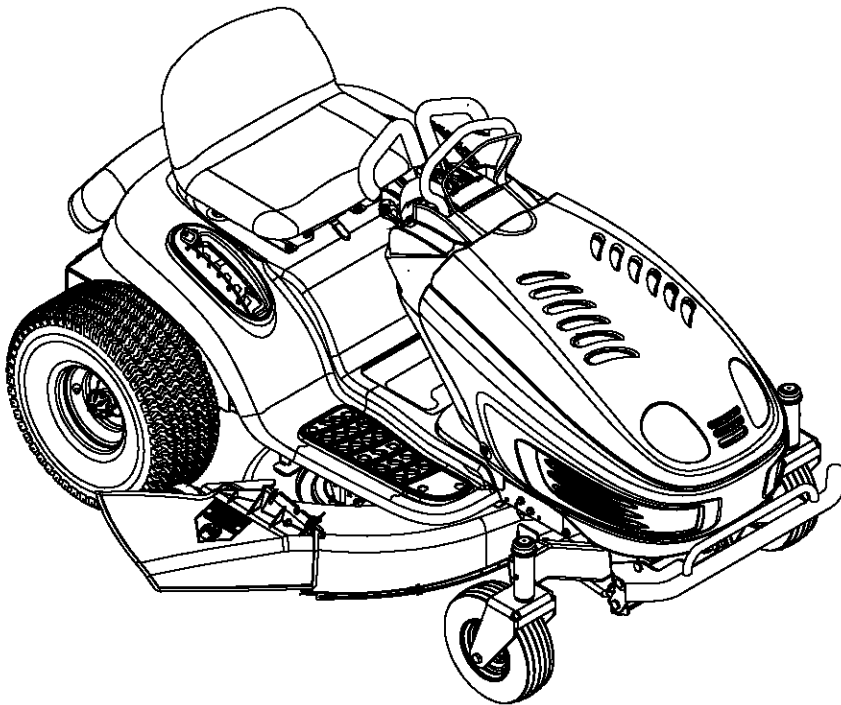




Operator's Manual

REVOLUTION™

**Lawn Tractor
Model 624**



IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 368022 Cleveland, Ohio 44136-9722.

MTD PRODUCTS INC. P.O. BOX 368022 CLEVELAND, OHIO 44136-9722

PRINTED IN U.S.A.
ECO No. 003236

FORM NO. 770-10444A
(10/2000)

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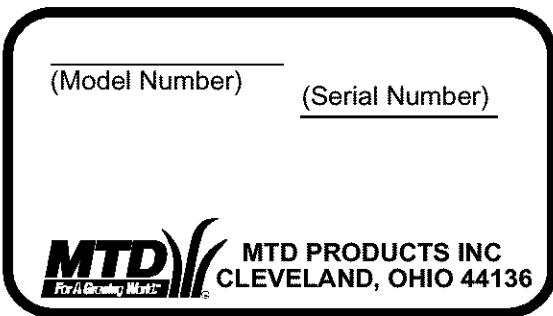
FINDING MODEL NUMBER

This Operator's Manual is an important part of your new lawn tractor. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.



Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from our Customer Support Department or an authorized dealer.

- You can locate the model number by looking beneath the seat. A sample model plate is explained below. For future reference, please copy the model number and the serial number of the equipment in the space below.



Copy the model number here: _____

Copy the serial number here: _____

CALLING CUSTOMER SUPPORT

If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call the Customer Support Department.



Call **1- (330) 220-4MTD (4683)** or **1- (800)-800-7310** to reach a Customer Support representative. Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

For more details about your unit, visit our website at www.mtdproducts.com

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



WARNING: This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—heed its warning.



DANGER: This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

California Proposition 65 Warning:



WARNING: Engine exhaust, some of its constituents, and certain vehical components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

GENERAL OPERATION

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. To help avoid blade contact or a thrown object injury, keep bystanders, helpers, children and pets at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
6. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys, and other foreign objects which could be picked up and thrown by the blades. Thrown objects can cause serious personal injury.
7. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction which may cause discharged material to ricochet back toward the operator.
8. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
9. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Loose fitting clothes and jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals.
10. Be aware of the mower and attachment discharge direction and do not point it at anyone. Do not operate the mower without the discharge cover or entire grass catcher in its proper place.
11. Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade(s) can amputate hands and feet.
12. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
13. Stop the blades when crossing gravel drives, walks, or roads and while not cutting grass.
14. Watch for traffic when operating near or crossing roadways. This machine is not intended for use on any public roadway.
15. Do not operate the machine while under the influence of alcohol or drugs.
16. Mow only in daylight or good artificial light.
17. Never carry passengers.
18. Disengage blades before moving both control handles into reverse. Back up slowly. Always look down and behind before and while backing to avoid a back-over accident.
19. Slow down before turning. Operate the machine smoothly. Avoid erratic operation and excessive speed.
20. Disengage blades, set parking brake, stop engine and wait until the blades come to a complete stop before removing grass catcher, emptying grass, unclogging chute, removing any grass or debris, or making any adjustments.
21. Never leave a running machine unattended. Always turn off blades/PTO, move both control handles into neutral position, set parking brake, stop engine and remove key before dismounting.
22. Use extra care when loading or unloading the machine into a trailer or truck. This unit should not be driven up or down ramp(s), because the unit could tip over, causing serious personal injury. The unit must be pushed manually on ramp(s) to load or unload properly.

23. Muffler and engine become hot and can cause a burn. Do not touch.
24. Check overhead clearances carefully before driving under low hanging tree branches, wires, door openings etc., where the operator may be struck or pulled from the unit, which could result in serious injury.
25. Disengage all attachment clutches, set parking brake and keep both control handles in the neutral position before attempting to start engine.
26. Your machine is designed to cut normal residential grass of a height no more than 10". Do not attempt to mow through unusually tall, dry grass (e.g., pasture) or piles of dry leaves. Dry grass or leaves may contact the engine exhaust and/or build up on the mower deck presenting a potential fire hazard.
27. Use only accessories and attachments approved for this machine by the machine manufacturer. Read, understand and follow all instructions provided with the approved accessory or attachment.
28. Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
29. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer or telephone 1-800-800-7310 for assistance and the name of your nearest servicing dealer.

SLOPE OPERATION

Slopes are a major factor related to loss of control and tip-over accidents which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

For your safety, use the slope gauge included as part of this manual to measure slopes before operating this machine on a sloped or hilly area. If the slope is greater than 10 degrees as shown on the slope gauge, do not operate this machine on that area or serious injury could result.

DO:

1. Mow up and down slopes, not across. Exercise extreme caution when changing direction on slopes.
 2. Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
 3. Use slow speed. Tires may lose traction on slopes even though the brakes are functioning properly.
 4. Follow the manufacturer's recommendations for a counterweight for additional stability.
5. Use extra care with grass catchers or other attachments. These can change the stability of the machine.
 6. Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction. Rapid engagement or braking could cause the front of the machine to lift and rapidly flip over backwards which could cause serious injury.
 7. Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.

DO NOT:

1. Do not turn on slopes unless necessary; then, turn slowly and gradually downhill, if possible.
2. Do not mow near drop-offs, ditches or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff, ditch, or if an edge caves in.
3. Do not try to stabilize the machine by putting your foot on the ground.
4. Do not use a grass catcher on steep slopes.
5. Do not mow on wet grass. Reduced traction could cause sliding.
6. Do not tow heavy pull behind attachments (e.g. loaded dump cart, lawn roller, etc.) on slopes greater than 5 degrees. When going down hill, the extra weight tends to push the tractor and may cause you to lose control. (e.g. tractor may speed up, braking and steering ability are reduced, attachment may jack-knife and cause tractor to overturn).

