

# WOODS MOW'N MACHINE

FZ25D  
Power Unit



**MAN0646**  
(Rev. 9/1/2015)

**WOODS**<sup>®</sup>  
Woods Equipment Company

OPERATOR'S MANUAL

## TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Woods® dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Operator's Manual are completed before releasing equipment to the owner.

**The dealer must complete the online Product Registration form at the Woods Dealer Website** which certifies that all Dealer Check List items have been completed. Dealers can register all Woods product at dealer.WoodsEquipment.com under Product Registration.

**Failure to register the product does not diminish customer's warranty rights.**

## TO THE OWNER:

Read this manual before operating your Woods equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer. To locate your nearest dealer, check the Dealer Locator at www.WoodsEquipment.com, or in the United States and Canada call 1-800-319-6637.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

For service, your authorized Woods dealer has trained mechanics, genuine Woods service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine Woods service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

**Model:** \_\_\_\_\_ **Date of Purchase:** \_\_\_\_\_

**Serial Number: (see Safety Decal section for location)** \_\_\_\_\_

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term **NOTICE** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING**, and **DANGER** are used in conjunction with the Safety-Alert Symbol (a triangle with an exclamation mark) to indicate the degree of hazard for items of personal safety.



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Indicates a hazardous situation that, if not avoided, will result in death or serious injury.



Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

**IMPORTANT  
or NOTICE**

Is used to address practices not related to physical injury.

**NOTE**

Indicates helpful information.

**WOODS**  
Woods Equipment Company

**ALITEC**™  
**BMP**®  
**CENTRAL FABRICATORS**®  
**GANNON**®  
**GILL**®  
**WAIN-ROY**®  
**WOODS**®

## 2 Introduction

Gen'l (Rev. 3/28/2012)

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**¡LEA EL INSTRUCTIVO!**

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

**⚠ WARNING ⚠**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**⚠ WARNING ⚠**

This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm.  
Wash hands after handling.



**This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.**

# SPECIFICATIONS

Engine . . . . .	Kubota 3-cylinder, 4-cycle, liquid cooled (See engine manual for complete specifications)
Horsepower . . . . .	25 HP
Fuel Type . . . . .	Diesel
Standard Tire Size:	Front . . . . . 23 x 10.50 - 12 Rear . . . . . 15 x 6.00 - 6 Rib
Recommended Tire Pressure:	Front . . . . . 12 psi Rear . . . . . Maximum 18 psi
Power Unit Dimensions:	Width . . . . . 50" Overall Length . . . . . 87" Weight . . . . . 1020 lbs
Fuel Tank Capacity . . . . .	11.0 Gallons
Recommended Mower Decks . . . . .	52", 61", 72"

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## GENERAL INFORMATION

 **WARNING**

■ Some illustrations in this manual show the equipment with safety shields removed to provide a better view. This equipment should never be operated with any necessary safety shielding removed.

The purpose of this manual is to assist you in operating and maintaining your Mow'n Machine. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive field experience and engineering data. Some information

may be general in nature due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

The illustrations and data used in this manual were current at the time of printing but, due to possible inline production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

Throughout this manual, references are made to right and left directions. These are determined by standing behind the equipment facing the direction of forward travel.



# SAFETY RULES

**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by an operator's single careless act.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, judgement, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

It has been said, "The best safety device is an informed, careful operator." We ask you to be that kind of operator.

## **TRAINING**

■ **Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.) Failure to follow instructions or safety rules can result in serious injury or death.**

■ **Data indicates that those operators age 60 years and above are involved in a large percentage of riding mower-related injuries. Those operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from injury.**

■ **If you do not understand any part of this manual and need assistance, see your dealer.**

■ **Know your controls and how to stop engine and attachment quickly in an emergency.**

■ **Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.**

■ **Never allow children or untrained persons to operate equipment.**

## **PREPARATION**

■ **Check that all hardware is properly installed. Always tighten to torque chart specifications unless instructed otherwise in this manual.**

■ **Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.**

■ **Make sure attachment is properly secured, adjusted, and in good operating condition.**

■ **Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.**

■ **The safety interlock system was installed for your protection. Do not disconnect, disable, override, or execute any action that would cause this system to malfunction. If malfunction occurs, stop all operation and contact dealer for repair.**

■ **Remove accumulated debris from this equipment, power unit, and engine to avoid fire hazard.**

■ **Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.**

■ **Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)**

■ **Make sure shields and guards are properly installed and in good condition. Replace if damaged.**

■ **Be sure either the discharge chute, mulching end cap, or complete vacuum attachment is installed and in good condition. Replace if damaged.**

■ **Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.**

■ **The machine is not intended for highway or street use.**

■ **Do not mow on wet grass.**

■ **While fueling, extinguish all cigarettes, cigars, pipes, and other sources of ignition.**

■ **Never fuel the machine indoors.**

*(Safety Rules continued on next page)*

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



- Never fill fuel containers inside a vehicle or a truck or trailer bed with a plastic liner. Always place container on the ground away from the vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately.
- Never over-fill tank. Replace gas cap and tighten securely.
- Handle fuel carefully; it is highly flammable. Always use an approved container. Never remove fuel cap or add fuel while engine is running. Allow engine to cool before refueling. Wipe up all spilled fuel before starting engine.

## TRANSPORTATION

- Use extra care when loading or unloading the machine onto a trailer or truck.
- Transport power unit facing rearward when equipped with a sunshade.
- Do not operate or transport on steep slopes.
- Do not operate or transport equipment while under the influence of alcohol or drugs.
- Do not operate PTO during transport.

## OPERATION

- Keep bystanders away from equipment.
- Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the mowing area.
- Before and while backing, look behind and down for children.
- Never direct discharge toward people, animals, or property.

- Operate only in daylight or good artificial light.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Power unit is equipped with a ROPS and seat belt. Keep seat belt securely fastened during operation. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position during operation.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your vision.
- Use care when operating with ROPS or sunshade around shrubs, trees or other objects that can become entangled with power unit.
- Always comply with all state and local lighting and marking requirements.
- Never allow riders on power unit or attachment.
- Start engine from operator's seat after disengaging power unit PTO and placing steering levers in neutral.
- Do not mow in reverse unless absolutely necessary.
- Slow down before turning.
- Do not operate on slopes greater than 15 degrees (27% grade).
- Mow up and down slopes, not across.
- If the tires lose traction on a slope, disengage the blade(s) and proceed slowly straight down the slope.
- Do not stop, start, or change directions suddenly on slopes.
- Do not make sudden changes in speed or direction which could cause the machine to roll over.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Installation of a grasscatcher assembly will reduce the stability and maneuverability of the Mow'n Machine when operating on sloping terrain.
- Watch for hidden hazards on the terrain during operation.
- Watch for traffic when operating near or crossing roadways.
- Uneven terrain could overturn the machine.
- Do not try to stabilize the machine by putting your foot on the ground.

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.
- Do not drive or operate mower in tilt-up position. Power unit stability is not adequate and resulting loads can damage or cause failure of tilt-up mechanism.
- Never leave a running machine unattended.
- Moving steering levers rapidly from forward to reverse or reverse to forward could cause loss of control.
- Do not operate power unit with attachment removed. Attachment is required for power unit stability.
- Before dismounting power unit, follow these steps: lower attachment to ground, shut off PTO, set parking brake, shut off engine, position steering levers to neutral swing-out position, and remove key.
- This machine is not equipped for towing. Do not tow any loads.
- To avoid burns, DO NOT TOUCH the engine or muffler immediately after operation.

## MAINTENANCE

- Before dismounting power unit, follow these steps: lower attachment to ground, shut off PTO, set parking brake, shut off engine, position steering levers to neutral swing-out position, and remove key.
- Before attempting to unplug vacuum hoses, disengage PTO, stop power unit, and remove key.
- Before performing any service or maintenance, lower attachment to ground, turn off power unit engine, remove key, and disconnect battery ground cable (negative -).
- Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.

- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Do not work on mower in tilt-up position unless deck is in a stable position.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.
- Do not work on mower in tilt-up position unless lock-up mechanism is in good condition. Replace if damaged.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Do not put Mow'n Machine into service unless clutch is working properly. When the engine is at full throttle, PTO-driven accessories must stop within five seconds after the PTO switch is turned to "OFF." See your dealer for replacement clutches.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- Do not change engine governor settings or overspeed engine.
- Frequently check blades. They should be sharp, free of nicks and cracks, and securely fastened.
- Do not handle blades with bare hands. Careless or improper handling may result in serious injury.
- Your dealer can supply genuine replacement blades. Substitute blades may not meet original equipment specifications and may be dangerous.
- Tighten all bolts, nuts, and screws to torque chart specifications. Check that all cotter pins are installed securely to ensure equipment is in a safe condition before putting unit into service.
- Use care to prevent battery acid from contacting skin.
- Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.

*(Safety Rules continued on next page)*

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



■ Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.

## STORAGE

■ Keep children and bystanders away from storage area.

■ Never store the machine or fuel container near an open flame, spark or pilot light such as on a water heater or other appliance.

■ Do not run engine indoors. Exhaust gases contain carbon monoxide, an odorless and deadly poison.

■ Remove key and store in a secure location to prevent unauthorized persons from operating





# SAFETY & INSTRUCTIONAL DECALS

**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**  
**Replace Immediately If Damaged!**



1 - PN 72407

**! WARNING**

**TO AVOID  
SERIOUS INJURY OR DEATH**

- **Read manual before operating and follow all safety and operating instructions.**  
(Manual available from dealer or call 1-800-319-6637.)
- **Before dismounting, stop engine, set park brake, and remove key.**
- **Never allow riders.**
- **Do not operate near drop-offs, embankments and holes.**

72407-A

2 - PN 72404

**! WARNING**

**FAN BLADE -  
KEEP CLEAR!**

72404-A

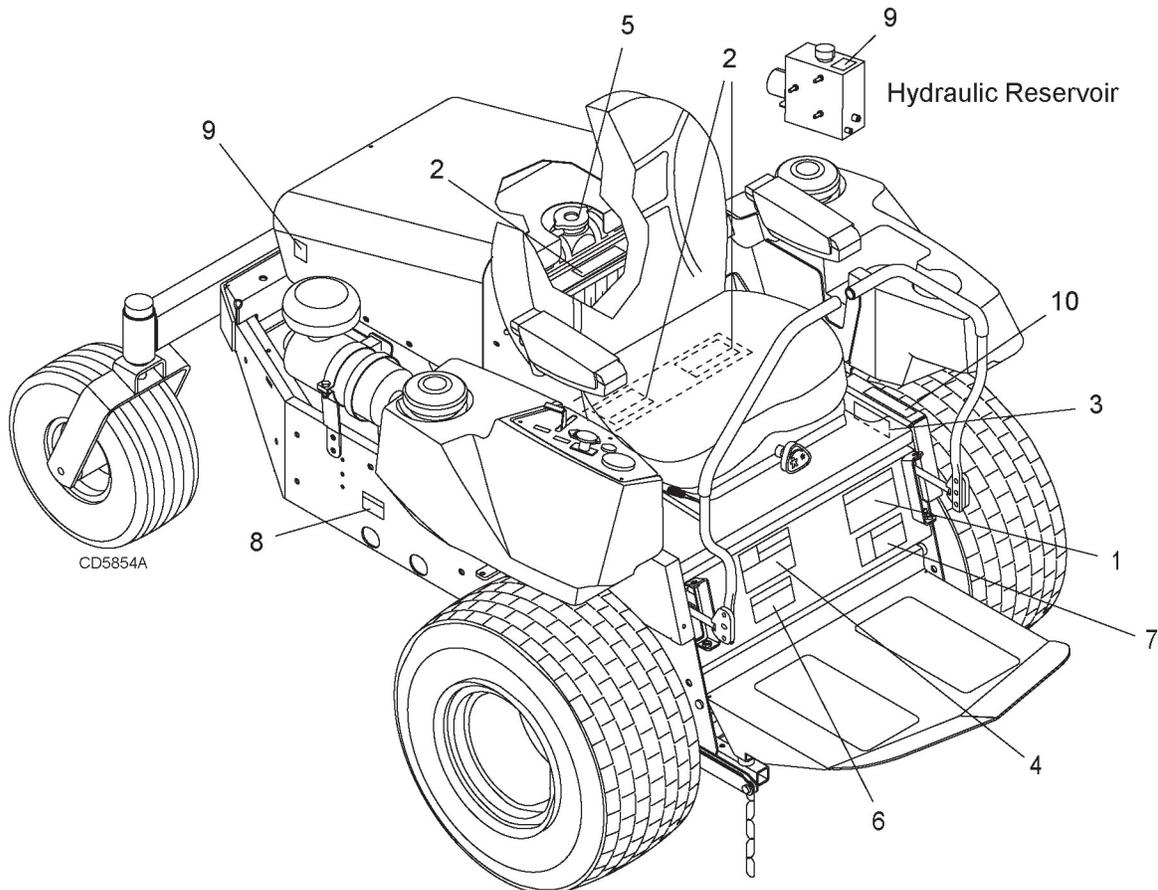
3 - SERIAL NUMBER PLATE

Model#  
Serial#

(BAR CODE)

WOODS

Woods Equipment Company  
Oregon, Illinois 61061 USA



*(Safety Decals continued on next page)*



# SAFETY & INSTRUCTIONAL DECALS

**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**  
**Replace Immediately If Damaged!**



(Safety Decals continued from previous page)

4 - PN 72408

	<b>WARNING</b>
	<b>TIP OVER HAZARD</b>

- Operate controls smoothly and slowly, especially on slopes.
- Unit may roll on slopes when not under power. Always set park brake immediately when engine is turned off or power loss occurs.
- Move very slowly when attachment is removed.
- Do not operate on steep slopes. See Operator's Manual for details.

72408-A

5 - PN 72648

**CAUTION**  
**ENGINE COOLANT**  
**(SEE ENGINE MANUAL)**  
**DO NOT OPEN**  
**WHEN HOT**

72648

9 - PN 07754100



10 - PN 72801

**STEERING LEVERS**

Forward  
 Neutral  
 Right Turn  
 Left Turn  
 Neutral  
 Reverse  
 OFF  
 PARKING BRAKE  
 ON

6 - PN 70376

**WARNING**

**DO NOT ALTER ELECTRICAL SYSTEM**  
 Wrong wiring connections will damage electrical components and may make the safety switches inoperative.

70376-D

8 - PN 72406

**WARNING**

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

72406-A

7 - PN 72405

**DANGER**

**RUNOVER HAZARD**

- Be alert when operating.
- Look carefully. This unit turns quickly.
- Never allow riders. Never carry children.
- Do not mow with people nearby.

72405-A

## BE CAREFUL!

Use a clean, damp cloth to clean safety decals. Avoid spraying too close to decals when using a pressure washer; high-pressure water can enter through very small scratches or under edges of decals causing them to peel or come off. Replacement safety decals can be ordered free from your Woods dealer. To locate your nearest dealer, check the Dealer Locator at [www.woodsequipment.com](http://www.woodsequipment.com), or in the United States and Canada call 1-800-319-6637.

# OPERATION

The operator is responsible for the safe operation of this Mow'n Machine. The operator must be properly trained. Operators should be familiar with the power unit, all attachments that will be used, and all safety practices before starting operation. Read the safety rules and safety decals on page 5 through page 10.

## WARNING

- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.
- Do not operate power unit with attachment removed. Attachment is required for power unit stability.
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.
- Handle fuel carefully; it is highly flammable. Always use an approved container. Never remove fuel cap or add fuel while engine is running. Allow engine to cool before refueling. Wipe up all spilled fuel before starting engine.
- Keep bystanders away from equipment.
- Do not operate or transport equipment while under the influence of alcohol or drugs.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Never allow riders on power unit or attachment.
- Never direct discharge toward people, animals, or property.

## WARNING

- Moving steering levers rapidly from forward to reverse or reverse to forward could cause loss of control.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Do not stop, start, or change directions suddenly on slopes.
- Before dismounting power unit, follow these steps: lower attachment to ground, shut off PTO, set parking brake, shut off engine, position steering levers to neutral swing-out position, and remove key.
- Do not drive or operate mower in tilt-up position. Power unit stability is not adequate and resulting loads can damage or cause failure of tilt-up mechanism.
- Do not operate PTO during transport.

## CAUTION

- Remove accumulated debris from this equipment, power unit, and engine to avoid fire hazard.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.
- Start engine from operator's seat after disengaging power unit PTO and placing steering levers in neutral.
- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.

## CONTROLS AND SWITCHES

### **! WARNING**

- **Know your controls and how to stop engine and attachment quickly in an emergency.**

Control and indicator console is located on the right fuel tank. This console contains controls needed to operate this unit. PTO switch (2) is used to engage attachments: pull up to engage, push down to disengage.

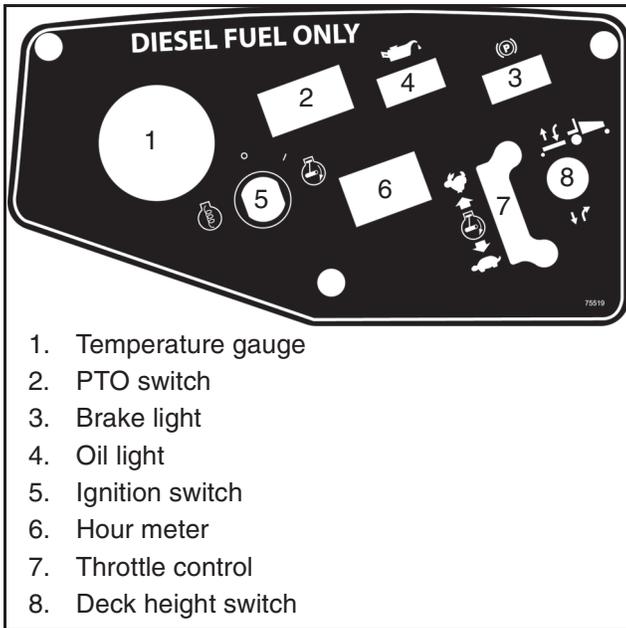


Figure 1. Console Control Locations

### DECK HEIGHT/POWER TILT™ ADJUSTMENT SWITCH

The deck height and Power Tilt™ switch is used with MXT or MX deck equipped with the Power Tilt™ Kit. Push the toggle switch forward to raise the deck and pull back to lower the deck to the desired cutting height. For Power Tilt™ operation, pull back and hold the toggle switch to lower the deck and cycle through to the tilt position. Release switch when deck reaches maximum tilt position. To lower the deck, push and hold toggle switch until it cycles to the desired cutting height. **NOTE:** Power Tilt™ feature must not be used when sitting in the seat.

### BRAKE & TEMPERATURE LIGHTS

#### **Brake Light**

#### **NOTICE**

- **Do not operate with parking brake engaged or damage to the brake adjustment will occur.**

The brake light indicates when the brake is engaged. To ensure light is operating properly, engage parking

brake and turn ignition key switch to the “ON” position. Control panel brake light (3) should be on.

#### **Temperature Light**

#### **NOTICE**

- **For overheating, clean radiator grill and check engine coolant level.**

The temperature light will alert you when the engine temperature is excessive. The temperature light system is not intended to shut the engine off or prevent operation; it is designed to provide notification. If temperature light starts to flash during operation, discontinue operation. The light is programmed to flash at 220° fahrenheit and above.

