

Walker Rider Lawnmowers

OWNER'S MANUAL

Safety, Assembly, Operating, and Maintenance Instructions

and ILLUSTRATED PARTS MANUAL

Model MW - Walk-Behind (15 HP)



CE

TM

Please Read and Save These Instructions

For Safety, Read All Safety and Operation
Instructions Prior to Operating Machine

Effective Date: 11-01-03

P/N 9001
Price \$5.00



Foreword

Thank you. . .for purchasing a **Walker by Walker** (Model MW). Every effort has been made to provide you with the most reliable product on the market, and we are sure you will be among our many satisfied customers. If for any reason this product does not perform to your expectations, please contact an authorized servicing dealer or Walker Manufacturing at (970) 221-5614. Every customer is important to us. Your satisfaction is our goal.

Please. . .read this manual thoroughly! This manual is to be used in conjunction with the engine manufacturer's manual for the specific engine on the mower model you are using. Before you operate your new mower, please read this entire manual. Some of the information is crucial for proper operation and maintenance of this product - it will help protect your investment and ensure that the tractor performs to your satisfaction. Some of the information is important to your safety and must be read and understood to help prevent possible injury to the operator or others. If anything in this manual is confusing or hard to understand, please call our service department, at (970) 221-5614, for clarification before operating or servicing this product.

This manual covers the Model MW Walk-Behind (15-HP) mower.

All shields and guards must be in place for the proper and safe operation of this mower. Where they are shown removed in this manual, it is for illustration purposes only. **Do not operate this product unless all shields and guards are in place.**

Specifications given are based on the latest information available at the time this manual was produced.

Walker Mfg. Co. is continually striving to improve the design and performance of its products. We reserve the right to make changes in specifications and design without thereby incurring any obligation relative to previously manufactured products.

Sincerely,
WALKER MANUFACTURING COMPANY

A handwritten signature in cursive script that reads "Bob Walker".

Bob Walker, President

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General Information

HIGHLIGHTED INFORMATION

Walker Manufacturing recommends that any service requiring special training or tools be performed by an authorized Walker Mower Dealer. There are several general practices to be aware of in the area of safety. Most accidents associated with the operation or maintenance of a Walker product are caused by disregarding basic safety precautions or specific warnings. Such accidents, in most cases, can be prevented by being aware of the dangers present.

Information of special importance has been highlighted in bold type in this manual. Refer to **Safety Instructions** for the meanings of **DANGER, WARNING, CAUTION, IMPORTANT, and NOTE**.

GLOSSARY

There are many terms that are either unique to this equipment or that are used as acronyms. The following terms and their definitions will help while using this manual:

- **DECK** is the mowing attachment mounted on the front of the tractor which includes the carrier frame, deck housing, blade drive gearboxes, and cutter blades.
- **FORWARD SPEED CONTROL (FSC) SWITCH** controls the maximum forward speed of the tractor; functioning as a cruise control.
- **GROUND DRIVE** refers to the dual hydrostatic transmissions which drive the main wheels.
- **LEFT HAND (LH)** refers to the left-hand side of the tractor when the operator is seated facing forward from the operator position.
- **NEUTRAL LOCKOUT** releases the hydrostatic transaxles to permit freewheeling the tractor.
- **PISTOL GRIPS** steer the tractor by controlling the dual hydrostatic transaxles.
- **POWER TAKE-OFF (PTO)** transmits engine power to run the cutter blades.
- **RIGHT HAND (RH)** refers to the right-hand side of the tractor when the operator is facing forward from the operator position.

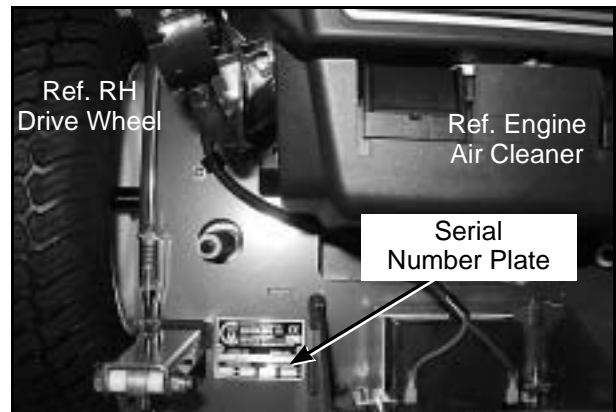
- **SIDE DISCHARGE (SD)** mows but does not collect the mowed material.
- **TRACTOR** is the prime mover, including the engine, drive train, and controls to operate the mower.

IDENTIFYING NUMBER LOCATIONS

The mower serial number is affixed to RH side of the inside of the unit housing. Model and serial numbers are helpful when obtaining replacement parts and maintenance assistance. For ready reference, please record these numbers in the space provided.

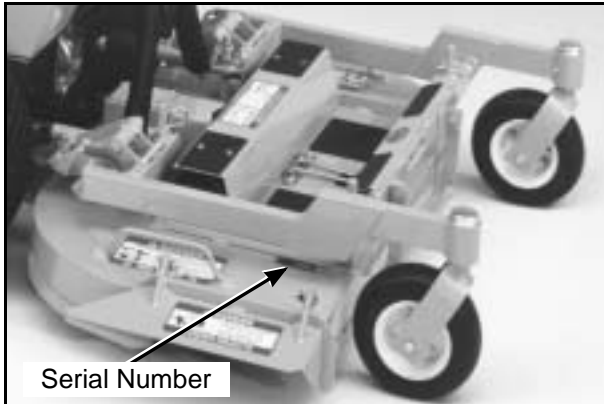
Tractor Model No.	_____
Tractor Serial No.	_____
Deck Serial No.	_____
Engine Model No.	_____
Engine Serial No.	_____
Date of Purchase	_____

Fill In By Purchaser



Tractor Serial Number Location
(Top View of Tractor)

General Information



Deck Serial Number Location

ENGINE SERIAL NUMBER LOCATION

The Kawasaki engine model, type, and code numbers are located on the side of the engine opposite the recoil starter handle (on the aluminum housing). For the mower model covered by this manual, an engine manual is available to cover the Kawasaki FH430V.



Engine Serial Number Location

SERVICING OF DRIVETRAIN GEARBOX

The detailed servicing and repair of the engine, hydrostatic transmission, and gearboxes are not covered in this manual. Only routine maintenance and general service instructions are provided. For the service of these components during the limited warranty period, it is important to find a local, authorized servicing agent of the component manufacturer. **Any unauthorized work done** on these components during the warranty period **may void the warranty**. If you have any difficulty finding an authorized outlet or obtaining warranty service, please contact our Service Department for assistance:

Walker Manufacturing Company

5925 E. Harmony Road
Fort Collins, CO 80528
1-970-221-5614

Service manuals are available for each of these components from their respective manufacturers as follows:

Kawasaki Engines **Kawasaki Tractor Corp.**
P.O. Box 888285
Grand Rapids, MI 49588-8285

Transmissions **HydroGear Corporation**
Sullivan, IL

Gearboxes (Deck & PTO) **Tecumseh Products Co.**
900 North Street
Grafton, WI 53024

Specifications

MODEL	MW
ENGINE	
Manufacturer/Model	Kawasaki, FH430V, OHV, 2 Cyl. V-Twin (Air-Cooled)
Displacement	431CC (26.3 cu. in.)
HP (@ 3600 RPM)	15
Max. RPM (No Load)	4000
Governed RPM	3600
Max. Torque [ft-lb (N•m) @ RPM]	23.6 (32 N•m) @ 2400
Idle RPM	1500
Spark Plug Type	Champion® RCJ8Y
Spark Plug Gap	.030 in. (.75 mm)
Crankcase Capacity	1.8 qts (1.7 liters)
Crankcase Lubricant	API SC/SD/SE/SF/SG/SH Grade Oil Only with 10W-30/10W-40 Viscosity or 40W Above 68° F (20° C) Only
Fuel Tank Capacity	3 Gallons (11.4 liters)
Fuel	Automotive Grade Unleaded Gasoline (87 Octane)
ELECTRICAL SYSTEM	
Battery	12-Volt, Interstate PC1250
Charging System	12.5 Amp Alternator
Charging Output	15 Amp DC (Regulated)
System Polarity	Negative Ground
Ignition	Electronic Magneto
Starter	Recoil Starter
Interlock Switch	Ignition Lockout by Operator Presence Lever, Transmission Neutral and Blade Clutch
TRANSMISSION	
Manufacturer/Model	Dual, Independent Hydro-Gear Integrated Transaxles
Steering	Handle Pistol Grips
Forward Speed Control	Variable Speed Controlled by Rocker Switch Near RH Thumb, with Neutral Park Setting
Service Brake	Mechanical Lockout for each Transmission (Single Lever Control)
Neutral	Transmission Release by Manual Dump Valve

Specifications

MODEL	MW
TRANSMISSION (continued)	
Transmission Fluid	
Factory Service	20W50 Multi-Viscosity Motor Oil
Transmission Fluid Capacity	79 fl. oz. (2336 ml.)
Transmission Cooling	Cooling Fan Mounted on Drive Pulley
Ground Travel Speed	
Forward m.p.h. (km/h)	0-5 (0-8) Infinitely Variable
Reverse m.p.h. (km/h)	0-2 (0-3) Infinitely Variable
BLADE DRIVE	
PTO Shaft	Quick Disconnect Splined Shaft with Two (2) High-Speed U-Joints
Blade Spindle	Each Blade (2) Mounts Direct on Peerless Right Angle Gearbox with Tee Gearbox in Center Connected to PTO Shaft (Complete Geared Drive, Peerless Model 1000 Gearboxes)
Blade Drive Clutch and Brake	Manual Belt Tightener Clutch and Band Brake (Stops Blades within Five (5) Seconds of Disengagement)
Max. Blade Speed [25 in. (64 cm) Blade] @ 3600 RPM Engine	2400 RPM [15700 FPM (4785 m/min)] (48" Deck)
TIRE SIZE	
Deck Caster Wheel	2.80/2.50-4 Pneumatic (4-Ply)
Deck Caster Wheel (Optional)	8.25 x 2.75 Foamed Rubber
Drive	18 x 8.50-10 (Low-Profile)
Rear	2.80/2.50-4 Pneumatic (4-Ply)
Rear Wheel (Optional)	8.25 x 2.75 Foamed Rubber
TIRE PRESSURE	
Deck Caster Wheel	20 PSI (137 kPa)
Drive	15 PSI (103 kPa)
Rear	20 PSI (137 kPa)
DIMENSIONS (Tractor and Mower)	
Length	80 in. (203 cm)
Width	48-3/4 in. (124 cm)
Height	44-3/4 in. (114 cm)
Wheel Base (Tractor)	22 in. (56 cm)
Tread Width (Tractor)	29-1/4 in. (74 cm)

Specifications

MODEL	MW
MOWER DECK	
Width of Cut	36-, 42-, 48-, 52-, or 56-in.(91, 107, 122, 132, or 142 cm)
Cutting Height	1 to 4 in. (3 to 10 cm)
Height Adjustment	7 Positions - 1/2 in. (1 cm) Increment Hitch Pins Installed in Multi-Position Deck Support
Blade Size	
42 in. (107 cm)	22 in. (56 cm) 2 in. (5 cm) Center Overlap (Two Blades, CW Rotation)
48 in. (122 cm)	48 in. (122 cm) 25 in. (64 cm) 2 in. (5 cm) Center Overlap (Two Blades, CW Rotation)
Deck Suspension	Torsion-Flex Frame with Caster Wheels and Counterweight Springs

CURB WEIGHT (Approximate)

Tractor Only	370 lb (168 kg)
Tractor and Deck	520 lb (236 kg)

* Dimensions and weight shown are for 48 in. (122 cm) SD Deck (Typical)

DRIVE BELTS

Engine PTO	Walker P/N 9230
Ground Drive	Walker P/N 9248

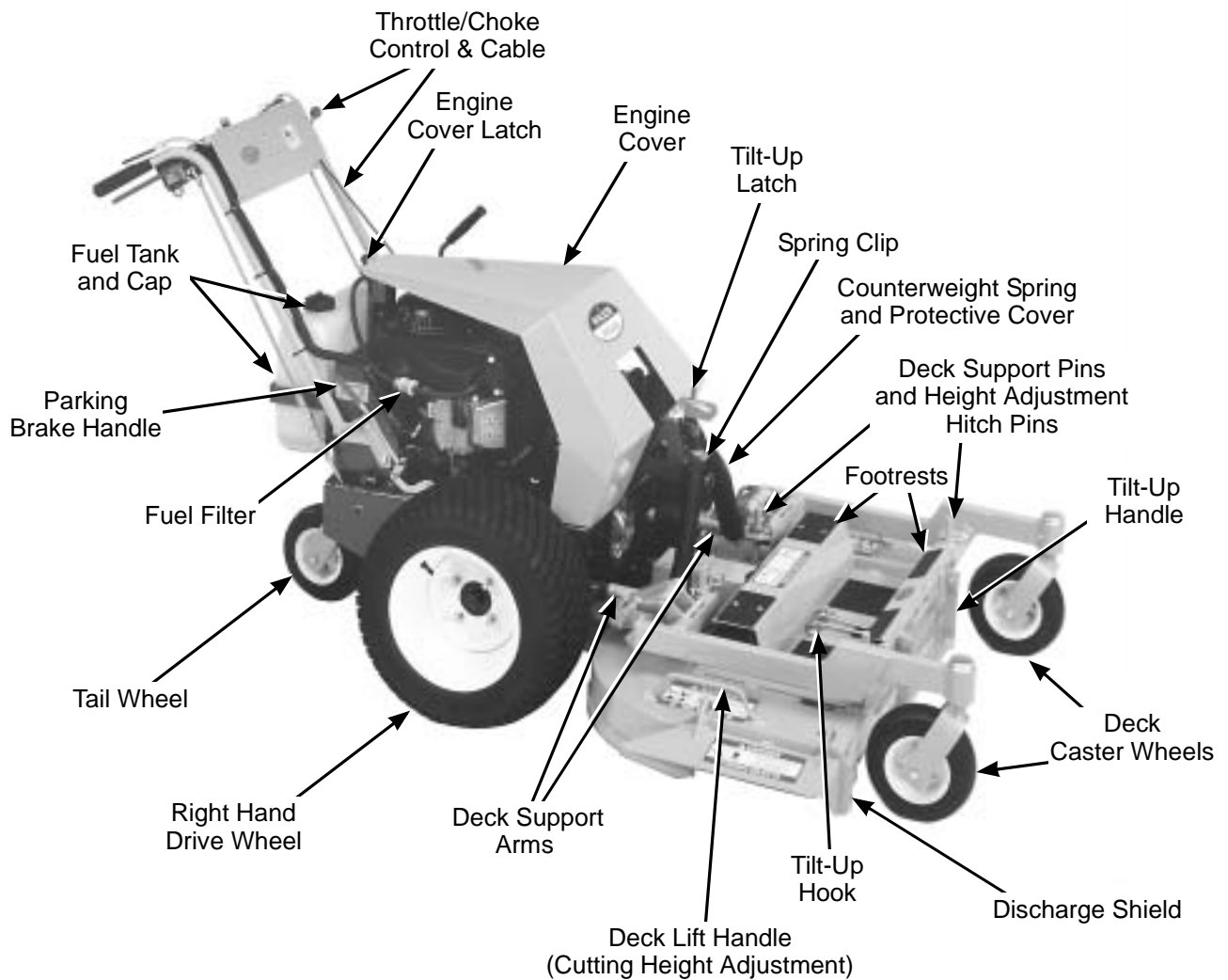
FRAME/BODY CONSTRUCTION

Frame/Body	3/16 Plate Steel
Deck	11 Gauge Steel

NOTE: The manufacturer reserves the right to make changes in specifications shown herein at any time without notice or obligation.

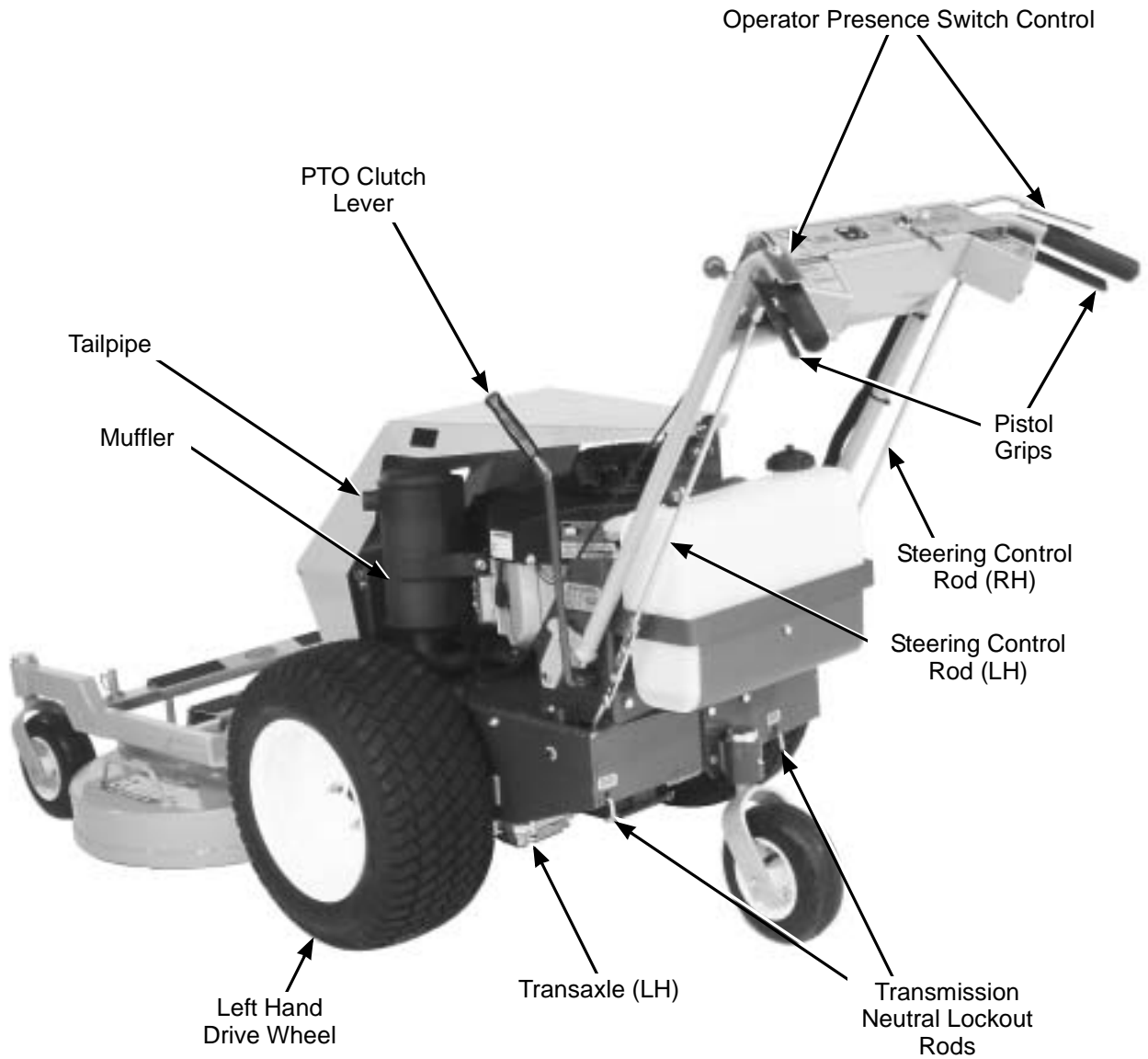
Component Identification

NOTE: Control Identification shown in **Operating Instructions** section.



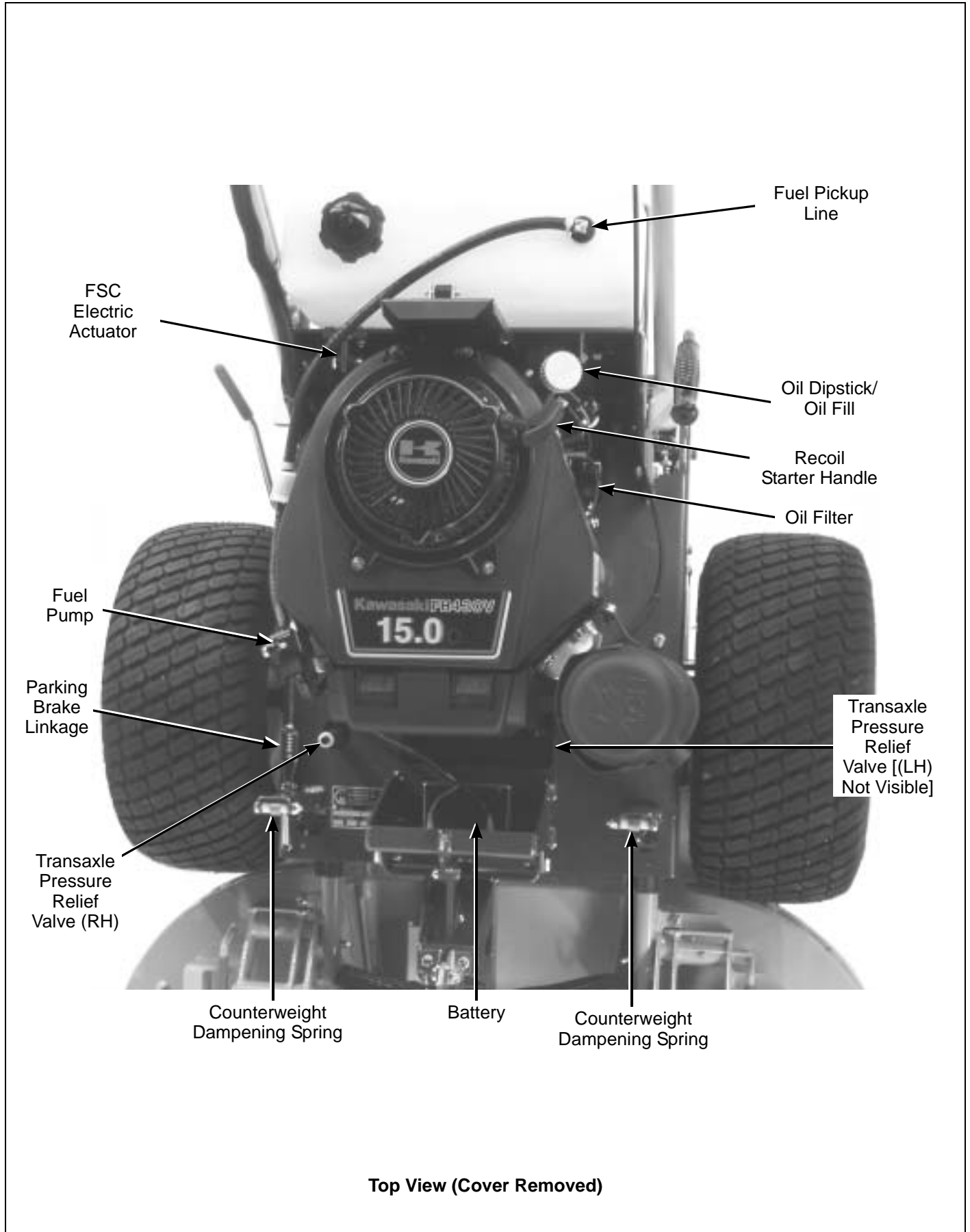
Front View and Right Side View

Component Identification




Rear View and Left Side View

Component Identification



Safety Instructions

Pay particular attention to any information labeled **DANGER**, **WARNING**, **CAUTION**, **IMPORTANT**, and **NOTE** in this manual.

When you see the Safety Alert Symbol (), read, understand, and follow the instructions. Failure to comply with safety instructions may result in personal injury.

The seriousness or degree of importance of each type of information is defined as follows:

DANGER

An **IMMEDIATE** hazard that **WILL** result in severe personal injury or **DEATH**, if warning is ignored and proper safety precautions are not taken.

WARNING

A **POTENTIAL** hazard that **COULD** result in severe personal injury or **DEATH**, if warning is ignored and proper safety precautions are not taken.

CAUTION

Possible hazards or unsafe practices that **MAY** result in **MODERATE** personal injury or property damage, or machine damage, if warning is ignored and proper safety precautions are not taken.

IMPORTANT: Identifies mechanical information demanding special attention, since it deals with the possibility of damaging a part or parts of the machine.

NOTE: Identifies information worthy of special attention.

Walker Manufacturing cannot predict every potentially dangerous situation. Therefore, items labeled as such in this manual do not cover all conceivable situations. Any person using procedures, tools, or control techniques not recommended by Walker Manufacturing must take full responsibility for safety.