CHILDREN

1. Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.
 - a. Keep children out of the mowing area and in watchful care of a responsible adult other than the operator.
 - b. Be alert and turn machine off if a child enters the area.
 - c. Before and while backing, look behind and down for small children.
 - d. Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation.
 - e. Use extreme care when approaching blind corners, doorways, shrubs, trees or other objects that may block your vision of a child who may run into the machine.

- f. Disengage the cutting blades before moving both control handles into reverse. The “No-Cut-In Reverse” feature is a reminder not to cut in reverse and to help avoid back over accidents. Do not defeat it.
 - g. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
 - h. Remove key when machine is unattended to prevent unauthorized operation.
9. Never allow children under 14 years old to operate the machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.

TOWING

1. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
2. Follow the manufacturers recommendation for weight limits for towed equipment and towing on slopes.
3. Never allow children or others in or on towed equipment.
4. On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
5. Travel slowly and allow extra distance to stop.

SERVICE

SAFE HANDLING OF GASOLINE:

1. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
 - a. Use only an approved gasoline container.
 - b. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
 - c. When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
 - d. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
 - e. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
 - f. Never fuel machine indoors.

- g. Never remove gas cap or add fuel while the engine is hot or running. Allow engine to cool at least two minutes before refueling.
- h. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to allow space for fuel expansion.
- i. Replace gasoline cap and tighten securely.
- j. If gasoline is spilled, wipe it off the engine and equipment. Move unit to another area. Wait 5 minutes before starting the engine.
- k. To reduce fire hazards, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
- l. Never store the machine or fuel container inside where there is an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
- m. Allow a machine to cool at least 5 minutes before storing.

GENERAL SERVICE:

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless, and deadly gas.
2. Before cleaning, repairing, or inspecting, make certain the blades and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
3. Periodically check to make sure the blades come to complete stop within approximately (5) five seconds after operating the blade disengagement control. If the blades do not stop within the this time frame, your unit should be serviced professionally by an authorized MTD service dealer.
4. Check parking brake frequently as it is subjected to wear during normal operation. Adjust and service as required.
5. Check the blades and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blades for damage (e.g., excessive wear, bent, cracked) Replace the blades with the original equipment manufacturer’s (O.E.M.) blades only, listed in this manual. “Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!”
6. Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
7. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
8. Never tamper with the safety interlock system or other safety devices. Check their proper operation regularly.

9. After striking a foreign object, stop the engine, disconnect the spark plug wire(s) and ground against the engine. Thoroughly inspect the machine for any damage. Repair the damage before starting and operating.
10. Never attempt to make adjustments or repairs to the machine while the engine is running.
11. Grass catcher components and the discharge cover are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
12. Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
13. Maintain or replace safety and instruction labels, as necessary.
14. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.



WARNING: YOUR RESPONSIBILITY Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

WARNING

TO AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS. DO NOT MOW SLOPES GREATER THAN 10°.
- AVOID SUDDEN TURNS.
- DO NOT OPERATE THE MACHINE WHERE IT COULD SLIP OR TIP.
- IF MACHINE STOPS GOING UPHILL, STOP BLADES AND BACK DOWNHILL SLOWLY.
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
- NEVER CARRY CHILDREN EVEN WITH BLADES OFF.
- LOOK DOWN & BEHIND BEFORE AND WHILE BACKING.

- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES, ETC.) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADES.
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- BE SURE BLADES AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADES.
- BEFORE LEAVING OPERATOR'S POSITION, DISENGAGE BLADES, POSITION CONTROL HANDLES IN NEUTRAL, ENGAGE PARKING BRAKE, SHUT OFF ENGINE AND REMOVE KEY.

READ OPERATOR'S MANUAL

TO REDUCE THE RISK OF INJURY, DO NOT OPERATE UNLESS DISCHARGE COVER OR GRASS CATCHER IS IN ITS PROPER PLACE. IF DAMAGED, REPLACE IMMEDIATELY.

DANGER

KEEP HANDS and FEET AWAY

WARNING

DO NOT OPERATE ON SLOPES OVER 10° AND TURN SLOWLY TO CONTROL TRACTOR STEERING.

DANGER

AVOID SERIOUS INJURY OR DEATH

KEEP HANDS AND FEET AWAY FROM ROTATING PARTS. REMOVE OBJECTS THAT CAN BE THROWN BY THE BLADE IN ANY DIRECTION. WEAR SAFETY GLASSES. DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND. NEVER CARRY CHILDREN EVEN WITH BLADES OFF. USE EXTRA CAUTION ON SLOPES. DO NOT MOW SLOPES GREATER THAN 10° MOW UP AND DOWN, NOT ACROSS. AVOID SUDDEN TURNS, USE LOW SPEED.

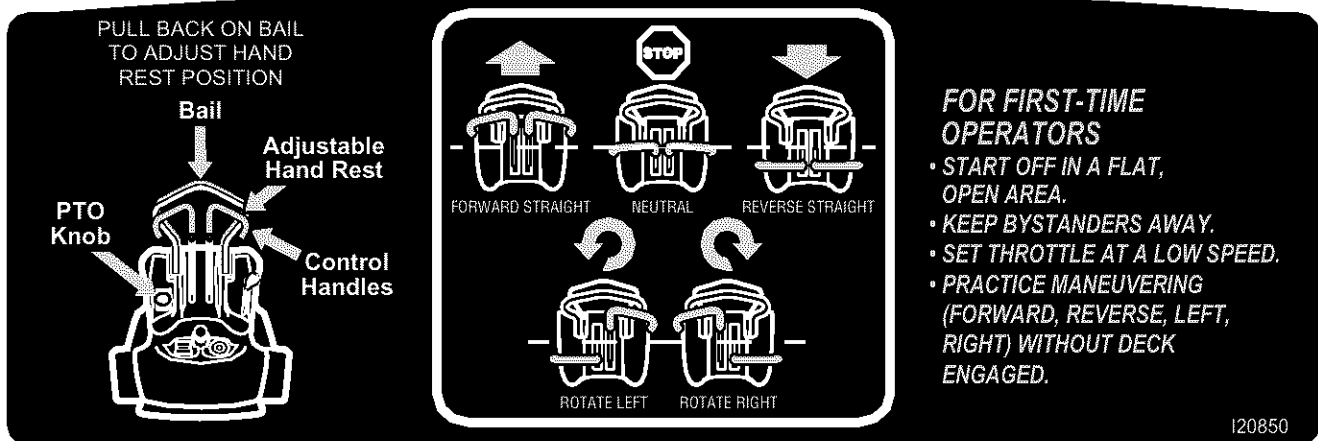
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MAX 10°

READ OPERATOR'S MANUAL. KEEP SAFETY DEVICES IN PLACE AND WORKING.

Label shape may vary by tractor model. Label contents do not vary.

SECTION 2: IMPORTANT NOTE TO FIRST-TIME OPERATORS



The Revolution™ lawn tractor has a number of unique features. For example, there is a single pair of Control Handles which replace the steering wheel, forward/reverse shift lever, speed control and brake pedal typically found on conventional lawn tractors. Because of Revolution's™ unique controls, all first-time operators should **thoroughly** familiarize themselves with the function of all controls before beginning to mow. Refer to Figure 3 on page 10 of this manual for the location of all of the tractor's controls.