**NOTE:** The radiator and prescreen require regular cleaning to prevent engine overheating. Clean the prescreen daily and the radiator fins every 40 hours. Do not use high pressure on radiator fins to avoid radiator damage.

#### HOUR METER

The hour meter is programmed to alert the operator at various service intervals. The change oil light will flash at 20 hours (initial break in) and every 100 hours after. The light will flash for a period of 4 hours (alternating between hours & change oil) and then resume normal mode. The hour glass will flash every second indicating it's in running mode.

<b>Service Intervals</b>	
<b>20 hrs</b>	<b>Engine oil change (break in)</b>
<b>100 hrs</b>	<b>Engine oil change &amp; filter</b>
<b>500 hrs</b>	<b>Hydraulic oil change &amp; filter (see hydraulic transmission - change oil &amp; filter, page 19)</b>

#### SAFETY SWITCH SYSTEM

Several safety switches are incorporated in the unit's design to prevent it from being started out of NEUTRAL (handles pivoted outward) or with PTO engaged.

The PTO control must be in the “OFF” position and the steering handles in the NEUTRAL position before unit can be started.

A safety switch behind the operator's seat will cause the engine to stop if the operator leaves the seat with the PTO or steering handles engaged. The engine will also stop if the steering handles are moved from NEUTRAL while the parking brake is engaged. It will not run if the deck jumper wire (for Power Tilt™ operation) is not connected to the wire harness or the deck safety switch is disengaged.

## **STARTING ENGINE**

### **DANGER**

■ **Do not run engine indoors. Exhaust gases contain carbon monoxide, an odorless and deadly poison.**

To enhance starter life, use short starting cycles not exceeding 10 seconds. If engine does not start within 10 seconds, stop cranking for 30 seconds; then repeat starting procedures.

1. Position yourself on the power unit seat.
2. Place steering control handles in the NEUTRAL position (pivoted outward).
3. Place PTO switch in the "OFF" position (down).
4. Place throttle approximately 1/3 open.
5. Turn key counter-clockwise to "PRE-HEAT" the glow plugs.  
**NOTE:** Standard pre-heating time is 5 to 10 seconds. Pre-heat is not required if engine has been running and warmed up.
6. Turn key to "START". Release key immediately when engine starts.
7. Ensure that the oil pressure light is off.
8. Warm up engine several minutes at medium throttle.

**NOTE:** Allow engine a warm-up period regardless of the season. Loading a cold engine will shorten its life.

If engine does not start after refueling or has been sitting for a prolonged period, refer to "bleeding the fuel system" in the engine manual.

## **COLD WEATHER STARTING TIPS**

1. Use proper oil grade for temperature expected. (Refer to engine manual for oil grade.)
2. Set throttle half way open.
3. A warm battery has better starting capacity than a cold one.
4. Use fresh fuel (winter grade for diesel model); it is better for starting than leftover fuel.

## **STARTING MOWER OR ATTACHMENT**

### **WARNING**

■ **Make sure people and objects are clear of attachment and discharge area before engaging PTO.**

## ***NOTICE***

■ **Never engage PTO if the mower blades are plugged with grass or other material. This may cause damage to the electric clutch.**

1. With engine running, position throttle at half speed.
2. Engage PTO by pulling up on the PTO switch.
3. Move throttle to full speed and begin operation.

**NOTE:** Starting attachment at lower engine speed will help prolong the life of the clutch and transmission components.

## **STOPPING MOWER OR ATTACHMENT**

Push down on PTO switch.

**NOTE:** If attachment does not stop in five seconds, the unit requires service.

## **PRACTICE OPERATION**

### **WARNING**

■ **Never allow children or untrained persons to operate equipment.**

Operating this unit is not difficult once you are familiar with the use of the controls. Equip the power unit with the attachment you will be using and practice in a flat open area at half throttle setting until you are comfortable with the controls.

Do not operate attachment until you become proficient with controls.

## **UNEVEN TERRAIN OPERATION**

### **WARNING**

- **Uneven terrain could overturn the machine.**
- **Do not operate on slopes greater than 15 degrees (27% grade).**
- **Do not stop, start, or change directions suddenly on slopes.**
- **Use extreme care and reduce ground speed on slopes and rough terrain.**
- **Watch for hidden hazards on the terrain during operation.**
- **Installation of a grasscatcher assembly will reduce the stability and maneuverability of the Mow'n Machine when operating on sloping terrain.**

**CAUTION**

- Mow up and down slopes, not across.
- If the tires lose traction on a slope, disengage the blade(s) and proceed slowly straight down the slope.

Practice steering maneuvers at half throttle.

**STEERING HANDLE OPERATION**

**WARNING**

- Moving steering levers rapidly from forward to reverse or reverse to forward could cause loss of control.
- Do not operate power unit with attachment removed. Attachment is required for power unit stability.

**NOTE:** Speed and direction are controlled with steering handles. Pushing handles forward will move power unit

forward. Pulling handles to the rear will move the power unit in reverse. The further forward or rearward the steering handles are moved, the faster the machine will move.

**Steering Handle Positions**

**NOTICE**

- If you become confused during operation, return both handles to the center neutral position and the power unit will stop.

Forward	Both handles forward
Reverse	Both handles rearward
Gentle Right	Left handle further forward than right
Gentle Left	Right handle further forward than left
360° Left	Left full rearward; right full forward
360° Right	Right full rearward; left full forward

**NOTE:** Moving one handle forward with the other handle in neutral will also result in a 360° circle. However this will cause one drive wheel to dig into the turf and should be avoided.

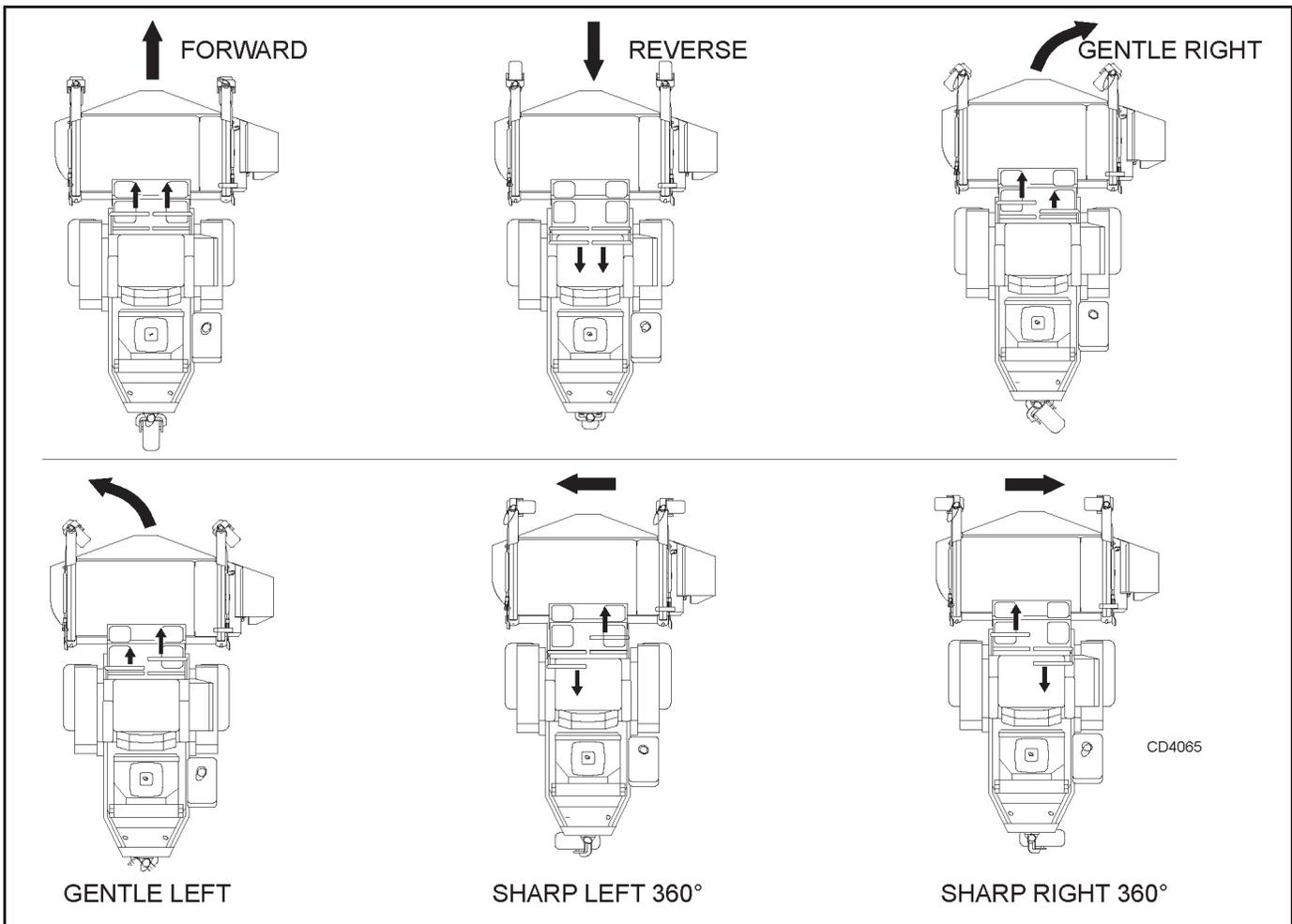


Figure 2. Steering Handle Operation

## **STOPPING ENGINE**

1. Move throttle to 1/3 setting.
2. Allow engine to idle for several minutes.
3. Turn key to OFF position and remove.

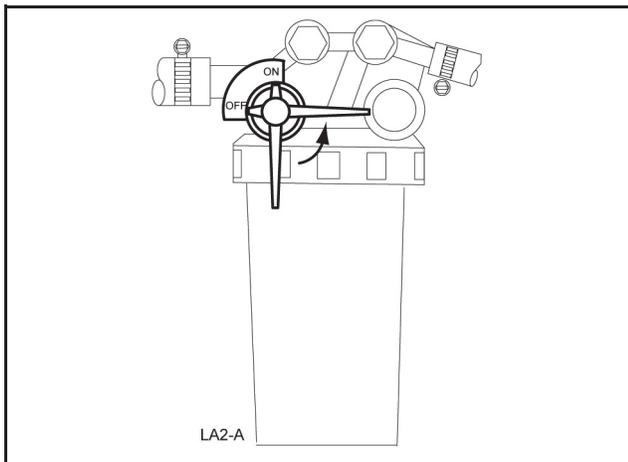
### **! CAUTION**

■ **Remove key and store in a secure location to prevent unauthorized persons from operating equipment.**

### **Manual Fuel Shut-Off Valve**

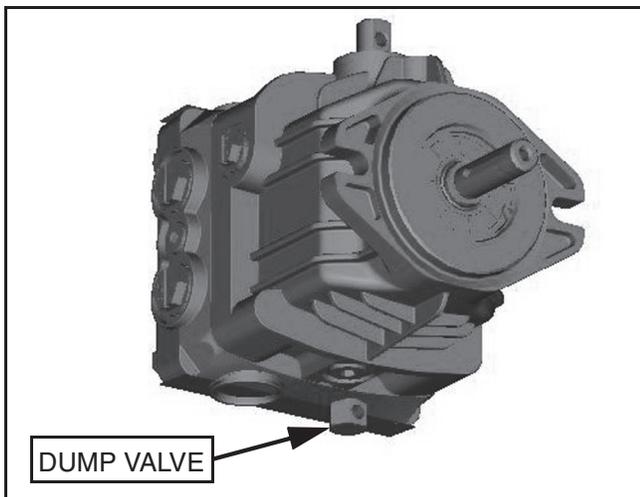
A manual fuel shut-off valve is located on top of the fuel filter, on the right side of engine.

1. Place valve in the "ON" position before attempting to start engine.
2. Place valve in the "OFF" position when changing or cleaning the fuel filter.



**Figure 3.** Manual Shut-Off Valve

## **MOVING DISABLED POWER UNIT**



**Figure 4.** Left Pump Dump Valve

Manually move a disabled power unit by following these steps.

1. Locate dump valves both hydraulic pumps. (Bottom of pump for Parker®) (Side of pump for Hydro-Gear®)
2. Turn hex head two full revolutions counter-clock wise to open valve, using a 5/8" wrench or round punch.

## **WEIGHT TRANSFER**

### **! WARNING**

■ **When using weight transfer system, correct counterweight must be used to maintain stability. See counterweight chart in power unit manual or contact dealer.**

The weight transfer is designed to place an additional load on the drive wheels, providing additional traction.

1. Attach mower to power unit and set to desired cutting height.
2. Torque bolt on both sides to 35 lbs-in.

**NOTE:** Counterweight is needed to provide adequate stability. Refer to the chart to determine your power unit/mower combination, and the amount of counterweight required.

Counterweights are not required when power unit is equipped with a grass catcher system.

Mower	FZ25D	With ROPS	With ROPS & Sun Shade	
			Grass Catcher	
52" Deck	0 lbs	50 lbs	100 lbs	0 lbs
61" Deck	0 lbs	50 lbs	100 lbs	0 lbs
72" Deck	50 lbs	100 lbs	150 lbs	N/A
Snow Thrower	0 lbs	50 lbs	100 lbs	N/A
Dozer Blade	0 lbs	50 lbs	100 lbs	N/A
60" Sweeper	50 lbs	100 lbs	150 lbs	N/A

**Figure 5.** Counterweight Requirement Chart

## **OWNER PRE-OPERATION CHECK LIST**

### (OWNER'S RESPONSIBILITY)

- \_\_\_ Review and follow all safety rules and safety decal instructions on pages 5 through 10.
- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Check to make sure all shields and guards are properly installed and in good condition. Be sure that either the discharge shield or complete vacuum attachment is installed.
- \_\_\_ Check that all hardware and cotter pins are properly installed and secured.
- \_\_\_ Check that equipment is properly and securely attached to power unit.
- \_\_\_ Make sure driveline spring-activated locking pin or collar slides freely and is seated firmly in power unit PTO spline groove and in gearbox spline groove.
- \_\_\_ Check for grass wrap on PTO shaft. When mowing long grass, remove key and check for grass wrap around PTO shaft every 30 minutes of operation.
- \_\_\_ Check to be sure engine is free of dirt and debris. Pay particular attention to the cooling fins, governor parts and muffler.
- \_\_\_ Do not allow riders.
- \_\_\_ Inspect area and remove stones, branches or other hard objects that might be thrown, causing injury or damage.
- \_\_\_ Clean air intake screen. Check air cleaner; service if necessary.
- \_\_\_ Clean area around oil fill dipstick. Remove dipstick and check to be sure oil is in operating range (between marks on dipstick). Add oil if necessary but **Do Not Overfill**. Install dipstick assembly firmly until cap bottoms out on tube. Dipstick assembly must always be secured into fill tube when engine is running. Avoid touching exhaust manifold if unit has been running.
- \_\_\_ Check all lubrication points and grease as instructed. See "Lubrication Service Intervals" on page 18.
- \_\_\_ Check hydrostatic fluid level (refer to Owner Service section). Check to be sure cooling fins on hydrostat are clean.
- \_\_\_ Perform a functional check of the safety interlock system each time you operate the unit. Place both steering levers outward, start engine, engage PTO and then rise up out of the seat; the engine should die. If it does not, do not operate unit until the safety interlock system has been repaired and operates properly.



# OWNER SERVICE

The information in this section is written for operators who possess basic mechanical skills. If you need help, your dealer has trained service technicians available. For your protection, read and follow the safety information in this manual.

## WARNING

■ Before performing any service or maintenance, lower attachment to ground, turn off power unit engine, remove key, and disconnect battery ground cable (negative -).

■ Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.

■ Keep all persons away from operator control area while performing adjustments, service, or maintenance.

## CAUTION

■ Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

## RADIATOR AND PRESCREEN

### *NOTICE*

■ Clean the prescreen daily and the radiator fins every 40 hours or annually, whichever is less. Do not use high pressure on radiator fins to avoid radiator damage.

## ENGINE SERVICE

**NOTE:** Follow engine manufacturer recommendations in engine manual.

### **Check Engine Oil Level**

**NOTE:** Never attempt to check oil level while engine is running. Serious injury or damage to equipment could result.

1. Park power unit on a level surface.
2. Stop engine and clean off dirt and dust from around dipstick.
3. Remove dipstick, check oil level. Oil level should be between marks on dipstick. Avoid touching exhaust manifold if unit has been running.
4. Add oil as necessary.

## **Change Engine Oil**

### *NOTICE*

■ Use care to prevent hot oil from contacting bare skin.

1. Run engine to allow oil to become hot. This will ensure that most foreign materials are in suspension and will be flushed out with the oil.
2. Remove drain plug and drain crankcase.
3. Remove oil filter.
4. Install new oil filter.
5. Install drain plug and add oil.

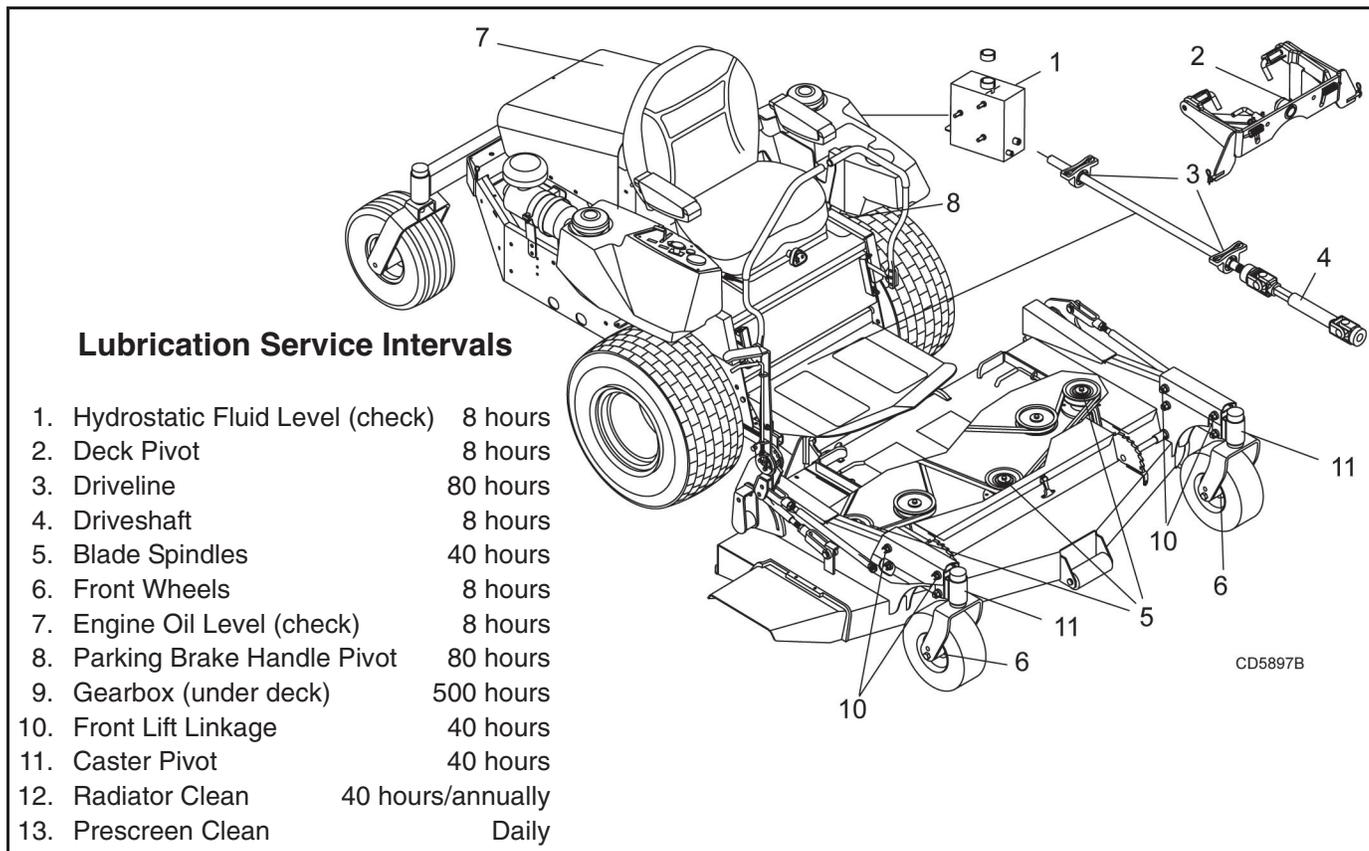
**NOTE:** Refer to the engine manual for oil specifications, capacity, service rating, and proper grade.