The mower has been designed with many safety features to protect the operator from personal harm or injury. However, it is necessary for the operator to use safe operating procedures at all times. **Failure to follow safety instructions contained in this manual may result in personal injury or damage to equipment or property.**

If you have any questions concerning setup, operation, maintenance, or safety, please contact your authorized Walker Mower Dealer or call Walker Manufacturing Company at (970) 221-5614.

BEFORE OPERATING

1. **Read and understand the contents of this Owner's Manual before starting and operating the machine.** Become thoroughly familiar with all machine controls and how to stop the machine and disengage the controls quickly. Replacement Owner's Manuals are available by sending the Model and Serial Number to:

Walker Manufacturing Company
5925 East Harmony Road
Fort Collins, CO 80528

2. **Never allow children to operate the machine.** Do not allow adults to operate without proper instruction.
3. The mower should be operated by one (1) person at a time (do not give rides on the engine cover).
4. Keep everyone, especially children and pets, a safe distance away from the area being mowed. **Do not operate with bystanders in the area.**
5. Do not operate the machine wearing sneakers, tennis shoes, or similar lightweight footwear. **Wear substantial protective footwear that will improve footing on slippery surfaces.**
6. Ground cover or leaves can sometimes hide objects that might cause damage to the mower or make unstable footing for the operator. Clear the area of objects and mark all sprinkler heads and/or utility box covers.

Safety Instructions

7. Do not wear loose fitting clothing that could get caught in moving parts. **Always wear adequate protective clothing** including long pants. Wearing safety glasses and safety shoes is advisable and required by some local ordinances and insurance regulations.
8. Prolonged exposure to loud noise can cause impairment or loss of hearing. **Operator hearing protection is recommended.** Wear a suitable hearing protective device, such as earmuffs or earplugs.
9. **Keep all protective shields and safety devices in place.** If a protective shield, safety device, or decal is damaged, unusable, or missing, repair or replace it **before** operating the machine.
10. **Be sure interlock switches are functioning correctly** so the engine cannot be started unless the Forward Speed Control switch is in the **NEUTRAL-PARK** position and the PTO clutch is in the **DISENGAGED** position. Also, the engine should stop if the operator lifts their hands off the operator presence control with the PTO clutch in the **ENGAGED** position and/or moving forward (FSC switch out of neutral).
11. **Never attempt to make any adjustments while the engine is running,** except where specifically instructed to do so.
12. **Handle gasoline with care.** Gasoline is highly flammable and its vapors are explosive:
 - a. Use an approved fuel container.
 - b. Never add fuel to a running engine or hot engine (allow hot engine to cool several minutes).
 - c. Keep matches, cigarettes, cigars, pipes, open flames, or sparks away from the fuel tank and fuel container.
 - d. Always fill the fuel tank outdoors using care. Fill to about one inch from the top of the tank. Use a funnel or spout to prevent spilling.
 - e. Replace the machine fuel cap and container cap securely and clean up any spilled fuel before starting the engine.

13. The electrical system battery contains sulfuric acid. Avoid any contact with skin, eyes, and clothing. Keep the battery and acid out of reach of children.

OPERATING

1. **Operate the mower only in daylight** or in good artificial light with good visibility of the area being mowed.
2. Keep feet behind the tractor at all times and always maintain secure footing when the tractor is moving and/or mower blades are operating.
3. Use extreme caution when reversing the machine towards you.
4. For a beginning operator, **learn to steer (maneuver) the tractor with a slow engine speed before attempting any mowing operation.** Be aware that, with the front mounted mower configuration, the back of the tractor can raise off the ground slightly when going into reverse at high speeds.
5. Remember, for an emergency stop, the forward motion of the tractor can always be stopped by allowing the operator presence control (on top of handle bars) to raise up.
6. Disengage the blade clutch and put the FSC in the **NEUTRAL-PARK** position before starting the engine (an ignition interlock switch normally prevents starting of the machine if these controls are in the **OPERATING** position).
7. **Do not run the engine in a confined area without adequate ventilation.** Exhaust fumes are hazardous and can be deadly.
8. Watch for holes, rocks, and roots in the terrain and for other hidden hazards. When mowing tall grass, mow higher than desired to expose any hidden obstacles. Then, clean the area and mow to the desired height.
9. **Avoid sudden starts or stops.** Before backing the machine up, look to the rear to be sure the area behind you is clear of obstacles. Watch carefully for traffic when crossing or working near roadways.

Safety Instructions

10. Disengage the blade drive when transporting the machine across drives, sidewalks, etc. **Never raise the mower deck while blades are rotating.**
11. **The maximum recommended side slope operating angle is 20 degrees or 33% grade.** When operating the machine on a slope, reduce ground speed and use caution to start, stop, and maneuver. To prevent tipping or loss of control of the machine, avoid sharp turns or sudden changes in direction.
12. **Never adjust cutting height with the engine running.** Before adjusting cutting height or servicing, disengage the blade clutch (PTO), stop the engine, and remove the ignition key. Wait for all movement to stop before leaving the operator position.

NOTE: A blade brake should normally stop drive line rotation within five (5) seconds of disengaging the PTO clutch.
13. For side discharge mower decks, **do not operate with the grass deflector chute removed.** Keep the deflector in the lowest possible position.
14. For tractors equipped with tilt-up deck, **do not move tractor with deck in tilt-up position.**
15. **In case of a clogged or plugged mower deck:**
 - a. **Disengage the blade clutch (PTO) and turn the engine off before leaving the operator position (behind the handles).**
 - b. **LOOK** to make sure blade drive shaft movement has stopped before trying to unclog the deck.
 - c. Disconnect the spark plug wires.
 - d. Never place hands under the deck - use a stick or similar tool to remove clogged material.
16. If the cutting blades strike a solid object or the machine begins to vibrate abnormally, **immediately disengage the blade clutch (PTO), stop the engine, and wait for all moving parts to stop.** To prevent accidental starting, disconnect the spark plug wires. Thoroughly inspect

the mower and repair any damage before re-starting the engine and operating the mower. Make sure cutter blades are in good condition and blade nuts are torqued to 60 ft-lb (81.3 N·m).

17. **Do not touch the engine, engine cover, or muffler while the engine is running** or immediately after stopping the engine. These areas may be hot enough to cause serious burns.
18. When leaving the machine unattended, **disengage the blade clutch (PTO), stop the engine, and remove the key.**

MAINTENANCE

1. To prevent accidental starting of the engine when servicing or adjusting the machine, remove the key from the ignition switch and disconnect the spark plug wires.
2. **To reduce fire hazards,** keep the engine free of grass, leaves, excessive grease, and dirt.
3. Keep all nuts, bolts, and screws tight to ensure the machine is in a safe, working condition. Check the blade mounting nuts frequently, making sure they are tight.
4. **Perform only maintenance instructions described in this manual.** Unauthorized maintenance operations or machine modifications may result in unsafe operating conditions.
5. If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing away from moving parts. **Do not wear jewelry or loose clothing.**
6. **Always use the proper engine service manual when working on the engine.** Unauthorized maintenance operations or modifications to the engine may result in unsafe operating conditions.
7. Altering the equipment or engine in any manner which adversely affects its operation, performance, durability, or use will **VOID the warranty** and may cause hazardous conditions.
8. Never attempt to disconnect any safety devices or defeat the purpose of these safety devices.

Safety Instructions

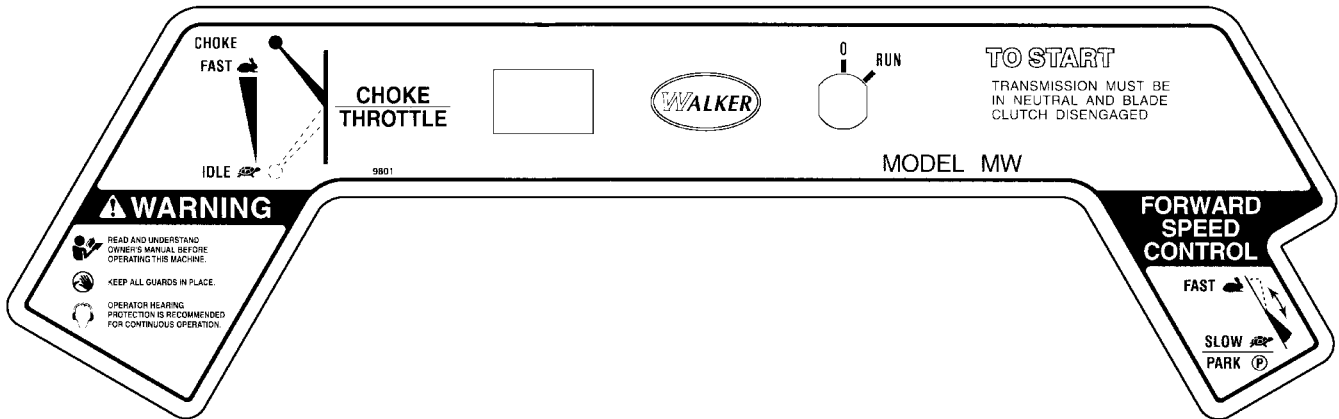
9. Do not change the engine governor settings or overspeed the engine. The governor has been factory-set for maximum-safe engine operating speed.
10. **Use genuine factory replacement parts.** Substitute parts may result in product malfunction and possible injury to the operator and/or others.
11. **Use care when charging the battery** or performing maintenance on the battery and electrical system:
 - a. Make sure the battery charger is unplugged before connecting or disconnecting cables to the battery.
 - b. Charge the battery in a well-ventilated space, so gases produced while charging can dissipate.
 - c. Keep sparks, flames, and smoking materials away from the battery at all times. To avoid sparks, use care when removing battery cables from posts.
 - d. Disconnect both battery cables before unplugging any wiring connectors or making repairs on the electrical system.

IMPORTANT: Keep all applicable manuals immediately accessible to anyone who may operate or service this machine.

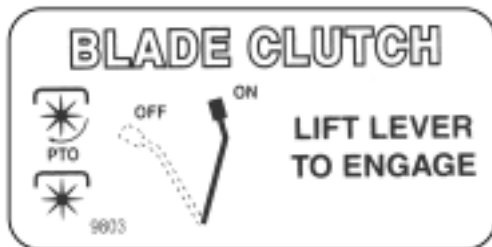
Safety Instructions

SAFETY, CONTROL, AND INSTRUCTION DECALS

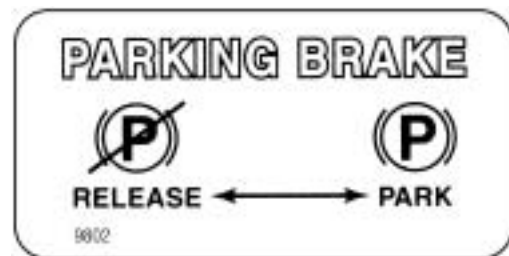
Safety, Control, and Instruction Decals are installed on the machine; if any are missing, illegible, or damaged, a replacement should be ordered and installed before putting the machine into operation. The Decal Part Number is listed below and in the Parts List.



Control Panel (Walker P/N 9801)



On Body Adjacent to Clutch Control Lever (P/N 9803)



On Body Adjacent to Parking Brake Lever (P/N 9802)



On Rear of Body Above Neutral Lockout Arms (2) (P/N 9804)

Assembly Instructions

SETUP INSTRUCTIONS

Walker Mowers are shipped partially assembled. After uncrating the tractor and mower deck, initial setup is required.

NOTE: During the process of unpacking, any damaged or missing parts should be noted and reported to the delivering carrier immediately (put in writing within 15 days). The carrier will provide directions for proceeding with a claim to receive compensation for damage.

Tire Installation (Tractor)

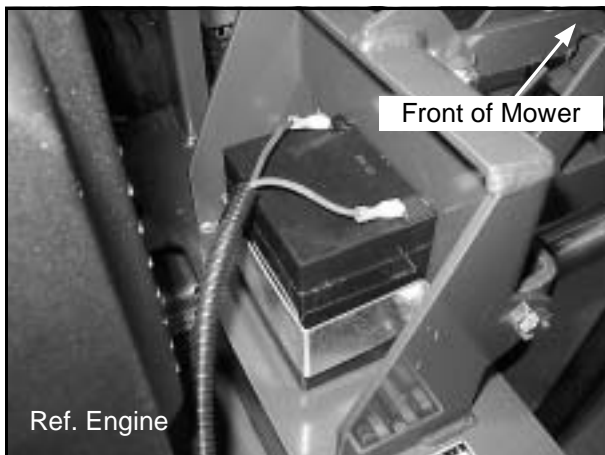
- Install the drive tires using the eight (8) lug bolts that are supplied with the owner's packet of materials. Drive tires are 18 x 8.50-10, 4-ply; rear tire is 2.80/2.50-4 Pneumatic (4-Ply).
- Check and adjust the inflation of the tires. The tire inflation recommendations are:

Drive = 15 PSI (103 kPa)
Rear = 20 PSI (137 kPa)

Battery Service

The battery is a completely sealed, non-serviceable battery.

IMPORTANT: Make sure battery is securely mounted in the frame. A loose battery may cause damage to the case resulting in acid leakage and severe damage to the machine. A hazard may be created by damage to critical working parts and safety systems.



Battery Location

Battery Charging



BATTERIES PRODUCE EXPLOSIVE GASES

- Charge the battery in a well-ventilated area, so that gases produced while charging can dissipate.
- Keep sparks, flames, and smoking materials away from the battery at all times.
- Make sure the battery charger is unplugged before connecting or disconnecting cables to the battery.

Limit initial charging current to 1000mA. Charge until battery voltage (under charge) reaches 14.40 to 14.70 volts at 68°F (20°C). Hold at 14.40 to 14.70 volts until current drops to approximately 50mA. Battery is fully charged under these conditions, and charger should be disconnected.

NOTE: Due to the self-discharge characteristics of this type of battery, it is imperative that it be charged after 6-9 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Assembly Instructions

Mower Deck Assembly

Deck Caster Wheels Installation

1. Remove the bolt, nut, axle spacer tube, and spacer washers from each deck caster wheel fork.

NOTE: Spacer washers are used only when the optional semi-pneumatic deck wheels (8.25 x 2.75) are installed.

2. Fit the axle spacer tube through the wheel hub, position the spacer washer on each side of the hub (if used), and fit the assembly into the wheel fork.
3. Insert the 3/8-16 x 4-1/2 in. bolt through the wheel fork with the bolt head to the outside and install the 3/8-16 in. Keps nut.
4. Tighten the bolt and nut until the axle spacer tube bottoms against the inside of the wheel fork (will not turn) while the wheel and spacer washers (if used) spin freely without binding.



Deck Caster Wheel Installation

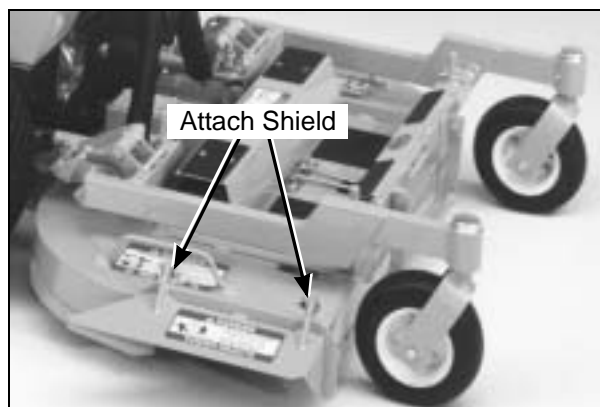
Deck Discharge Shield Installation (Side Discharge Models Only)

Attach the deck side discharge shield by positioning the shield hinge lug in front of the deck mount and fastening with two 3/8-16 x 1-1/4 in. bolts, 3/8-16 ESNA nuts, and 3/8 in. wave spring washers. The wave washers fit between the two hinging surfaces. Tighten the nuts until the shield moves freely but is not loose.



WARNING

DO NOT operate the machine without the grass deflector chute attached and in the lowest possible position.

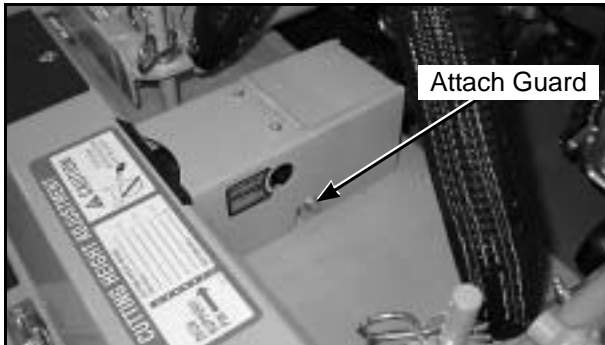


Deck Discharge Shield Installation

Assembly Instructions

PTO Shaft Guard Installation

Position the shaft guard as shown and mount with two 1/4-20 x 1/2 in. bolts.

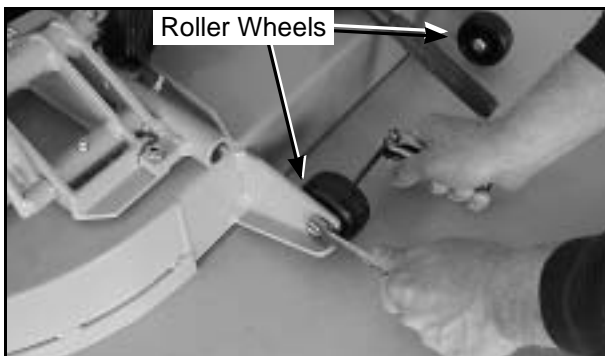


PTO Shaft Guard Installation

Tilt-Up Roller Wheel Installation

NOTE: A 2-1/2" diameter tilt-up roller wheel (P/N 9772) is required for decks installed on the walk-behind.

Mount the two (2) tilt-up roller wheels on the brackets on the rear skirt of the deck housing using the P/N 8490 axle bolt, 3/8 in. wave spring washer and 3/8-16 in. Whiz locknut. Tighten the axle bolt until the wheel rolls freely, but is not loose.



Tilt-Up Roller Wheel Installation

Mower Deck Installation on Tractor

Deck Installation

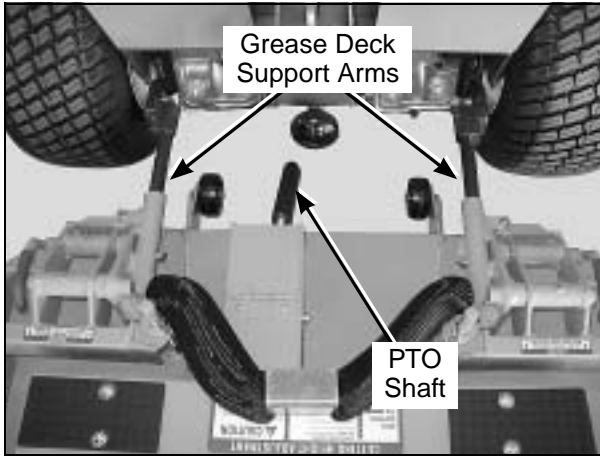
1. Lightly grease each deck support arm (2) on the tractor. Refer to **Mower Deck Installation** photo for location of deck support arm.
2. Engage the deck carrier frame tube sockets on the tractor support arms. Slide the deck onto the support arms.

NOTE: When installing the DSD52 Mower deck, make sure to retract the dolly wheel after mounting the deck on the tractor.

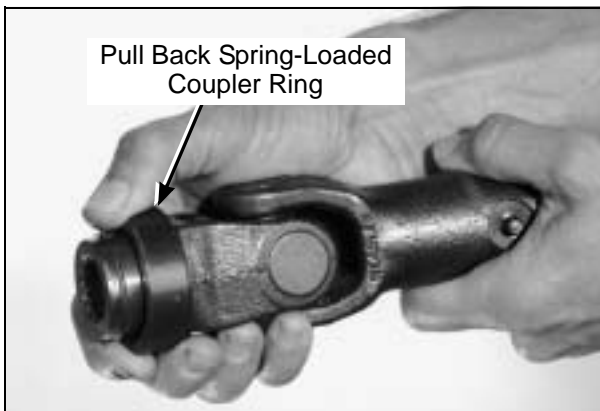
3. Install the hitch pin through the hole on the end of each support arm to lock the deck in place (refer to **Counterweight Spring Receptacle Assembly** photos). Two (2) hitch pins are included in the owner's packet of materials.
4. Connect the mower deck PTO drive shaft assembly to the tractor with the splined quick disconnect coupler. This coupler simplifies shaft alignment and installation.
 - a. Use the arrows on the shaft and tube to align and slide the PTO quick coupler onto the deck splined shaft.
 - b. Reaching under the tractor, pull the ring back on the coupler, slide onto the spline shaft on the tractor, and release the ring.

IMPORTANT: To prevent damage to the mower, make sure the PTO shaft assembly is securely locked on the tractor, with the locking balls fully seated in the groove and the ring in the full forward position (refer to the **Coupler Ring "Locked" Position** photo). After installation, pull on the shaft to check for security.

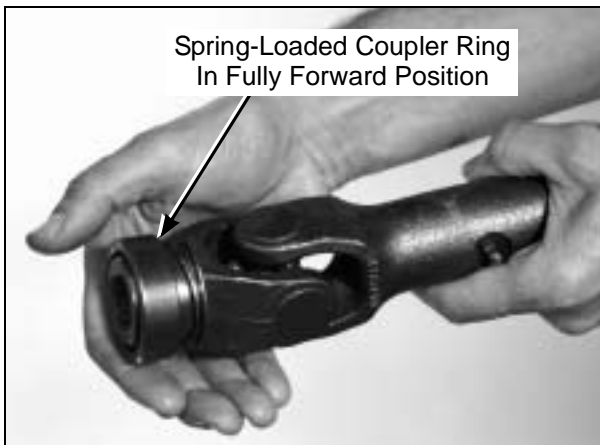
Assembly Instructions



**Mower Deck Installation
(PTO Shaft Connection)**

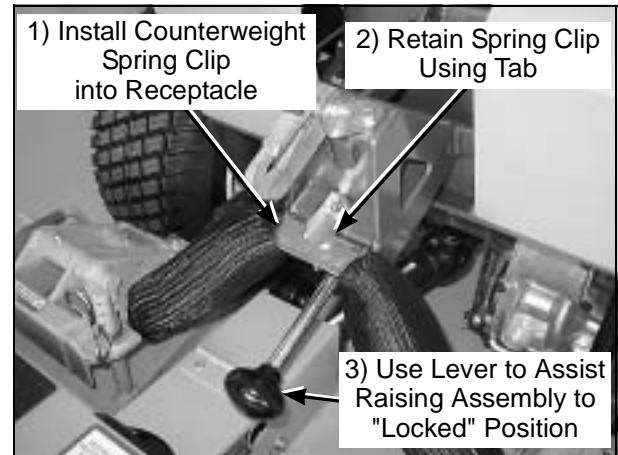


Installing PTO Quick Coupler

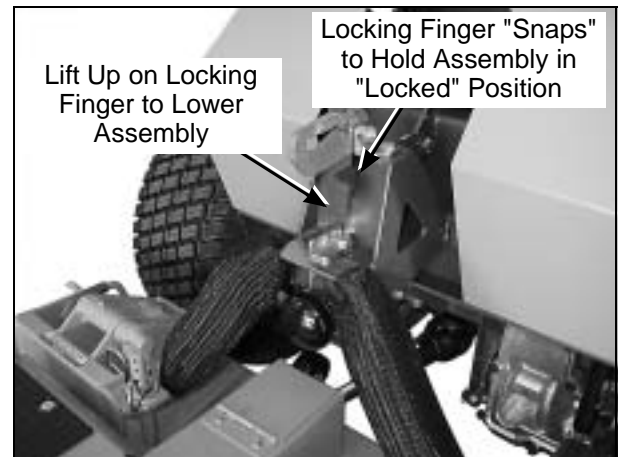


Coupler Ring "Locked" Position

5. Pull out counterweight spring receptacle assist handle and lift up on locking finger slightly to unlock the receptacle assembly. Lower this assembly toward the deck and attach the counterweight springs to the receptacle. Raise the assist handle until the assembly locks into the raised position to tension the springs



Counterweight Spring Receptacle Assembly in "Unlocked" Position



Counterweight Spring Receptacle Assembly in "Locked" Position

6. With the counterweight springs connected, the weight on the deck caster wheels should be 15 to 25 lb (7 to 11 kg). Check this weight by lifting on the front of the deck carrier frame. If required, the spring tension can be adjusted by tightening or loosening the elastic stop nuts located underneath the lower spring hook.