The following is required for all first-time operators.

1. Read entirely through this Operator's Manual. Pay particular attention to:
 - SECTION 1: IMPORTANT SAFE OPERATION PRACTICES,**
 - SECTION 3: SLOPE GAUGE,**
 - SECTION 5: KNOW YOUR LAWN TRACTOR and**
 - SECTION 6: OPERATING YOUR LAWN TRACTOR.**
2. Before operating the unit the first time, push (do not drive) it out into a flat open area well away from any bystanders and obstacles such as buildings, vehicles, trees, etc. For detailed instructions on doing so, refer to page 18 under the heading **Moving the Tractor Manually**.
3. Before starting the engine, adjust the seat to a comfortable position. With the engine still off, operate the controls (i.e. Control Handles, Adjustable Hand Rest, Parking Brake Lever, Throttle Control Lever, Deck Lift Lever, PTO Knob) through their full range of operation to get a feel for how they function.
4. Once familiar with all the controls, start the tractor's engine as follows:
 - a. Insert the ignition key into the Ignition Switch.
 - b. Make certain the PTO knob is in the disengaged (OFF) position.
 - c. Engage the tractor's Parking Brake.
 - d. Squeeze the Bail against the Adjustable Hand Rest and position it rearward so that it is in the position closest to the operator.
 - e. Move the throttle control lever into the FAST (or CHOKE, if so equipped) position. Otherwise, pull out the Choke Control Knob, if so equipped.

FOR FIRST-TIME OPERATORS

- START OFF IN A FLAT, OPEN AREA.
- KEEP BYSTANDERS AWAY.
- SET THROTTLE AT A LOW SPEED.
- PRACTICE MANEUVERING (FORWARD, REVERSE, LEFT, RIGHT) WITHOUT DECK ENGAGED.

120850

- f. Turn the Ignition Key clockwise to start the engine.
- g. Once the engine has warmed up, move the Throttle Control Lever to a low RPM (near the Turtle).

The rear tires of the Revolution™ both propel the lawn tractor as well as steer it.

The right control handle controls the **right** rear wheel.

The left control handle controls the **left** rear wheel.

- The further *forward* a control handle is positioned, the faster the wheel it controls will drive *forward*.
- The further *rearward* a control handle is positioned, the faster the wheel it controls will drive *in reverse*.

Moving each control handle in varying positions allows the operator to maneuver the tractor in nearly any direction. Refer to the label found on the top of your tractor's dash panel (illustrated above) for a quick reference of basic control handle positions and their relation to the direction the tractor will travel.

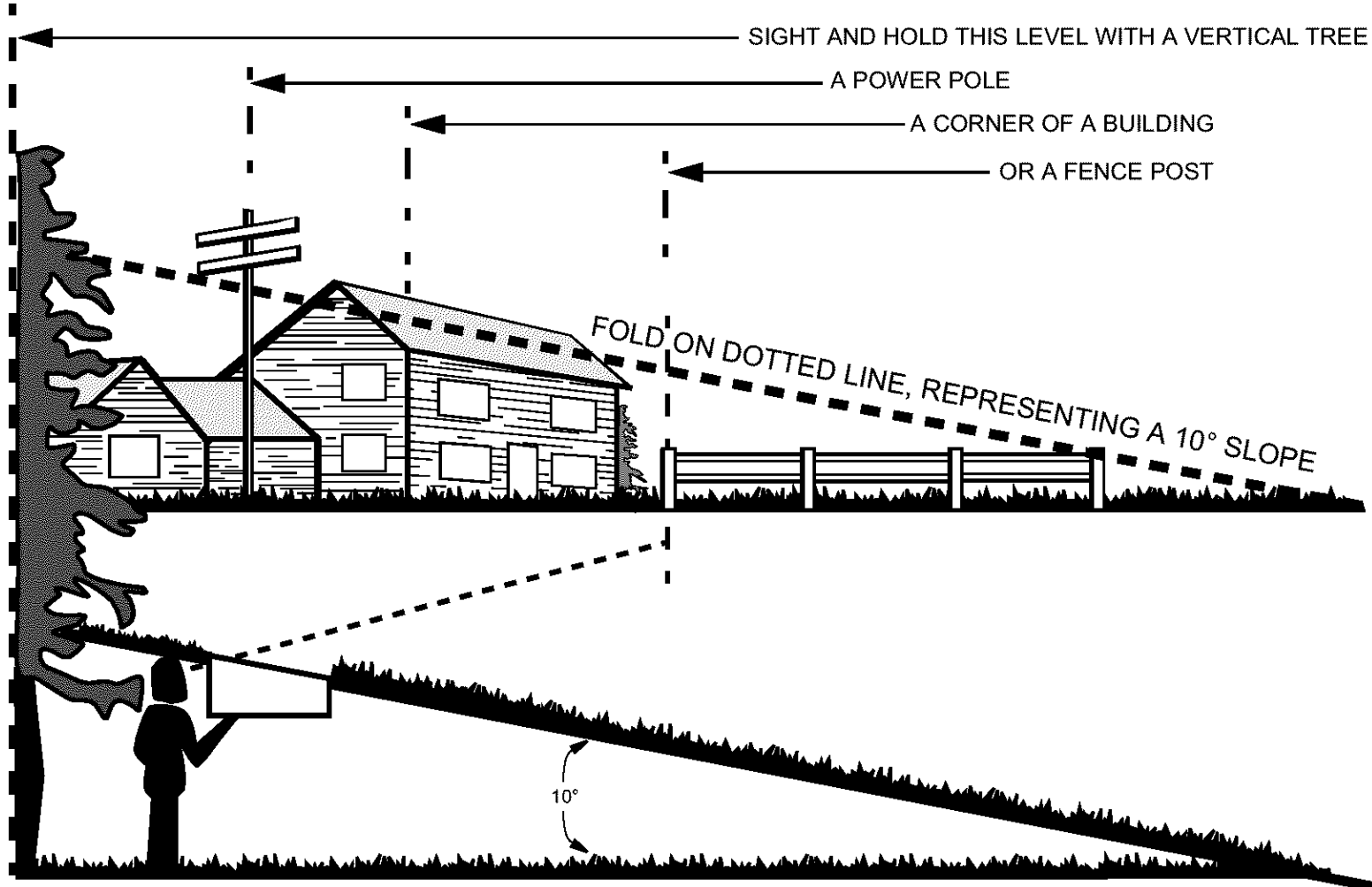
5. Practice maneuvering the tractor, with the PTO in the disengaged (OFF) position, around moveable objects such as pylons or cardboard boxes (NOT trees) to help get comfortable with the controls.



WARNING: Always look down and behind before and while backing up to avoid a back-over accident.

6. Gradually increase throttle speed and become **completely** comfortable with the tractor's controls before placing the PTO knob in the engaged (ON) position and using the tractor to cut grass.

SECTION 3: SLOPE GAUGE



WARNING

Do not use the riding mower on inclines with a slope in excess of 10 degrees (a rise of approximately 2 feet every 10 feet). A riding mower could overturn and cause serious injury. Operate RIDING mowers up and down slopes, never across the face of slopes.