## **Engine Coolant**

Refer to the engine manual for the coolant specifications, coolant capacity, service rating, and proper mixture.

## LUBRICATION INFORMATION

1. Do not let excess grease collect on or around parts, particularly when operating in sandy areas.
2. See Figure 6 for lubrication points and frequency or lubrication based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication.
3. Use a lithium grease of #2 consistency with a MOLY (molybdenum disulfide) additive for all locations unless otherwise noted. Be sure to clean fittings thoroughly before attaching grease gun. One good pump of most guns is sufficient when the lubrication schedule is followed.



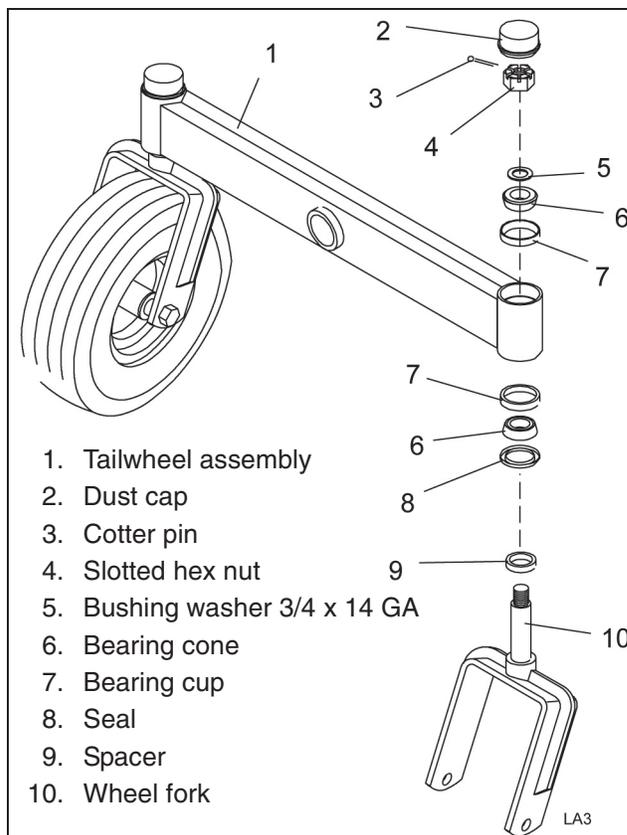
**Figure 6.** Lubrication Diagram

## **TAILWHEEL MAINTENANCE**

Once a year, disassemble tailwheel assembly and inspect roller bearings:

1. Remove dust cap (2) from top of tailwheel assembly (1).
2. Remove cotter pin (3) and slotted hex nut (4).
3. Remove wheel fork (10), bearing cones (6) and remaining hardware from assembly.
4. Inspect bearing cones (6) and bearing cups (7) for wear and replace if necessary. Replace seals and washers as necessary.
5. Pack bearing cones (6) with a good grade wheel bearing grease.
6. Install wheel fork (10) bearing cones (6) and remaining hardware into assembly as shown.
7. Set bearings by torquing hex nut to 26 lbs-ft. All bearing free play should be removed.

**NOTE:** Proper bearing adjustment is essential to good bearing life. If bearings are loose, caster wheels will wobble and/or slap side to side. If bearings are overtightened, loosen hex nut and rap shaft with a lead hammer to loosen bearings. Readjust bearings until proper setting is obtained.



**Figure 7.** Tailwheel Assembly (Typical)

## HYDROSTATIC TRANSMISSION SERVICE

### **NOTICE**

■ **Keep transmission oil clean. When adding fluid take precautions to prevent dirt and other foreign material from entering the system.**

**NOTE:** Check fluid level every 8 hours of operation.

1. Place power unit on a level surface.
2. Stop engine; remove key and clean off dirt and dust from around cap on top of hydraulic reservoir, located behind left tire.
3. Remove cap and look inside reservoir to check fluid level. Check oil against notch in center of reservoir; hot oil should be to the top of the divider, cold oil should be to the bottom of the notch. See Figure 8.
4. Add oil as necessary.
5. Check cooling fins and fan blades for debris; they should be free of foreign material. Clean as necessary.

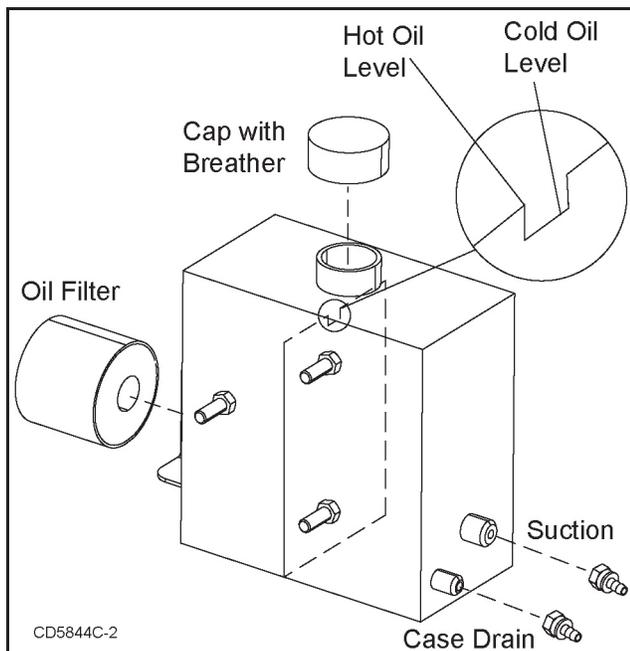


Figure 8. Hydraulic Tank

## HYDRAULIC TRANSMISSION - CHANGE OIL & FILTER

**NOTE:** Change oil and filter every 1000 hours under normal mowing conditions.

**NOTE:** Change oil and filter every 500 hours when using a grass catcher or when operating in ambient temperature above 100°F for any extended period.

1. Place power unit on a level surface.
2. Stop engine; remove key.

3. Remove case drain hose fitting from bottom of reservoir, located outside of power unit frame. Allow reservoir to completely drain.
4. Remove automotive type filter (Figure 8) by turning counter-clockwise.
5. Replace filter by turning until gasket is seated; then turn an additional 3/4 turn.
6. Replace hose fitting and fill reservoir with 5 quarts of 20W-50 motor oil.

**NOTE:** The transmissions do not need to be individually drained; they will drain through the fluid reservoir.

## BATTERY SERVICE

### **WARNING**

■ **Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.**

### **NOTICE**

■ **Use care to prevent battery acid from contacting skin.**

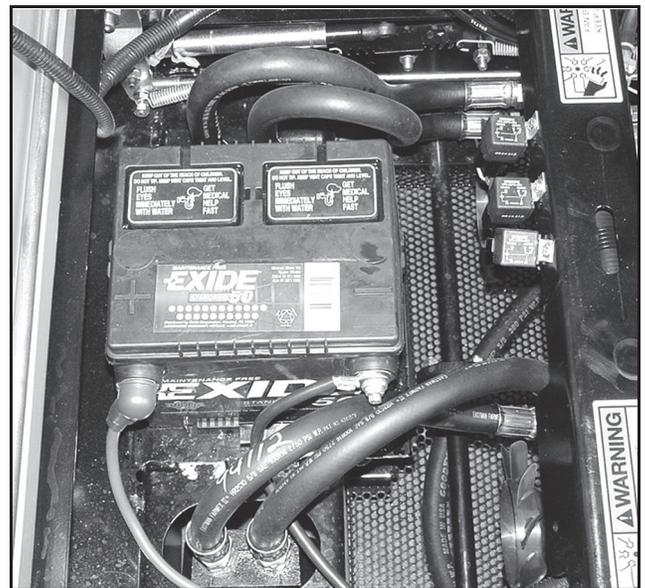


Figure 9. Battery Located under Seat

Clean battery at least once a season by following these steps:

1. Inspect cables for deterioration and loose connections.
2. Clean terminals.
3. Make sure battery tie-down is tight and battery is secured in place.

4. Inspect battery case for cracks or leaks; replace battery if necessary.
5. Test battery with hydrometer; recharge battery if less than 75% charge is indicated.
6. Add water if necessary.
7. Check that the positive terminals on the battery, starter and alternator are properly covered with protective boots from exposure to grounding.

## **CLUTCH BURNISHING**

### ***NOTICE***

■ **A new clutch or one that has not been used for three months, will require burnishing to dress drive surface. The clutch could fail if you do not accomplish the following procedure.**

1. Place steering control handles in the NEUTRAL position. Start engine and run at half throttle.
2. Turn clutch switch (PTO) "ON" 30 seconds and "OFF" for 30 seconds. Repeat cycle 20 times.

**NOTE:** The 30 seconds "OFF" allows clutch surface to cool.

## **RETURN TO OPERATION**


**WARNING**

■ **Make sure shields and guards are properly installed and in good condition. Replace if damaged.**


**CAUTION**

■ **Remove accumulated debris from this equipment, power unit, and engine to avoid fire hazard.**

## **CLEANING**

### **After Each Use**

- Remove large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Inspect machine and replace worn or damaged parts.
- Replace any safety decals that are missing or not readable.

### **Periodically or Before Extended Storage**

- Clean large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Remove the remainder using a low-pressure water spray.
  1. Be careful when spraying near scratched or torn safety decals or near edges of decals as water spray can peel decal off surface.
  2. Be careful when spraying near chipped or scratched paint as water spray can lift paint.
  3. If a pressure washer is used, follow the advice of the pressure washer manufacturer.
- Inspect machine and replace worn or damaged parts.
- Sand down scratches and the edges of areas of missing paint and coat with Woods spray paint of matching color (purchase from your Woods dealer).
- Replace any safety decals that are missing or not readable (supplied free by your Woods dealer). See Safety Decals section for location drawing.



# DEALER SERVICE

The information in this section is written for dealer service personnel. The repair described here requires special skills and tools. If your shop is not properly equipped or your mechanics are not properly trained in this type of repair, you may be time and money ahead to replace complete assemblies.

## WARNING

- Before performing any service or maintenance, lower attachment to ground, turn off power unit engine, remove key, and disconnect battery ground cable (negative -).
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.

## CAUTION

- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

## TROUBLESHOOTING HYDROSTATIC PUMP

### Loss of Power in Transmission

1. Make sure transmission fluid is correct.
2. Make sure hydrostatic pump and fan blades are clean.

**NOTE:** Overheating can cause loss of power or fluid leaks from excess fluid expansion.

3. Make sure dump valves are tightened down.

**NOTE:** Transmission fluid can leak by the dump valve if by-pass is not tight. Tighten hex head if dump valves are loose.

### No Positive Neutral Position

If drive wheels travel forward or reverse when steering handles are in the NEUTRAL position (pivoted outward), adjustment of hydrostatic pumps is necessary.

1. Block up power unit frame so both drive wheels are off the ground.
2. Release parking brake.
3. Loosen jam nut (1) on linkage rod as shown in Figure 10.

4. Place steering handles in the NEUTRAL position (pivoted outward) and start engine.
5. If drive wheels turn, turn rod out or in until wheel stops.
6. Tighten jam nut.
7. Repeat steps 3 through 6 for other hydrostatic pump control arm.

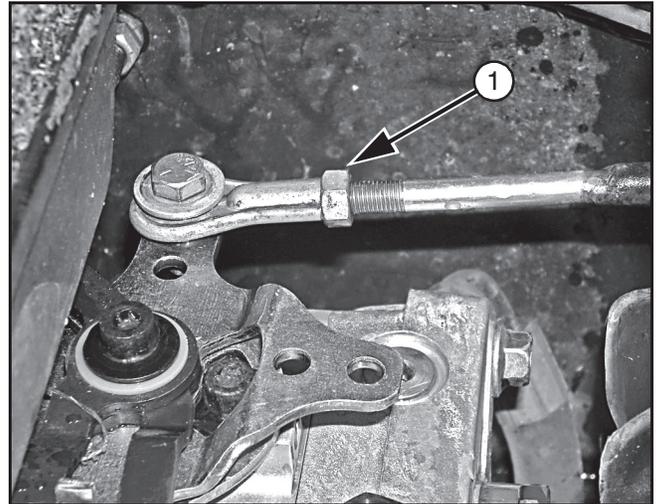


Figure 10. Jam Nut on Linkage Rod, Left Pump

### Straight Line Travel Adjustment

1. Check tire pressure; tires must have equal air pressure.
2. Check travel; drive forward with both steering handles full forward at half throttle.
  - If travel is not straight, adjust steering handle stop bolt on opposite side of turn.
  - If power unit turns to the left, raise steering stop bolt on the right.
  - If power unit turns to the right, raise steering stop bolt on the left.

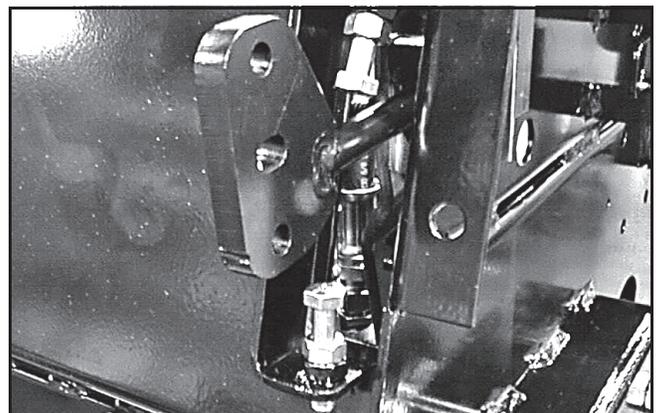


Figure 11. Left Side Steering Stop Bolts

## TROUBLESHOOTING ENGINE

PROBLEM	POSSIBLE CAUSE	SOLUTION
<b>Engine will not crank</b>	PTO switch is "ON"	Switch to the "OFF" position
	Steering handles are not in "Positive Neutral"	Swing steering handle outward
	Battery is discharged	Charge or replace battery
	Starter fuse is blown	Replace fuse
	Steering handle switches are out of adjustment	Listen for the switch "click" and adjust as necessary
<b>Engine cranks but will not start</b>	Fuel tank is empty	Fill fuel tank
	Fuel line or fuel filter is restricted	Bleed fuel line or replace fuel filter
	Ignition fuse is blown	Replace fuse
	Loose wires or connections	Inspect wire connection and safety switches

### **Engine Dies when Steering Handles are Engaged**

1. Check if parking brake is set.

- Release parking brake.

**NOTE:** When parking brake is on, system is designed to kill the engine if either steering handle is engaged.

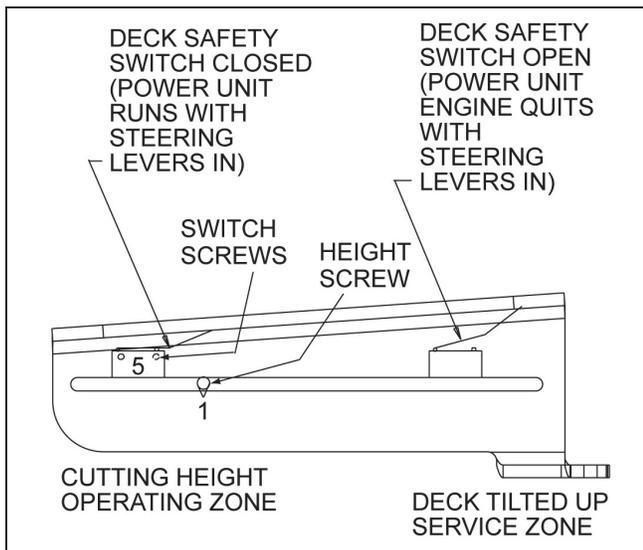
 **CAUTION**

■ **This circuit has a positive voltage with the key on. Jumping the seat switch with exposed wires could short out the main fuse or timer delay.**

2. Check seat switch and deck safety switch/jumper.
  - a. Raise seat assembly and secure.
  - b. Turn key switch "ON", engage seat switch and move deck to highest cut height position if equipped with power tilt deck.
  - c. Check voltage between the green timer delay wire and red wire at the seat switch connector on the main wire harness side. (See FZ25D Wiring Diagram.) Both wires are located underneath the seat pan on the right side next to steering pivot block.
    - If there is voltage at one wire but not the other, either the switches/jumper are defective or not fully engaged. The red and green wires are

part of a series circuit that includes the seat switch and deck safety switch (power tilt deck) or weatherpack jumper.

- If there is voltage on only one wire check each switch individually to determine which switch is defective or not closed. The weatherpack jumper should be connected to the main wire harness, underneath the seat pan by the left hand steering pivot linkage if there is not a deck or a standard deck is attached.
  - If using the power tilt option and you need to check the deck safety switch refer to Figure 12 and troubleshooting deck safety switch. If the deck switch is open the engine will kill when pulling handles in.
3. Check park brake switch.
    - If there is voltage at both red/green wires mentioned in previous paragraph, check voltage at yellow/red parking brake wires with the park brake off.
    - If voltage is not present, check the yellow/red wire between the seat relay and parking brake; and the pink seat relay/timer delay wire to determine which wire or relay is defective.
    - If voltage is present at one yellow/red wire but not the other, the parking brake switch is defective and must be replaced.



**Figure 12.** Power Tilt Deck Safety Switch Layout

### Troubleshooting Deck Safety Switch

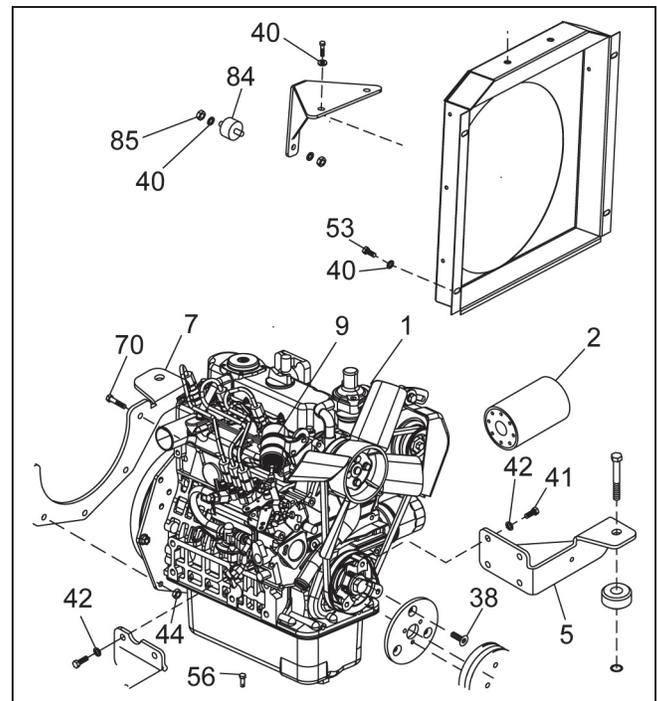
1. Pull handlebars in with deck in lowest cutting height position (1).
2. Check that switch is making contact with the height gauge.
3. Check that wires are properly hooked up to power unit.
4. Adjust switch bracket location on actuator if needed (four screws). Make sure height screw does not bottom out on slot in either direction when raising or lowering deck.
5. Check that screws holding switch to bracket are not too tight and holding lever open.
6. Adjust safety switch lever or replace switch if necessary,
7. After adjustments, check that engine cuts out with deck partially raised.