Assembly Instructions

Deck Leveling

1. Position mower on a smooth, level surface. Set the cutting height to the highest position - 4 in. (102 mm) - for easy access under the deck to measure blade height. Refer to **ADJUSTING CUTTING HEIGHT** in **Operating Instructions**.

NOTE: A block of wood cut **4 in. (102 mm)** high is a convenient gauge to measure blade height above ground during the leveling process.

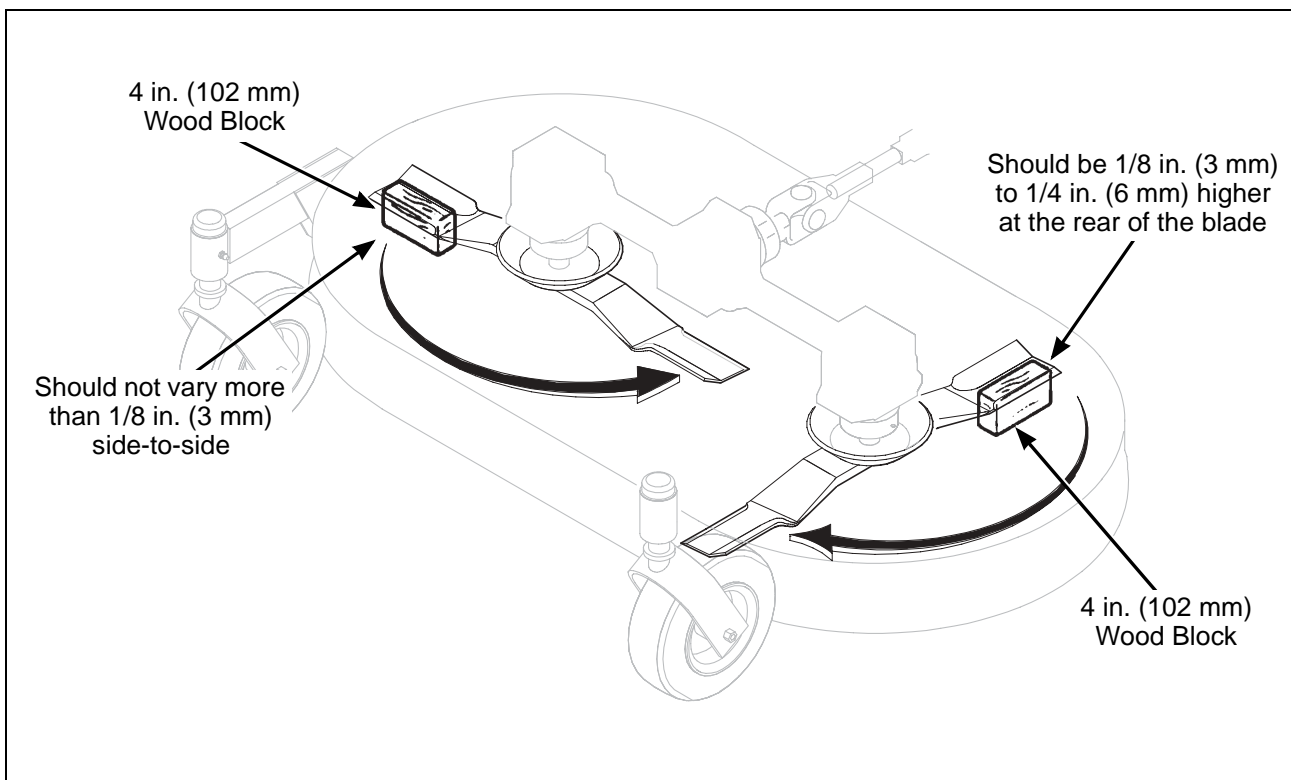


WARNING

The machine must be shut off during this procedure.

2. Check the side-to-side level. **Rotate each blade sideways** and measure the distance from blade tip to ground on each side. If measurements vary more than 1/8 in. (3 mm), add a washer shim under the deck support pins on the low side to level the deck.
3. Check the front-to-rear level. **Rotate the blades to point forward**. Measure the distance from blade tip to ground on the front and rear. The rear of the blade should be 1/8 to 1/4 in. (3 to 6 mm) higher than the front of the blade; shim the rear (or front) deck support pins equally to achieve **at least** 1/8 in. (3 mm) difference.

NOTE: The mower deck and support frame are jig welded; within normal tolerances, very little, if any, shimming should be required to level the deck. Tire pressure will influence the levelness of the deck. Check the tire pressure as a possible cause of the deck not being level.



Deck Leveling

Assembly Instructions

PREOPERATING CHECKLIST

Before operating the mower for the first time, and as a routine before daily operations, it is important to make sure the mower is properly prepared and ready for operation. The following is a list of items to be checked. (For a mower with frequent operation, some of these items will not need to be checked every day, but the operator should be aware of the condition of each.)

For proper fuels and lubricants refer to **Specifications**.

FILL FUEL TANK

Fill the fuel tank using clean, fresh automotive grade **unleaded** gasoline (87 octane rating minimum).



DANGER

Handle gasoline with care. Gasoline is highly flammable and its vapors are explosive. Use safe refueling procedures:

- **DO NOT** fill fuel tank with the engine running.
- If the engine is hot, allow to cool before refueling.
- Use an approved fuel container.
- Fuel the mower outdoors.
- **DO NOT** smoke while refueling.
- Avoid spilling fuel; use a funnel or spout.
- **DO NOT** overfill the fuel tank; fill up to about 1 in. (25 mm) below the top of tank.

IMPORTANT: **DO NOT** permit dirt or other foreign matter to enter the fuel tank. Wipe dirt from around the filler cap before removing. Use a clean fuel storage container and funnel.

IMPORTANT: **DO NOT** mix oil with gasoline. Always use fresh, automotive grade gasoline. **DO NOT** use premium, white, or high-test gasoline. **DO NOT** use additives, such as carburetor cleaners, decifiers, or moisture removing agents. **DO NOT** use gasoline blended with methyl alcohol.

CHECK ENGINE CRANKCASE OIL LEVEL

Check the engine crankcase oil level before use and **after each 5 hours** of continuous operation. Refer to **LUBRICATION** for *Checking Engine Crankcase Oil Level* in **Maintenance Instructions**.

CHECK AND SERVICE ENGINE AIR CLEANER SYSTEM

- Check condition, cleanliness, and security of the air cleaner system (clean air filter **every 100 hours**). For detailed procedures, refer to **CLEANING** the **Engine Air Cleaner System** in **Maintenance Instructions**.

ADJUST CARBURETOR (Initial Start-up Only)

Refer to **ADJUSTMENTS** of **Carburetor** in **Maintenance Instructions**.

CHECK ENGINE COOLING SYSTEM

Check condition and cleanliness of engine air intake screen located on top of engine. For detailed procedures, refer to **CLEANING** the **Engine Cooling System** in **Maintenance Instructions**.

Assembly Instructions

- INSPECT TWO (2) DRIVE BELTS

PTO Drive and Hydrostatic Ground Drive.

- CHECK TIRE PRESSURE

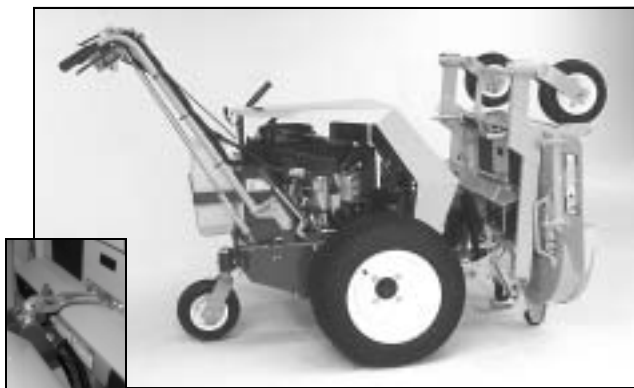
Deck Caster Wheel = 20 PSI (137 kPa)

Drive = 15 PSI (103 kPa)

Rear = 20 PSI (137 kPa)

- CHECK AND CLEAN GRASS BUILDUP UNDERNEATH MOWER DECK

The tilt-up deck can be secured in the raised position by unlocking the deck lock levers on each side of the carrier frame and inserting the deck hook into the tilt-up latch on the tractor body. Before operating the tractor, make sure to re-engage the deck lock levers after lowering the deck to the normal operating position.



Deck Secured in TILT-UP Position

DANGER

Do not operate the mower with deck in tilt-up position. Do not move the tractor with the deck in the tilt-up position.

DANGER

With the deck in the tilt-up position, the U-joint tube and shaft may separate. Check after lowering deck and before operating.

DANGER

Never operate cutter blades with deck in raised position because it is hazardous.

CAUTION

Do not operate machine with deck tilt-up pivot joint unlocked.

- CHECK MOWER BLADE CONDITION, SHARPNESS, AND SECURITY OF MOUNTING

The blade mounting nut should be tightened to 60 ft-lb (81.3 N·m). If blade sharpening is required, refer to **CHECKING/SERVICING** for **Sharpen Mower Blades** in **Maintenance Instructions**.

- ADJUST MOWER CUTTING HEIGHT, IF REQUIRED

Position the hitch pins in the four deck support pins. Refer to the "Cutting Height Adjustment" decal on the deck gearbox cover.

- PERFORM ANY ADDITIONAL PROCEDURES called for on the **MAINTENANCE SCHEDULE CHART** in **Maintenance Instructions**.

Operating Instructions

CONTROL IDENTIFICATION, LOCATION, AND FUNCTION

Operating Controls

CAUTION

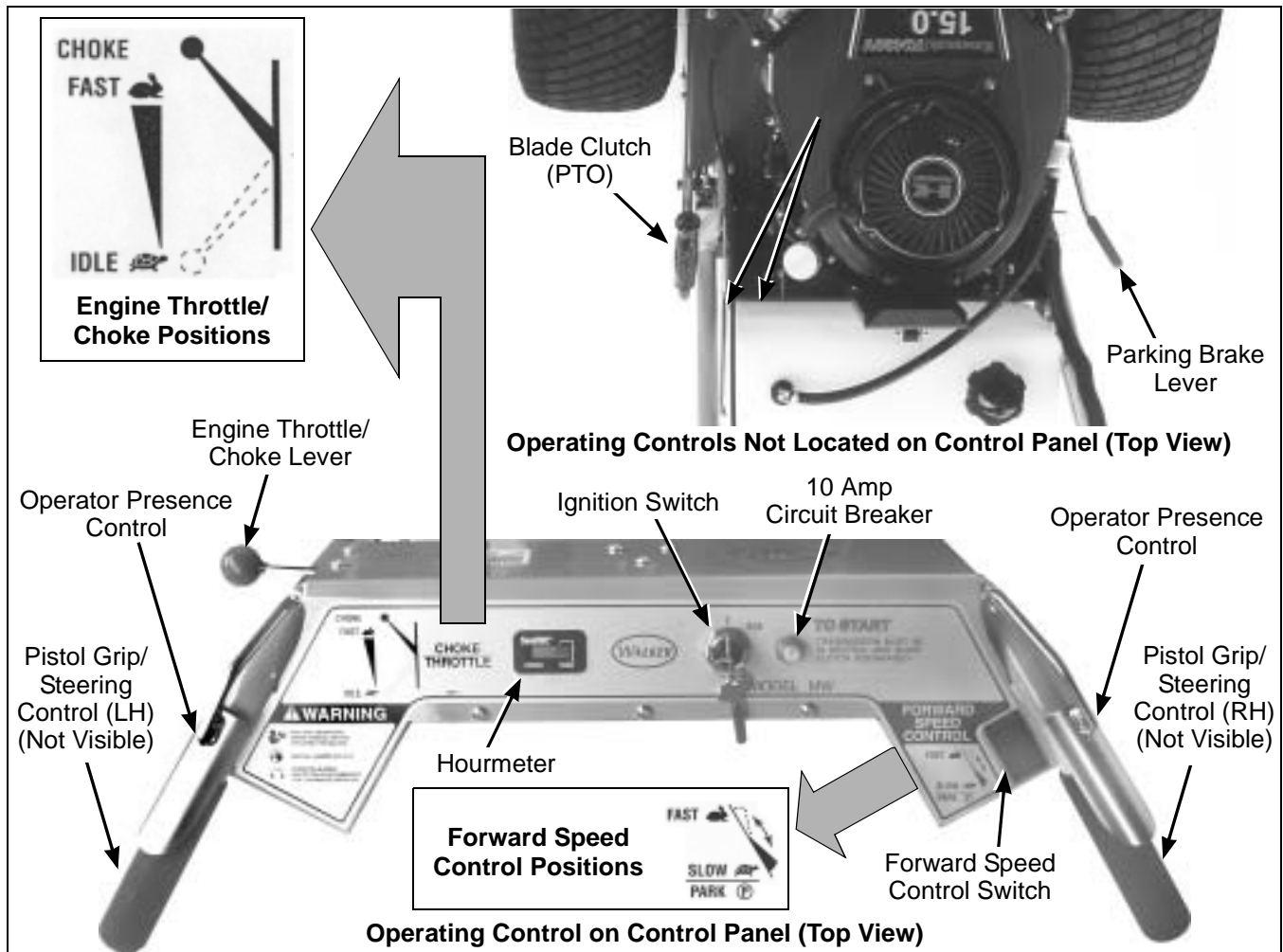
Before operating the mower, become familiar with the location and function of all operator controls. Knowing the location, function, and operation of these controls is important for safe and efficient operation of the mower.

Engine Throttle/Choke

The throttle/choke control lever (red knob) is located to the left hand side of the operator's control panel. This control is a dual-functioning control (choke and throttle). The control is equipped with a detent between the choke position (full forward) and the throttle control range.

To start a cold engine, push the control to the **CHOKE** position. After the engine starts, pull the control back past the detent into the **THROTTLE CONTROL** range. A warm engine requires little or no choke for starting.

Moving the lever **forward** into the **FAST** position **increases** engine speed; moving it **backward** toward the **IDLE** position **decreases** engine speed.



Operating Controls

Operating Instructions

IMPORTANT: Make sure the choke is in the **OFF** position during normal engine operation; running with the choke in the **ON** position **CAN** damage the engine.

Forward Speed Control (FSC)

The Forward Speed Control (FSC) is a rocker switch located adjacent to the RH thumb position near the RH pistol grip.

This rocker switch controls an electric actuator that has two functions: One is to set forward travel speed, and the other is to establish the **NEUTRAL-PARK** position. When the FSC switch is moved into the **FORWARD** position, it sets the forward speed from 0 to 5 mph (0 to 8 km/h). The ground speed is proportional to how long the rocker switch is held forward; the longer the switch is held forward, the faster the tractor moves. It is not necessary to hold the FSC switch in position since the electric actuator maintains the selected position. Squeezing the pistol grips/steering control levers overrides the FSC setting and slows or stops forward travel. Releasing the pistol grips/steering control levers allows the tractor to resume forward travel at the speed set by the FSC switch. To stop and park the machine, the FSC switch is depressed backward until the **NEUTRAL-PARK** position is achieved.

Pistol Grips/Steering Control Levers

Each drive wheel is controlled by its own independent pistol grip (located below the operators handles), for both steering function and **FORWARD/REVERSE** motion. The FSC switch sets the maximum forward speed, and also sets the forward position of the pistol grips. The pistol grips operate **only with a squeezing** movement of the grip, which causes the drive wheel for that lever to first slow down, stop, and then reverse with a full backward lever stroke. The grips are released to the **FORWARD** position for "straight-ahead" ground travel. Reverse is achieved by squeezing the pistol grips past the **NEUTRAL-PARK** position. For better control, it is recommended that this is done in conjunction with toggling the FSC switch back to the **NEUTRAL-PARK** position.

Blade Clutch (PTO)

The blade clutch lever has two positions. Pulling the lever **BACK** engages the PTO that drives the mower blades. Pushing the lever **FORWARD** disengages the PTO and engages the blade brake.

Parking Brake

The parking brake functions by locking a detent arm into the transaxle outer control gear teeth. Moving the lever **FORWARD** engages the parking brake; moving the lever **BACKWARD** releases the brake.

IMPORTANT: Stop the tractor completely before engaging the parking brake. The parking brake uses a positive mechanical lock similar to the **PARK** position on an automotive automatic transmission. If the tractor is moving when the brake is engaged, it will result in sudden stoppage and possible internal damage to the transaxle.

NOTE: If pressure on the parking brake lever is noticed when engaging the brake, move the mower gently forward or backward to allow the brake detent to set into the teeth.

Engine Cover Latch

The engine cover hinges forward for maintenance access and is latched down in the **OPERATING** position. To raise the body, unhook the rubber latch located between the fuel tank and engine.

Transaxle Lockout Rods

The transaxle lockout rods disengage the transaxles. By **pulling** the rods toward the rear of the mower and locking them into place with the shoulder on the rod in the body, the transaxles are released to permit freewheeling. By releasing the rods and pushing it back into the body, the transaxles are engaged for normal operation. The transaxle rods in the **LOCKOUT** position are used to enable moving the machine without the engine running (e.g., for service). Refer to **TRANSAXLE LOCKOUT** in this section for operating instructions.

NOTE: The transaxle lockout rods ends should be completely retracted against the body, otherwise operation of the transaxle may be erratic.

Hourmeter

The hourmeter displays **operating time** accumulated while the ignition switch is in the **ON** position with the engine running. It also gives service indications for oil changes and lubrication.

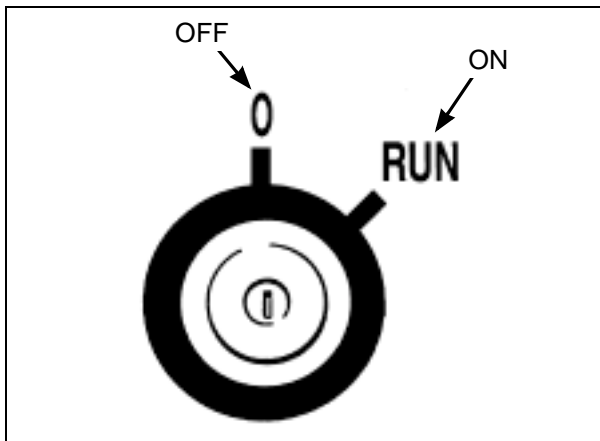
Circuit Breaker

A manual reset circuit breaker is located on the operator panel. It has a button that pops out if the circuit breaker trips. The circuit breaker protects the safety switches.

Operating Instructions

Ignition Switch

The ignition switch has two positions: a **RUN** and an **OFF** position. The **RUN** position should be used when starting (using the recoil starter) and running the engine. The **OFF** position stops the engine.



Ignition Switch

STARTING THE ENGINE

CAUTION

Before operating the mower, read and understand all Safety Instructions and Operating Instructions.

WARNING

NEVER run the engine in an enclosed or poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

1. Before attempting to start the engine, make sure the Forward Speed Control (FSC) rocker switch is in **NEUTRAL-PARK** position, and the blade clutch and parking brake are **DISENGAGED**.

CAUTION

A safety interlock switch system **PREVENTS CRANKING** the engine with either the Forward Speed Control or the blade clutch (PTO) out of neutral. If the engine cranks otherwise, the safety system is not working and should be repaired or adjusted before operating the mower. **DO NOT** disconnect safety switches; they are for the operator's protection.

2. Turn the ignition key to the **RUN** position. Move the throttle/choke lever into the **CHOKE** position.
NOTE: The choke may not be required if the engine is warm.

3. Make sure you have secure footing and pull the recoil starter handle toward you.

IMPORTANT: If the engine fails to start after approximately 5 attempts, the engine and safety switch circuit should be checked **before any further attempts**. Turn the key to the **OFF** position to begin these checks.

4. After the engine starts, gradually move the throttle/choke lever to the **THROTTLE** position, keeping enough choke on to allow the engine to run smoothly as it warms up. As soon as possible, move the lever past the detent into the **THROTTLE** position.

IMPORTANT: Make sure the choke is in the **OFF** position during normal engine operation; running with the choke in the **ON** position **CAN** damage the engine.

ADJUSTING GROUND SPEED AND STEERING

IMPORTANT: If the DSD52 Mower deck is installed on the tractor, make sure the dolly wheel is retracted **BEFORE** moving.

CAUTION

Learn to **START, STOP, and MANEUVER** the mower in a large, open area.

If the operator has not operated a machine with **DUAL TRANSAXLES** or **PISTOL GRIPS**, steering and ground operation should be learned and practiced until the operator is completely comfortable handling the machine **BEFORE ATTEMPTING TO MOW**.

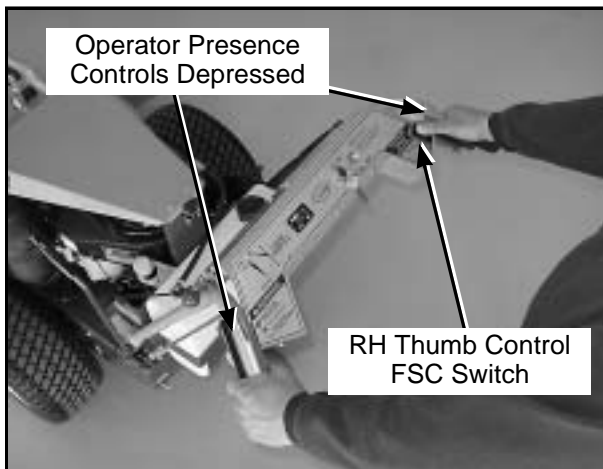
Operating Instructions

1. Place both hands on their respective grips and using your RH thumb, toggle the FSC switch out of **NEUTRAL- PARK** position to the desired forward speed. It is not necessary to hold the FSC switch in position since the electric actuator holds the selected switch position (and forward travel speed).
2. Steer by squeezing the pistol grip on the side of desired direction of turn, e.g., squeeze the **LH** grip to **turn left**.
3. Reverse direction of the mower by squeezing both grips.

NOTE: Smooth action on the pistol grips will produce smooth mower operation. Remember to keep the engine and ground speed slow until learning the control response.

4. The FSC switch may be adjusted forward for faster ground speed and backward for slower ground speed. When mowing, ground speed should be adjusted to match the load on the cutter blades, i.e., as the engine pulls down in heavy cutting, toggle back the FSC switch to reduce ground speed. Adjusting ground speed helps maintain a balance between engine power and blade speed for high-quality cutting action.
5. Stop ground travel by squeezing both pistol grips to the **NEUTRAL** position (tractor not moving) and depressing the FSC switch back to the **NEUTRAL-PARK** position.

NOTE: If the tractor creeps forward or backward with the FSC switch in the **NEUTRAL-PARK** position, the transmission control needs to be adjusted. Refer to **ADJUSTMENTS of Transmission Control** in **Maintenance Instructions**.



Correct Operator Hand Position

Beginning Recommendations are:

◆ Learn operation of the mower in an open area away from buildings, fences, and obstructions. Learn operation on flat ground **BEFORE** operating on slopes.

◆ Start maneuvering the mower with **SLOW** engine speed and **SLOW** Forward Speed Control setting until familiar with all operating characteristics.

◆ Remember the forward speed of the mower is controlled by the FSC toggle switch (a unique Walker feature); always squeeze the pistol grips for steering or for reverse motion of the mower.

◆ Learn to operate the pistol grips with smooth action. Jerky movements are hard on the transaxles and lawn. For sharp turns, do not allow the inside wheel to stop and twist on the grass. Squeeze the pistol grip controlling the inside wheel into reverse for a smooth “rolling” turn (one wheel rolling forward while the other rolls backward).

◆ Practice maneuvering the mower until you can make it go exactly where you are aiming.

◆ Remember, for an emergency stop, or in case of loss of control, the machine is equipped with an operator presence switch on the handlebars. Releasing this when the machine is driving or the PTO is engaged will make the engine shut down.

Operating Instructions

ENGAGING THE MOWER

1. Set the engine throttle at about 1/3 speed. **Do not attempt to engage the blade clutch at high engine speeds.** This will drastically shorten drive belt life. Use only moderate engine speed when engaging the blade clutch.
2. Pull the blade clutch lever **SLOWLY** up to engage the mower blades.



CAUTION

A safety interlock switch (operator presence on handle grips) will cause the engine to stop if the blade clutch is engaged and the operator presence control is not depressed. The function of this switch should be checked by the operator lifting off of the control and engaging the blade clutch; the engine should stop. If the switch is not working, it should be repaired or replaced before operating the mower. **DO NOT** disconnect the safety switches; they are for the operator's protection.