SECTION 4: TRACTOR SET-UP

Attaching the Battery Cables

NOTE: The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

- The positive cable (heavy red wire) is secured to the positive battery terminal (+) with a hex bolt and hex nut at the factory. Make certain that the rubber boot covers the terminal to help protect it from corrosion.
- Remove the hex bolt and wing nut from the negative cable.
- Remove the black plastic cover, if present, from the negative battery terminal and attach the negative cable (heavy black wire) to the negative battery terminal (-) with the bolt and wing nut.
- Make certain the hold-down strap is in position over the battery, securing it in place. See Figure 1.

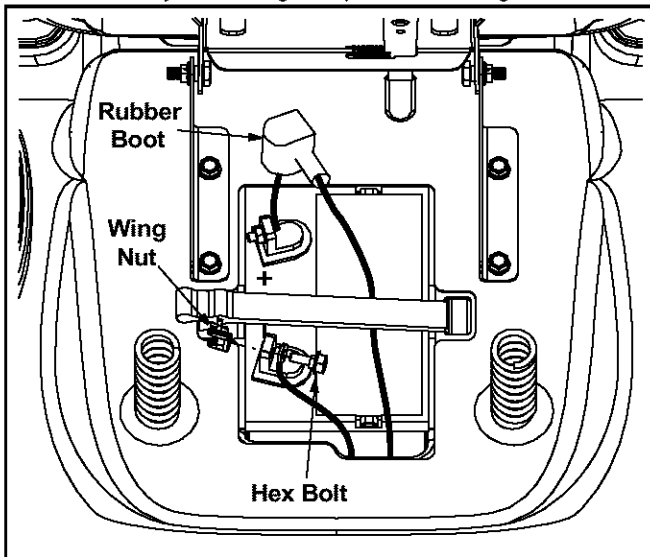


Figure 1

NOTE: If the battery is put into service after the date shown on top of battery, charge the battery as instructed on page 26 of this manual prior to operating the tractor.

Gas and Oil Fill-up

The gasoline tank is located under the hood and has a capacity of either two or three gallons. Do not overfill.



WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes, and other sources of ignition.

Service the engine with gasoline and oil as instructed in the separate *Briggs & Stratton Operator/Owner Manual* packed with your tractor. Read instructions carefully.

IMPORTANT: Your tractor is shipped with motor oil in the engine. However, you **MUST** check the oil level before operating. Be careful not to overfill.

Shipping Brace Removal



WARNING: Make sure the riding mower's engine is off, set the parking brake and remove the ignition key before removing the shipping brace.

- Locate the shipping brace and warning tag found on the right side of the cutting deck. See Figure 2.

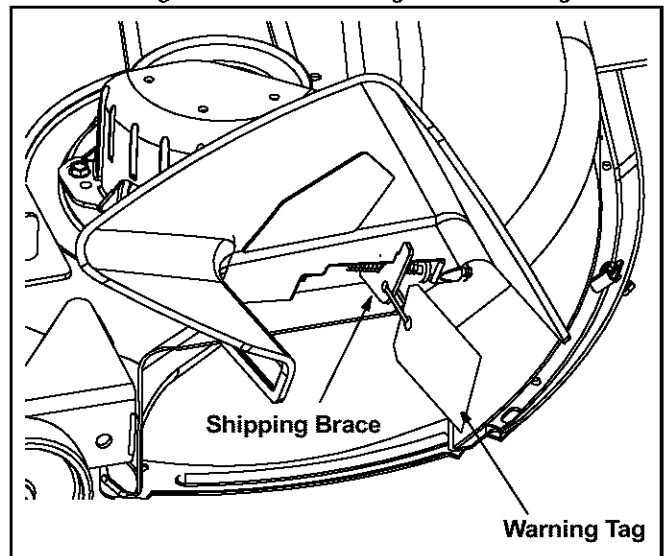


Figure 2

- While holding the discharge chute with your left hand, remove the shipping brace with your right hand by grasping it between your thumb and index finger and rotating it clockwise.

NOTE: 42-inch decks come equipped with a mulch plug installed over the chute opening. Do NOT discard it. Refer to **Mulching** on page 17 for detailed information.



WARNING: The shipping brace, used for packaging purposes only, must be removed and discarded before operating your riding mower.



WARNING: The mowing deck is capable of throwing objects. Failure to operate the riding mower without the discharge cover in the proper operating position could result in serious personal injury and/or property damage.