### HYDROSTATIC PUMP & BELT REMOVAL

**NOTE:** Removal procedures are the same for both right and left hydrostatic pumps.

1. Place power unit on a level surface and remove key.
2. Place power unit on stands to allow access to bottom of the machine.
3. Drain hydraulic reservoir and hydrostatic pumps.
4. Remove steering linkage from control arm on hydrostatic pump.
5. Loosen J-bolt and remove belt.
6. If clearance between radiator cowl and engine sheave is too tight, loosen or remove rubber isolator (84) radiator mount located above the

engine. Push radiator forward until belt clears radiator cowl and engine sheave.



**Figure 13.** Rubber Isolator & Radiator Mount

7. Remove hoses from hydrostatic pump. Plug and cap all fittings on hoses and pump to prevent contamination.
8. Remove H-drive that mounts sheave to hydrostatic pump. Use new 1/4 x 3/4 GR5 bolts in holes located 90° from previously occupied holes to separate H-drive from sheave.
9. Remove two bolts holding hydrostatic pump to frame and remove pump from frame. Hydrostatic pump weighs approximately 8 lbs; use care when removing.

### HYDROSTATIC PUMP INSTALLATION

1. Position hydrostatic pump into power unit frame and secure with two bolts. Apply Loctite® 242 to threads of the two mounting bolts and torque to 35 lbs-ft.
2. Install sheave onto hydrostatic pump and secure H-drive. Alternate tightening each cap screw to 8 lbs-ft. Align sheave with spring idler to allow for proper belt alignment.
3. Install hoses to hydrostatic pump.
4. Install belts and tighten J-bolt for proper belt tension.
5. Install steering linkage to control arm on hydrostatic pump.
6. Fill hydraulic reservoir with new fluid. Use 20W-50 motor oil.

7. Start engine and disengage parking brake.
8. Open pump dump valve.
9. Slowly push steering levers back and forth 5 to 6 times to bleed the hydraulic system.
10. Close pump dump valve.
11. Adjust NEUTRAL position of steering linkage as necessary.
12. Stop engine. Check level of hydraulic reservoir and check for leaks.
13. Remove power unit from stands.

### **PTO BELT REMOVAL**

1. Remove key from switch.
2. Remove belt shield, if necessary
3. Remove clutch anti-rotation cable, if necessary.
4. Loosen idler spring bolt (J-bolt), and derail belts from pulleys.
5. Remove belts.

### **ENGINE REMOVAL**

1. Disconnect throttle cable, battery cables, hoses, fuel line, and electrical wires from engine.
2. Remove the four engine mounting bolts from bottom of power unit frame.
3. Remove belts from the front and rear engine pulleys. See belt removal.
4. Lift engine from the power unit frame.

**NOTE:** Contact your authorized engine dealer for parts and repairs.

### **PARKING BRAKE ADJUSTMENT**

#### ***NOTICE***

■ **Overtightening the brake can cause internal damage to the brake linkage.**

**NOTE:** Adjust right and left brakes individually.

1. Disconnect clevis from right parking brake and brake handle linkages.
2. Adjust left parking brake pull rod until brake rock shaft lug is perpendicular with the bottom edge of the frame rail.
3. Readjust and reconnect clevis for parking brake handle linkage.

**NOTE:** Approximately 12 to 13 lbs of force at the top of the handle is needed to apply the single brake.

4. Reconnect right parking brake rod.
5. Disconnect clevis from left parking brake and brake handle linkages.

6. Adjust right parking brake pull rod until brake rock shaft lug is perpendicular with the bottom edge of the frame rail.
7. Reconnect parking brake rod.

**NOTE:** Approximately 24 to 26 lbs of force at the top of the handle is needed to apply both brakes.

### **SOLENOID TEST**

1. Disconnect solenoid from engine and briefly crank engine.
2. Leave key ON. Fuel solenoid should be engaged (pushed out).

**NOTE:** If fuel solenoid will not engage, check inline fuse. If fuse is OK, test the solenoid in this manner:

- a. Disconnect wires from solenoid terminals.
- b. Set a multi meter to X 1 ohm scale.
- c. Connect leads to “Common” and “Pull” solenoid terminals; meter should indicate 0.1 ohms.
- d. Connect leads to “Common” and “Hold” solenoid terminals; meter should indicate 10 ohms.

**NOTE:** If you do not get these readings, or one of the circuits reads “OPEN”, then the solenoid is defective and you will need to replace the defective solenoid.

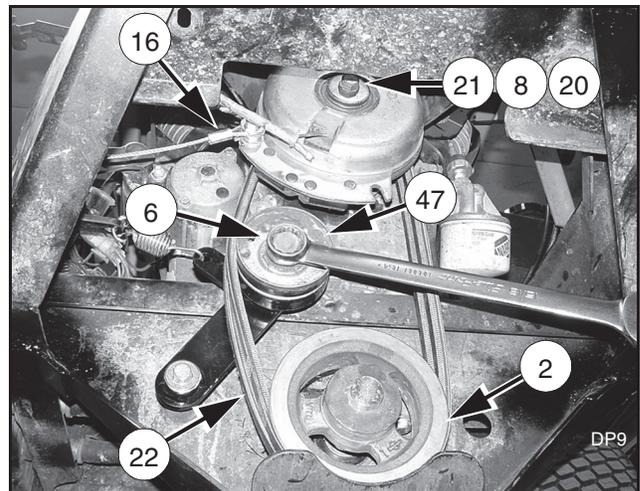
### **CLUTCH REPAIR**

#### **Remove Components (Figure 14 & Figure 15)**

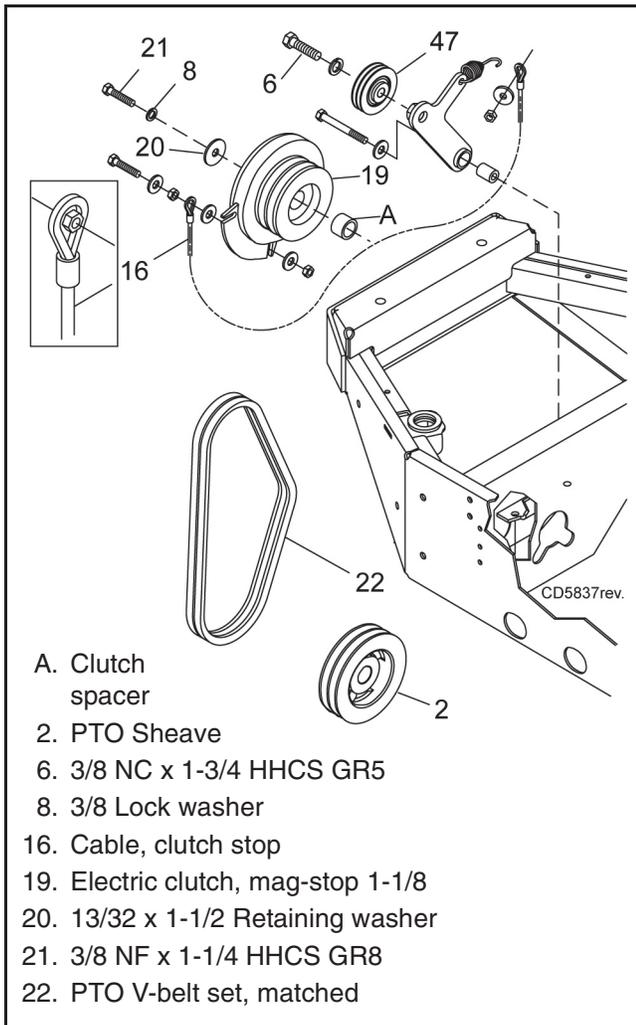
1. Position Mow'n Machine on a level work area.
2. Set parking brake, stop engine, and remove key.

**NOTE:** Photo in Figure 14 was taken from underneath the power unit for clarification. All work can be performed from above.

**NOTE:** It may be easier to rework clutch if you first remove counterweights from the rear of the power unit.



**Figure 14.** Clutch and Sheave Assembly

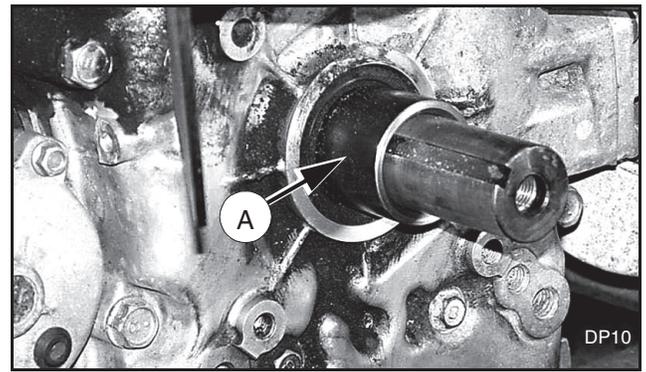


**Figure 15. Clutch Assembly**

3. Place a 9/16 wrench over cap screw (6) on idler (47) and remove the tension from PTO V-belts (22) by rotating the wrench clockwise.
4. Remove PTO V-belts (22) from PTO drive sheave (2).
5. Disconnect electrical wire harness from clutch.
6. Disconnect clutch cable (16) from clutch.
7. Remove cap screw (21), lock washer (8) and retaining washer (20) from end of clutch.
8. Remove clutch (19) and clutch spacer (A) from engine shaft.

### Install Clutch

1. Install clutch spacer (A) over engine shaft with the chamfer side towards the engine. See Figure 16.

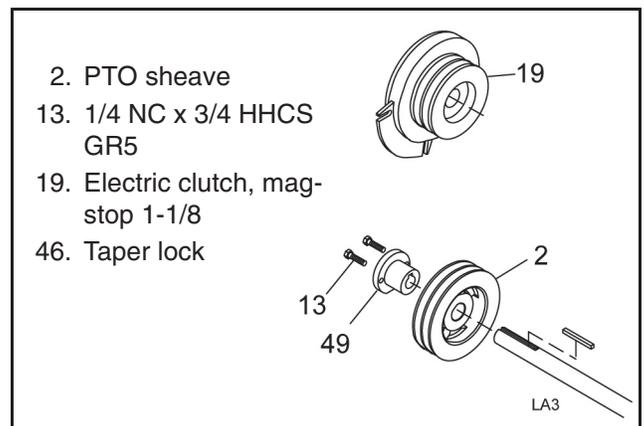


**Figure 16. Clutch Spacer Installed**

2. Install clutch onto engine shaft.
3. Secure clutch to engine shaft using 3/8 NF cap screw GR8 (21) and lock washer (8) previously removed (Figure 15).
 

**NOTE:** Place a drop of Loctite® 242 (blue) on threads of cap screw before installing.
4. Torque Grade 8 cap screw (21) to 40 lbs-ft.
5. Check belt alignment and if necessary adjust PTO sheave on shaft. See .
 

**NOTE:** If belt alignment is not necessary, proceed to Reassemble Components.



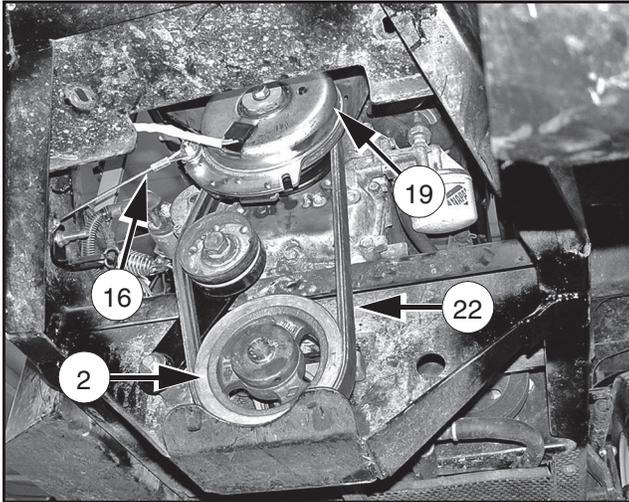
**Figure 17. Align Clutch & PTO Sheave**

### Align Belt

6. Loosen the taper bolts (13), adjust sheave (2), and tighten bolts to 85 lbs-inch.

### Reassemble Components

1. Install PTO V-belts (22) over PTO sheave (2) and clutch (19).
2. Attach clutch cable (16) to clutch (19) using hardware previously removed. Make sure nut is inside of loop of cable and between washers. Cable must pivot freely, (see Figure 15).
3. Attach electrical wiring harness to clutch.
4. Replace counterweights if removed.



- 2. PTO sheave
- 16. Cable, clutch stop
- 19. Electric clutch, mag-stop 1-1/8
- 22. PTO V-belt set, matched

**Figure 18.** Clutch & Drive Components Reassembled

## **RETURN TO OPERATION**

When you have completed service and maintenance functions, read and comply with these safety messages before returning unit to operation.

### **WARNING**

- **Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)**
- **Make sure shields and guards are properly installed and in good condition. Replace if damaged.**

# ASSEMBLY

## DEALER SET-UP INSTRUCTIONS

Assembly of this Mow'n Machine is the responsibility of the Woods dealer. It should be delivered to the owner completely assembled, lubricated, and adjusted for normal cutting conditions.

Set up the Mow'n Machine as received from the factory with these instructions. Complete check lists on page 29 when assembly is completed.

## Power Unit Preparation

1. Remove crating from around power unit. Remove power unit from pallet and place on blocks.
2. Remove Operator's Manual from power unit frame and save for original retail purchaser.

**NOTE:** Dealer must complete and return product registration card at time of sale.

## Battery

1. Connect ground cable to negative battery post and secure.
2. Confirm that rubber boot is properly secured over positive battery post.

## Lubrication/Coolant

### **NOTICE**

■ **Running engine without oil will cause engine failure.**

1. Check oil level (30W) and the engine radiator fluid.
2. Check that oil level (20W-50) in transmission reservoir is full.

**NOTE:** See Owner Service section for engine, transmission, and lubrication information.

## Fuel

Fill fuel tank with the correct fuel. Refer to engine manual.

## INSTALL DRIVE TIRES

1. Install drive tires using five lug bolts (1) removed from brake drum.
2. Torque lug bolts to 85 lbs-ft.

Drive Tire Pressure:

Turf Tires 12 psi

Chevron Tires 10 - 12 psi

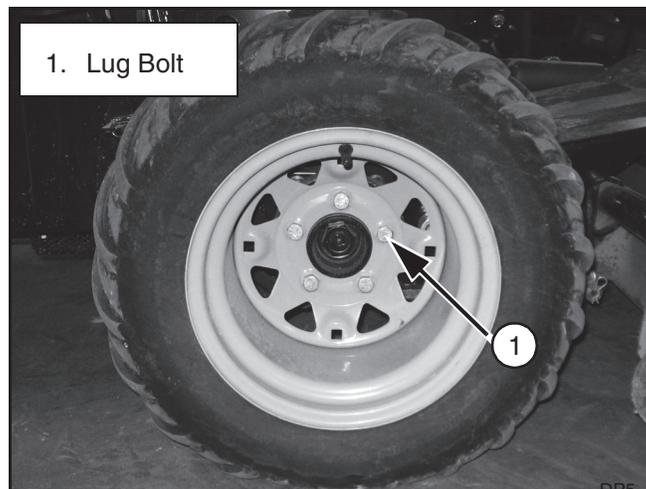


Figure 19. Drive Tire Installed

## ADJUST STEERING HANDLES

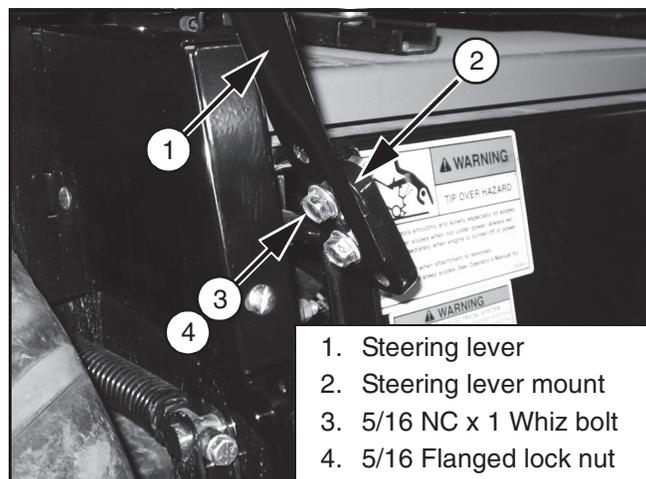


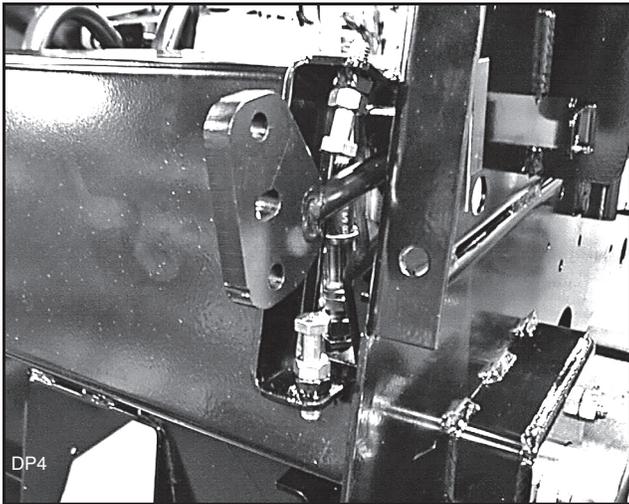
Figure 20. Steering Handle Adjustment

The steering handles are shipped loose, inside the foot rest.

1. Remove whiz bolt (3) and lock nut (4) from left steering lever mount (2).
2. Position steering handle (1) to desired location on steering lever mount (2). The top and middle holes are for taller operators and the middle and bottom holes are for shorter operators. Do not tighten hardware at this time. Repeat steps 1 and 2 for right steering handle.
3. Rotate handles inward. Align handles with one another. Torque all hardware to 12 lbs-ft. Make sure handles stay in alignment.

## STRAIGHT LINE TRAVEL

1. Check tire pressure; tires must have equal air pressure.
2. Check travel; drive forward with both steering handles full forward at half throttle.
  - If travel is not straight, adjust steering handle stop bolt on opposite side of turn.
  - If power unit turns to the left, raise steering stop bolt on the right.
  - If power unit turns to the right, raise steering stop bolt on the left.