IMPORTANT: DO NOT engage the blade clutch when transporting the mower across drives, sidewalks, loose materials, etc. **DO NOT engage the blade clutch with the PTO shaft disconnected** (the mower deck removed from tractor).



CAUTION

If the cutting blades strike a stationary object while mowing, stop the mower immediately, disconnect the spark plug wires, lift the deck, and inspect the deck and blades thoroughly for damage. Make sure that the blade timing has not been disturbed (the blades should be at 90 degrees to each other on gear-driven decks). Refer to **REPLACING/REPAIRING the Blade Overload Shear Bolts** in Maintenance Instructions if blades are out of time. Also, make sure the blade retaining nuts are torqued to 60 ft-lb (81.3 N-m).



Blade Clutch Engaged



Blade Clutch Disengaged

STOPPING THE MACHINE

1. Slow the engine to a fast idle; put the throttle in the 1/2 throttle position.
2. Squeeze the pistol grips to the **NEUTRAL** position and toggle the FSC switch back to the **NEUTRAL-PARK** position.
3. Disengage the blade clutch.

IMPORTANT: DO NOT disengage the blade clutch with high engine speed (above 1/2 throttle) since the brake action on the blade drive will cause premature wear of the brake band.

Operating Instructions

CAUTION

A brake stops the cutter blades from free-wheeling within five (5) seconds after disengaging the clutch. If the brake system malfunctions and the blades do not stop within five (5) seconds, the brake should be adjusted or repaired before operating the mower. Refer to ADJUSTMENTS of Blade Clutch (PTO) in Maintenance Instructions.

4. Slow the engine to idle, put throttle in **IDLE** position; and turn the ignition switch **OFF**.

WARNING

Remove the key from the ignition switch when leaving the mower unattended. This will prevent children and inexperienced operators from starting the engine.

5. Engage the parking brake.

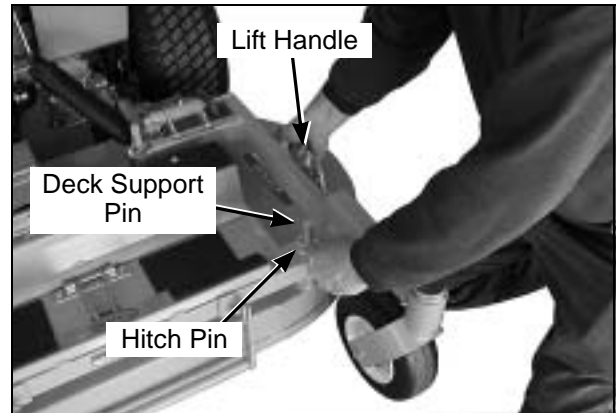
IMPORTANT: The transaxles lock to prevent the mower from rolling freely with the engine stopped. However, if the mower is parked on a slope, it is necessary to **ENGAGE** the parking **BRAKE** to prevent the mower from creeping. This is due to a small amount of slippage in the transaxles, especially when transmission fluid is warm.

ADJUSTING CUTTING HEIGHT

WARNING

The engine must be stopped before adjusting cutting height. Disengage the blade clutch (PTO), stop the engine, and remove the ignition key. Wait for all movement to stop before leaving the operator position.

Cutting height is adjusted by positioning the four-retain hitch pins in a series of seven vertical holes on the deck support pins. Lift handles have been provided on each end of the deck to assist in raising the deck while positioning the hitch pins. Cutting heights range from 1 in. (25 mm) [top holes] to 4 in. (102 mm) [bottom holes] in 1/2 in. (13 mm) increments.



Cutting Height Adjustment

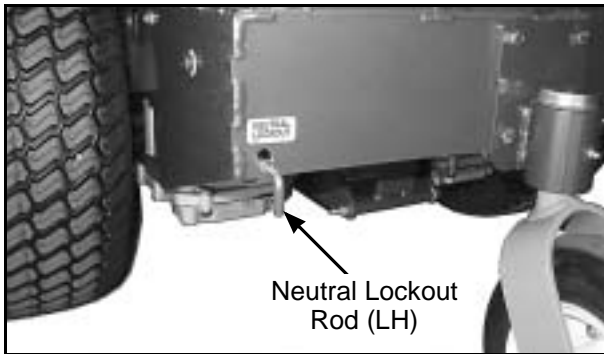
TRANSAXLE LOCKOUTS

IMPORTANT: DO NOT TOW this mower with the transaxle lockouts engaged. Towing can produce excessive internal pressure and damage the transaxle.

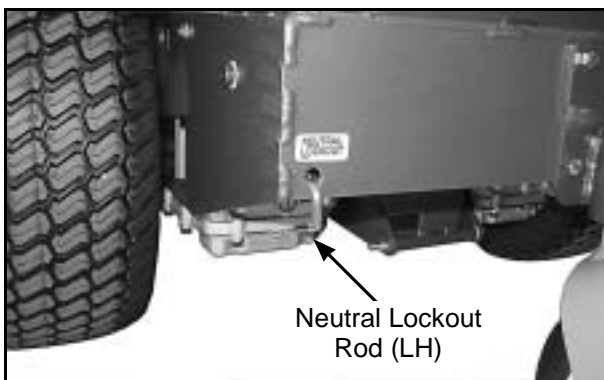
To move the mower with the engine **NOT** running (will not start, maintenance, etc.), unlock (release) the transaxles.

1. Locate each lockout rod at the rear of the mower on either side of the tail wheel below the fuel tank.
2. Pull each rod out and lock them on the body using the shouldered part of the rod.
3. The mower will "freewheel" with the rods in the **LOCKOUT** position. The rods must be shouldered on the body to completely unlock the transmissions.
4. After moving the mower, release the rods, placing them in the normal **OPERATING** position. The transmission rod ends should be completely retracted against the body, otherwise operation of the transmission may be erratic.

Operating Instructions



Freewheel Position



Operating Position

RECOMMENDATIONS FOR MOWING

IMPORTANT: Operate the engine at **full speed** when mowing, to allow the engine to produce full horsepower and to increase efficiency of the engine cooling system.

- Keep the mower deck and discharge chute clean.
- Mow with **sharp blades**. A dull blade tears the grass (resulting in poor lawn appearance) and uses extra power (slowing the mowing speed).
- It is preferable to cut grass when it is **dry and not too tall**. Mow frequently and do not cut grass too short. (For best appearance, cut off 1/3 or less of existing grass height.)
- When mowing, operate the engine at or near **full throttle** for the best cutting action and performance of the deck. Mowing with a lower engine RPM causes the mowing blade to not cut clean and tear the grass. The engine is **designed to be operated at full speed**.

- When mowing in adverse conditions (tall and/or wet grass), mow the grass twice. Raise the mower to the highest setting - 4 in. (102 mm) - for the first pass and then make a second pass cutting to the desired height.

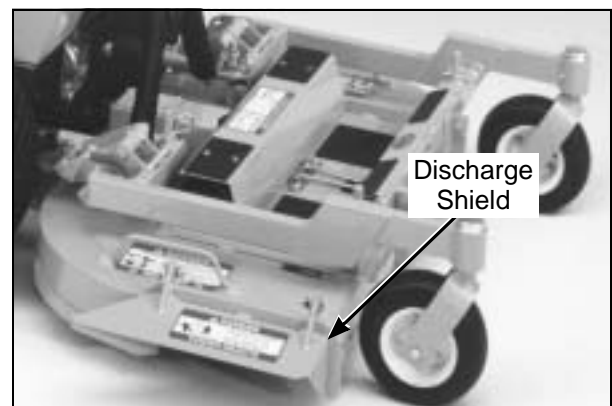
- Use a **slow** setting on the FSC for **trimming** operations.

- Make sure the mower is **leveled properly** for a smooth cut. Refer to *Deck Leveling in Assembly Instructions*.

- Use an alternating **stripe mowing pattern** for **best appearance** and vary the direction of the stripe each time the grass is mowed to avoid wear patterns in the grass.

- Avoid damage to the grass by slipping and skidding of the drive tires. Use **smooth control movements** of the pistol grips since the hydrostatic transmissions are "power boosted controls" and jerking the levers can easily slip the tires. For sharp turns, do not allow the inside wheel to stop and twist on grass; squeeze the inside pistol grip into reverse for a smooth "rolling" turn (one wheel rolling forward while the other rolls backward).

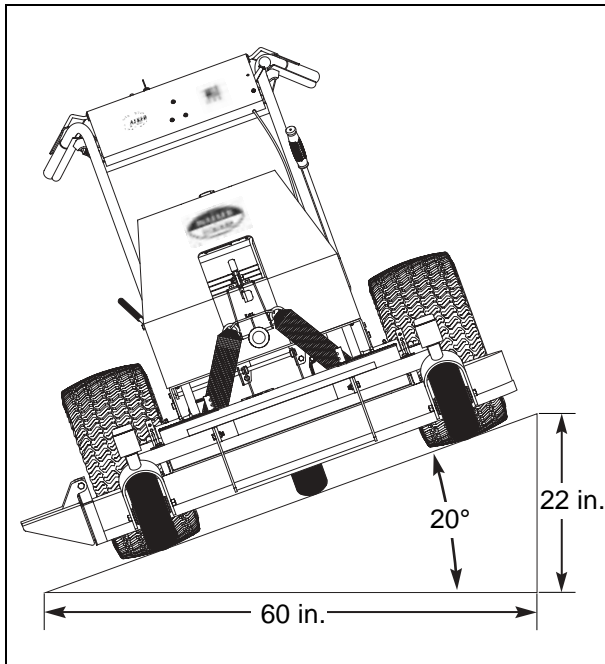
- When using a side discharge mower deck, the side discharge shield **must not be removed** and must be kept in the lowest possible position to deflect grass clippings and thrown objects downward. Orient the side discharge away from sidewalks or streets to minimize cleanup of clippings. When mowing close to obstacles, orient the side discharge away from obstacles to reduce the chance of damage to property by thrown objects.



Side Discharge Shield in Lowest Position

Operating Instructions

- When operating on a slope, **reduce speed and use caution** to start, stop, and maneuver. Avoid sharp turns or sudden changes in direction. The **maximum recommended side slope operating angle is 20 degrees or 33% grade.**



Maximum Recommended Side Slope

RECOMMENDATIONS FOR TILT-UP DECK OPERATION/TRANSPORT

To avoid potential deck and/or tractor damage while using the tilt-up deck, the following recommendations are offered:

- **Do not move the tractor** with the deck in the tilt-up position since both the roller wheels (on the back of the deck) may be damaged by moving the tractor. The tilt-up configuration should only be used when the tractor is parked.
- When transporting a tractor with the deck in the tilt-up position (on a truck or trailer), the **deck should be secured** to the vehicle with a strap or rope (stop vertical movement). This will prevent the deck from bouncing on the rear roller wheels (causing breakage).

Maintenance Instructions

IMPORTANT TIPS FOR CARE OF THE KAWASAKI ENGINE

Fuel System

- Fuel must be clean - free from water, dirt, and organic material.
- Change fuel filter on a regular basis and when contamination is suspected or found in the fuel.

Starting/Stopping

- Match crankcase oil viscosity to the ambient temperature, allowing the engine to crank faster and start easier.

Cooling System

- Operate the engine at full speed when mowing. This will allow the engine to produce full horsepower and move more cooling air through the cooling fins.

Air Cleaner System

- Use **only** Kawasaki air cleaner elements. Aftermarket elements may not seal in the air cleaner housing, allowing dirt to enter the engine. Also, aftermarket filters often skimp on the filtration media and require more frequent cleaning and replacement (see following instructions).
- **DO NOT overservice** or frequently "disturb" the **air filter**. A dirty air filter actually cleans better than a new one. Changing and cleaning the air filter too often can actually reduce filter efficiency and increase the opportunity for traces of dust to enter the engine.

- When the air filter element is removed or replaced, make sure all **dust is cleaned out** of the **air cleaner housing**. Use a damp cloth and wipe the interior of the air cleaner case clean (a little dirt left here will be sucked into the engine and reduce engine life). When the filter is installed, make sure the **element is held tight and straight** in the housing for proper seating and sealing.

Oil

- **DO NOT** screw filler cap into crankcase when checking oil level.
- Single viscosity or multi-viscosity oils may be used with the viscosity matching ambient temperatures for the engine operating conditions. This will **aid starting** in cold weather and assure proper lubrication in hot weather.
- Use only Kawasaki oil filters. **Aftermarket filters may not seal properly** and/or have the incorrect pressure relief valve for proper lubrication.

Maintenance Instructions



CAUTION

Maintenance procedures requiring special training or tools should be performed by a trained technician.

MAINTENANCE SCHEDULE CHART - RECOMMENDED SERVICE INTERVALS - MODEL MW						
Service Item	Daily	25 Hours	50 Hours	100 Hours	200 Hours	Ref. Page
Check Engine Crankcase Oil Level	x					30
Check/Clean Engine Air Intake Screen*	x					36
Check for Loose or Lost Nuts and Screws	x					N/A
Clean Grass Buildup Under Deck	x					36
Service Mower Blades	x					37
Lubricate Grease Fittings and Oil Points*		x				31
Check Tire Pressure		x				37
Check Drive Belts (PTO, Ground Drive)		x				38
Check PTO and Deck Gearbox Oil Seals		x				38
Clean Air Filter Foam Element*		x				36
Inspect Air Filter Paper Element*			x	x		36
Change Engine Crankcase Oil**				x		30
Clean and Regap Spark Plugs				x		38
Clean Engine Cooling Fins				x		36
Change Engine Oil Filter				x		30
Check Fuel Lines and Clamps					x	38
Check/Adjust Blade/Brake Action					x	39
Replace Air Filter Paper Element*					x	36
<p>* More often in extremely dusty or dirty conditions (see notes about air cleaner element in IMPORTANT TIPS FOR CARE OF KAWASAKI ENGINE)</p> <p>** Change engine oil and filter after first 8 hours of operation of a new engine (break-in period)</p>						

LUBRICATION



WARNING

DO NOT attempt to lubricate the machine with the engine running. Disengage the PTO clutch, shut off the machine, and remove the ignition key.

Proper lubrication is an important maintenance procedure. It reduces wear and makes the machine quieter and easier to operate.

Engine Oil

Engine Break-In Oil

No special break-in oil is required. The engine is serviced with 10W-30, Service Class SG oil from the factory. Change the oil after the initial engine **break-in period of 5 hours**. Thereafter, change oil **after every 100 hours** of operation or more often in extremely dusty or dirty conditions.

Checking Engine Crankcase Oil Level

Check the engine crankcase oil level before use and **after each 5 hours** of continuous operation.

IMPORTANT: The importance of checking and maintaining the proper crankcase oil level cannot be overemphasized. Check the oil level **BEFORE EACH USE**.

1. Park the mower on a **level surface with the engine stopped**. Also, make sure the engine is cool and oil has had time to drain into the sump [allow **at least five (5) minutes** after stopping the engine].

IMPORTANT: **NEVER** check or add oil with the engine running.

2. Before removing the dipstick, clean the area around the dipstick to keep any dirt or debris out of the engine.
3. Remove the dipstick, wipe off with a clean rag, then reinsert the dipstick into the tube **without screwing it in**.
4. Remove the dipstick again and check the oil level on the dipstick. The oil level should be between the FULL and LOW mark on the dipstick.

IMPORTANT: **DO NOT** operate engine without a sufficient oil supply in the crankcase. **DO NOT** operate with the oil level below the lower mark or above the upper mark on the dipstick.

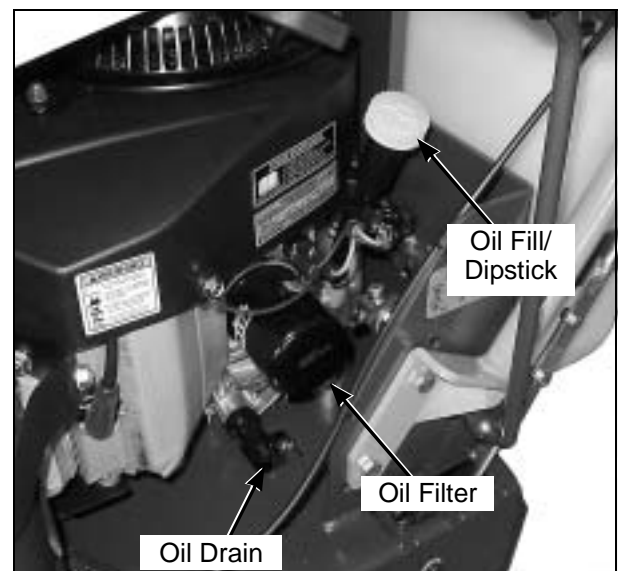
5. If additional oil is needed, refer to **Specifications** for proper crankcase lubricant. **Fill up to, but not above, the upper mark on the dipstick**.

IMPORTANT: **DO NOT** overfill the crankcase (oil above "F" mark) as this **CAN** result in engine overheating, loss of power, and possible engine damage.

Changing Engine Crankcase Oil/Oil Filter

Change the engine crankcase oil **after every 100 hours** of operation and replace the oil filter every other oil change (**every 200 hours** of operation or more often in extremely dusty or dirty conditions).

1. Park the mower on a **level surface with the engine stopped**. The engine oil should be warm before draining. If not warm from operation, start the engine and run a few minutes to warm the oil.
2. Before removing the dipstick and oil fill cap, clean the area around them to keep any dirt or debris out of the engine.
3. Remove the dipstick, oil fill cap, and unscrew the oil drain plug 4-1/2 revolutions (to prevent the drain plug from coming out completely, do not exceed 4-1/2 turns). Drain oil into a suitable container. Be sure to allow ample time for complete drainage.



Oil Drain, Dipstick (Oil Fill), and Oil Filter Location

4. Before removing the oil filter, clean the area around the filter to keep dirt and debris out of the engine.
5. Remove the old oil filter and wipe off the filter mounting surface on the engine.
6. Apply a thin coating of clean oil to the rubber gasket on the replacement oil filter.

IMPORTANT: Use **ONLY** oil filters from the engine manufacturer (Kawasaki 49065-2078). Aftermarket oil filters may not seal properly and/or may not have the correct pressure relief valve for proper lubrication.

7. Install the new oil filter on the engine. Turn the filter clockwise until the rubber gasket contacts the sealing surface, then tighten an additional **1/2 turn**.
8. Close drain valve.
9. Fill the crankcase with new, clean oil. Use only crankcase lubricants recommended by the engine manufacturer. Refer to **Specifications** in this manual or the engine owner's manual. Use the recommended oil viscosity for the expected ambient temperature. Oil with the correct viscosity will aid starting in cold weather and assure proper lubrication in hot weather. **Fill up to, but not above, the upper mark** on the dipstick. Crankcase capacity is 1.6 quarts (1.5 liters) plus 0.2 quart (0.2 liters) for the new oil filter.

IMPORTANT: Check the dipstick reading before adding the last 1/2 pint of oil and **fill only to the upper mark**. **DO NOT** overfill the crankcase (oil above upper mark) as this **CAN** result in engine overheating, loss of power, and possible engine damage.

10. Start the engine and check for oil leaks around the oil filter. Stop the engine, recheck the oil level, and add oil if necessary. (When the engine is first operated with a new oil filter, the oil level drops slightly as the filter is filled with oil.)

Grease Fitting and Oil Point Lubrication

Lubricate the grease fittings and oil points **after every 25 hours** of operation. Lubricate **more often** when operating in **dusty or dirty conditions**. Use SAE general purpose lithium or molybdenum base grease for grease fittings and light machine oil (SAE 10) to lubricate oil points. **Lubricate the locations shown in the Chassis and Deck Lubrication Points illustration.**

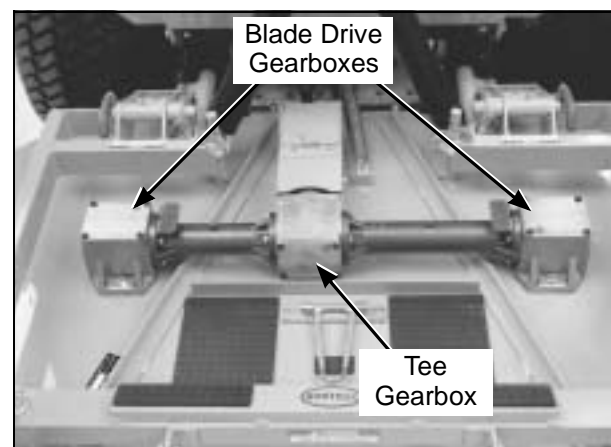
NOTE: PTO universal joints (on the deck and tractor) require routine lubrication **after every 8 hours** of running time.

Mower Deck Gearbox Lubrication

NOTE: These instructions apply to all mower decks with gear-driven blades. Refer to **DSD52 Mower Deck Lubrication** in this section for the DSD52 deck with belt-driven blades.

The mower deck gearboxes (tee gearbox and blade drive gearboxes) are connected as a unitized assembly, and oil flows freely between them. The gearboxes are permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seals should be checked **every 25 hours** for indication of an oil leak; **particularly the lower seals** on the blade drive gearboxes should be inspected, since they operate in a dirty environment. If an oil leak is noted, replace the oil seal and relubricate the gearbox assembly as follows:

1. Remove gearbox cover (footrest). Deck orientation should be in the normal operating position.



Mower Deck Gearboxes
(shown with gearbox cover removed for clarity)

- Clean the area around the individual gearbox cover plates to prevent contaminants from entering the gearcase.
- Remove the screws securing the cover plates on the blade drive gearboxes.
- Check the level of lubricant in the gearboxes. If the lubricant is low, add SAE E.P. (Extreme Pressure) 90W oil until the oil level is up to (submerges) the horizontal shaft in the gearbox (shaft parallel to cover plate).

NOTE: In case the gearboxes are completely drained of oil, approximately 5 fl. oz. (15 cl) of oil per gearbox is required to refill the gear drive assembly.

NOTE: Since the gearboxes are connected as a unit by connector tubes, it is necessary to add oil slowly. Allow a few minutes after adding oil for the oil to flow throughout the assembly and the oil level to stabilize before reassembly.

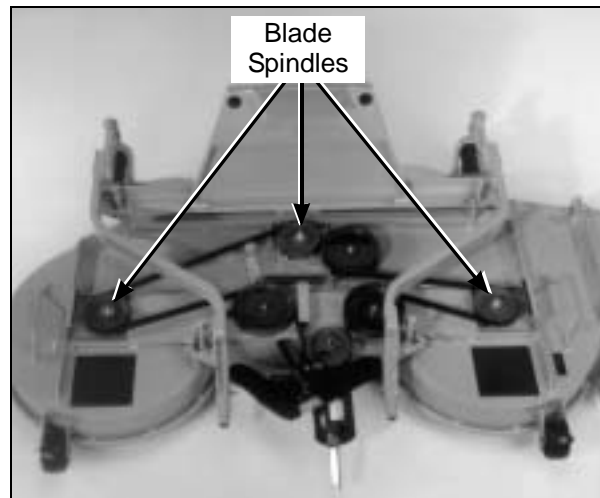
IMPORTANT: DO NOT overfill the deck gearboxes. The gearbox assembly is not vented, and overfilling with oil will cause excessive pressure and result in oil leaks.

- Check condition of the cover gasket and replace if worn or damaged. Reinstall gearbox cover plates; torque screws to 24 in-lb (2.7 N·m).

DSD52 Mower Deck Lubrication

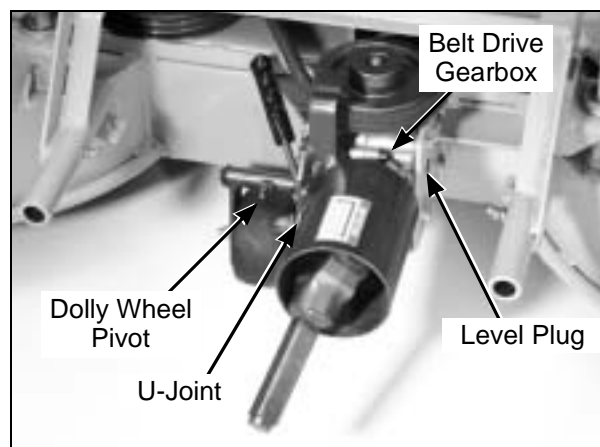
There are several special lubrication requirements for the DSD52 mower deck in addition to the requirements detailed in the **Chassis and Deck Lubrication** illustration. Lubricate the locations shown in the **Blade Spindle Lubrication** and **Gearbox, Dolly Wheel, and U-Joint Lubrication** photos and check and maintain oil in the belt drive gearbox.

- Lubricate the blade spindles **every 25 hours** with two (2) shots of SAE general purpose lithium or molybdenum base grease.