SECTION 5: KNOW YOUR LAWN TRACTOR

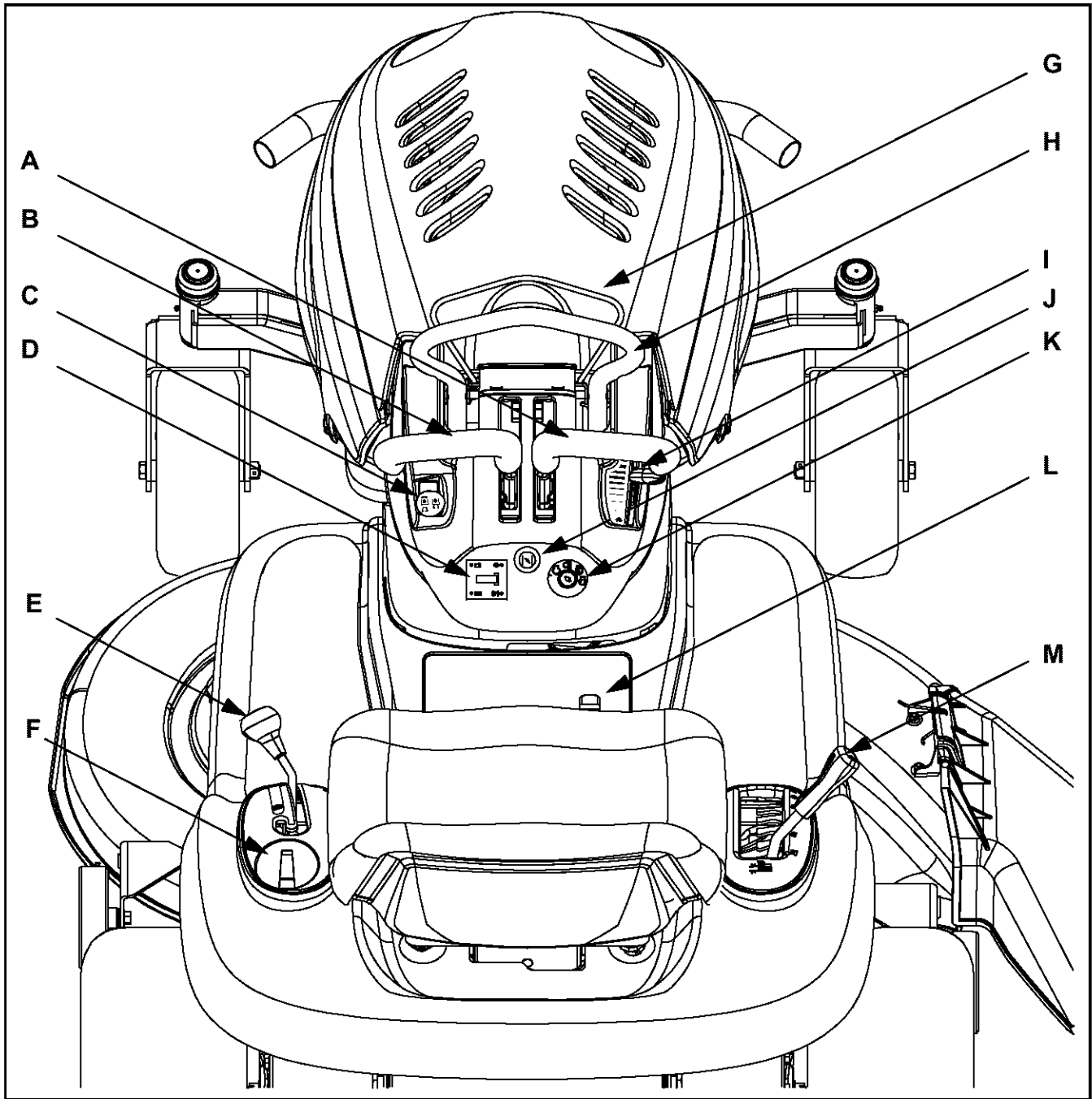


Figure 3

- | | | | |
|---|--------------------------------------|---|--------------------------------|
| A | Right Control Handle | H | Adjustable Hand Rest |
| B | Left Control Handle | I | Throttle Control Lever |
| C | Electric PTO (Power Take-off) Knob | J | Choke Control (if so equipped) |
| D | Systems Indicator Monitor/Hour Meter | K | Ignition Switch |
| E | Parking Brake Lever | L | Seat Adjustment Lever |
| F | Cup Holder | M | Deck Lift Lever |
| G | Hand Rest Bail | | |

NOTE: Any reference in this manual to the RIGHT or LEFT side of the tractor is observed from operator's position.

Throttle Control Lever

The throttle lever is located on the right side of the tractor's dash panel. This lever controls the speed of the engine, and on some units the choke control also. When set in a given position, the throttle will maintain a uniform engine speed. See Figure 4.

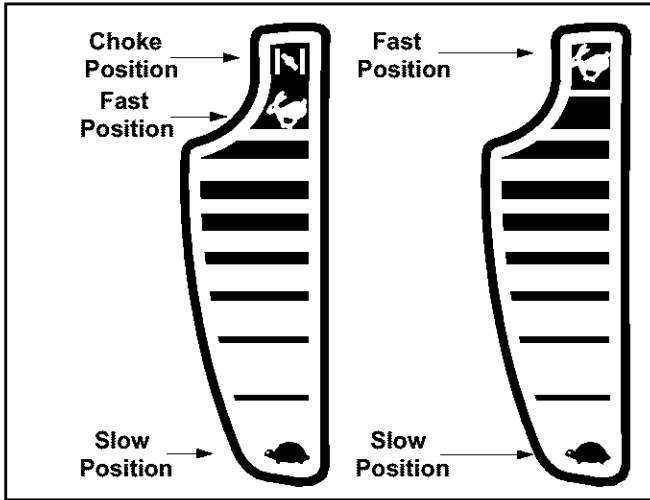


Figure 4

IMPORTANT: When operating the tractor with the cutting deck engaged, be certain that the throttle lever is **always** in the FAST (rabbit) position.

Ignition Switch



WARNING: Never leave a running machine unattended. Always turn off blades/PTO, move both control handles into neutral position, set parking brake, stop engine and remove key before dismounting.

To start the engine, insert the key into the ignition switch and turn clockwise to the **START** position. Release the key into the **ON** position once engine has fired. See Figure 5.

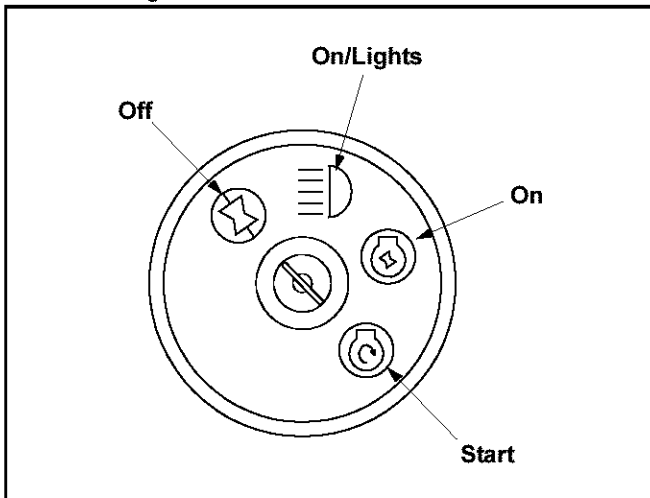


Figure 5

Refer to **Starting The Engine** on page 14 of this manual for detailed starting instructions

The ignition switch is also used to operate the tractor's headlights. Refer to **Operating The Headlights** on page 17 of this manual for detailed instructions.

Systems Indicator Monitor / Hour Meter

Your tractor is equipped with four indicator lights and an hour meter located on the left side of the dash panel. See Figure 6.

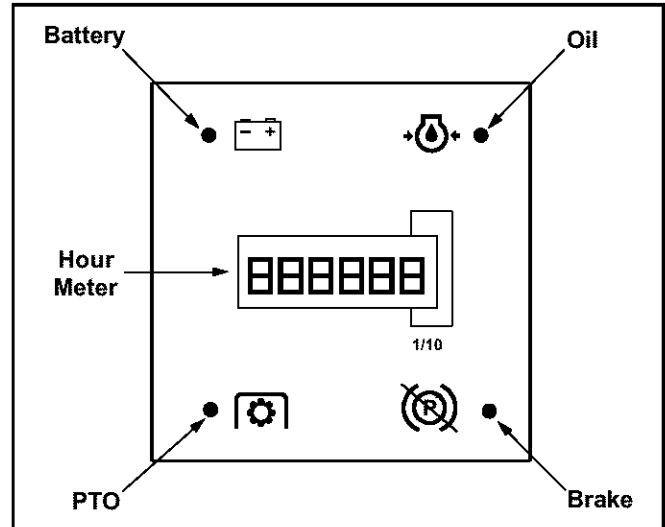


Figure 6

If the Brake light or PTO light illuminates when attempting to start the unit, proceed as follows:

- Brake** — Engage the parking brake.
- PTO** — Move the PTO knob into the disengaged (OFF) position.

It is normal for the Oil light and the Battery light to illuminate while the engine is **cranking**, but if either illuminates while the **engine is running**, proceed as follows:

- Oil**— Stop the tractor immediately and check the crankcase oil level as instructed in the *Briggs & Stratton Operator/Owner Manual* included. Add oil as required.
- Battery**— If this light illuminate's while the engine is running, it indicates that the battery is in need of a charge OR that the engine's charging system is not generating sufficient amperage. Refer to **Battery** on page 25 of this manual for the proper battery charging procedure or have the engine's charging system checked by an authorized *Briggs & Stratton* dealer.

The hour meter operates whenever the engine is running and records the actual hours of tractor operation.

Control Handles

The control handles are located in the center of the tractor's dash. Moving the handles forward or rearward controls both the ground speed of the tractor and the direction of travel. When released, the control handles will return to their original STOP (neutral) position. Refer to **Driving the Tractor** on page 14 of this manual for detailed instructions regarding the control handles.