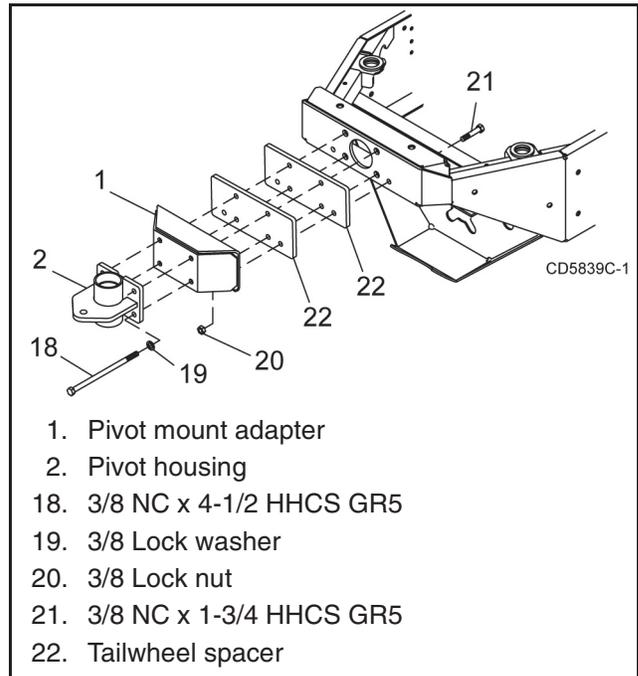


**Figure 21.** Left Side Steering Stop Bolts

## INSTALL SINGLE TAILWHEEL (OPTIONAL)

1. Attach tailwheel spacer (22), and pivot mount adapter (1) to rear of power unit frame using two cap screws (21) and lock nuts (20).
2. Attach pivot housing (2) to pivot mount adapter and power unit frame using four cap screws (18) and lock washers (19).
3. Torque hardware to 35 lbs-ft.

**NOTE:** Rear tire pressure: 18 psi



**Figure 22.** Single Tailwheel Installation



# DEALER CHECK LISTS

## **PRE-DELIVERY CHECK LIST**

(DEALER'S RESPONSIBILITY)

Inspect the equipment thoroughly after assembly to make sure it is set up properly before delivering it to the customer. The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory, corrections are made, or services are performed.

- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Check that all shields and guards are properly installed and in good condition. Replace if damaged.
- \_\_\_ Properly attach implement to power unit and make all necessary adjustments.
- \_\_\_ Check all bolts to be sure they are properly torqued.
- \_\_\_ Check that all cotter pins and safety pins are properly installed. Replace if damaged.
- \_\_\_ Check and grease all lubrication points.
- \_\_\_ Check the level of gearbox fluids before delivery.
- \_\_\_ Run unit immediately following set-up to double-check systems operation including hydrostatic neutral and safety switch system (page 12).
- \_\_\_ Check all fluid levels. See Owner Service section.

- \_\_\_ Check tire pressure. See Assembly section.

## **DELIVERY CHECK LIST**

(DEALER'S RESPONSIBILITY)

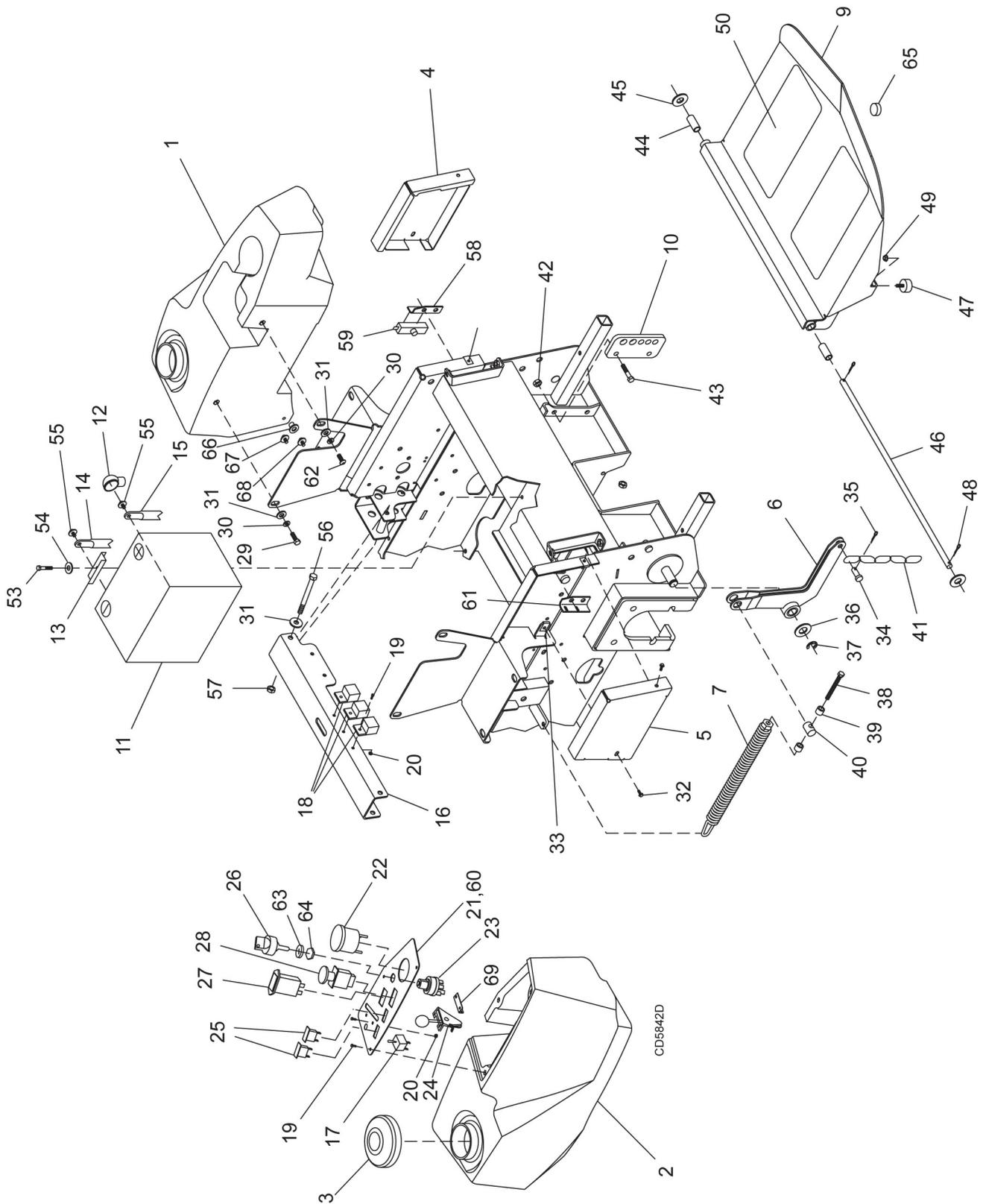
- \_\_\_ Show customer how to make adjustments.
- \_\_\_ Instruct customer how to lubricate and explain importance of lubrication.
- \_\_\_ Point out the safety decals. Explain their meaning and the need to keep them in place and in good condition. Emphasize the increased safety hazards when instructions are not followed.
- \_\_\_ Present Operator's Manual and request that customer and all operators read it before operating equipment. Point out the manual safety rules, explain their meanings, and emphasize the increased safety hazards that exist when safety rules are not followed.
- \_\_\_ Show customer how to make sure driveline is properly installed and that spring-activated locking pin or collar slides freely and is seated in groove on power unit PTO shaft.
- \_\_\_ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- \_\_\_ Make customer aware of optional equipment available so that customer can make proper choices as required.



# NOTES

FRAME ASSEMBLY .....	32 & 33
ENGINE ASSEMBLY .....	34 & 35
HYDRAULIC RESERVOIR & HOSES .....	36 & 37
PTO, PUMP & CLUTCH ASSEMBLY .....	38 & 39
SEAT ASSEMBLY .....	40
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BRAKE ASSEMBLY .....	42 & 43
WIRING DIAGRAM KUBOTA DIESEL .....	44 & 45
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# FZ25D FRAME ASSEMBLY



**32 Parts**

(Rev. 8/22/2008)

MAN0646 (Rev. 11/5/2007)

## FZ25D FRAME ASSEMBLY PARTS LIST

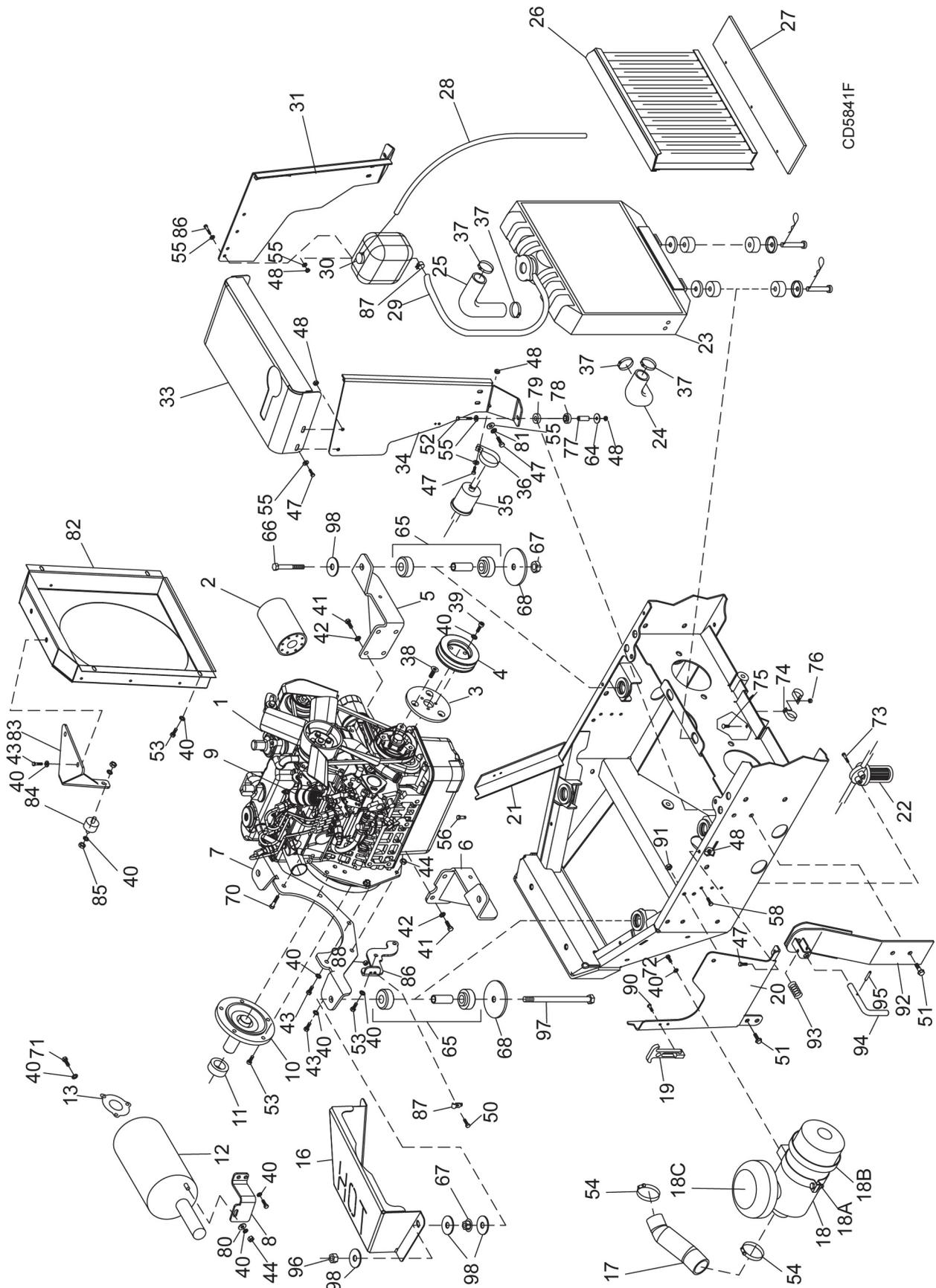
REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	78317	1	Fuel tank, LH	38	24660	2	3/8 NC x 3-1/2 HHCS full thread - GR5
2	73894	1	Fuel tank, RH Diesel	39	73896	4	Weight transfer sleeve
3	09239500	2	Fuel cap	40	73895	2	Weight transfer pin
4	73427	1	Left fender cover	41	71170	2	5-Link chain
5	73428	1	Right fender cover	42	6698 *	4	3/8 NC Hex lock nut
6	73898	2	Weight transfer arm	43	839 *	4	3/8 NC x 1" HHCS - GR5
7	71144	2	Extension spring	44	73581	2	Bushing sleeve
9	73891	1	Footrest (includes item 44 & 50)	45	3598 *	2	1/2 Flat washer
10	73827	2	Deck bracket	46	72410	1	Pivot rod
11	----- *	1	Battery, 12V (details on page 45)	47	71444	2	Rubber bumper
12	70274	1	Terminal boot	48	73217 *	2	1/8 x 3/4 Cotter pin
13	70733	1	Battery hold down	49	73163	2	5/16 NC Flange whiz nut
14	73887	1	Negative battery cable	50	72411	2	Footrest tread
15	73888	1	Positive battery cable w/ terminal boot	53	3184 *	3	1/4 NC x 1-1/4 HHCS - GR5
16	73714	1	Seat support channel	54	1985 *	1	1/4 Standard lock washer
17	75520	1	Switch, toggle deck	55	78086	2	Battery bolt
18	71475	3	Bosch style relay	56	62155 *	2	5/16 NC x 2-3/4 HHCS - GR5
19	73542 *	8	#10-24 x 1/2 Hex head machine screw	57	6778 *	2	5/16 NC Hex lock nut
20	35710	5	#10-24 Nylok nut	58	71314	1	Steering switch mount, left
21	75518	1	Console <b>(SN 00001 - 00284)</b>	59	75105	2	Steering safety switch
21	75567	1	Console <b>(SN 00285 &amp; Up)</b>	60	75519	1	Console decal - FZ25D <b>(SN 00001 - 00284)</b>
22	72854	1	Temp gauge	60	75566		Console decal - FZ25D <b>(SN 00285 &amp; Up)</b>
23	73173	1	Key switch, diesel	61	71313	1	Steering switch mount, right
24	75525	1	Throttle cable, diesel <b>(SN 00001 - 00284)</b>	62	78285	1	5/16 NC x 3/4 Button head screw
24	75565	1	Throttle cable, diesel <b>(SN 00285 &amp; Up)</b>	63	75357	1	Ignition cap switch
25	08841200	2	Indicator light	64	75198	1	Panel nut
26	75197	1	Key	65	75546	1	Glide, felt
27	73902	1	Hour meter	66	07511400	2	Bushing
28	72262	1	PTO Switch	67	75258	2	Fitting, barb 3/16 - RETRUN
29	6096 *	7	5/16 NC x 3/4 HHCS - GR5	68	07064500	2	Fitting, barb 5/16" w/screen
30	2472 *	8	5/16 Standard lock washer	69	75560	1	Throttle bracket <b>(SN 00001 - 00284)</b>
31	4378 *	10	5/16 Standard flat washer	NS	----- *	6	Screw, slotted #8 - 32 x .5 (used with throttle bracket)
32	301300 *	4	1/4 NC x 3/4 Truss head bolt	NS	----- *	6	Nut, self locking #8 - 32 (used with throttle bracket)
33	72474	4	1/4-20 U-tapped spring nut	NS	75368	1	Decal, Woods
34	70070	2	3/8 x 3/4 Pin	NS	75531	1	Decal, FZ25D
35	1326 *	2	1/8 x 1/2 Cotter pin				
36	70624	2	3/4 x 18GA Washer				
37	71145	2	3/4 External retainer				