Blade Spindle Lubrication (DSD52)

- Check the oil level in the belt drive gearbox **every 100 hours** (or sooner if a visible oil leak has developed). With the deck in the normal operating position, remove the level plug in the side of the gearcase. Add SAE E.P. (Extreme Pressure) 90W oil to maintain the oil level to the plug. If the oil level is low, check the gearbox for any indication of an oil leak. If an oil leak is noted, the gearbox will need to be removed and rebuilt.
- Lubricate the dolly wheel pivot **every 25 hours** with general purpose grease.
- Lubricate the U-Joint in the drive shaft **every 8 hours** with SAE general purpose lithium or molybdenum base grease.



Gearbox, Dolly Wheel, and U-Joint Lubrication

Tractor PTO Gearbox Lubrication

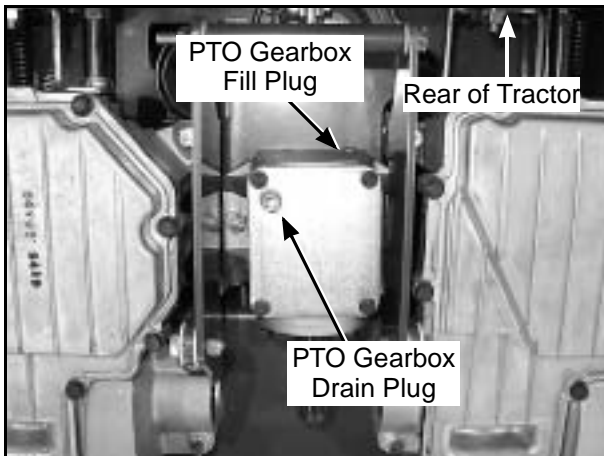
Checking Gearbox Oil Level

The tractor PTO gearbox is permanently lubricated (oil filled) and sealed requiring no scheduled lubrication. However, the gearbox oil seals should be checked **every 25 hours** for indication of oil leaks. If evidence of an oil leak is noted, replace the oil seal and relubricate the gearbox. The gearbox can be drained by removing the plug on the gearbox cover. Replace plug and refill gearbox using 5 fl. oz. (15cl) of SAE E.P. (Extreme Pressure) 90W oil.

With the deck removed, the tractor unit may need to be tilted forward (resting on deck support arms) for positioning purposes, to add oil into the PTO gearbox.

CAUTION

Do not leave the mower in this position for an extended period of time to prevent oil from draining into the heads and causing possible engine damage.



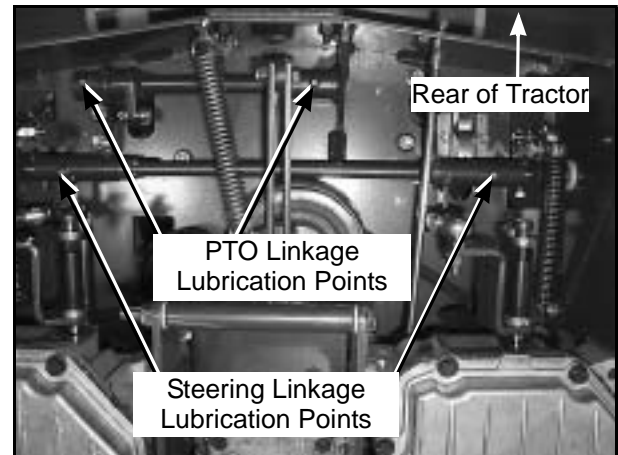
**Tractor PTO Gearbox Location
(view from underside of tractor)**

Transaxle Lubrication

- The transaxle oil lubrication is SAE 20W-50 engine oil.
- Inspect both transaxle cases **after every 100 hours** of operation for visible leaks. If a leak is detected, the oil level should be checked through the breather port on top of the transaxle. Using a clean rod, measure the oil level by placing the rod in the fill port and bottoming out the rod on the bottom of the case. Remove the rod and measure the oil level on the rod. It should measure 4 to 4-1/4 in. (10 to 10.75 cm) total depth of oil. **DO NOT** overfill.

Steering Linkage and PTO Linkage Lubrication

The steering and PTO linkage are located at the rear of the tractor below the body. The grease and oil points should be lubricated **every 25 hours**.



**Steering and PTO Linkage Location
(view from underside of tractor)**

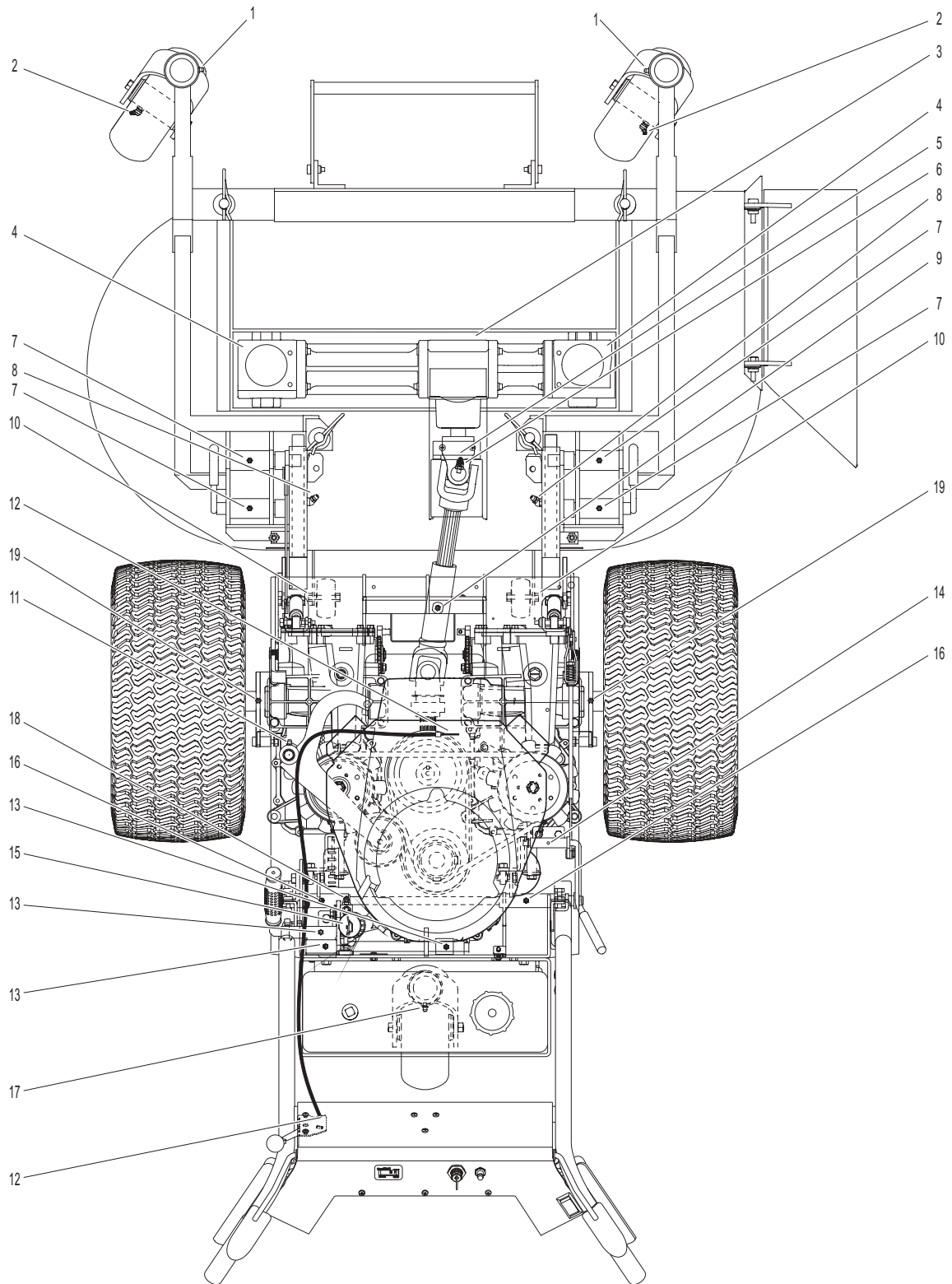
Ident No.	Location	Lubrication Type	No. Places	Ident No.	Location	Lubrication Type	No. Places
1	Deck Caster Wheel Fork Pivot	Grease	2	13	PTO Clutch Lever Pivot	Grease	3
2	Deck Caster Wheel Bearing	Grease	2	14	Parking Brake Pivot	Oil	1
3	Tee Gearbox, Deck	Oil*	1	15	Engine Oil	Oil***	1
4	Blade Drive Gearbox	Oil*	2	16	Steering Control Linkage	Grease	2
5	PTO Shaft Guard Hinge	Oil	1	17	Tail Wheel Fork Pivot & Wheel Bearing (not shown)	Grease	2
6	Universal Joint Shaft & Tube Assembly	Grease**	1	18	Clutch Actuator Push Rod	Grease	1
7	Pivot Assembly, Tilt-Up Deck	Grease	4	19	Deck Support Pivot Arm	Grease	2
8	Deck Support Arm Socket	Grease	2				
9	Universal Joint Quick Connect Spline (Grease Slide Area)	Grease	1				
10	Tilt-Up Roller Wheel	Oil	2				
11	Ground Drive Belt Idler Arm (not visible - access side of body)	Grease	1				
12	Throttle/Choke Control Pivot (on Control Panel) & Cable End	Oil	1				

* Gearboxes are permanently lubricated and sealed requiring no scheduled lubrication. Oil level should be checked only when an oil leak is noted. Refer to **Mower Deck Gearbox Lubrication** in this section.

** Lubricate every eight (8) hours.

*** Refer to **Engine Oil** in this section.

NOTE: DSD42 Deck is shown for reference. For other Deck Lubrication Points, Refer to Deck and Carrier Frame **Illustrated Parts Manual**.

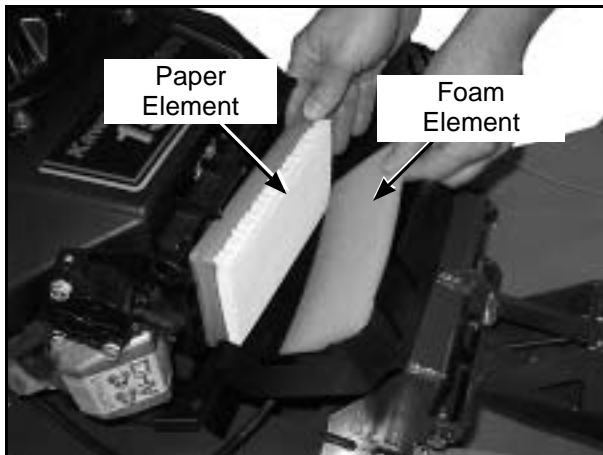


Chassis and Deck Lubrication Points

CLEANING

Engine Air Cleaner System

There are two components in the engine air cleaner system: a foam prefilter element and a paper element. Each component is checked, cleaned and maintained on a different schedule based on the filtering action required. Each component is serviced as follows:



Engine Air Cleaner Foam and Paper Element

Foam Pre cleaner Element

Clean and inspect the foam element after every 25 hours of service and replace the element yearly (or when dirty or damaged). Wash the element in detergent and water; and dry it thoroughly. More frequent cleaning may be required when operating in extremely dusty conditions.

Paper Pre cleaner Element

Inspect the paper element **after every 50 hours** of service and **replace** the element **every 200 hours** (or when dirty or damaged). More frequent replacement may be required when operating in extremely dusty conditions.

Be careful to reinstall the foam element and the paper element into the air cleaner case. Carefully reinstall the air cleaner cover into the air cleaner body by putting the hooks on the bottom of the air cleaner cover into the air cleaner body bottom.

Engine Cooling System

Air Intake Screen

Before each use, check that the air intake (rotary) screen is free from grass and debris and clean if necessary.

Engine Cooling Fins

Every 100 hours, check and clean the cooling fins and inside of engine shrouds to remove grass, chaff or dirt clogging the cooling system and causing overheating. When cleaning, remove the recoil starter and the fan housing.

Grass Buildup in Mower Housing



Before raising or removing the mower deck for cleaning, stop the engine, remove the ignition key, and disconnect the spark plug wires.

1. **Raise** the deck lock lever handle on each side of the carrier frame **and pull out** to release carrier frame for tilting action.
2. Using the carrier frame lift handle, raise deck to the **TILT-UP** position and insert the deck hook into the tilt-up latch on the tractor body.



Do not operate the mower with deck in tilt-up position. Do not move the tractor with the deck in the tilt-up position.

3. Clean grass buildup underneath the deck using a pressure washer (and scraper if required).

NOTE: While some degree of material buildup in the mower deck housing can be tolerated, a point is finally reached **where cutting quality deteriorates and clogging begins to occur** because of too much buildup on the baffling and housing.

4. Lower the deck to the normal operating position and reengage the deck lock levers.



NEVER operate the cutter blades with the deck in the raised position.

CHECKING/SERVICING

 **DANGER**

To prevent accidental starting of the engine when servicing or adjusting the machine, remove the key from the ignition switch and disconnect the spark plug wires.

Battery

Charging the Battery

Limit initial charging current to 1000mA. Charge until battery voltage (under charge) reaches 14.40 to 14.70 volts at 68°F (20°C). Hold at 14.40 to 14.70 volts until current drops to approximately 50mA. Battery is fully charged under these conditions, and charger should be disconnected.

NOTE: Due to the self-discharge characteristics of this type of battery, it is imperative that it be charged after 6-9 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Tire Pressure

Inflate tires to pressures shown below:

Deck Caster Wheel = 20 PSI (137 kPa)
 Drive = 15 PSI (103 kPa)
 Rear = 20 PSI (137 kPa)

Sharpen Mower Blades

Check mower blade(s) for **straightness, sharpness, condition of the cutting edge**, and **balance every 10 hours** of operation (or more often when mowing abrasive type grass or operating on sandy soils). **Replace blades if worn, bent, cracked, or otherwise damaged** (refer to **REPLACING/REPAIRING the Mower Blades** in this section). Use the following procedure to check and sharpen blades:

NOTE: Keep blades sharp - cutting with dull blades not only yields a poor mowing job but slows the cutting speed of the mower and causes extra wear on the engine and blade drive by pulling hard.

1. Stop the engine, remove ignition key, and disconnect the spark plug wires **before** raising the mower deck to service blades.

2. Raise the deck and secure it in the **TILT-UP** position. Refer to **CLEANING the Grass Buildup in Mower Housing** in this section for deck raising instructions.

 **DANGER**

NEVER operate cutter blades with the deck in the raised position.

3. Check the blades for **straightness** by marking the blade tip position inside the deck housing, and then rotating the opposite end of the blade to the same position and comparing. If the difference in blade tip track is **more than 1/8 in. (3 mm)**, the blade is bent and **should be replaced**.

 **WARNING**

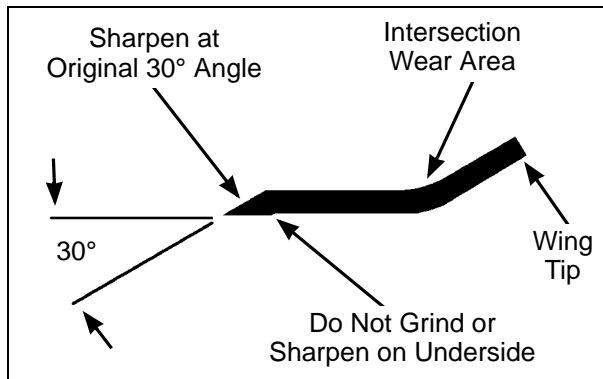
DO NOT try to straighten a blade that is bent. **NEVER** weld a broken or cracked blade. **ALWAYS** replace with a new blade to assure safety.

4. If the blade cutting edge is **dull or nicked**, it should be sharpened. Remove blades for sharpening by grasping the end of the blade using a rag or a thick, padded glove, while loosening and removing the nut, lock washer, and flat washer that mounts the blade.
5. Grind cutting edge at the same bevel as the original. Sharpen only the top of the cutting edge to maintain sharpness.

NOTE: Blades can be sharpened with an electric blade sharpener, conventional electric grinder, or a hand file.

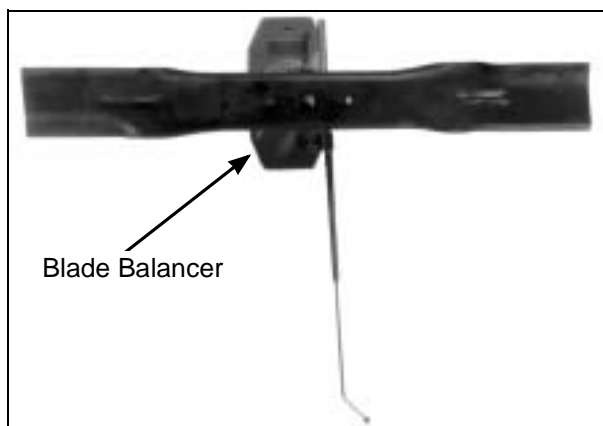
 **CAUTION**

ALWAYS wear eye protection and gloves when sharpening a blade.



Mower Blade Profile For Sharpening

6. Check blade balance by positioning the blade **horizontally** on a blade balancer or use a nail or shaft through the center hole. If either end of the blade rotates downward, grind (remove) metal on that end until the blade will balance. The blade is properly balanced when neither end drops. Balance of a blade is generally maintained by removing an equal amount of material from each end of the blade when sharpening.



Blade Balanced on Magnetic Wall-Mounted Balancer

7. Mount the blade with wing tips pointing up into the housing. Reinstall the blade, washer, lock washer, and nut. **Tighten the nut to 60 ft-lb (81.3 N·m).**

Drive Belts

Look under the body and inspect the condition of the two (2) belts **every 25 hours** of operation - engine PTO drive, and ground drive belt. If the belts show **signs of cracking or deteriorating**, the belts should be **replaced**. Refer to **REPLACING/RE-PAIRING the Drive Belts** in this section.

Mower Deck Gearbox Oil Seals

The mower deck gearbox seals and gaskets should be inspected **every 25 hours** for evidence of oil leaking; **particularly** the lower oil seal on the blade drive gearbox. This seal is protected by the trash guard on the blade hub and seal protector plate on the housing, but is still vulnerable to seal damage due to operating in an adverse environment. The mower blade must be removed for inspection of the seal, so it is recommended to **inspect the gearbox seals when blades are removed for sharpening**. If an oil leak is noted, the seal should be replaced and the gearbox assembly relubricated. Refer to **Mower Deck Gearbox Lubrication** in this section.

Spark Plugs

Every 100 hours, remove the spark plugs, inspect, clean, and reset the gap (or replace with **new plugs**). Clean spark plugs with a wire brush. If the electrodes are burned short or pitted, replace the plug (refer to **Specifications** for the proper type of replacement plug). Check the spark plug gap with a wire-type feeler gauge and set the gap to 0.030 in. (0.75 mm). Reinstall and tighten to 16 ft-lb (22 N·m).

Fuel Lines and Clamps

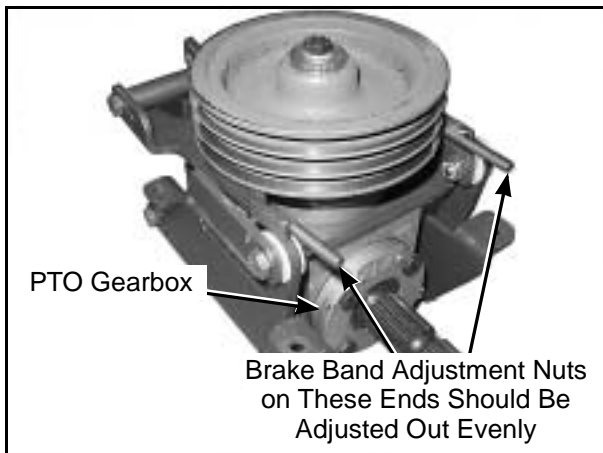
Every year, inspect the fuel supply line from the tank to engine for deterioration or damage. Also, inspect the fuel line **clamps for tightness**. Good preventive maintenance calls for complete **replacement** of fuel lines and clamps **every two (2) years**.

Blade Brake Action

 **WARNING**

It is important to check and maintain blade brake action for safe operation of the machine.

Check the function of the cutter blade brake by engaging the blade clutch (PTO), operating the engine at full throttle, then disengaging the clutch and measuring how quickly the blades stop. Watch the rotation of the blade drive shaft as a visual indication that movement has stopped. If the brake is **working properly, all rotation will stop five (5) seconds after disengagement** of the clutch. If the brake system malfunctions - blades do not stop in five (5) seconds - adjust or repair the brake before operating the mower. Refer to **ADJUSTMENTS of Blade Clutch (PTO)** in this section.



Brake Band
(View with PTO Geabox Assembly Removed)

REPLACING/REPAIRING



To prevent accidental starting of the engine when replacing parts or repairing the machine, remove the key from the ignition switch and disconnect the spark plug wires.

IMPORTANT: ALWAYS use genuine factory replacement parts. Substitute parts **CAN** result in product malfunction and possible injury to the operator and/or others.

Drive Belts

There are **two (2) individual belts**:

- Ground Drive Belt
- PTO Drive Belt (3 Groove Power Band)

The belts may be removed and replaced using the following procedures:

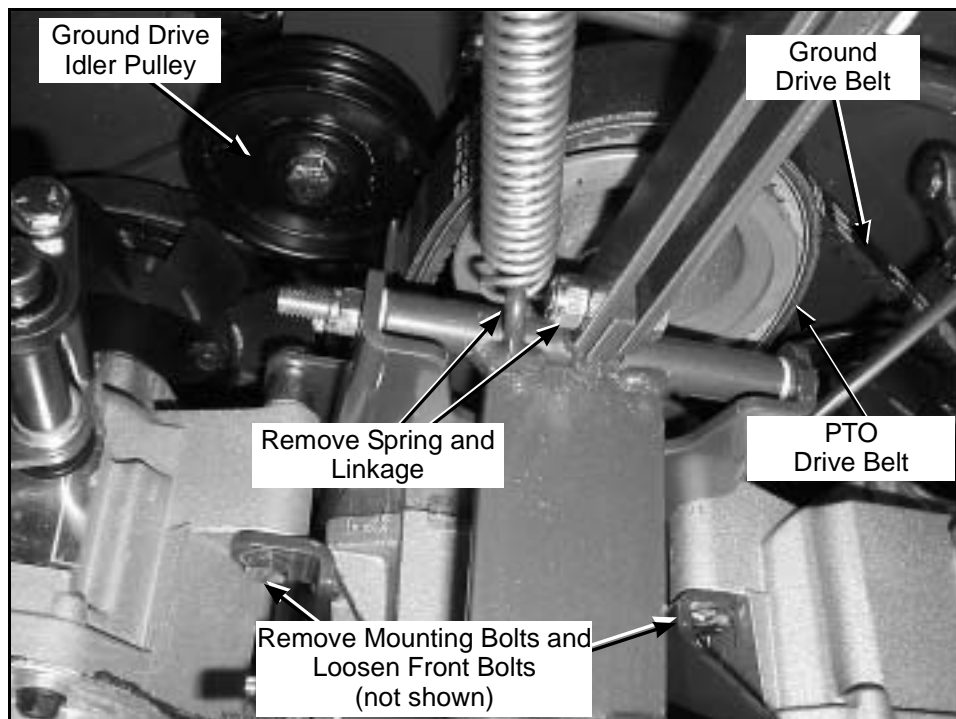
PTO Drive Belt

1. Remove the two mounting bolts holding the PTO belt guide in place and loosen the front mounting bolts of PTO actuator assembly (as shown). Remove belt guide. Remove nuts on the front of brake band and remove.
2. Unhook spring and unbolt actuator clevis attached to the PTO gearbox assembly. Pull gearbox assembly to the rear and remove belt.
3. Install the PTO drive belt by reversing removal procedure.

Ground Drive Belt

NOTE: The PTO drive belt must be removed for removal of the ground drive belt.

1. Relax the belt by releasing spring tension from the ground drive belt idler arm.
2. Slide the belt over both transaxle pulleys and feed it toward the back of the mower.
3. Install ground drive belt by reversing removal procedure.