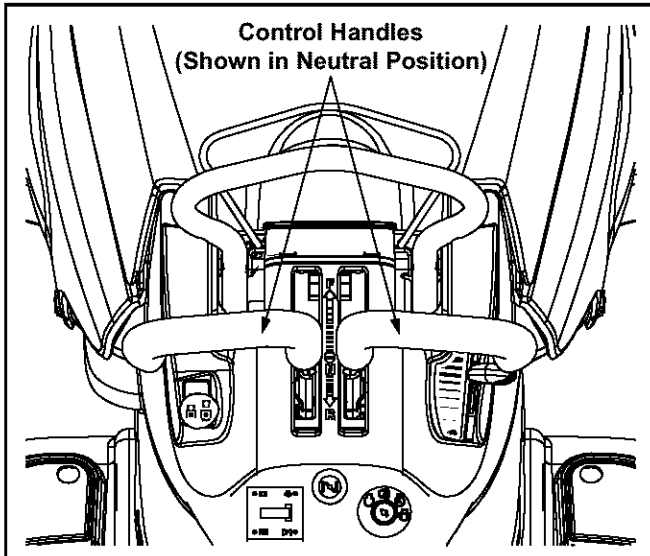


Figure 7

IMPORTANT: Never use a control handle to stabilize yourself while mounting or dismounting the tractor. Grasp only the adjustable hand rest (see Figure 8) to help stabilize yourself.

Adjustable Hand Rest & Bail

Found immediately in front of the control handles, the adjustable hand rest can be repositioned (by squeezing the bail) to limit the forward travel of the control handles.

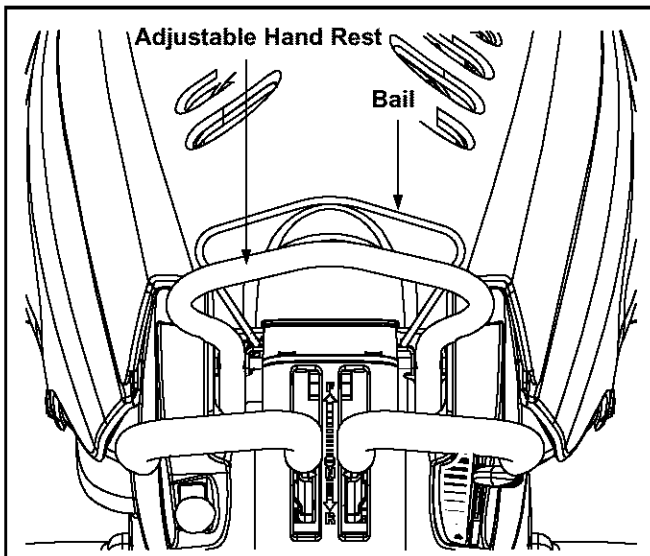
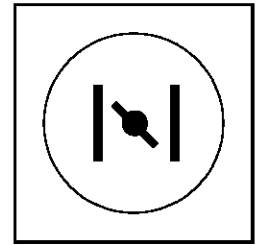


Figure 8

Choke Control

On some units, moving the throttle lever all the way forward activates the engine's choke control. On all other units, the choke control can be found in the center of the dash panel and is activated by pulling the knob outward. Activating the choke control closes the choke plate on the carburetor and aids in starting the engine. Refer to **STARTING THE ENGINE** on page 14 of this manual for detailed starting instructions.

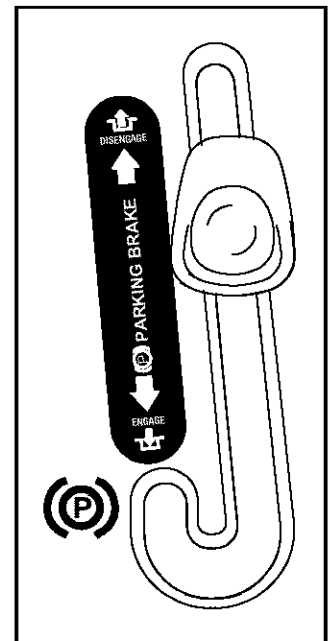


Parking Brake Lever

The parking brake should be engaged when leaving the tractor unattended. To do so, grasp the parking brake lever found on the tractor's left fender and pull it toward the rear of the tractor in the long slot. Move the lever slightly to the left before releasing it into the short slot.

IMPORTANT: The parking brake should not be engaged while the tractor is in motion. If the operator should attempt to engage the parking brake with either (or both) control handle in position for FORWARD or REVERSE travel, the tractor's safety interlock system will automatically shut off the engine.

NOTE: The parking brake must be engaged if the operator leaves the seat with the engine running or the engine will auto-matically shut off.



Deck Lift Lever

The deck lift lever is used to change the height of the cutting deck. To use, move the lever to the left, then place in the notch best suited for your application.

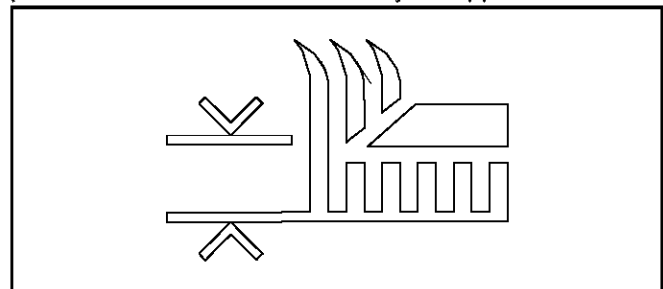
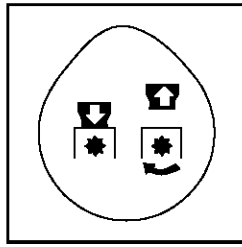


Figure 9

Electric PTO (Power Take-off) Knob

To engage the power to the cutting deck, pull outward on the PTO knob. Push the PTO knob inward to disengage the power to the cutting deck.



NOTE: The PTO knob *must* be in the disengaged (OFF) position when starting the engine, when simultaneously moving both control handles into the REVERSE position and if the operator leaves the seat.

Seat Adjustment Lever

To adjust the seat forward or backward, slide the seat adjustment lever to the left and reposition the seat to the desired position. Once a comfortable position is found, release the seat adjustment lever to lock the seat in place. Refer to **SEAT ADJUSTMENT** on page 19 of this manual for more detailed instructions.

Cup Holder

The tractor's cup holder is located on the fender to the left of the seat, just to the rear of the parking brake lever.

SECTION 6: OPERATING YOUR LAWN TRACTOR



WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Safety Interlock Switches

This tractor is equipped with a safety interlock system for the protection of the operator. If the interlock system should ever malfunction, do not operate the tractor. Contact an authorized *MTD* Service Dealer in your area. The safety interlock system prevents the engine from cranking unless the parking brake is engaged, and the PTO knob is in the disengaged (OFF) position.

- The safety interlock system will automatically shut off the tractor's engine if the operator leaves the seat before engaging the parking brake.
- The safety interlock system will automatically disengage the electric PTO clutch and stop the blades when the operator leaves the tractor's seat, regardless of whether the parking brake is engaged. The PTO knob must then be placed in the disengaged (OFF) position before being pulled out again to reengage the PTO and start the blades.
- The safety interlock system will automatically disengage the electric PTO clutch and stop the blades if both control handles are simultaneously placed in position for REVERSE travel.
- The safety interlock system will automatically shut off the tractor's engine if either control handle is placed in position for FORWARD or REVERSE travel with the parking brake engaged.



WARNING: Do not operate the tractor if the interlock system is malfunctioning. This system was designed for your safety and protection.

IMPORTANT: Tampering with or attempting to bypass the tractors Safety Interlock Switches in any way WILL void your tractor's warranty.