NS Not Shown

HHCS Hex Head Cap Screw

\* Standard hardware, obtain locally

# FZ25D ENGINE ASSEMBLY



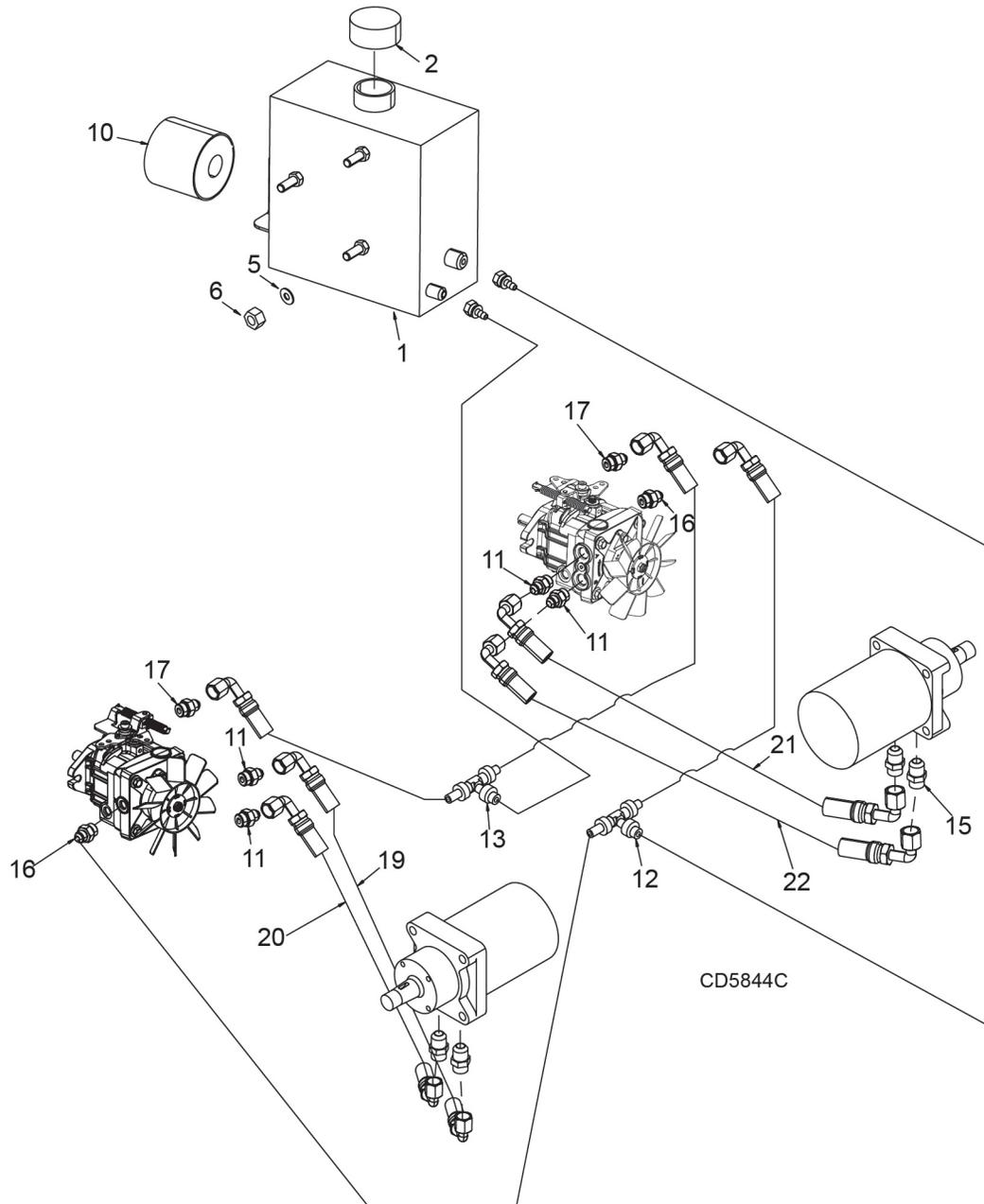
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# FZ25D ENGINE ASSEMBLY PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1		1	Kubota diesel engine (Spec No. 16447 - 15000)	43	307125 *	6	M8 x 1.25 x 20 mm HHCS CL 8.8
2	70127	1	Oil filter	44	30515 *	4	M8 x 1.25 Hex nut
3	73432	1	Sheave adapter	47	300057 *	11	1/4 NC x 3/4 HHCS - GR5
4	75464	1	Front drive sheave	48	6128 *	15	1/4 NC Lock nut
5	75399	1	Left front engine mount	51	839 *	7	3/8 NC x 1 HHCS GR5
6	75400	1	Right front engine mount	52	15041 *	4	1/4 NC x 1-1/2 HHCS - GR5
7	75401	1	Rear engine mount	53	----- *	9	M8 x 1.25 x 15 mm Socket head cap screw
8	75442	1	Muffler bracket	54	62259 *	2	2" Hose clamp
9	75490	1	Fuel stop solenoid	55	5336 *	8	1/4 Standard flat washer
10	71406	1	Stub shaft weldment	56	75461	1	Clamp, throttle
11	73509	1	Clutch spacer	58	70065 *	2	1/4 NC Whiz nut
12	75465	1	Muffler (gasket sold separately)	64	32806	4	Washer 1/4 x 7/8 x 1/8
13	75529	1	Muffler gasket	65	73681	4	Vibration isolator
16	78048	1	Clutch shield	66	14069 *	2	1/2 NC x 3-1/4 HHCS - GR5
17	75460	1	Air intake hose	67	11900 *	4	1/2 NC Flange Hex lock nut
18	75212	1	Air cleaner	68	78775 *	4	.5 x 2.0 x .135 Plated flat washer
18a	75215	1	Air filter - safety element	70	72885 *	1	M8 x 1.25 x 50 mm HHCS CL 8.8
18b	75214	1	Air filter - element only	71	30577 *	3	M8 x 1.25 x 25 mm HHCS CL 8.8
18c	75229	1	Rain hat, air filter	72	71632	2	5/16 NC x 1 Whiz bolt
19	09079500	2	Hood latch	73	4528 *	1	5/16 NC x 1-3/4 HHCS GR5
20	75454	1	Air cleaner mount	74	74060	2	1" Cushioned P-clip
21	73672	1	Left hood support	75	15028 *	1	3/8 NC x 1 Carriage bolt
22	70666	1	Fuel filter - element only	76	6698 *	1	3/8 NC Hex lock nut
23	75448	1	Radiator	77	78090	2	Sleeve, isolator
24	75509	1	Lower radiator hose	78	78088	2	Vibration isolator bushing
25	75510	1	Upper radiator hose	79	78089	2	Vibration isolator ring
26	75462	1	Radiator screen (includes item # 27)	80	4378 *		5/16 Flat washer
27	75463	1	Rubber flap	81	1985 *		1/4 Lock washer
28	71087	1	Hose - tank overflow	82	75449	1	Cowl, rear
29	71882	1	Hose - radiator overflow	83	75453	1	Bracket, radiator
30	72308	1	Expansion tank <b>(SN 00001 - 00284)</b>	84	75530	1	Insulator, rubber
30	75556	1	Expansion tank <b>(SN 00285 &amp; Up)</b>	85	4529 *	2	5/16 NC Hex nut
31	75451	1	Left radiator support <b>(SN 00001 - 00284)</b>	86	75563	1	Lug, Throttle cable <b>(SN 00285 &amp; Up)</b>
31	75555	1	Left radiator support <b>(SN 00285 &amp; Up)</b>	87	06928000	1	Throttle clamp
32	----- *	1	Cable tie	88	----- *	1	#10 - 24 Nut
33	75455	1	Radiator cowl <b>(SN 00001 - 00284)</b>	89	----- *	2	1/4 NC x 1/2 HHCS GR5
33	75564	1	Radiator cowl <b>(SN 00285 &amp; Up)</b>	90	73542	4	#10-24 x 1/2 Screw - washer head
34	75450	1	Right radiator support	91	14350	7	3/8 NC Flange lock nut
35	70659	1	Fuel pre-filter	92	78666	1	Lug assembly
36	73951	1	Fuel filter clamp	93	66510	1	Spring, Comp .66 x .06 x 2.5 x 8
37	480263 *	4	1-1/2 Hose clamp	94	66836	1	Pin, bent .5 x 1.96
38	----- *	3	M8 x 1.25 x 15mm Flat head screw	95	4115 *	1	3/16 x 1-1/8 Spring pin
39	----- *	3	5/16 NC x 1 Socket head cap screw	96	13859	2	1/2 NC Jam nut
40	2472 *	16	5/16 Standard lock washer	97	1637 *	2	1/2 NC x 3-1/2 HHCS GR5 ZP
41	----- *	10	M10 x 1.25 x 20 mm HHCS CL 8.8	98	3598 *	6	1/2 SAE Flat washer
42	838 *	14	3/8 Standard lock washer				

HHCS Hex Head Cap Screw  
\* Standard hardware, obtain locally

# HYDRAULIC RESERVOIR & HOSES PARKER® PUMPS



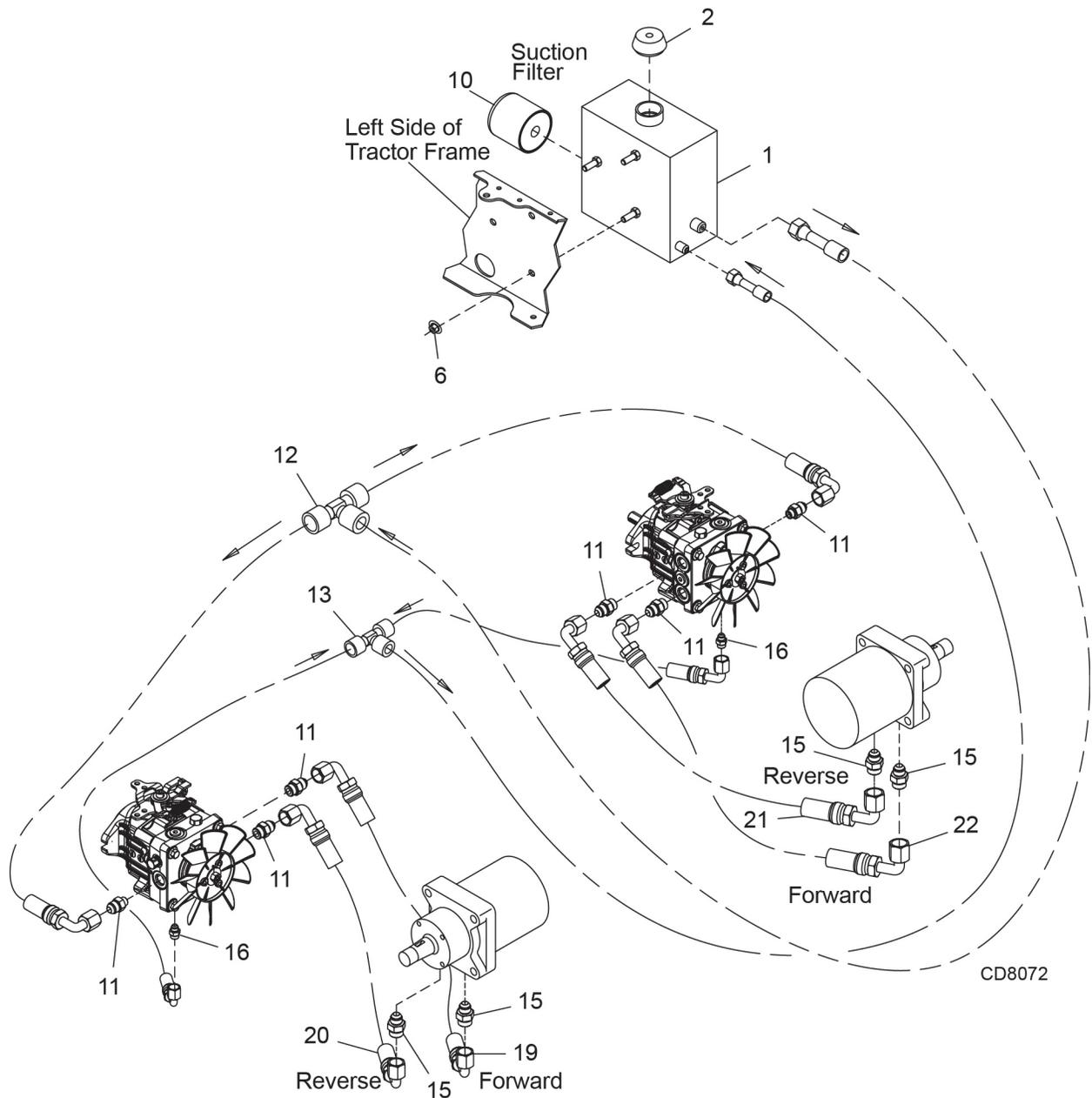
REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	75477	1	Hydraulic reservoir	16	315031	2	Adapter, 9/16 ORBM x 3/4 JICM
2	75489	1	Cap w/breather	17	62367	2	Elbow, 9/16 ORBM x 9/16 JIMCM
5	838 *	3	3/8 Lock washer	19	75481	1	Hose - Right, top pump front motor
6	59077 *	3	3/8 NC Center lock nut	20	75480	1	Hose - Right, bottom pump back motor
10	75527	1	Filter, hydraulic oil	21	75478	1	Hose - Left, top pump back motor
11	61	4	Adapter, 3/4 JICM x 3/4 ORBM	22	75479	1	Hose - Left, bottom pump front motor
12	75482	1	Hose assembly - suction				
13	75483	1	Hose assembly - Case drain				
15	316016	4	Adapter, 3/4 JICM x 7/8 ORBM				

\* Standard hardware, obtain locally

**36 Parts**

(Rev. 6/17/2013)  
MAN0646 (Rev. 11/5/2007)

# HYDRAULIC RESERVOIR & HOSES HYDRO-GEAR® PUMPS

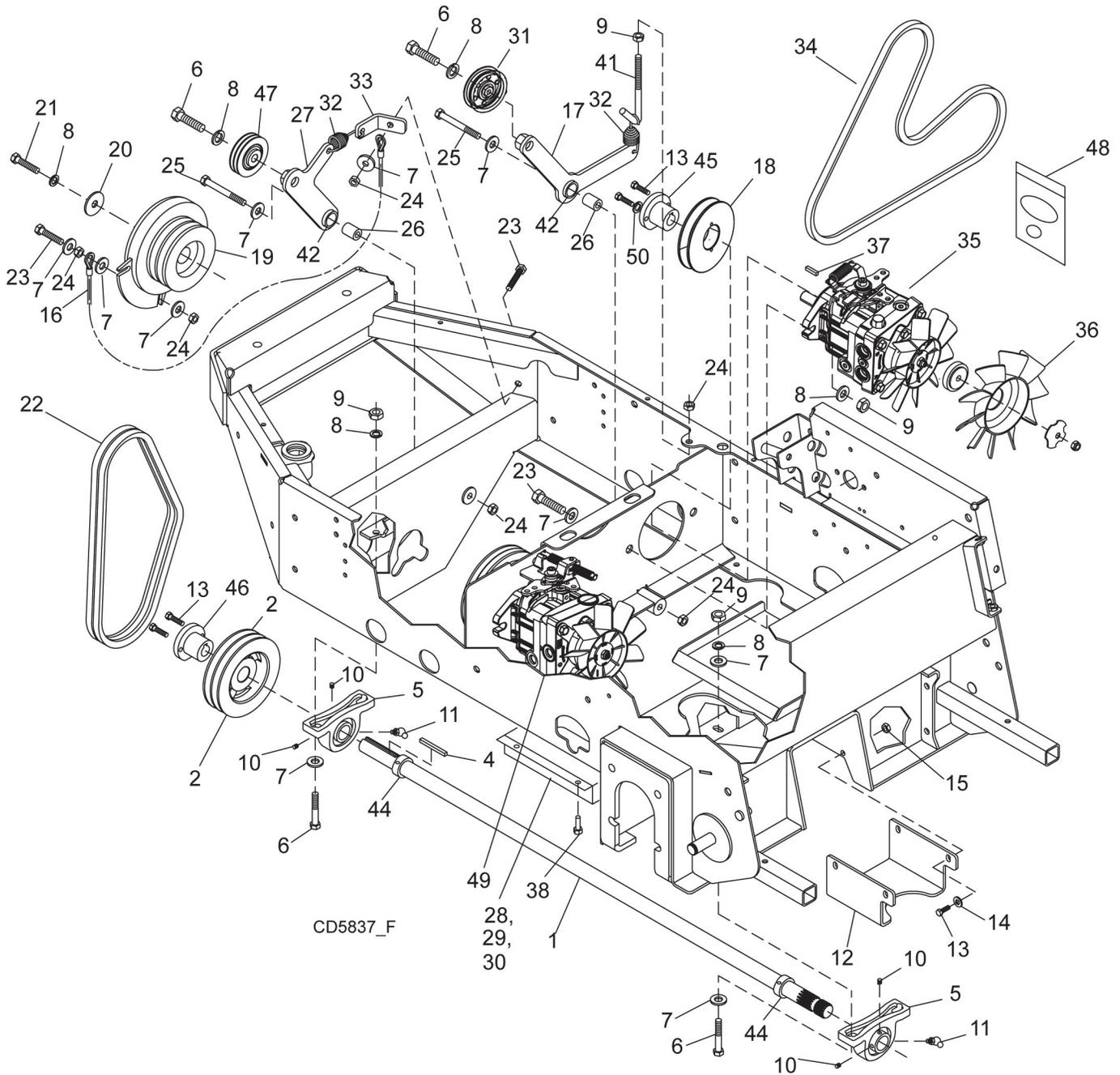


REF	PART	QTY	DESCRIPTION
1	75477	1	Hydraulic reservoir
2	75489	1	Cap w/breather
6	70069 *	3	3/8 NC Flanged lock nut
10	75527	1	Filter, hydraulic oil
11	61	6	Adapter, 3/4 JICM x 3/4 ORBM
12	75482	1	Hose assembly - suction
13	75483	1	Hose assembly - Case drain
15	316016	4	Adapter, 3/4 JICM x 7/8 ORBM

REF	PART	QTY	DESCRIPTION
17	62367	2	Elbow, 9/16 ORBM x 9/16 JIMCM
19	75481	1	Hose - Right, top pump front motor
20	75480	1	Hose - Right, bottom pump back motor
21	75478	1	Hose - Left, top pump back motor
22	75479	1	Hose - Left, bottom pump front motor

\* Standard hardware, obtain locally

# PTO, CLUTCH & PUMP ASSEMBLY



**38 Parts**

(Rev. 3/20/2013)  
MAN0646 (Rev. 11/5/2007)

# PTO CLUTCH & PUMP ASSEMBLY PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	75397	1	Splined power shaft	28	75585	1	Debris screen
2	75549	1	PTO sheave	29	75587	1	19.5 Trim Lok
4	3886 *	1	Key 1/4 x 1-1/4	30	75588	1	3.75 Trim Lok
5	78044	2	1" Pillow block bearing w/set screw	31	75476	1	Sheave, pump idler
6	920 *	6	3/8 NC x 1-3/4 HHCS - GR5	32	73826	2	Extension spring
7	565 *	16	3/8 Flat washer	33	75551	1	Spring lug
8	838 *	10	3/8 Lock washer	34a	75402	1	Drive V-belt (Parker®)
9	835 *	9	3/8 NC Hex nut	34b	78755	1	Drive V-belt (Hydro-Gear®)
10	----- *	4	1/4 NF Socket head set screw	35a	75543	1	Pump, Left (Parker®)
11	58567 *	2	90° Grease fitting	35b	78753	1	Pump, Left (Hydro-Gear®)
12	73425	1	Bearing guard	36a	75538	2	Fan (Parker®)
13	2457 *	10	1/4 NC x 3/4 HHCS - GR5	36b	78774	2	Fan (Hydro-Gear®)
14	5336 *	4	1/4 Flat washer	37	73964	2	Key 5 mm x 25 mm
15	70065	4	1/4 Whiz nut	38	30036	1	5/16 NC x 3/4 HHCS, self tap
16	73758	1	Cable, clutch stop	41	71156	1	3/8 NC x 6 Hook bolt
17	75507	1	Drive idler arm (includes item 42)	42	74068	2	Bushing idler arm
18a	75403	2	Pump sheave (Parker®)	44	75363	2	Collar set
18b	78751	2	Pump sheave (Hydro-Gear®)	45	75194	2	Bushing, 17 mm
19	74075	1	Electric clutch, mag-stop 1-1/8	46	34440	1	Bushing, 1"
20	70355	1	13/32 x 1-1/2 Retaining washer	47	75360	1	Idler
21	71724	1	3/8 NF x 1-1/4 HHCS - GR8	48a	75537	AR	Seal kit, for hydraulic pump (items 35 & 49) (Parker®)
22	78095	1	PTO V-belt set, matched	48b	78795	AR	Seal kit, for hydraulic pump (items 35 & 49) (Hydro-Gear®)
23	12169 *	1	3/8 NC x 1-1/4 HHCS - GR5	49a	75542	1	Pump, right (Parker®)
24	6698 *	5	3/8 NC Center lock nut	49b	78752	1	Pump, right (Hydro-Gear®)
25	31138 *	2	3/8 NC x 3-1/2 HHCS - GR5	50	-----	2	1/4 Lock washer
26	73416	2	Idler sleeve	51	----- *	1	3/8 NC x 1-1/2 HHCS, GR5
27	75362	1	PTO Idler arm (includes item 42)				