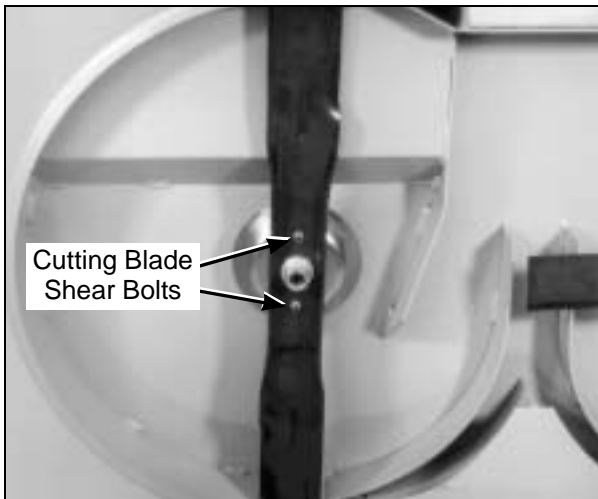


**PTO Drive and Ground Drive Belt Removal
(view from underside rear of tractor)**

Blade Overload Shear Bolts

NOTE: Shear bolts are not used on the DSD52 mower deck.

The cutting blade is keyed to the blade hub by **two (2) shear bolts** (10-24 x 5/8 in. stainless steel machine screws). These bolts are designed to shear and protect the blade drive gearbox from damage if the blade encounters a shock load.



Cutting Blade Shear Bolts

NOTE: Tightening the **5/8-18 blade mounting nut to 60 ft-lb (81.3 N·m)** is also important for proper shock load protection. It is important to **not over-tighten** the mounting nut since this defeats (overrides) the function of the shear bolts.

If these bolts shear, remove the blade and install new bolts. Refer to **CHECKING/SERVICING** in this section for **Sharpen Mower Blades** which describes the blade removal and installation procedure.

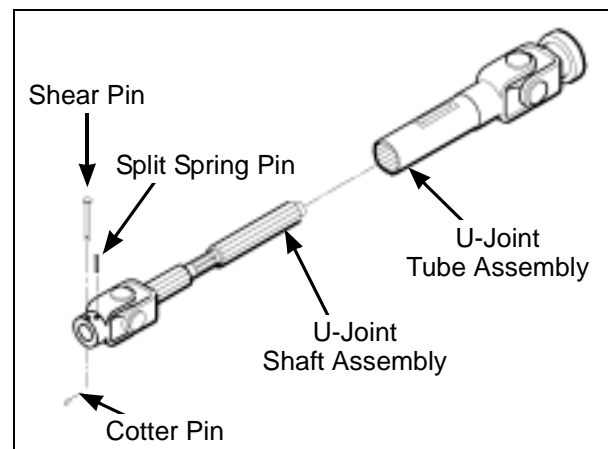
After reinstalling the blade, check blade timing by moving blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other. If timing is incorrect, refer to **Mower Deck Gearbox Replacement** in this section.

PTO Shear Pin

The PTO drive shaft connection to the deck gearbox has a shear pin to provide shock load protection to the mower deck drive. This system provides **primary shock protection** in case of blade impact and will normally shear before the individual shear bolts on the blade hub.

When the PTO pin has sheared, use the following procedure to replace it:

1. Loosen the two bolts securing the PTO shaft guard on the deck; lift the guard off. (Holes in guard are slotted for easy removal.)
2. Rotate U-joint on shaft to align the shear pin hole with the hole (and shear pin fragment) in the shaft. Use a punch to drive the remaining portion of the old shear pin out.
3. Install new shear pin and secure with cotter pin.



PTO Shear Pin

IMPORTANT: Use only Walker P/N 8067-13 shear pins for replacement to provide proper shock protection -- these pins are hardened to shear under a specific amount of load.

4. Reinstall the PTO shaft guard.

Before operating the deck, inspect the blade overload shear bolts and also check blade timing (on gear driven decks) by moving blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other. If timing is incorrect, refer to **Mower Deck Gearbox Replacement** in this section.

Mower Blades

Mower blades are removed and remounted as described in **Sharpen Mower Blades** instructions. During the course of sharpening and inspecting mower blades, if there are **any of the following conditions of wear or damage, blades should be replaced** for reasons of safety and performance of the machine:

- An excessive amount of the **flat section** of the blade has been **ground away** (removed) when the blade is sharpened. Replace the blade **when less than a 3/4 in. (19 mm) flat section remains** at the blade tip.
- Examine ends of the blade carefully, especially the intersection where the flat section of the blade turns up to form the “wing tip” (refer to **Mower Blade Profile for Sharpening** illustration in **Sharpen Mower Blades** instructions). Since sand and abrasive material can wear metal away in this area, the blade should be **replaced when metal thickness has worn to 1/16 in. (1.6 mm) or less.**

 **DANGER**

When blades are operated over sandy soil, and if blades are allowed to wear, a “slot” may be worn into the wing tip of blade. Eventually a piece of the blade may break off creating a serious potential for injury or damage.

- Check the blades for **straightness** by marking blade tip position inside the deck housing and then rotating the opposite end of the blade to the same position and comparing. If the difference in blade tip track is **more than 1/8 in. (3 mm)**, the blade is bent and **should be replaced.**
- Inspect the blade surface, especially in formed areas, for **cracks**. Replace the blade if any cracks are found.

 **WARNING**

DO NOT try to straighten a blade that is bent. NEVER weld a broken or cracked blade. ALWAYS replace with a new blade to assure safety.

Reinstall the blades following procedure from **Sharpen Mower Blades** instructions. If blades are replaced, always use **Walker original equipment blades** to ensure safety and optimum performance. The quality and performance of **replacement blades offered by other manufacturers** cannot be guaranteed, they **could be dangerous.**

 **CAUTION**

ALWAYS use genuine factory replacement parts. Substitute parts CAN result in product malfunction and possible injury to the operator.

Mower Deck Gearbox Replacement

NOTE: Deck gearbox(es) may be changed with the deck mounted on the tractor. However, the deck may be removed from the tractor making the overall job of removing the gearbox assembly easier. Refer to *Deck Installation* in **Assembly Instructions** and reverse the procedure to remove the deck.

To replace the mower deck gearbox(es), use the following procedure:

1. Remove mower blades. Refer to procedure in **Sharpen Mower Blade** instructions.
2. Remove gearbox cover (two machine screws) and PTO shaft guard (two 1/4-20 bolts).
3. Remove two (2) 3/8-16 mounting bolts from each blade drive gearbox and lift the entire gearbox assembly from the deck (including PTO drive shaft).
4. Remove the screws securing the cover plates on the gearboxes and remove the covers. Remove all covers to be sure oil is completely drained from all gearboxes.

NOTE: With oil flow throughout the unitized gear drive assembly; if one gearbox has internal damage or excessive wear, the remaining gearboxes and connector tubes should be completely disassembled and thoroughly flushed out with solvent before reassembly.
5. Drain and properly dispose of oil.
6. Remove the four (4) bolts mounting the gearbox to the connector tube and slide the gearbox off the splined drive shaft coupling.

7. Install the new gearbox on the spline coupling of the drive shaft. Establish correct timing of the blade drive gearboxes by setting flats on the output shaft at 90 degrees when connecting the gearbox(es) to the spline coupling. Make sure the timing is correct before proceeding with assembly.
8. Reinstall the four (4) bolts mounting the gearbox to the connector tube but **do not tighten** them at this time; leave connector tube bolts finger-tight.
9. Position the gear drive assembly on the deck and install the 3/8-16 bolts mounting the entire assembly. Leave the mount bolts finger-tight.
10. Torque all the connector tube bolts to 80 in-lb (9 N·m); then tighten the deck mount bolts.

NOTE: This fastener tightening sequence aligns the gearbox assembly with the deck housing and eliminates the possibility of mounting the unitized assembly in a bind.
11. Fill gearbox assembly with oil. Refer to **Mower Deck Gearbox Lubrication** in this section for instructions.
12. Reassemble remaining items onto deck to complete installation. After installing blades, check that the blade timing is correct by moving the blades through **one (1) complete revolution**. Make sure blade tips pass clear of each other.



Mower Deck Gearboxes
(Shown with Gearbox Cover Removed for Clarity)

ADJUSTMENTS

⚠ DANGER

If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. **DO NOT** wear jewelry or loose clothing.

Blade Clutch (PTO)

Clutch Disengagement/Brake Action

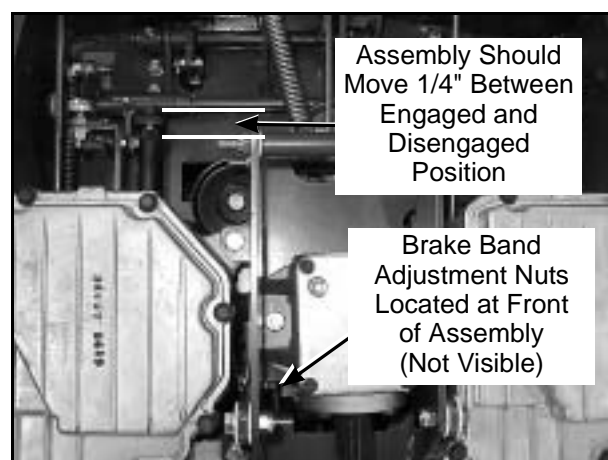
⚠ WARNING

It is important to check and maintain blade brake action for safe operation of the machine.

The blade brake is activated by linkage to the clutch pulley mechanism. The brake is designed to stop the blades within five (5) seconds after disengaging the clutch.

Use the following procedure to check and adjust clutch disengagement and brake action:

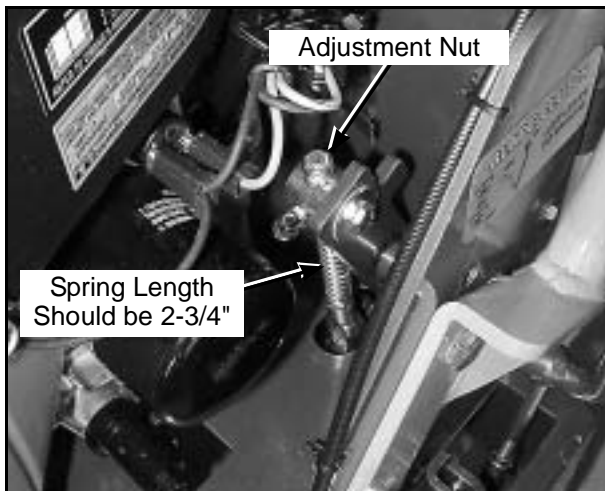
1. Evenly adjust the nuts on the end of the brake band to achieve 1/4" of travel of the PTO gearbox assembly between the engaged and the disengaged position (refer to **PTO Gearbox Engagement Photo**).



PTO Gearbox Engagement
(view from underside of tractor)

- Use the adjustment nut on the PTO clutch actuator assembly (refer to **PTO Clutch Linkage Adjustment** photo) to set the tension applied by the PTO clutch lever. The adjustment nut is initially set to achieve an approximate measurement of 2-3/4" between the jam nut and the knuckle joint. As the belt and pulleys wear, it will be necessary to tighten the adjustment nut in order to prevent belt slippage--this adjustment is the same in the Engaged and Disengaged positions.

Do not overtighten the adjustment nut. This may cause damage to the clutch linkage and the PTO belt.



PTO Clutch Linkage Adjustment

Transmission Control



If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. DO NOT wear jewelry or loose clothing.

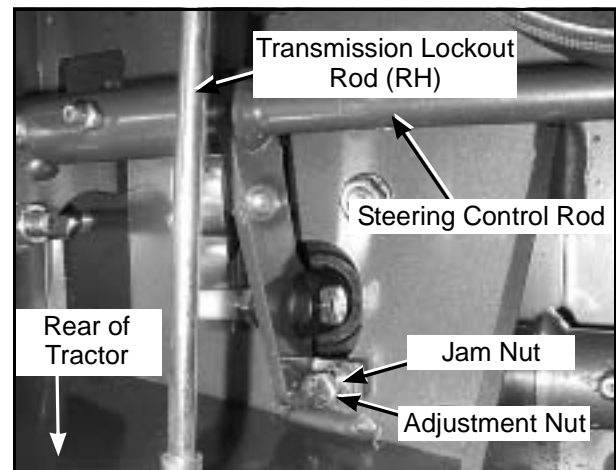
IMPORTANT: The proper adjustment of the transmission control stops is **essential** for efficient operation and life of the transmission. These stops are properly adjusted at the factory and should only require readjustment if the transmission or related control linkage is removed or changed.

NOTE: It would not be unusual for a new machine, after initial 5 or 10 hours of operation, to begin to not travel straight (this is due to the break-in of the transmissions). In this case, proceed to *Tracking Adjustment - Step 4*.

IMPORTANT: The following adjustment procedures are sequential. Check and adjust each function in the order given.

FSC Actuator Stop Adjustment - Step 1

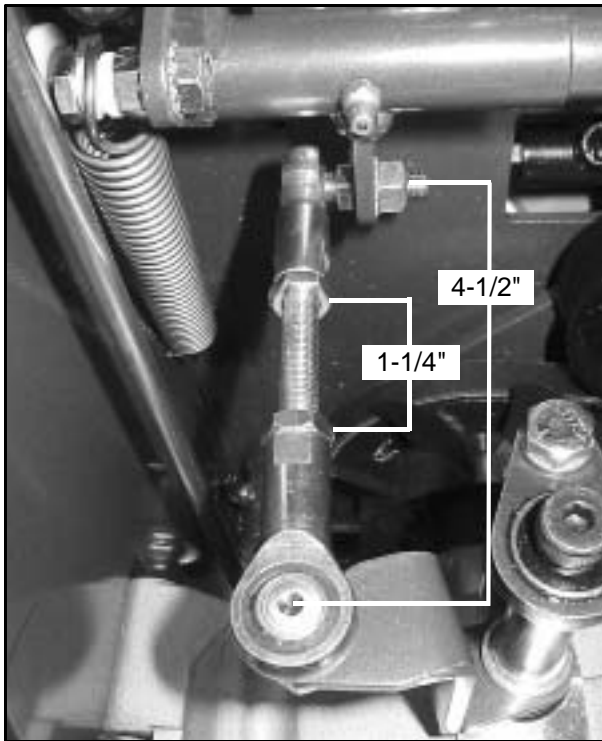
- Loosen jam nut and back off the adjustment bolt located in the steering pivot rod (as shown).
- Turn the ignition key to the ON position and toggle the FSC switch to the Neutral position (fully retracted).
- Tighten the adjustment bolt until it contacts the chassis and turn an additional 1/2 turn. Tighten jam nut.



**FSC Actuator Stop Adjustment
(View from underside of tractor)**

Control Arm Rod Adjustment - Step 2

1. For both control arm rods, loosen jam nut on ball joint end of control arm rod and adjust to obtain a 1-1/4" measurement between jam nuts (4-1/2" measurement between centers of ball joints). Tighten jam nuts.

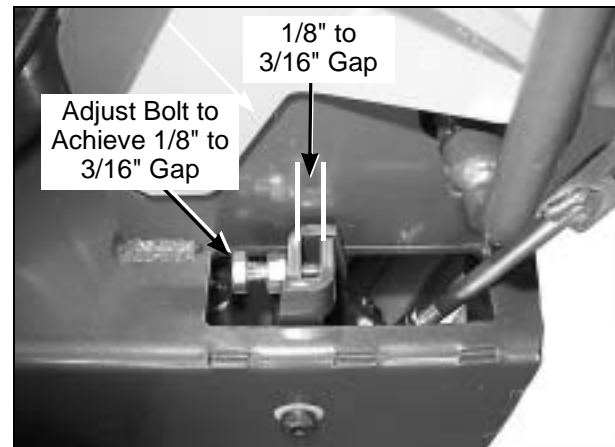


**Control Arm Rod Adjustment - Both Transaxles
(view from underside of tractor)**

Neutral Adjustment - Step 3

1. Turn the ignition key to the ON position and toggle the FSC switch to the Neutral position (fully retracted).
2. Tighten adjustment bolt in speed control actuator to achieve approximately an 1/8" to 3/16" gap between speed control actuator and speed control stop.
3. Make identical adjustment to the other side of tractor.
4. Start engine. If one or both drive wheels creep forward, turn corresponding adjustment bolt in (toward rear of mower). If drive wheels creep backwards, turn corresponding adjustment bolt out (toward front of mower).

NOTE: If the 1/8" to 3/16" gap between speed control actuator and speed control stop can not be maintained as neutral adjustments are made, it will be necessary to adjust the length of the control rod (Step 2). Increasing the length of the control rod, decreases the gap. Shortening the control rod, increases the gap.



Speed Control Actuator Adjustment (LH)

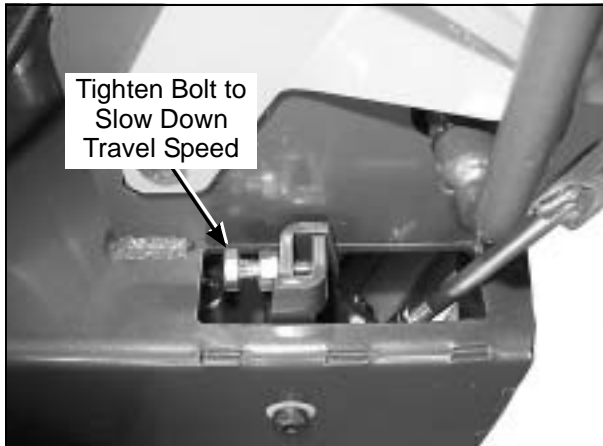
Tracking Adjustment - Step 4

⚠ DANGER

If the engine must be running to perform a maintenance adjustment, keep hands, feet, and clothing from moving parts. DO NOT wear jewelry or loose clothing.

1. Start engine and set the FSC switch to a normal walking speed. Check for equal drive speed for both wheels.

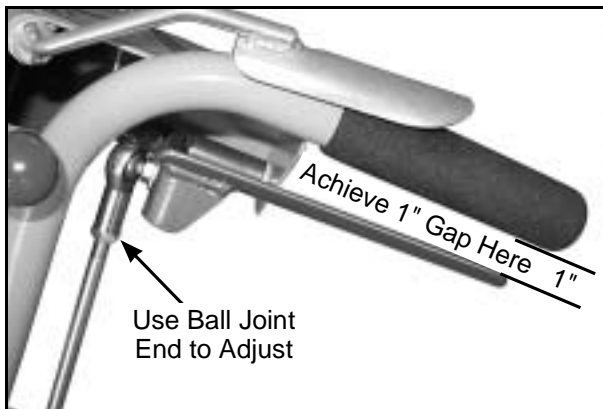
2. If one wheel is moving too fast, bring the mower back into NEUTRAL (using the FSC switch) and slightly tighten the adjustment bolt on the speed control actuator on the side that is moving faster.



Tracking Adjustment

Control Handle (Pistol Grip) Adjustment - Step 5

1. Loosen jam nut and adjust upper ball joint on upper lever linkage to achieve a 1" gap between control handle and pistol grip.
2. Make identical adjustment to the other side of handle. It may be necessary to adjust both wheels in order to achieve tracking and neutral.



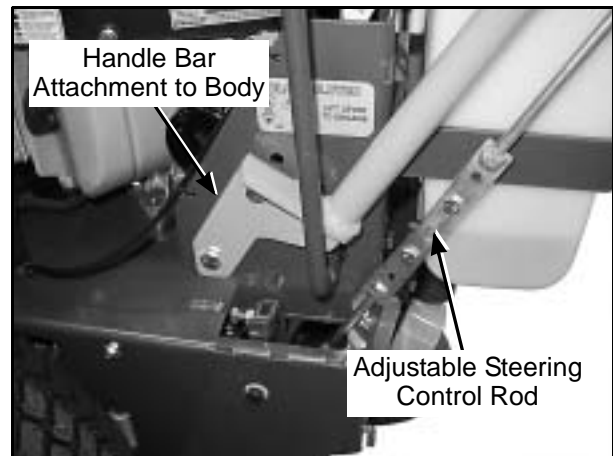
Pistol Grip Position Adjustment

Handlebar Height Adjustment

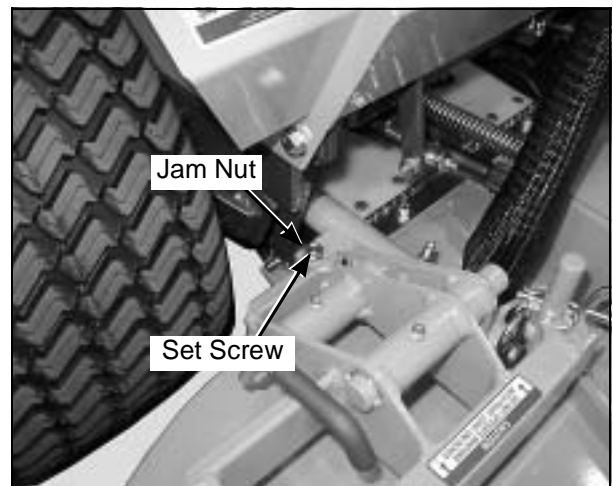
The height of the handlebar position for operators can be adjusted (taller for taller operators, shorter for shorter operators) using the following steps:

1. Unbolt the handlebar connection at the body on both sides. Unbolt the steering control arms.

2. Reattach handlebar and control arms in corresponding holes.



Handlebar Height Adjustment



Tilt-Up Deck Adjustable Stop

Tilt-Up Deck Adjustable Stop

When the carrier frame hinge joint is properly adjusted, the deck lock levers should move in and out of the engaged and disengaged positions freely. All four hitch pins used for height adjustment should sit flush on the washers above the deck pin bushing. On a level surface, if any pin is sticking up (likely the front pins), tighten the opposite side or loosen the existing side to lower the pin. Adjustments are made by loosening the jam nut and tightening or loosening the set screws on the Deck Mount Pivot Brackets. Retighten the jam nut when the adjustment is complete.

Carburetor



CAUTION

DO NOT change the engine governor settings or overspeed the engine. The governor has been factory set for maximum safe engine operating speed.

Carburetor adjustments are required to compensate for differences in altitude, temperature, and fuel. Once the carburetor has been set, no further adjustments should be required. However, if the engine exhibits any of the following symptoms, the carburetor adjustment should be checked by an authorized Kawasaki engine dealer: black, sooty exhaust smoke, lack of power, engine miss or backfire, hard to start, rough running or idle.