WARNING

AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS.
- AVOID SUDDEN TURNS.
- DO NOT OPERATE THE MACHINE WHERE IT COULD SLIP OR TIP.
- IF MACHINE STOPS GOING UPHILL, DISENGAGE BLADES/PTO AND BACK DOWNHILL SLOWLY.
- DO NOT MOW WHEN CHILDREN OR OTHERS ARE AROUND.
- NEVER CARRY CHILDREN, EVEN WITH BLADES OFF.
- LOOK DOWN AND BEHIND BEFORE AND WHILE BACKING.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADES.
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- BE SURE BLADES AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADES.
- BEFORE LEAVING OPERATOR'S POSITION, DISENGAGE BLADES/PTO, MOVE BOTH CONTROL HANDLES IN NEUTRAL POSITION, SET PARKING BRAKE, SHUT ENGINE OFF AND REMOVE KEY.

READ OPERATOR'S MANUAL

Setting the Cutting Height

Select the height position of the cutting deck by placing the deck lift lever in any of the six different cutting height notches on the right side of the fender. Then adjust the deck wheels so that they are between ¼-inch and ½-inch above the ground when the tractor is on a smooth, flat surface such as a driveway.



WARNING: Keep hands and feet away from the discharge opening of the cutting deck.

NOTE: The deck wheels are an anti-scalp feature of the deck and are not designed to support the weight of the cutting deck.

Refer to **Leveling the Deck** on page 18 of this manual for more detailed instructions regarding various deck adjustments.

Starting the Engine

NOTE: Refer to the **TRACTOR SET-UP** on page 9 of this manual for Gasoline and Oil fill-up instructions.

- Insert the tractor key into the ignition switch.
- Place the PTO knob in the disengaged (OFF) position.
- Engage the tractor's parking brake.
- Release both control handles.
- Move the throttle control lever into the FAST (or CHOKE, if so equipped) position.
- Pull out the choke control knob, if so equipped (a warm engine may not require choking).
- Turn the ignition key clockwise to the START position. After the engine starts, release the key. It will return to the ON position.

IMPORTANT: Do NOT hold the key in the START position for longer than ten seconds at a time. Doing so may cause damage to your engine's electric starter.

NOTE: Both control handles must be in the Neutral (STOP) position when starting or the engine will NOT crank.

As the engine warms up, gradually push the choke control knob inward (or move the throttle control lever out of the CHOKE position into the FAST position) to open up the choke plate on the engine's carburetor.

NOTE: Do NOT leave the choke control out while operating the tractor. Doing so will result in a "rich" fuel mixture and cause the engine to run poorly.

Stopping the Engine



WARNING: If you strike a foreign object, stop the engine, disconnect the spark plug wire(s) and ground against the engine. Thoroughly inspect the machine for any damage. Repair the damage before starting and operating.

- If the blades are engaged, place the PTO knob in the disengaged (OFF) position.
- Turn the ignition key counterclockwise to the OFF position.
- Remove the key from the ignition switch to prevent unintended starting.

Positioning the Adjustable Hand Rest

- Using both hands, squeeze the adjustable hand rest and bail together.

- Position the adjustable hand rest forward or rearward until a comfortable position is found for your application.
- Release the bail to lock the adjustable hand rest in place.

Driving the Tractor



WARNING: Always look down and behind before and while backing up to avoid a back-over accident.

IMPORTANT: For improved traction, when a bagger or any other separately available rear attachment is not being used, make certain that the rear weight is properly secured before operating the tractor.

The Revolution™ lawn tractor is operated in the same manner as a conventional riding mower with the exception of control handles used in place of a steering wheel allowing for greater maneuverability.

The rear tires of the Revolution™ both propel the lawn tractor as well as steer it. This allows the tractors front-end to pivot freely on castor wheels.

Control Handles

The right control handle controls the **right** rear wheel.

The left control handle controls the **left** rear wheel.

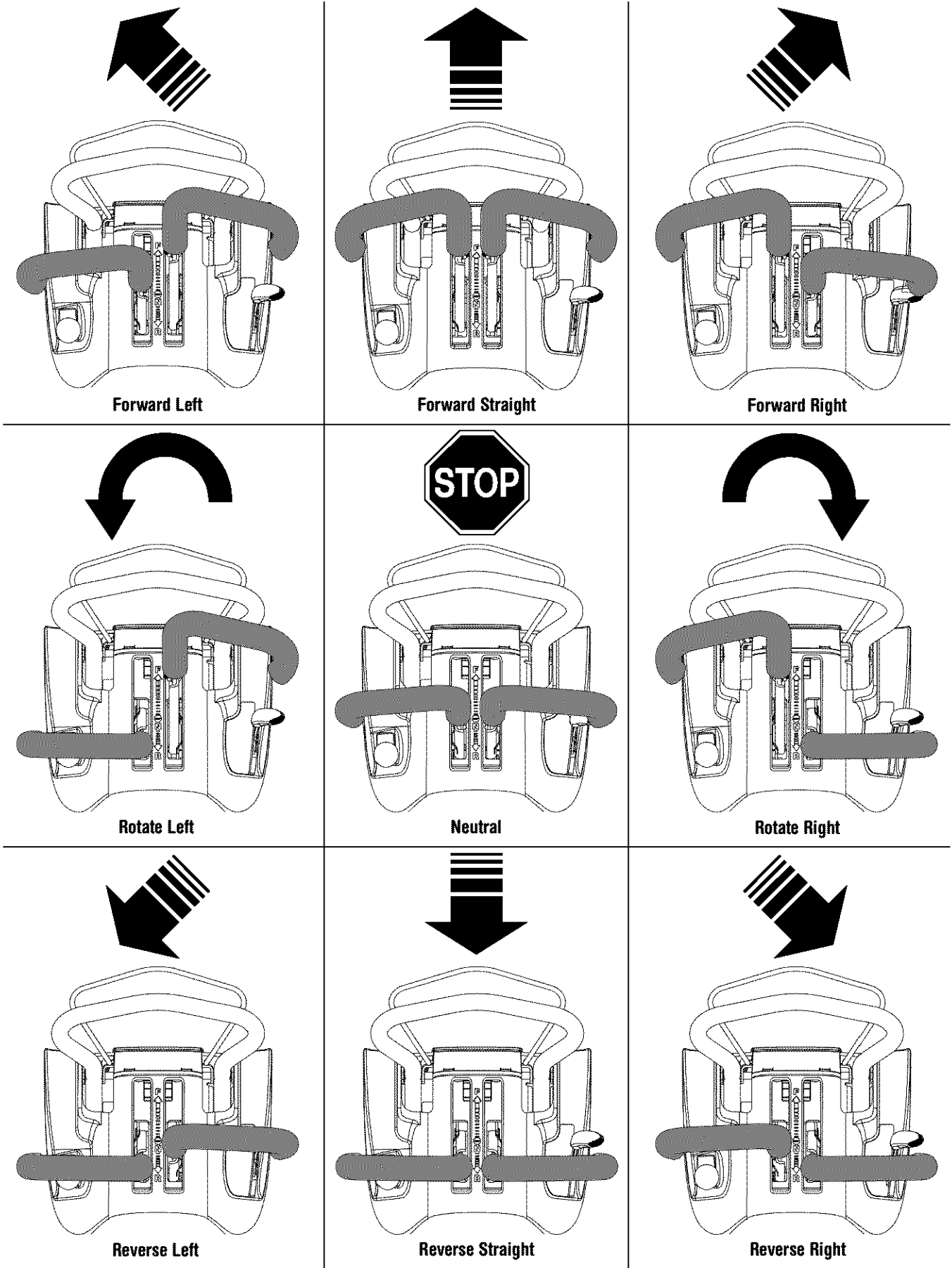
- The further *forward* a control handle is positioned, the faster the wheel it controls will drive *forward*.
- The further *rearward* a control handle is positioned, the faster the wheel it controls will drive *in reverse*.