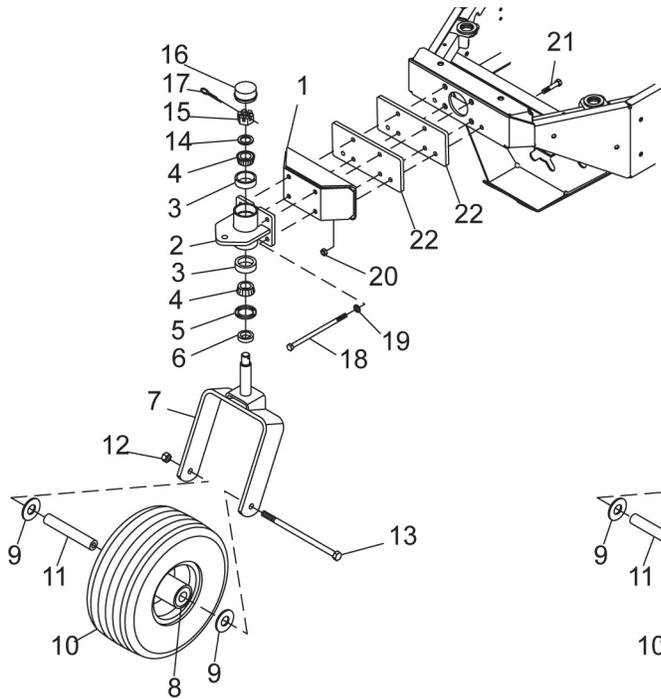
AR As Required

HHCS Hex Head Cap Screw

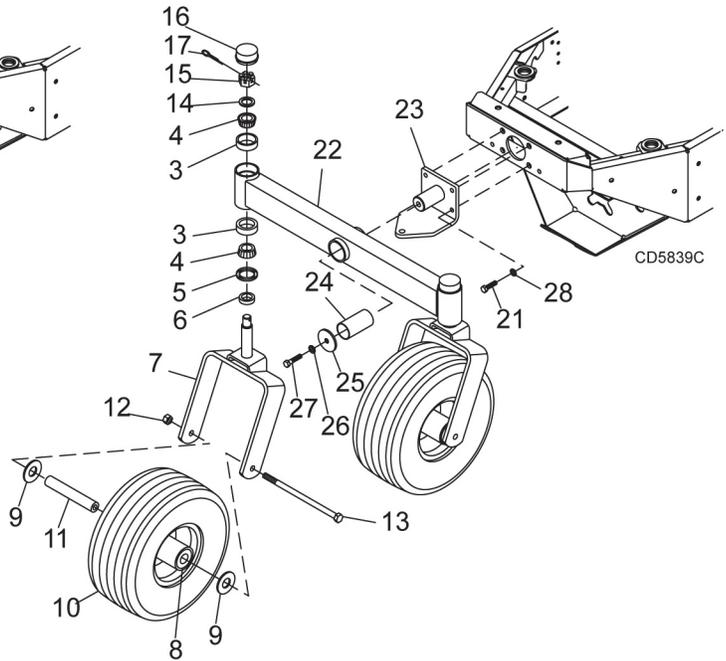
\* Standard hardware, obtain locally



# TAILWHEEL ASSEMBLY



**Single Tailwheel Assembly**



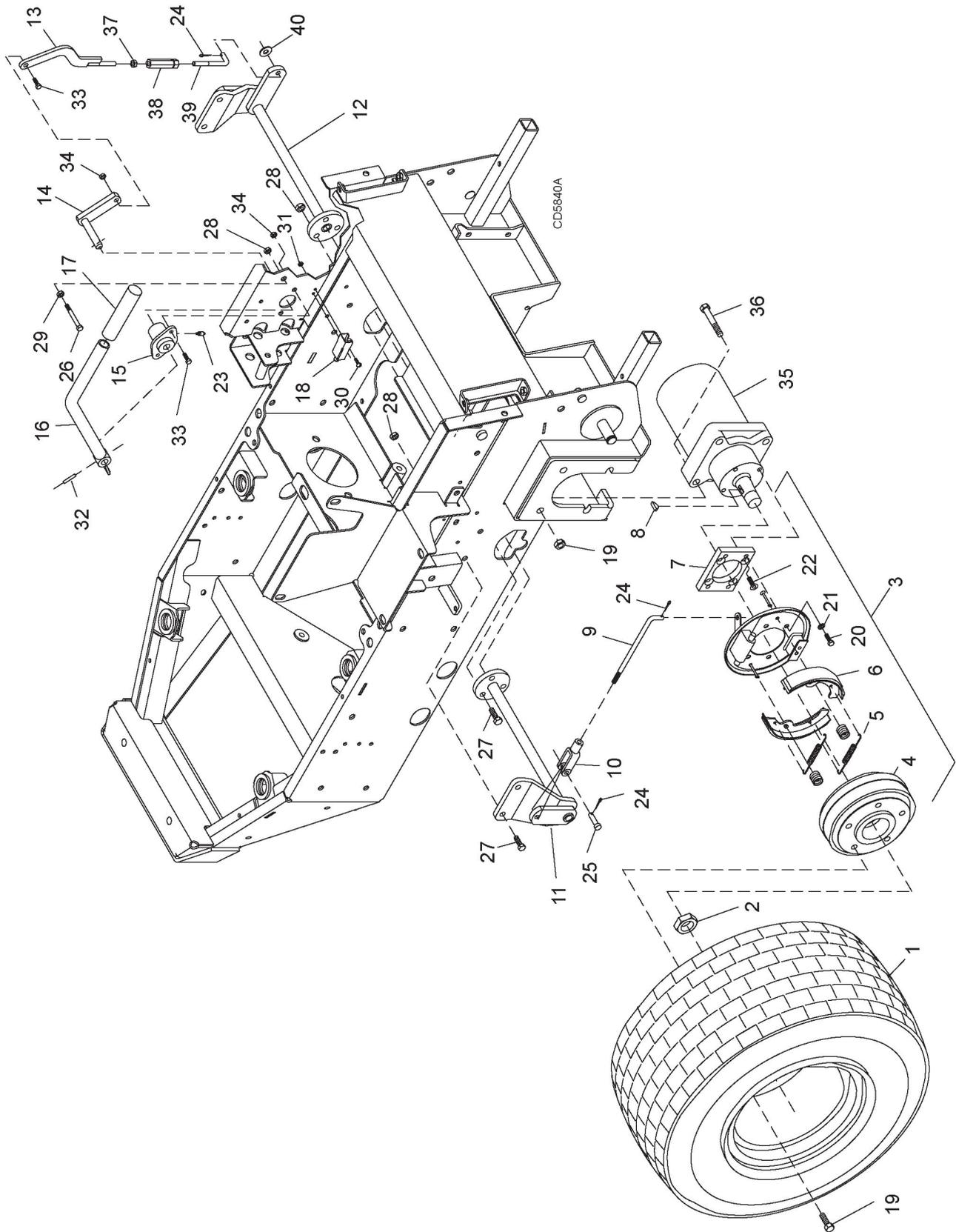
**Wide Stance Tailwheel Assembly**

REF	PART	QTY	DESCRIPTION
1	71126	1	Pivot mount adapter
2	73741	1	Pivot housing
3	3585	2	Bearing cup
4	3586	2	Bearing cone
5	70328	1	Seal, 1.5 x 2 x .187
6	70086	1	Spacer, .375 x 1
7	73818	1	Wheel fork
8	05435700	2	Bearing, 25 mm x 52 mm x 15 mm
9	3598 *	2	1/2 Flat washer
10	07147800	1	Wheel and tire assembly, 15 x 6-6
11	09231800	1	Spacer - wheel
12	765 *	1	1/2 NC Lock nut
13	38107	1	1/2 NC x 9 HHCS
14	70417	1	Bushing washer
15	5849	1	3/4 NF Slotted hex nut
16	70332	1	Dust cap
17	64291 *	1	Cotter pin, 5/32 x 1
18	12915 *	4	3/8 NC x 4-1/2 HHCS GR5
19	838 *	4	3/8 Lock washer
20	6698 *	2	3/8 NC Lock nut
21	920 *	2	3/8 NC x 1-3/4 HHCS GR5
22	78058	2	Tailwheel spacer

REF	PART	QTY	DESCRIPTION
3	3585	4	Bearing cup
4	3586	4	Bearing cone
5	70328	2	Seal, 1.5 x 2 x .187
6	70086	2	Spacer, .375 x 1
7	73818	2	Wheel fork
8	05435700	4	Bearing, 25mm x 52mm x 15mm
9	3598 *	4	1/2 Flat washer
10	07147800	2	Wheel & tire assembly, 15 x 6-6
11	09231800	2	Spacer - wheel
12	765 *	2	1/2 NC Lock nut
13	38107	2	1/2 NC x 9 HHCS
14	70417	2	Bushing washer
15	5849	2	3/4 NF Slotted hex nut
16	70332	2	Dust cap
17	64291 *	2	Cotter pin, 5/32 x 1
21	839 *	4	3/8 NC x 1 HHCS GR5
22	70336	1	Axle beam (includes item #24)
23	73740	1	Rear axle pivot
24	74065	2	Oilite bushing
25	70602	1	Washer, 1/2 x 2-1/4
26	855 *	1	1/2 Standard lock washer
27	25475	1	1/2 NC x 1 HHCS full thread GR5
28	838 *	4	3/8 Lock washer

\* Standard hardware, obtain locally

# BRAKE ASSEMBLY



**42 Parts**

MAN0646 (Rev. 11/5/2007)

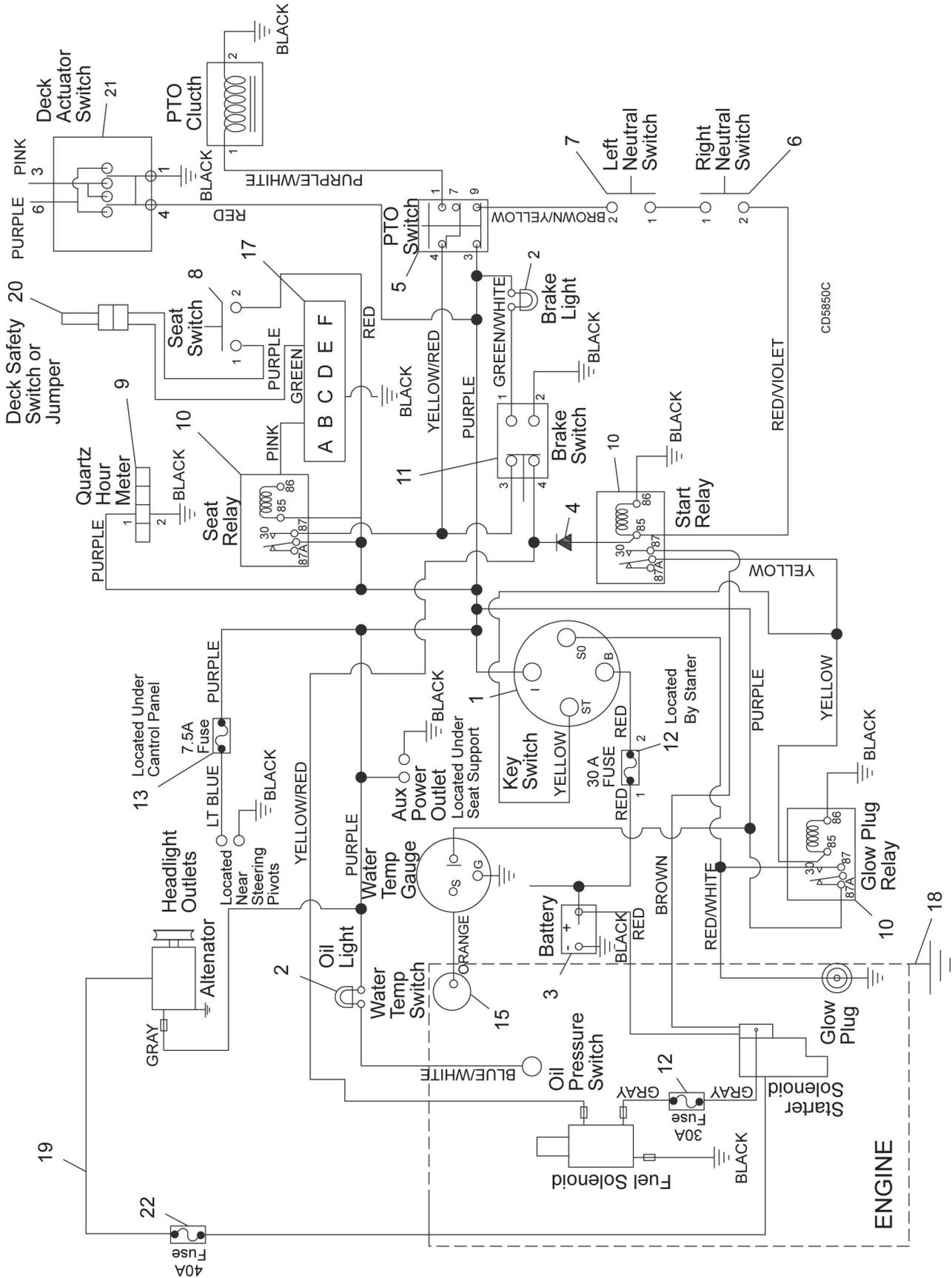
# BRAKE ASSEMBLY PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	----	--	See Tire & Wheel Chart Below	20	5651 *	8	5/16 NC x 5/8 HHCS - GR5
2	06541900	2	1 NF Hex patch lock nut	21	2472 *	8	5/16 Standard lock washer
3	73904	1	Brake assembly - RH (includes items 3A, 3C, 4, 5, 6, 7, 20, 21, 22)	22	5248	8	5/16 NC x 1-1/4 SHCS
	<b>or</b>			23	2985 *	1	1/4-28 Tapered thread grease fitting
3	73903	1	Brake assembly - LH (includes items 3B, 3C, 4, 5, 6, 7, 20, 21, 22)	24	3145 *	6	3/32 x 1/2 Cotter pin
3A	73972	1	Adjuster kit, Right hand (not shown)	25	70024	3	Clevis pin
3B	73973	1	Adjuster kit, Left hand (not shown)	26	3231 *	1	3/8 NC x 2 HHCS - GR5
3C	73974	1	Push rod assembly (not shown)	27	12169 *	7	3/8 NC x 1-1/4 HHCS - GR5
4	73948	2	Brake drum	28	6698 *	8	3/8 NC Hex lock nut
5	73949	2	Spring repair kit	29	835 *	1	3/8 NC Hex nut
6	73939	2	Shoe repair kit	30	35709 *	2	#10-24 x 3/4 Pan head machine screw
7	75557	2	Adapter plate	31	35710 *	2	#10-24 Nylok nut
8	---- *	2	Key, Woodruff 3/16 x 1	32	4115 *	1	3/16 x 1-1/8 Spring pin
9	73440	2	Brake actuator bar	33	6096 *	2	5/16 NC x 3/4 HHCS - GR5
10	70022	3	Adjustable clevis 5/16 - 24 x 2.5	34	6778 *	2	5/16 NC Hex lock nut
11	73829	1	Brake rod - RH	35	75487	2	Wheel motor, 240CC
12	73439	1	Brake rod - LH	36	3699 *	8	1/2 NC x 2 HHCS GR5
13	74042	1	Brake pull	37	62149 *	1	5/16 NC Hex jam nut
14	73710	1	Brake actuator	38	74043	1	5/16 NC x 2-1/2 Hex turnbuckle
15	01522000	1	Sintered bushing	39	74044	1	Lower link
16	73441	1	Parking brake lever	40	4378 *	1	5/16 Flat washer
17	75393	1	Parking brake lever - Grip				
18	71148	1	Brake switch		HHCS		Hex Head Cap Screw
19	1258	10	Wheel bolt, 1/2 NF x 1-1/8		SHCS		Socket Head Cap Screw
					*		Standard hardware, obtain locally

# TIRE & WHEEL CHART

REF	PART	QTY	DESCRIPTION
1	73955	2	23 x 10.50 Turf tire & wheel
1	78055	2	23 x 10.50 Knobby tire & wheel
1	74093	1	23 x 10.50 Chevron tire & wheel - Right
1	74097	1	23 x 10.50 Chevron tire & wheel - Left
-	78068	-	12" Spoked drive wheel only
-	75101	-	23 x 10.50-12 Turf tire only
-	78070	-	23 x 10.50-12 Knobby tire only
-	75102	-	23 x 10.50-12 Chevron tire only

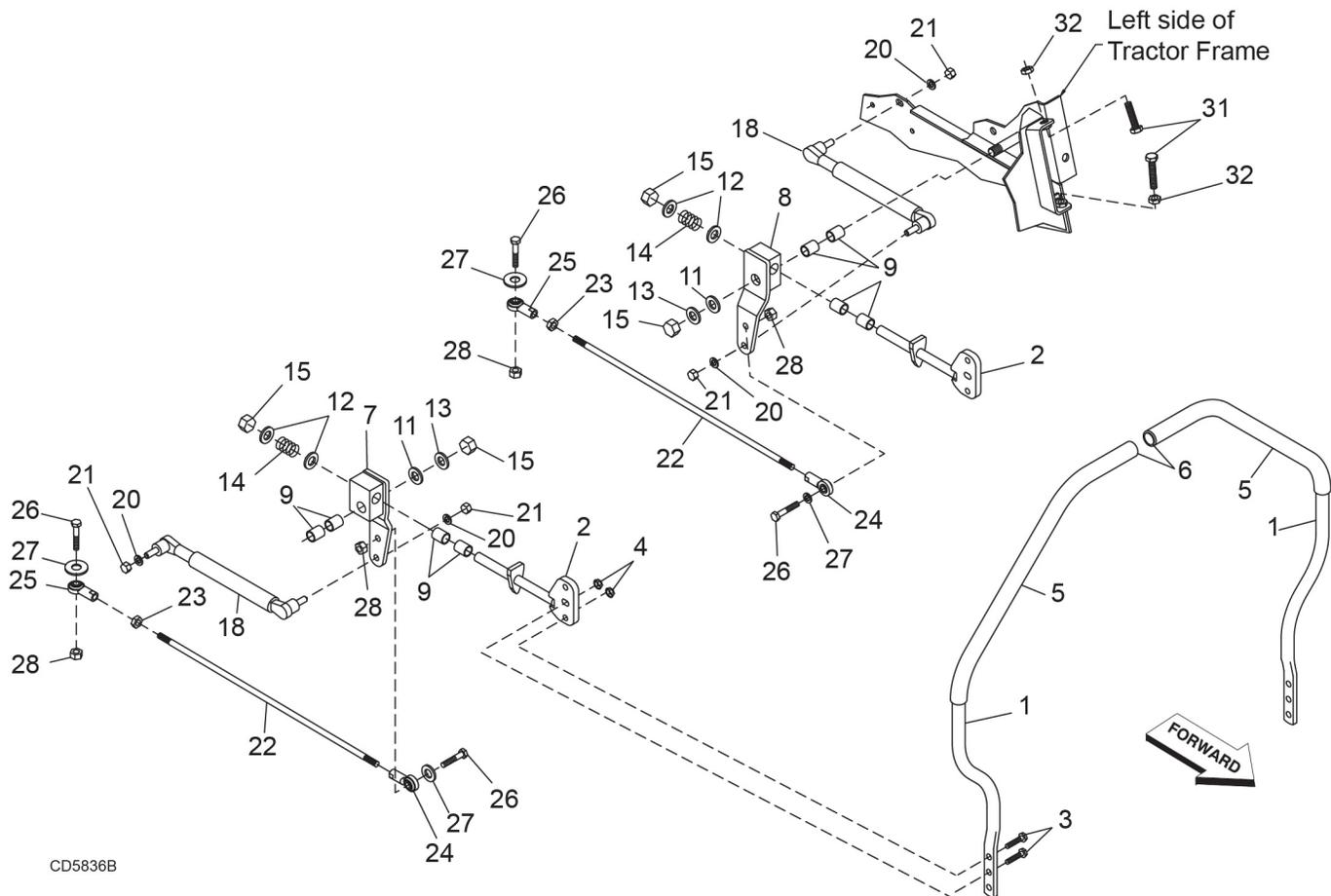
# FZ25D WIRING DIAGRAM KUBOTA



# FZ25D WIRING DIAGRAM KUBOTA DIESEL

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
A	75499	1	FZ25D Wiring assembly	12	71385 *	1	Fuse - 30 Amp auto
B	78757	1	FZ25D Wiring assembly	13	71387 *	1	Fuse - 7.5 Amp auto
1	73173	1	Ignition switch	15	72314	1	Water temperature sender
-	75197	1	Ignition key	17	75437	1	Timer delay
2	08841200	2	Indicator light	17A	----- *		#10 x 7/16 Self tapping screw (NS)
3	----- *	1	Battery 12V, side post, group 70, 450-500 CCA (obtain locally)	18	74079	1	Ground strap
4	73046	1	Diode assembly	19	75533	1	Cable, alternator-starter FZ25D
5	72262	1	PTO Switch	20A	75521	1	Cable jumper
6	75105	1	Steering safety switch - right	20B	78636	1	Cable jumper
-	71313	1	Right steering switch mount	21	75520	1	Switch, deck tilt
7	75105	1	Steering safety switch - left	22	75535 *	1	Fuse, 40 amp Auto
-	71314	1	Left steering switch mount	-	73888	1	Positive battery cable w/ terminal boot
8	75502	1	Seat switch	-	73887	1	Negative battery cable
9	73902	1	Hour meter				
10	71475	3	Relay		NS		Not Shown
11	71148	1	Brake switch				* Standard hardware, obtain locally