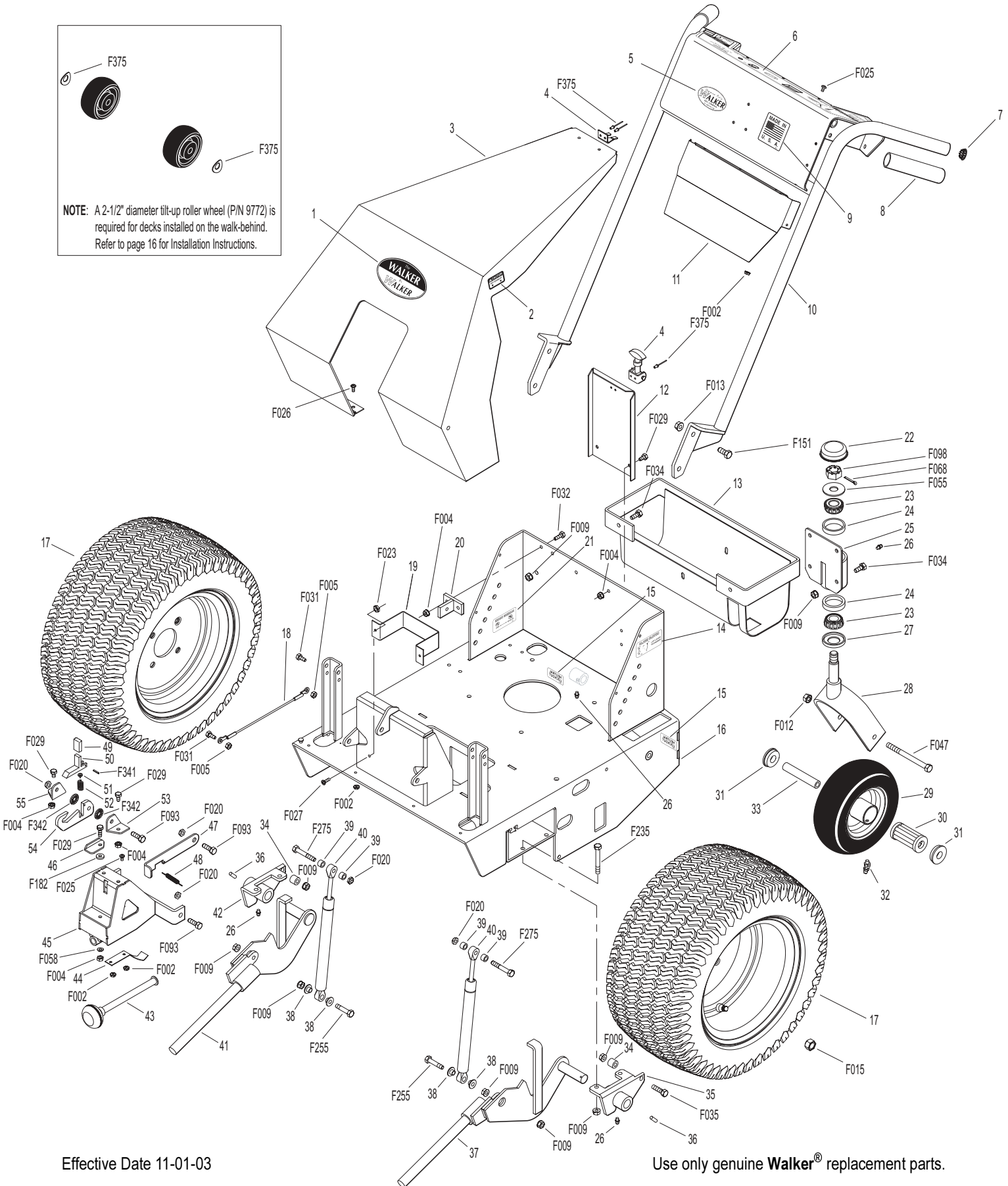
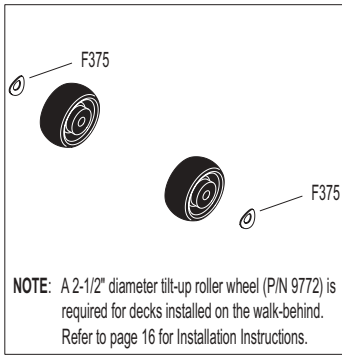
BODY / CHASSIS ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Body Assembly				42	9433	Deck Arm Mount, LH (Includes Item # 26)	1
1	9800	Decal, Walker By Walker	1	43	5862	FSC Knob	1
2	5805	Decal, Engine Exhaust	1	44	9347-1	Spring, Lift Rod	1
3	9100	Hood (Includes Items # 1 & 2)	1	45	9344	Deck Spring Hitch	1
4	9110	Hood Latch Assembly	1	46	9346	Spring Clip Lock	1
5	5803	Decal, Walker Manufacturing	1	47	9345	Lock Arm, Spring Hitch	1
6	9801	Decal, Control Panel	1	48	7222	Extension Spring (1-1/4 x 3)	1
7	9851	Handlebar End Plug	2	Tilt-Up Latch Assembly			
8	9850	Handlebar Grip, Foam	2	49	5847	Plastic Tip	1
9	5856	Decal, Made In USA	1	50	5744-20	Spring Arm, Tilt-Up Latch	1
10	9700	Handlebar (Includes Items # 7 & 8)	1	51	5744-10	Spring Pivot Bushing	1
11	9700-1	Cover Plate, Control	1	52	5744-15	Compression Spring (3/8 x 5/8)	1
12	9101	Hood Support, Rear	1	53	5744-14	Mount Angle, RH	1
13	9046	Gas Tank Mount	1	54	5744-12	Hook, Tilt-Up Latch	1
Chassis Assembly				55	5744-13	Mount Angle, LH	1
14	9803	Decal, Blade Clutch	1	Fasteners			
15	9804	Decal, Gearaxle Lockout	2	F002	10-24 Keps Nut		11
16	9300	Chassis Frame	1	F004	1/4-20 Keps Nut		6
17	5075	LP Wheel & Tire (18 x 8.5-10)	2	F005	1/4-20 ESNA Nut		5
18	9102	Cable	2	F009	5/16-18 Whiz Locknut		16
19	9310	Battery Strap	1	F012	3/8-16 Keps Nut		1
20	9620	Actuator Mount Tab	1	F013	3/8-16 Whiz Locknut		4
21	9802	Decal, Parking Brake	1	F015	1/2 Wheel Lug Nut		8
Tail Wheel Assembly				F020	5/16-18 ESNA Nut		6
22	8769-9	Dust Cap Deck Caster	1	F023	10-24 ESNA Nut		2
23	8037	Bearing Cone (3/4 ID)	4	F025	10-24 x 3/8 PPHMS		7
24	8769-1	Bearing Cup, Caster Fork	4	F026	10-24 x 1/2 PPHMS		4
25	9771	Mount, Caster Fork (Includes Item # 24 & 26)	1	F027	10-24 x 5/8 PPHMS		2
26	5830	Grease Fitting	4	F029	1/4-20 x 1/2 Hex Bolt		4
27	8768-1	Seal	1	F031	1/4-20 x 5/8 Hex Bolt		4
28	5770-1	Caster Wheel Fork	1	F032	1/4-20 x 3/4 Hex Bolt		3
29	5715-4	Caster, Wheel Pneu. (8 x 3.00-4)	1	F034	5/16-18 x 3/4 Hex Bolt		6
30	5715-5	Bearing, Caster Wheel	4	F035	5/16-18 x 1-1/4 Hex Bolt		2
31	5714-7	Bearing Cap	2	F047	3/8-16 x 4-1/2 Hex Bolt		1
32	5830-3	Grease Fitting (45 Deg.)	1	F055	5/8 SAE Washer		1
33	5714-3	Axle Spacer Tube	1	F058	1/4 Wave Spring Washer		1
Deck Support Arm & Hitch Assemblies				F068	1/8 x 1 Cotter Pin		1
34	9430-1	Spacer Tube, MW Deck Arm	2	F093	5/16-18 x 1 Hex Bolt		4
35	9434	Deck Arm Mount, RH (Includes Item # 26)	1	F098	5/8-18 Slotted Hex Nut		1
36	9023	6mm x 20mm Dowel Pin	2	F151	3/8-16 x 7/8 Hex Bolt		4
37	9431	Deck Arm, LH	1	F182	1/4 x 5/8 x 1/8 Washer		1
38	9432-1	Dampener Bushing	4	F235	5/16-18 x 2-1/2 Hex Bolt		4
39	9432-2	Dampener Spacer (3/8 x 1/2)	4	F255	5/16-18 x 1-1/2 Hex Bolt		2
40	9432	Dampener, Deck Arm	2	F275	5/16-18 x 2 Hex Bolt		2
41	9430	Deck Arm, RH	1	F341	Coil Roll Pin (7/64 x 9/16)		1
				F342	5/16 Conical Washer		2
				F375	64AAD Alum Pop Rivet (3/16 DIA x 1/4 Grip)		4

Use only genuine **Walker**[®] replacement parts.

Effective Date 11-01-03

BODY / CHASSIS ASSEMBLY



Effective Date 11-01-03

Use only genuine Walker® replacement parts.

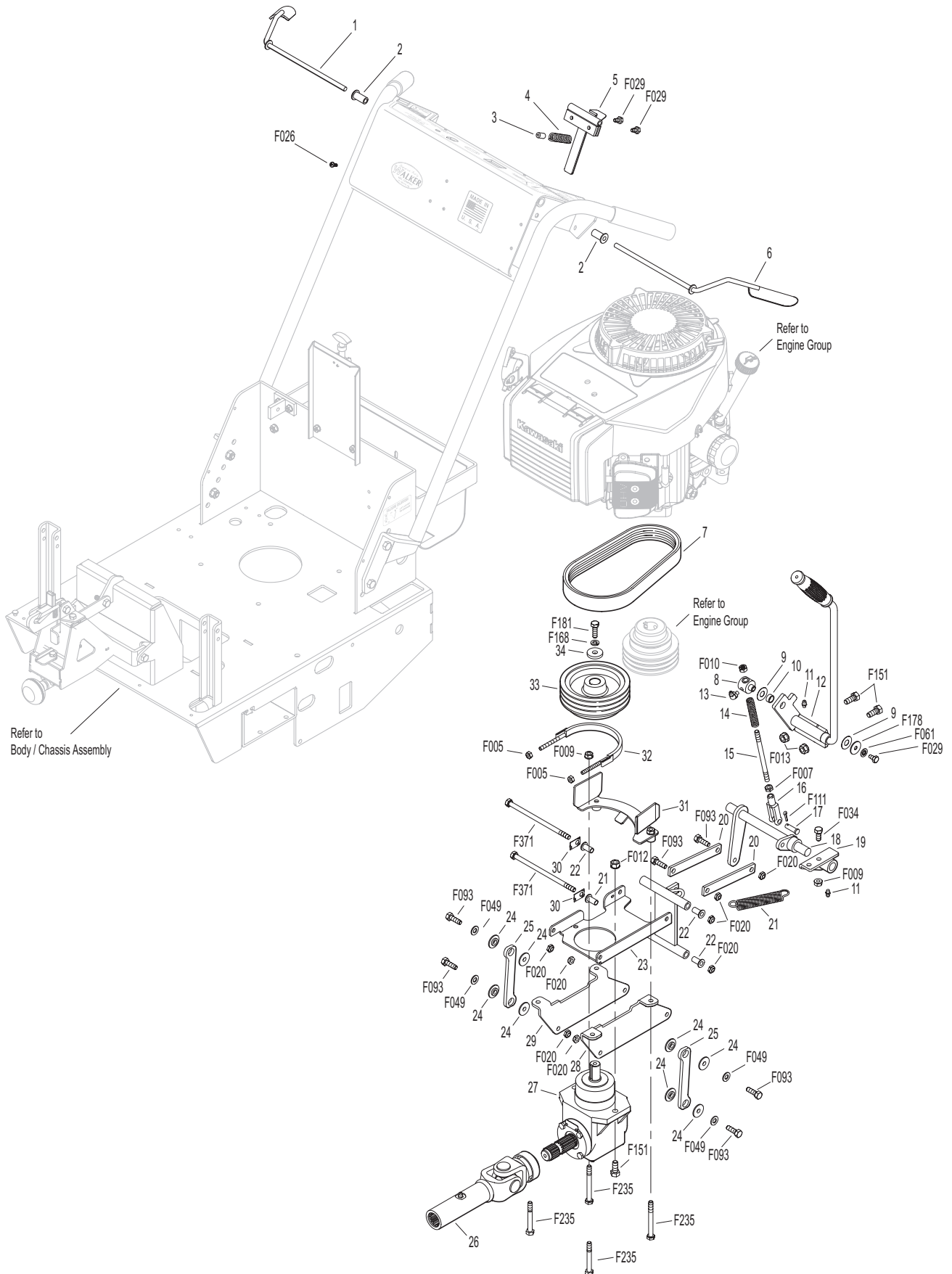
MAIN COMPONENT POWER TRANSMISSION

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Safety Switch Actuator Assembly				27	9050	PTO Gearbox	1
1	9744	Safety Switch Lever, RH	1	28	9304	PTO Mount Side Plate, RH	1
2	5103-2	Pivot Bushing (5/16 ID)	2	29	9303	PTO Mount Side Plate, LH	1
3	9742-2	Plastic Bushing (5/8 x 3/8)	1	30	9309	5/16 Tab Lock Washer	2
4	9742-1	Compression Spring (3/8 x 5/8)	1	31	9480	Belt Guide (Includes Item # F009)	1
5	9742	Safety Switch Actuator	1	32	9301	Brake Band	1
6	9743	Safety Switch Lever, LH	1	33	9236	PTO Pulley (5/3V) (Includes Items # 34, F067, F168 & F181)	1
PTO Drive Assembly				34	9051	5/8 x 1-1/8 x 3/8 Washer	1
7	9230	PTO Drive Belt	1	Fasteners			
8	7380-5	Knuckle Joint (3/8 ID)	1		F005	1/4-20 ESNA Nut	2
9	7377	Plastic Washer (7/16 x 1 x .025)	2		F007	5/16-18 Jam Nut	1
10	7378	Pivot Bearing (7/16 x 9/16)	1		F009	5/16-18 Whiz Locknut	5
11	5830	Grease Fitting	2		F010	5/16-24 ESNA Nut	1
12	9358	Clutch Lever (Includes Item # 11)	1		F012	3/8-16 Keps Nut	2
13	5830-4	Grease Fitting (90 Deg.)	1		F013	3/8-16 Whiz Locknut	2
14	9130-1	Clutch Actuator Spring	1		F020	5/16-18 ESNA Nut	8
15	9130-2	Clutch Actuator Rod	1		F026	10-24 x 1/2 PPHMS	1
16	9130-3	Clevis	1		F029	1/4-20 x 1/2 Hex Bolt	3
17	9130-4	5/16 x 1 Clevis Pin	1		F034	5/16-18 x 3/4 Hex Bolt	2
18	9359	Lower Clutch Pivot	1		F049	5/16 SAE Washer	4
19	9359-1	Pivot Mount, Clutch (Includes Item # 11)	1		F061	1/4 Star Lock Washer	1
20	9307	Link, PTO Actuator	2		F093	5/16-18 x 1 Hex Bolt	6
21	5221	Extension Spring (3/4 x 4)	1		F111	1/8 x 3/4 Cotter Pin	1
22	9306-1	Plastic Bushing, Rear Pivot	4		F151	3/8-16 x 7/8 Hex Bolt	4
23	9302	PTO Gearbox Mount Plate	1		F168	5/16 Split Lock Washer	1
24	9305-1	Plastic Bushing, Front Pivot	8		F178	1/4 x 1 Fender Washer	1
25	9305	Swingarm, PTO Gearbox	2		F181	5/16-24 x 1 Hex Bolt	1
26	7275-16	U-Jnt Tube Assy, Spline	1		F235	5/16-18 x 2-1/2 Hex Bolt	4
					F371	5/16-18 x 6 Hex Bolt	2

Use only genuine Walker® replacement parts.

Effective Date 11-01-03

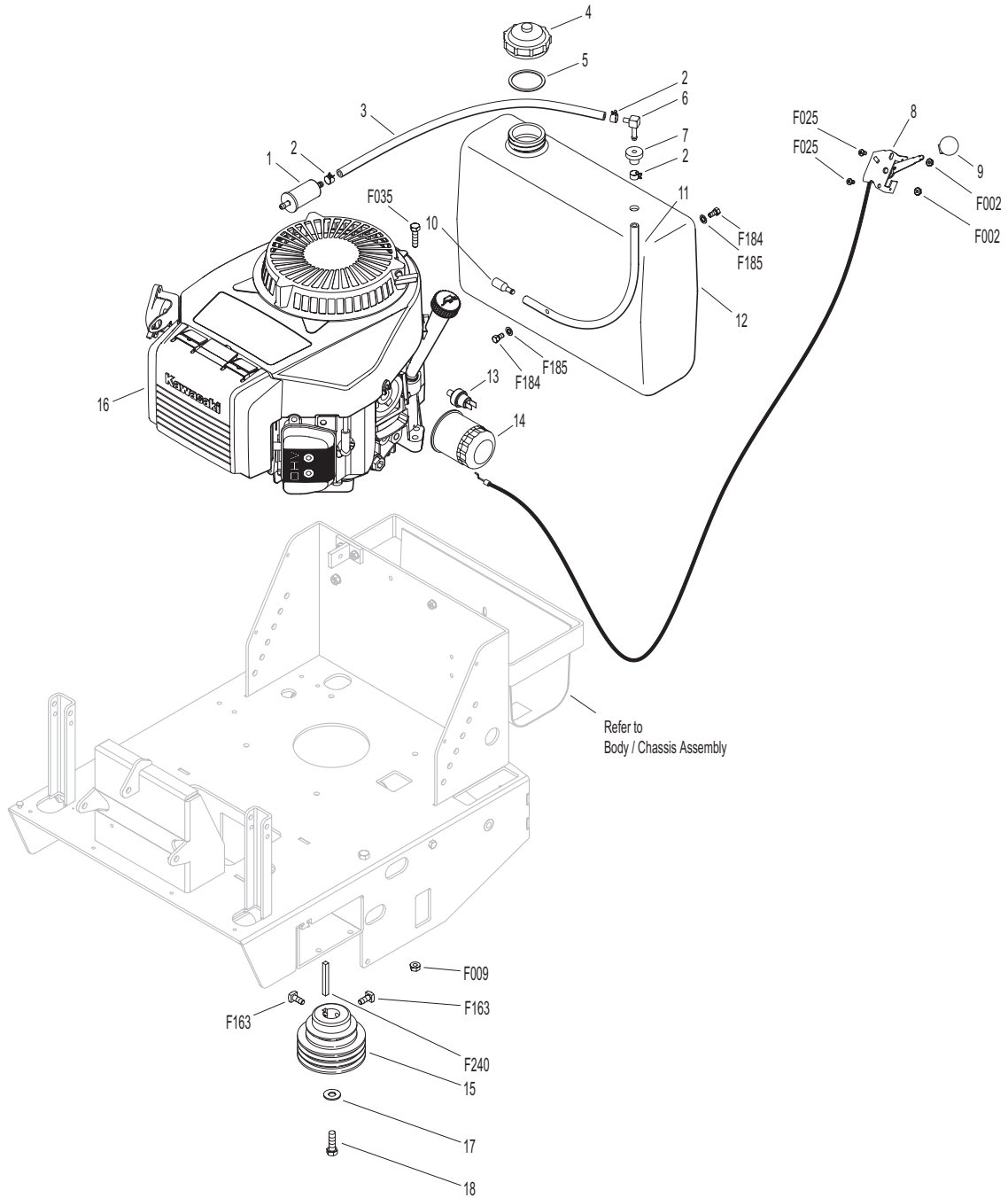
MAIN COMPONENT POWER TRANSMISSION



ENGINE GROUP

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Engine Assembly				Fasteners			
1	5020	Fuel Filter	1	F002		10-24 Keps Nut	2
2	5879-3	Hose Clamp (1/2)	3	F009		5/16-18 Whiz Locknut	4
3	5086-18	Fuel Line	1	F025		10-24 x 3/8 PPHMS	2
4	5082	Fuel Tank Cap (Includes Item # 5)	1	F035		5/16-18 x 1-1/4 Hex Bolt	4
5	5082-2	Fuel Cap Seal	1	F163		5/16-18 x 3/4 SQH Set Screw	2
6	5083-2	Tank Tube Elbow	1	F184		1/4-20 x 1/2 Hex Bolt, SS	2
7	5083-1	Bushing, Rubber	1	F185		1/4 Internal Star Lock Washer	2
8	9121-10	Throttle Control & Cable	1	F240		1/4 x 1/4 x 2-1/4 Key	1
9	5108-5	Throttle Control Knob/Red	1				
10	5020-1	Fuel Filter, In Tank	1				
11	5086	Fuel Line (In Tank P/U)	1				
12	6046-2	Fuel Tank 3.0 Gal./Gas (Includes Items # 4 & 5)	1				
13	9011	Oil Pressure Switch	1				
14	NS	Oil Filter (Kawasaki 49065-2078)	1				
15	9237	Engine Pulley (4/3V, 3A) (Includes Items # F163 & F240)	1				
16	NS	15 HP Kawasaki Engine (FH430VAS14)	1				
17	NS	Washer (Kawasaki 92002-1982)	1				
18	NS	Bolt (Kawasaki 92151-7010)	1				

ENGINE GROUP



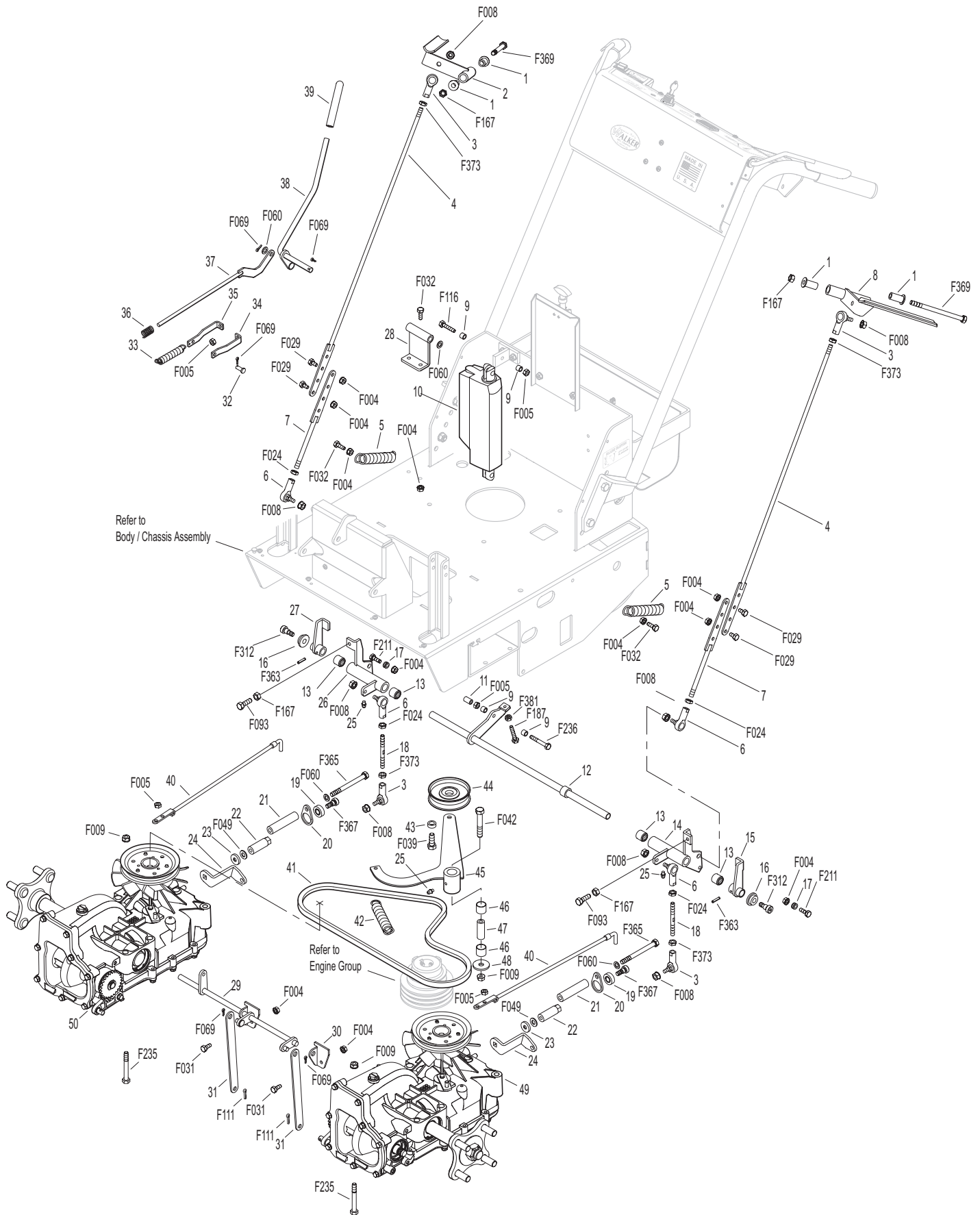
FORWARD SPEED & STEERING CONTROLS

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Steering Lever Assembly				Ground Drive Assemblies			
1	5103-2	Pivot Bushing (5/16 ID)	4	40	9027	Lockout Rod	2
2	9701	Control Handle, LH	1	41	9248	Ground Drive Belt	1
3	5214-3	Ball Joint (5/16-24LH) (Nylon Lined)	4	42	5221	Extension Spring (3/4 x 4)	1
4	9703-2	Linkage Rod, Upper Lever (LH Threaded)	2	43	9349-1	Pulley Spacer, Belt Tightener	1
5	9706-1	Extension Spring (3/4 x 4)	2	44	5245	Idler Pulley (3")	1
6	5214-2	Ball Joint (5/16-24) (Nylon Lined)	4	45	9349	Hydro Belt Tightener Arm (Includes Items # 25, 46 & 47)	1
7	9703-1	Linkage Rod, Lower Lever	2	46	7201-3	DU Bearing	2
8	9702	Control Handle, RH	1	47	7201-4	Inner Race (1-1/2)	1
FSC Linkage & Steering Linkage Assembly				48	5841	(3/8 x 1-1/4) Retainer Washer	1
9	9622	Plastic Bushing, Actuator	4	49	9025	Hydro-Gear, LH	1
10	9621	FSC Actuator	1	50	9026	Hydro-Gear, RH	1
11	9623	Switch Bushing, Actuator	1	Fasteners			
12	9704	Steering Pivot Rod	1	F004	1/4-20 Keps Nut		12
13	9705-2	Bearing, Speed Actuator	4	F005	1/4-20 ESNA Nut		5
14	9706	Speed Control Actuator, RH (Includes Items # 13 & 25)	1	F008	5/16-24 Keps Nut		8
15	9704-2	Speed Control Stop, RH	1	F009	5/16-18 Whiz Locknut		3
16	9704-3	Pivot Rod Bushing, Plastic	2	F024	5/16-24 Jam Nut		4
17	9705-1	Spring Bushing (1/4 x 1/8)	2	F029	1/4-20 x 1/2 Hex Bolt		4
18	9708-1	Control Arm Rod, LH Thread	2	F031	1/4-20 x 5/8 Hex Bolt		2
19	5551-1	Pivot Bearing (#S3PP)	2	F032	1/4-20 x 3/4 Hex Bolt		4
20	9707-3	Bearing Housing, Control Arm	2	F039	3/8-16 x 1-1/4 Hex Bolt		1
21	9707-2	Spacer Tube, Control Arm	2	F042	3/8-16 x 2-1/4 Hex Bolt		1
22	9707-1	Extension Nut, Hydrogear	2	F049	5/16 SAE Washer		2
23	9024	1/8 x 7/8 Washer	2	F060	AN960516 Washer		4
24	9707	Control Arm, Hydro-gear	2	F069	3/32 x 1/2 Cotter Pin		5
25	5830	Grease Fitting	3	F093	5/16-18 x 1 Hex Bolt		2
26	9705	Speed Control Actuator, LH (Includes Items 13 & 25)	1	F111	1/8 x 3/4 Cotter Pin		2
27	9704-1	Speed Control Stop, LH	1	F116	1/4-20 x 1-1/4 Hex Bolt		1
Brake Assembly				F167	5/16-18 Hex Nut		4
28	9406-1	Park Brake Lever Mount	1	F187	1/4-20 x 1-1/2 Hex Bolt		1
29	9407	Park Brake Actuator Rod	1	F211	1/4-20 x 7/8 Hex Bolt		2
30	9407-2	Brake Actuator Rod Mount	2	F235	5/16-18 x 2-1/2 Hex Bolt		2
31	9407-1	Park Brake Actuator Link	2	F236	1/4-20 x 1-3/4 Hex Bolt		1
32	7523-2	Clevis Pin (1/4 x 5/8)	1	F312	3/8 x 3/8 Shoulder Bolt		2
33	5225	Extension Spring (1/2 x 2-1/4)	1	F363	5/32 x 3/4 Roll Pin		2
34	9406-4	Clevis Half	1	F365	5/16-24 x 3-1/2 Hex Bolt		2
35	9406-3	Clevis Half, Spring Side	1	F367	3/8 x 1/2 Shoulder Bolt		2
36	5665	Compression Spring (1/2 x 1)	1	F369	5/16-18 x 4-1/2 Hex Bolt		2
37	9406-2	Brake Actuator Pull	1	F373	5/16-24 LH Hex Nut		4
38	9406	Park Brake Lever (Includes Item # 39)	1	F381	1/4-20 Hex Nut		1
39	7406-1	Handle Grip, Red	1				

Use only genuine **Walker**[®] replacement parts.

