 73 0            | Alternator, 14 0 Amp  |
| B1   | 12 31 PMF        | Deka        | 015475              | Battery, 12 Volt ( <a href="#">See Battery Specifications</a> ) |
| CB1  | 70-164 8-009     | Mech. Prod. | 015 52 7            | Breaker, 70 Amp Manual Reset Panel Mount, Power Feed            |
| CB2  | 70-164 8-009     | Mech. Prod. | 015527              | Breaker, 70 Amp Manual Reset Panel Mount, Up/Down               |
| CB3  | CH304 07 -15     | Cole-Hersee | E204 30             | Breaker, 15 Amp Manual Reset, Blade Guide                       |
| CB4  | CH304 07 -15     | Cole-Hersee | E204 30             | Breaker, 15 Amp Manual Reset, Accessory                         |
| CB5  | CH304 07 -15     | Cole-Hersee | E204 30             | Breaker, 15 Amp Manual Reset, Ignition                          |
| CB6  | CH304 07 -15     | Cole-Hersee | E204 30             | Breaker, 15 Amp Manual Reset, Start                             |
| CB7  | CH304 07 -15     | Cole-Hersee | E204 30             | Breaker, 15 Amp Manual Reset, Board Return                      |
| CB1 0                                      | 024 45 3         | Wood-Mizer  | 024 45 3            | Breaker Assy, Water Temp Max Circuit                            |
| D1 - D5                                    | 087496           | Wood-Mizer  | 087496              | Diode Assembly, Solenoid Coil Chassis                           |
| D7   | 024 12 3         | Wood-Mizer  | 024 12 3            | Diode Assembly, Inductive Kick Protection (Setworks Only)       |
| F1 , F2 <sup>1</sup>                       | RL-225           | Gould       | P1155 0             | Fuse Link, 225 Amp, 250 Volt For Hydraulic + 12 Volt Circuit    |
| F3   | RL-150           | Gould       | 023361              | Fuse Link, 150A 250V For Main + 12 Volt Starter, Alternator     |
| F4   | N/A              | N/A         | 02 45 97            | Fuse Link, 50 Amp Kubota Glow Plug                              |
| GP 1-GP 4                                  | 16851- 65510     | Kubota      | 092277              | Glow Plug   |
| H1   | T14BH517BC9      | ENM Corp.   | 015 40 1            | Hour Meter, 12 Volt, Low Power T14 Series                       |
| KS 1                                       | 121801           | General     | P0 4350             | Key Switch, 4-position (Accessory, Off, Ignition, Start)        |
| M1   | 10 86 77 .00     | Leeson      | 024 16 9            | Motor, 3/4HP 12VDC TEFC Power Feed w/o Base                     |
| M2   | 10 86 78 .00     | Leeson      | 015 17 4            | Motor, 3/4HP 12VDC TEFC Up/Down w/Base                          |
| M3   | P096 98 -1       | Klauber     | A10 36 5            | Motor, 12 Volt Blade Guide Arm 53:1 Gear                        |
| M4   | P096 98 -1       | Klauber     | A10 36 5            | Motor, 12 Volt Board Return 53:1 Gear                           |
| M5 , M6 <sup>1</sup>                       | 81 11            | Monarch     | P09955              | Motor, 12 Volt Hydraulic Pump                                   |
| PCB1                                       | 051667           | Wood-Mizer  | 051667              | Circuit Board, Control Box Power Feed                           |
| PCB2                                       | 089694           | Wood-Mizer  | 089694              | Board, LED Circuit (Diesel)                                     |
| R1   | 1238 537         | Bosch       | 092277              | Relay, Glow Plug Timer  |
| S1   | 26 01 -AF 2-S 11 | Square D    | E20438              | Drum Switch, Power Feed Fwd/Reverse Motor                       |
| S2   | 26 01 -AF2-S12   | Square D    | E20 44 0            | Drum Switch, Up/Down Motor                                      |
| S3   | 34 -591Q         | Pollak      | 024 20 0            | Toggle Switch, Blade Guide In/Out Motor                         |
| S4   | 34 -591Q         | Pollak      | 02 42 00            | Toggle Switch, Board Return Motor                               |
| S5 <sup>1</sup>                            | 024 19 8         | Wood-Mizer  | 024 19 8            | Switch, Hydraulic Pump Levers                                   |
| S6   | 15841- 39010     | Kubota      | 028 54 7            | Switch, Oil Pressure Sensor                                     |
| S7   | TM9A 230RQCG     | Kubota      | 028 51 0            | Switch, Water Temp Sensor                                       |
| SO L1                                      | 015470           | Stancor     | 015470              | Solenoid 200 A 12V SPST   |
| SO L4 -SO L5                               | 58 6-911         | Stancor     | 01 54 17            | Solenoid, 200 A 12V DPST  |
| SO L7                                      | 17454- 60010     | Kubota      | 028 52 3            | Solenoid, Fuel  |
| SO L8 ,<br>SO L9 ,<br>SO L1 0 <sup>1</sup> | 586- 902         | Stancor     | 015470              | Solenoid, 200 A 12V SPST Hydraulic Pump Motor                   |
| V1   | G51190 14 5      | Parker      | 016 28 0            | Valve , Waterlube Solenoid                                      |
| VR 1                                       | E20519           | Wood-Mizer  | E20519              | Potentiometer, Variable Resistance Power Feed                   |