# STEERING ASSEMBLY



CD5836B

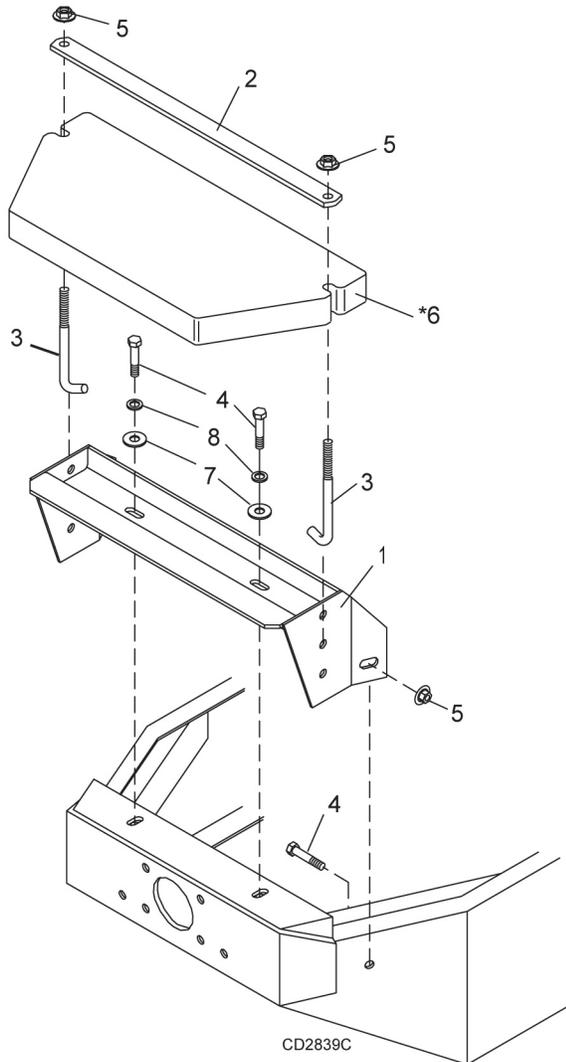
REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	73023	2	Steering lever (includes items 5 & 6)	18	75488	2	Dampener
2	73030	2	Steering lever mount	20	2472 *	4	5/16 Standard lock washer
3	73178	4	5/16 NC x 1.0 Whiz bolt	21	30515	4	M8 x 1.25P Hex nut
4	73163	4	5/16 NC Flanged lock nut	22	75511	2	Steering control link
5	78719	2	Foam handle grip	23	33654	2	5/16 NF Jam nut
6	09211400	2	Vinyl cap	24	08960700	2	5/16 NF RH Female rod end
7	75458	1	Steering pivot - right	25	09107800	2	5/16 NF LH Female rod end
8	75459	1	Steering pivot - left	26	24408 *	4	5/16 NC x 1-1/2 HHCS, GR5
9	71323	8	1/2 Nylon bushing	27	4378 *	8	5/16 Standard flat washer
11	70423	2	Nylon washer	28	6778 *	4	5/16 NC Hex lock nut
12	72886	4	Nylon washer	31	-----	4	5/16 NC x 1-1/2 HHCS, GR5 full thread
13	3598 *	2	1/2 SAE Washer	32	4529 *	4	5/16 NC Hex nut
14	70162	2	Compression spring				
15	765 *	4	1/2 NC Lock nut				

\* Standard hardware, obtain locally

**46 Parts**

(Rev. 10/21/2014)  
MAN0646 (Rev. 11/5/2007)

# COUNTERWEIGHT MOUNT KIT



REF	PART	QTY	DESCRIPTION
A	70980		Counterweight mount kit
1	71063	1	Weight mount
2	71123	1	Weight strap
3	71156	2	.375-16 x 6" Hook bolt
4	839 *	4	3/8 NC x 1 HHCS
5	66885	4	3/8 NC Flange nut
6	71512	**	50 lb Counterweight A/R
7	565 *	2	3/8 Flat washer
8	838 *	2	3/8 Lock washer

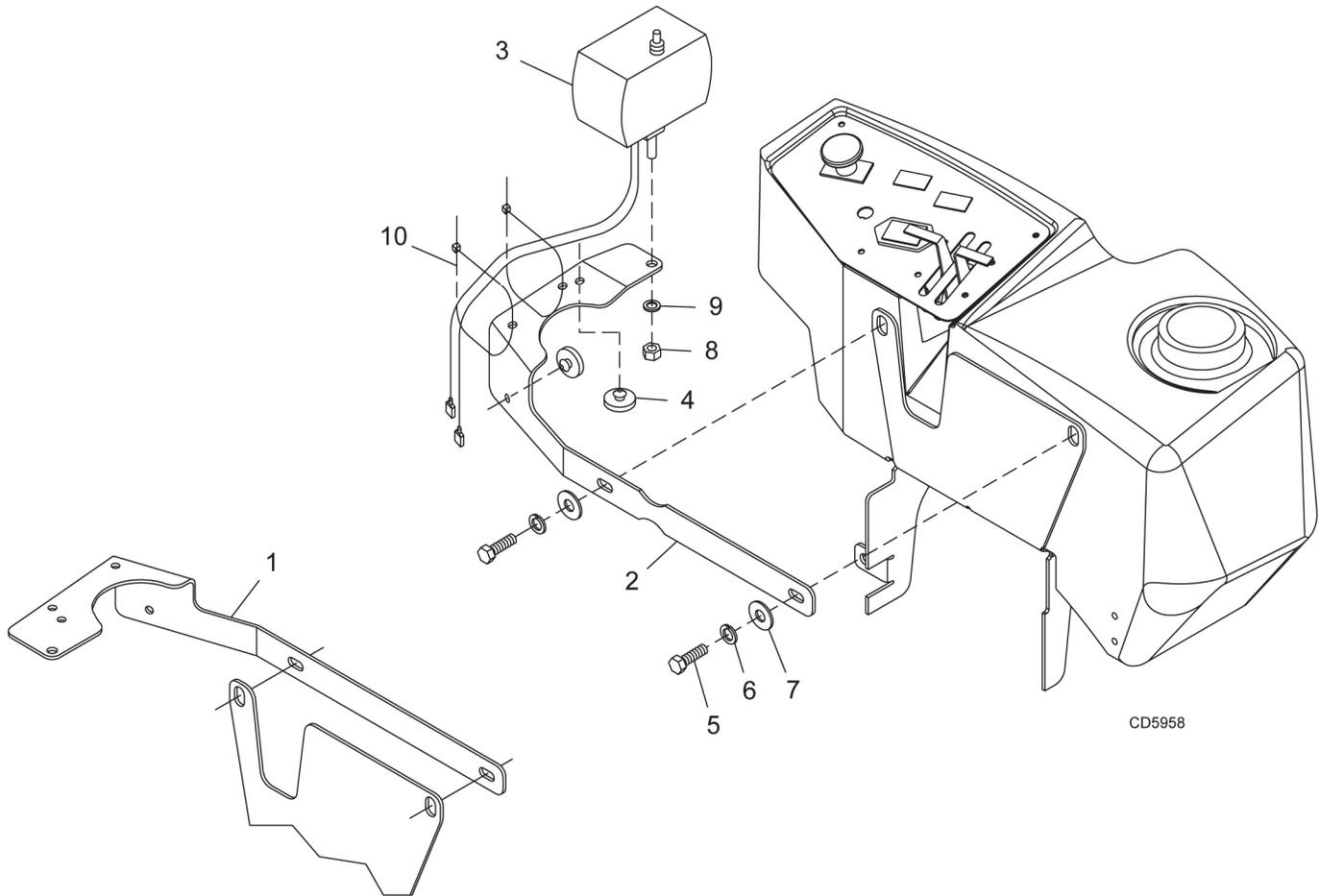
\* Standard hardware, obtain locally

## NOTES:

\* Refer to counterweight requirement chart on page 15 to determine the amount of counterweight required for your mower and equipment.

\*\* Not included in kit. As required.

## HEADLIGHT KIT (OPTIONAL)



REF	PART	QTY	DESCRIPTION
A	73938	-	Headlight kit
1	73937	1	Light bracket - left
2	73936	1	Light bracket - right
3	73935	2	Rect. work light with switch
4	07516000	4	Button bumper
5	6096 *	4	5/16 NC x 3/4 HHCS
6	2472 *	4	5/16 Lock washer
7	4378 *	4	5/16 Flat washer
8	5288 *	2	1/4 NC Hex nut
9	1985 *	2	1/4 Lock washer
10	----- *	8	Plastic tie

\* Standard hardware, obtain locally

**NOTES:** Headlight power outlets are located near the steering pivot blocks.

# BOLT TORQUE CHART

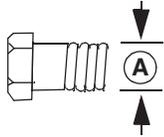
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 MAR 99 & J1701M JUL 96.



## SAE SERIES TORQUE CHART



SAE Grade 2  
(No Dashes)

SAE Bolt Head Identification

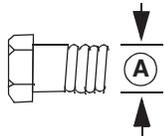


SAE Grade 5  
(3 Radial Dashes)



SAE Grade 8  
(6 Radial Dashes)

Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383



## METRIC SERIES TORQUE CHART



8.8  
Metric  
Grade 8.8

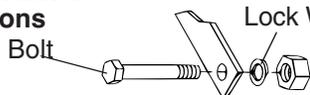
Metric Bolt Head Identification



10.9  
Metric  
Grade 10.9

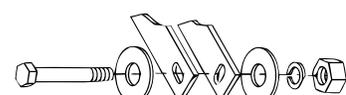
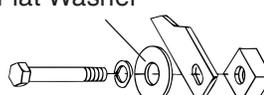
Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD								
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

### Typical Washer Installations



Lock Washer

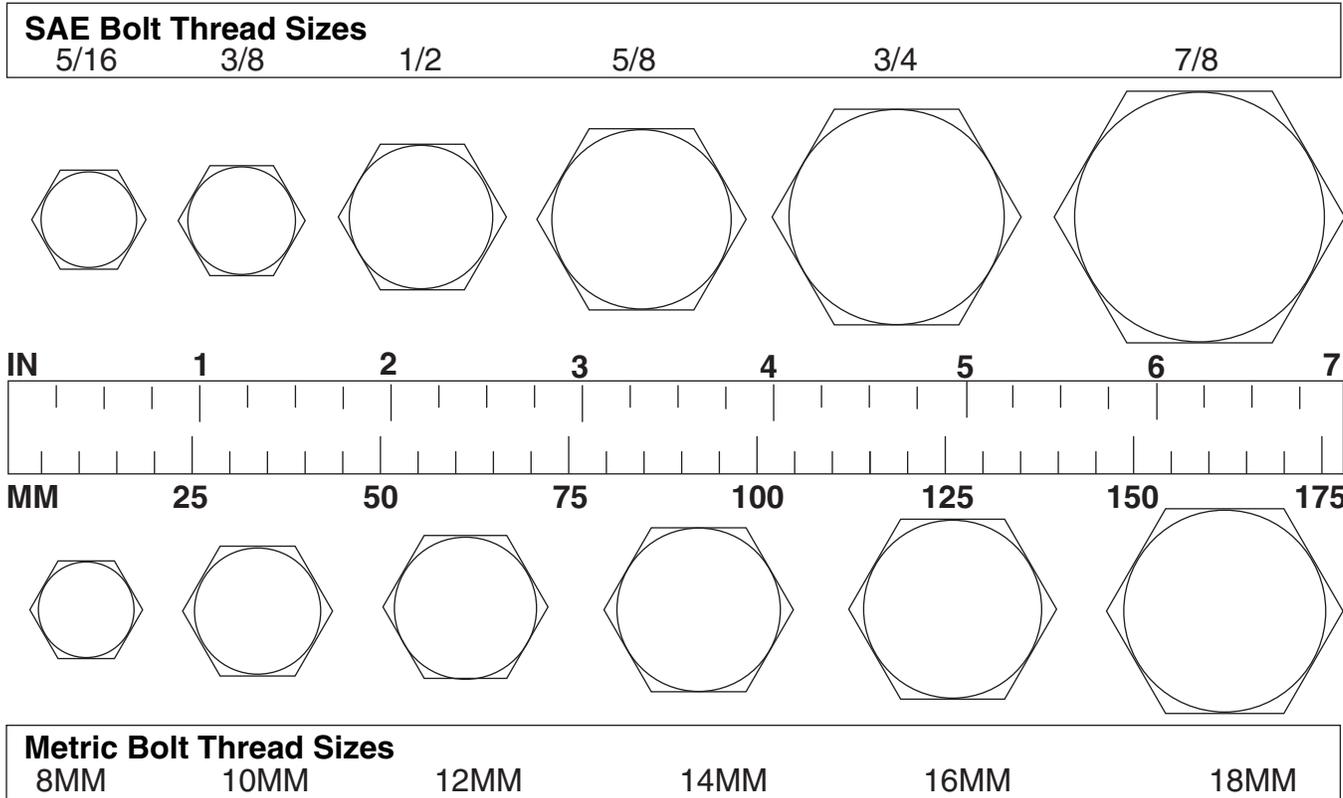
Flat Washer



8/9/00

# BOLT SIZE CHART

**NOTE:** Chart shows bolt thread sizes and corresponding head (wrench) sizes for standard SAE and metric bolts.



## ABBREVIATIONS

AG ..... Agriculture  
 ASABE ..... American Society of Agricultural & Biological Engineers (formerly ASAE)  
 ASAE..... American Society of Agricultural Engineers  
 ATF.....Automatic Transmission Fluid  
 BSPP..... British Standard Pipe Parallel  
 BSPTM..... British Standard Pipe Tapered Male  
 CV ..... Constant Velocity  
 CCW..... Counter-Clockwise  
 CW ..... Clockwise  
 F ..... Female  
 FT..... Full Thread  
 GA ..... Gauge  
 GR (5, etc.)..... Grade (5, etc.)  
 HHCS ..... Hex Head Cap Screw  
 HT ..... Heat-Treated  
 JIC..... Joint Industry Council 37° Degree Flare  
 LH..... Left Hand  
 LT ..... Left  
 m ..... Meter  
 mm ..... Millimeter  
 M ..... Male

MPa ..... Mega Pascal  
 N ..... Newton  
 NC..... National Coarse  
 NF ..... National Fine  
 NPSM ..... National Pipe Straight Mechanical  
 NPT.....National Pipe Tapered  
 NPT SWF..... National Pipe Tapered Swivel Female  
 ORBM ..... O-Ring Boss - Male  
 P ..... Pitch  
 PBY.....Power-Beyond  
 psi ..... Pounds per Square Inch  
 PTO.....Power Take Off  
 QD ..... Quick Disconnect  
 RH..... Right Hand  
 ROPS..... Roll-Over Protective Structure  
 RPM.....Revolutions Per Minute  
 RT ..... Right  
 SAE..... Society of Automotive Engineers  
 UNC ..... Unified Coarse  
 UNF ..... Unified Fine  
 UNS ..... Unified Special

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# LIMITED WARRANTY

## Mow'n Machine™ Zero-Turn Mowers

Please Enter Information Below and Save For Future Reference.

Date Purchased: \_\_\_\_\_ From (Dealer): \_\_\_\_\_

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

### WHAT IS COVERED:

Woods Equipment Company ("WOODS") warrants Mow'n Machine™ zero-turn mowers, attachments and accessories to be free from defect in material and workmanship for the warranty periods listed below.

### FOR HOW LONG:

Mow'n Machine Model #FZ22K, FZ23B, FZ25D, FZ28K & attachments are warranted for two (2) years from the date of delivery to the original purchaser or 2000 hours of operation, whichever occurs first.

IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN WARRANTY PERIODS LISTED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

### WHO IS COVERED:

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer the product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

### WHAT IS NOT COVERED:

This Warranty does not cover normal wear or tear, or normal maintenance items, or any damage, failure or loss caused by:

1. Improper operation, improper maintenance, misuse, or an accident;
2. Any modification or repair by someone other than WOODS, a WOODS' authorized dealer or distributor, and/or a WOODS' authorized service center; or
3. Repairs made with parts other than those obtained through WOODS.

WOODS makes no warranty, express or implied, with respect to engines, batteries, tires or other parts or accessories with respect to which the manufacturer provides a separate warranty.

### WHAT WOODS WILL DO TO CORRECT PROBLEMS:

WOODS' obligation under this Warranty is limited to, at WOODS' option, the repair or replacement, free of charge, of the product if the product is defective or in noncompliance with this Warranty. The product must be returned to WOODS with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid. WOODS shall complete such repair or replacement within a reasonable time after WOODS receives the product.

### OTHER LIMITATIONS:

WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the foregoing, WOODS shall not be liable for any damages relating to (i) lost profits, business, revenues or goodwill; (ii) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (iii) any other type of damage to property or economic loss. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

No agent, representative, dealer, distributor, service person, salesperson, or employee of any company, including without limitation, WOODS, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

### HOW STATE LAW APPLIES:

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### QUESTIONS:

Answers to any questions regarding warranty service and locations may be obtained by contacting:

### Woods Equipment

A Blount International Company

2606 South Illinois Route 2  
Post Office Box 1000  
Oregon, Illinois 61061 USA

800-319-6637 tel  
800-399-6637 fax

woodsequipment.com



**ALITEC™**

**BMP®**

**CENTRAL FABRICATORS®**

**GANNON®**

**GILL®**

**WAIN-ROY®**

**WOODS®**



## LIMITED WARRANTY

(Mow'n Machine™ Zero-Turn Mower Replacement Parts)

Woods Equipment Company ("WOODS") warrants replacement parts for Mow'n Machine™ zero-turn mowers and attachments to be free from defect in material and workmanship for a period of ninety (90) days from the date of delivery of the product to the original purchaser.

IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO A PERIOD OF NINETY (90) DAYS FROM THE DATE OF DELIVERY OF THE PRODUCT TO THE ORIGINAL PURCHASER. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer the product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

This Warranty does not cover normal wear or tear, or normal maintenance items, or any damage, failure or loss caused by improper operation, improper maintenance, misuse, or an accident.

WOODS' obligation under this Warranty is limited to, at WOODS' option, the repair or replacement, free of charge, of the product if the product is defective or in noncompliance with this Warranty. **The product must be returned to WOODS with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** WOODS shall complete such repair or replacement within a reasonable time after WOODS receives the product.

**WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory.** Without limiting the foregoing, WOODS shall not be liable for any damages relating to (i) lost profits, business, revenues or goodwill; (ii) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (iii) any other type of damage to property or economic loss. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

No agent, representative, dealer, distributor, service person, salesperson, or employee of any company, including without limitation, WOODS, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

This Warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

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**PART NO.**  
**MAN0646**

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