Effective Date 11-01-03

FORWARD SPEED & STEERING CONTROLS



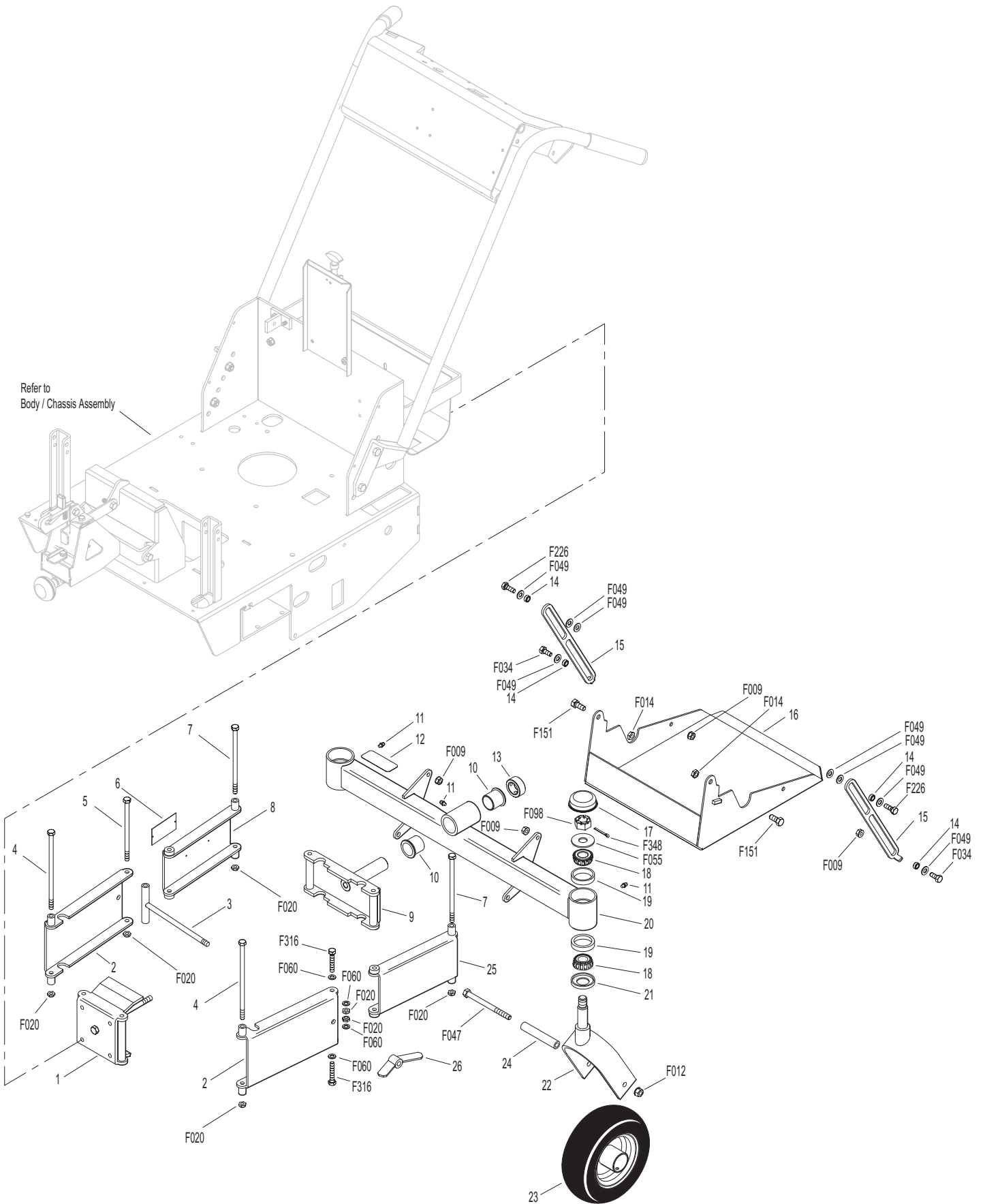
Effective Date 11-01-03

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SULKY ATTACHMENT

ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Sulky Attachment				Fasteners			
1	9504	Front Arm Mount, Sulky	1	F009	5/16-18 Whiz Locknut		4
2	9506	Front Arm, Sulky	2	F012	3/8-16 Keps Nut		2
3	9509	T-Bolt, Arm Lock	1	F014	3/8-16 ESNA Nut		2
4	9510	Front Pivot 5/16-18 x 6-5/8	2	F020	5/16-18 ESNA Nut		7
5	9511	Center Pivot 5/16-18 x 5-1/4	1	F034	5/16-18 x 3/4 Hex Bolt		2
6	NS	Serial Number Plate	1	F047	3/8-16 x 4-1/2 Hex Bolt		2
7	9512	Rear Pivot 5/16-18 x 5-5/8	2	F049	5/16 SAE Washer		8
8	9507-1	Rear Arm/RH, Sulky	1	F055	5/8 SAE Washer		2
9	9505	Rear Arm Mount, Sulky	1	F060	AN960516 Washer		4
10	5683	Pivot Bearing	2	F098	5/8-18 Slotted Hex Nut		2
11	5830	Grease Fitting	3	F151	3/8-16 x 7/8 Hex Bolt		2
12	9503-1	Decal, Max Load Warning	1	F226	5/16-18 x 7/8 Hex Bolt		2
13	5267-1	Retainer Collar (1")	1	F316	5/16-18 x 1-3/4 Hex Bolt		2
14	9502-1	Support Arm Bushing	4	F348	1/8 x 1-1/2 Cotter Pin		2
15	9502	Support Arm, Foot Tray	2				
16	9501	Foot Tray, Sulky	1				
17	8769-9	Dust Cap Deck Caster	2				
18	8037	Bearing Cone (3/4 ID)	4				
19	8769-1	Bearing Cup, Caster Fork	4				
20	9503	Fork Mount Tube (Includes Items # 10, 11 & 12)	1				
21	8768-1	Seal	2				
22	5770-1	Caster Wheel Fork	2				
23	5715-4	Caster Wheel Assembly Pneu. (8 x 3.00-4)	2				
24	5714-3	Axle Spacer Tube	2				
25	9507	Rear Arm/LH, Sulky	1				
26	9508	Wing Nut	1				

SULKY ATTACHMENT



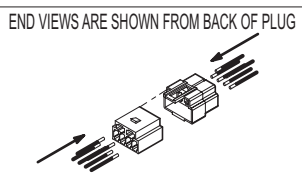
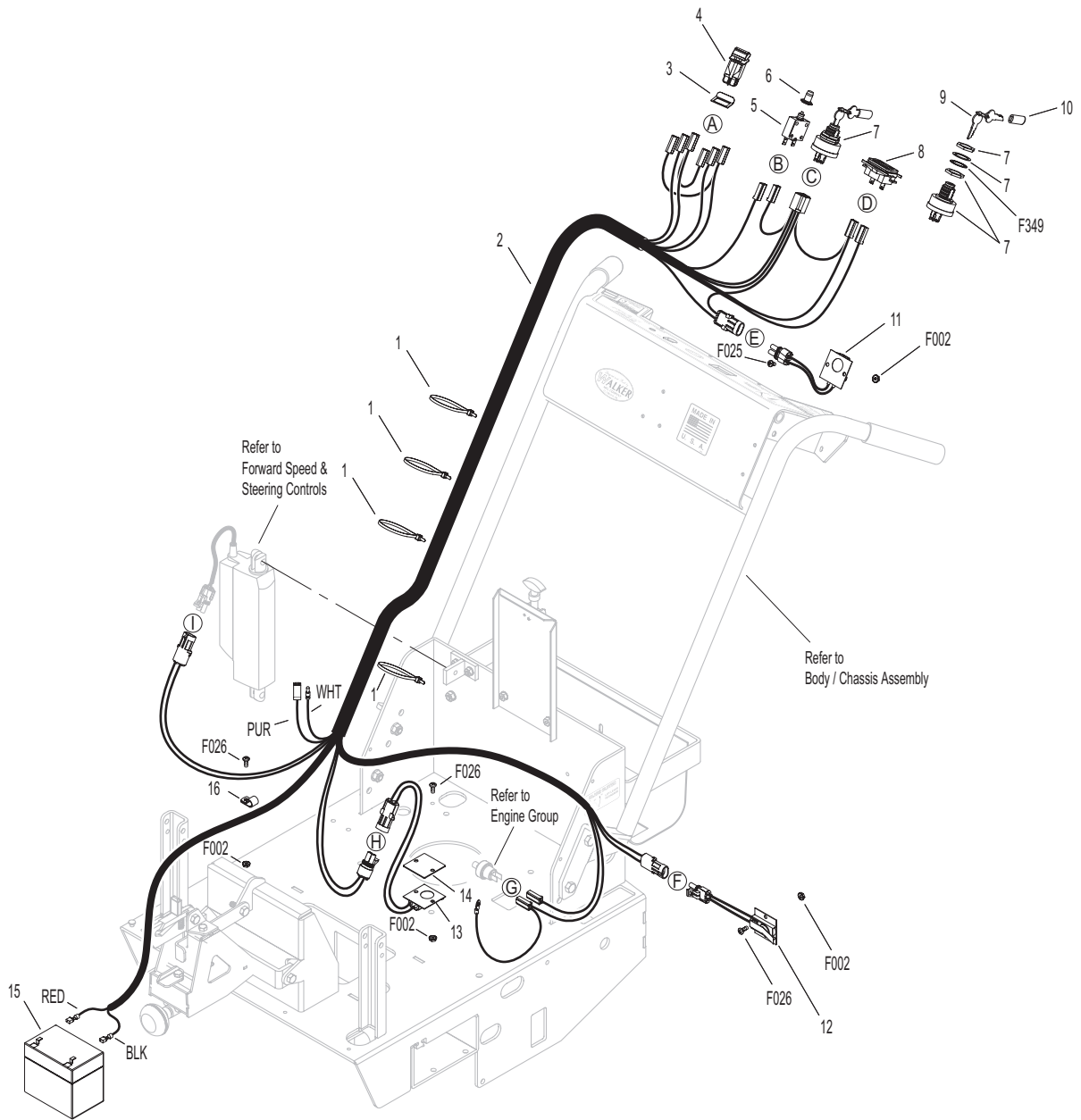
Effective Date 11-01-03

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ELECTRICAL ASSEMBLY

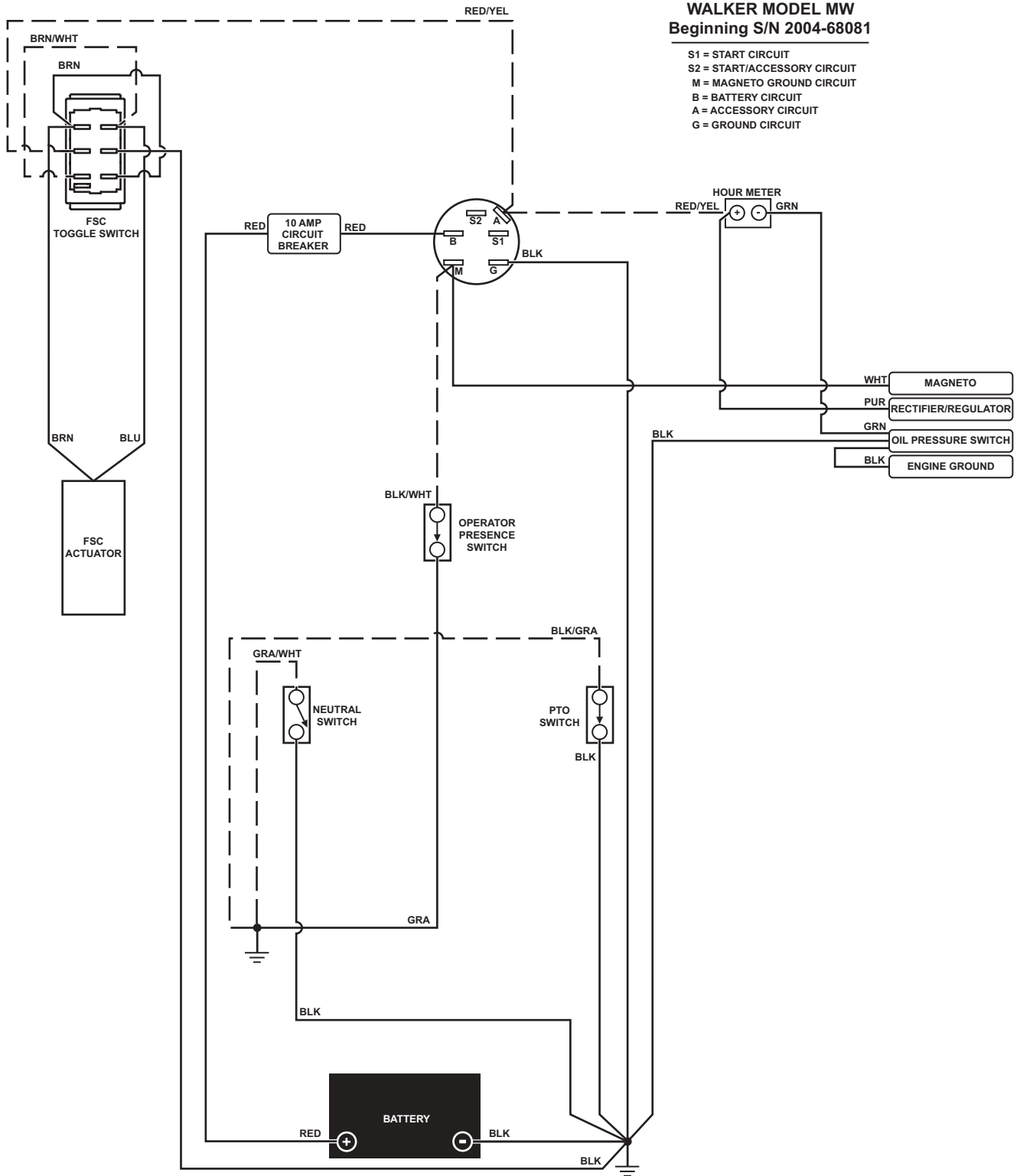
ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D	ITEM NO.	PART NO.	DESCRIPTION	NO. REQ'D
Electrical Assembly				Fasteners			
1	5975-3	Cable Tie (50# x 7")	4		F002	10-24 Keps Nut	7
2	9940	Wire Harness	1		F025	10-24 x 3/8 PPHMS	2
3	9941-2	FSC Thumb Guard	1		F026	10-24 x 1/2 PPHMS	5
4	9941-1	FSC Switch	1		F349	Washer .835 ID 1.122 OD, SS	1
5	7941-2	Circuit Breaker (10 Amp)	1				
6	7941-3	Boot, Circuit Breaker	1	*		Service Part Only	
7	8960-15	Ignition Switch (with Keys) (Includes Items # 9, 10 & F349)	1				
8	8990-1	Hourmeter (SenDec)	1				
9	8960-2	Ignition Key (1 Set)	*				
10	7854	Plastic Tip, Red	1				
11	9942	Safety Switch, Operator	1				
12	9943	PTO Safety Switch	1				
13	9944	Safety Switch, Neutral	1				
14	7203-6	Riser Plate, Seat Switch	1				
15	9910	Battery (12V/5 Amp SLA)	1				
16	5832	Cable Clamp (1/2)	1				

ELECTRICAL ASSEMBLY



DETAIL A	DETAIL B	DETAIL C	DETAIL D	DETAIL E	DETAIL F	DETAIL G	DETAIL H	DETAIL I
BLU BRN	RED	RED	RED	BLK/WHT	GRA	BLK	GRA	GRA
BLK RED/YEL	RED	WHT			BLK	GRN	BLK	BLK
BRN BRN/WHT		BLK/WHT				BLK		
		BLK						

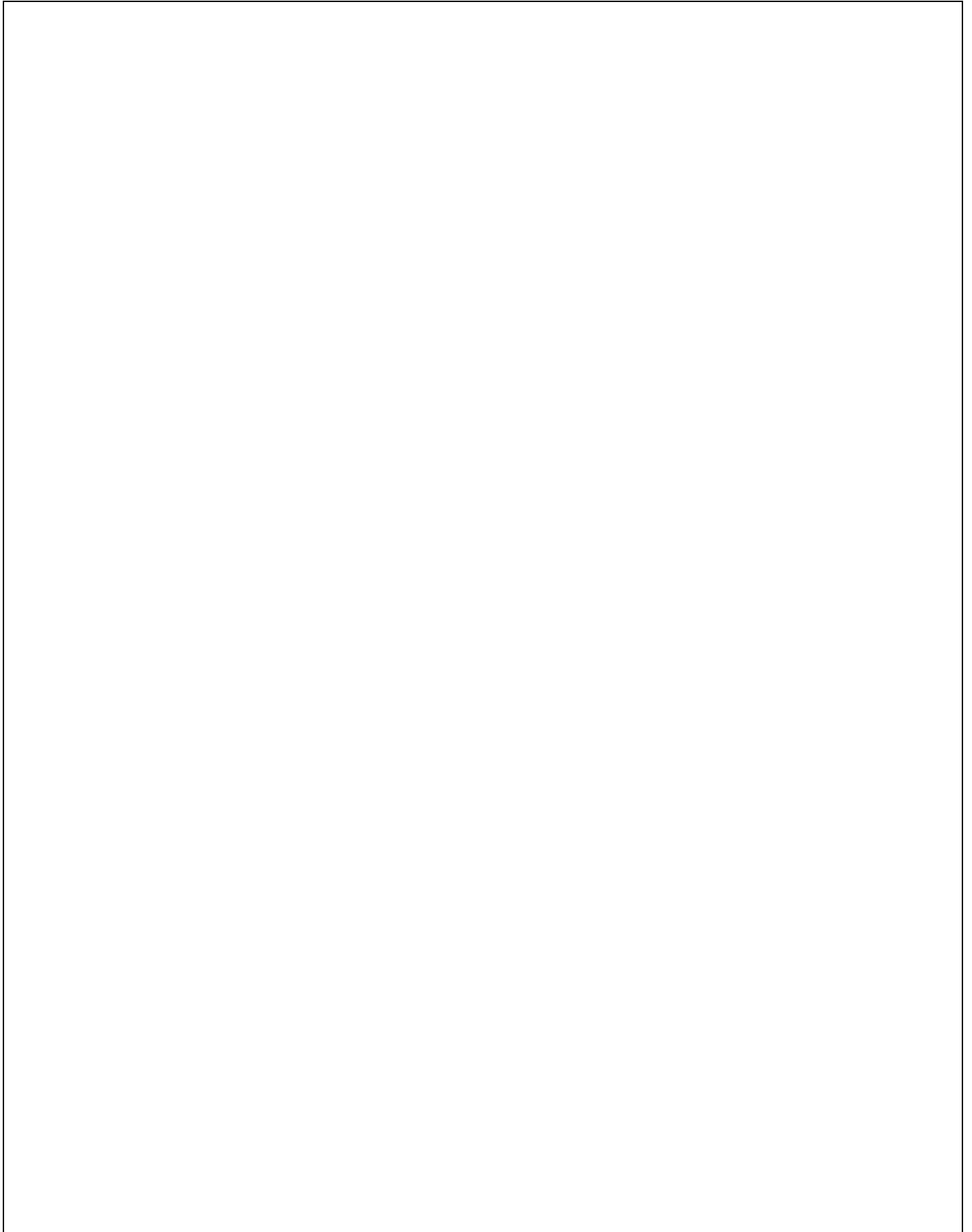
WIRING SCHEMATIC



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Effective Date 11-01-03

Operator's Notes

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LIMITED WARRANTY FOR WALKER COMMERCIAL RIDER MOWER

1. WHAT THIS WARRANTY COVERS, AND FOR HOW LONG:

Walker Manufacturing company will, at its option, repair or replace, without charge, any part covered by this warranty which is found to be defective in material and/or workmanship within one (1) year after date of sale to the original retail purchaser unless the product is used for rental purposes, in which case this warranty is limited to ninety (90) days. At Walker's request, customer will make the defective part available for inspection by Walker and/or return the defective part to Walker, transportation charges prepaid. All parts and components of the Walker Mower are covered by this warranty **except** the following components which are warranted separately by their respective manufacturers:

Kawasaki Engine
HydroGear Transaxles
Peerless Gearboxes
Battery
Tires

The available warranties covering these items are furnished with each mower. Walker does not assume any warranty obligation, liability or modification for these items, which are covered exclusively by the stated warranty of the respective manufacturers noted above.

2. WHAT THIS WARRANTY DOES NOT COVER:

- A. This warranty does not cover defects caused by depreciation or damage caused by normal wear, accidents, improper maintenance, improper use or abuse of the product, alterations, or failure to follow the instructions contained in the Owner's Manual for operation and maintenance.
- B. The customer shall pay any charges for making service calls and/or for transporting the mower to and from the place where the inspection and/or warranty work is performed.

3. HOW TO OBTAIN SERVICE UNDER THIS WARRANTY:

Warranty service can be arranged by contacting the dealer where you purchased the mower or by contacting Walker Manufacturing Company, 5925 East Harmony Road, Ft. Collins, CO 80528. Proof of the date of purchase may be required to verify warranty coverage.

4. WARRANTY LIMITATION:

- A. **THERE IS NO OTHER EXPRESS WARRANTY. ANY WARRANTY THAT MAY BE IMPLIED FROM THIS PURCHASE INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IS HEREBY LIMITED TO THE DURATION OF THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
- B. **WALKER WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES AND/OR EXPENSES IN CONNECTION WITH THE PURCHASE OR USE OF THE MOWER.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.
- C. Only the warranty expressed in this limited warranty shall apply and no dealer, distributor, or individual is authorized to amend, modify, or extend this warranty in any way. Accordingly, additional statements such as dealer advertising or presentations, whether oral or written, do not constitute warranties by Walker, and should not be relied upon.
- D. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WALKER MOWERS™

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