Moving each control handle in varying positions allows the operator to maneuver the tractor in nearly any direction. Refer to the chart on the following page for a quick reference of basic control handle positions and their relation to the direction the tractor will travel.

Revolution™ Driving Tips

- First-time operators should start off in an open area with bystanders at a significant distance away.
- Position the adjustable hand rest in the slowest (nearest the operator) position while learning how to drive the tractor.
- Position the throttle lever at a low RPM (near the Turtle) and practice maneuvering the tractor with the PTO always in the disengaged (OFF) position.
- Practice maneuvering the tractor around moveable objects such as pylons or cardboard boxes (NOT trees) to help get comfortable with the controls.
- Gradually increase throttle speed and become **completely** comfortable with the tractor's controls before placing the PTO knob in the engaged (ON) position and using the tractor to cut grass.

Control Handle Position Reference Chart





WARNING: Never leave a running machine unattended. Always turn off blades/PTO, move both control handles into neutral position, set parking brake, stop engine and remove key before dismounting.

To properly execute a 180° rotation on a pivot point, always observe the following steps in order:

NOTE: For simplicity of instructions, the following steps apply to making a **left** rotation. Simply substitute right for left (and vice-versa) in the following steps for instructions on making a **right** rotation.

1. Allow the tractor to come to a complete stop.
2. Pull back slightly on the **left** control handle to allow both front castor wheels to pivot to the left.
3. At the moment when both castor wheels are pointing **directly** sideways, gradually push the **right** control handle forward while maintaining a constant reverse position on the **left** control handle.

NOTE: Pushing the **right** control handle forward before allowing the castor wheels to pivot sideways will hinder the tractor's ability to rotate on a pivot point.

4. Once the tractor has completed the 180° rotation, push the **left** control handle forward and position it adjacent the **right** control handle on the dash.

IMPORTANT: Allow one control handle to remain in the STOP (neutral) position **only momentarily** while moving the opposite control handle forward or rearward. Leaving one control handle in the STOP (neutral) position while repositioning the other control handle may result in turf defacement.

Driving On Slopes

Refer to the **SLOPE GAUGE** on page 8 to help determine slopes where you may operate the tractor safely.



WARNING: All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

- Mow up and down slopes, not across.
- Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Avoid turns when driving on a slope. If a turn must be made, turn down the slope. Turning up a slope greatly increases the chance of a roll over.
- Avoid stopping when driving up a slope. If it is necessary to stop while driving up a slope, start up smoothly and carefully to reduce the possibility of flipping the tractor over backward.

Using the Deck Lift Lever

To raise the cutting deck, move the deck lift lever to the left, then place it in the notch best suited for your application. Refer to **Setting The Cutting Height** earlier in this section.

Engaging the Parking Brake

To engage the parking brake, grasp the parking brake lever found on the tractor's left fender and pull it toward the rear of the tractor in the long slot. Move the lever slightly to the left before releasing it into the short slot.

IMPORTANT: The parking brake should not be engaged while the tractor is in motion. If the operator should attempt to engage the parking brake with either (or both) control handle in position for FORWARD or REVERSE travel, the tractor's safety interlock system will automatically shut off the engine. Refer to **Safety Interlock Switches** earlier in this section.

Engaging the Electric PTO

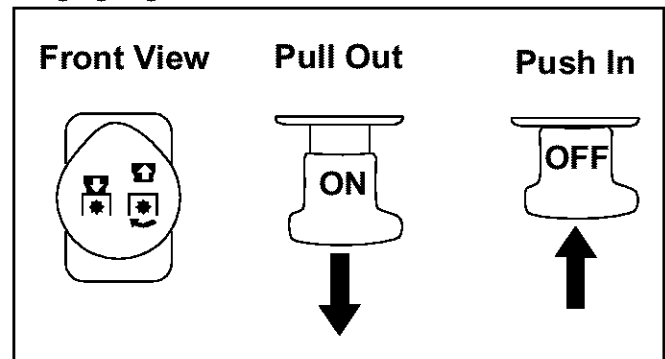


Figure 10

Engaging the electric PTO transfers power to the cutting deck. To engage the electric PTO, proceed as follows:

- Move the throttle control lever to the FAST (rabbit) position.
- Pull the PTO knob outward into the engaged (ON) position. See Figure 10.
- Keep the throttle lever in the FAST (rabbit) position for the most efficient use of the cutting deck or other (separately available) attachments.

NOTE: The operator must remain in the tractor seat at all times. If the operator should leave the seat without pushing the PTO knob inward into the disengaged (OFF) position, the tractor's electric PTO clutch will automatically disengage and stop the blades.

IMPORTANT: The PTO knob cannot be in the engaged (ON) position when both control handles are simultaneously placed in position for REVERSE travel or the electric PTO clutch will automatically disengage and stop the blades. Refer to **Safety Interlock Switches** earlier in this section.

Mowing



WARNING: To help avoid blade contact or a thrown object injury, keep bystanders, helpers, children and pets at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.

This tractor is equipped with one of MTD's high quality cutting decks. The following information will be helpful when using the cutting deck with your tractor.

Revolution™ Mowing Tips

- Never allow one control lever to remain in the STOP (neutral) position while moving the opposite lever forward or rearward. Doing so may result in turf defacement.



WARNING: Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction which may cause discharged material to ricochet back toward the operator.

- Do not cut the grass too short. Short grass invites weed growth and yellows quickly in dry weather.
- Mowing should ALWAYS be done with the throttle lever in the FAST (rabbit) position.
- Mowing wet grass results in a loss of rear-tire traction and significantly increases the chance of turf defacement.
- Do not mow at high ground speed, especially if a mulch kit or grass collector is installed.
- Under heavier conditions it may be necessary to go back over the cut area a second time to get a clean cut.
- Do NOT attempt to mow heavy brush and weeds and extremely tall grass. Your tractor is designed to mow lawns, NOT clear brush.
- Keep the blades sharp and replace the blades when worn. Refer to **Cutting Blades** on page 25 of this manual for proper blade sharpening instructions.

Mulching

Revolution™ tractors come equipped with a mulch kit which incorporates special blades, already standard on your tractor, in a process of recirculating grass clippings repeatedly beneath the cutting deck. The ultra-fine clippings are then forced back into the lawn where they act as a natural fertilizer. Observe the following recommendations for the best results when mulching.

NOTE: The mulch kit is installed on models equipped with a 42-inch deck. It is packed separately (with an instruction sheet) in the crate on models equipped with a 46-inch deck.

- Never attempt to mulch if the lawn is damp. Wet grass tends to stick to the underside of the cutting deck preventing proper mulching of the clippings.
- Do NOT attempt to mulch more than 1/3 the total height of the grass or approximately 1-1/2 inches. Doing so will cause the clippings to clump up beneath the deck and not be mulched effectively.
- Maintain a slow ground speed to allow the grass clippings more time to effectively be mulched.
- Always position the throttle control lever in the FAST (rabbit) position and allow it to remain there while mowing. Failing to keep the engine at full throttle places strain on the tractor's engine and does not allow the blades to properly mulch grass.

NOTE: It is not necessary to remove the discharge chute to operate the mower with the mulch kit installed.

To operate the cutting deck without mulching, simply remove the mulch plug by unthreading the plastic wing nut which fastens it to the cutting deck. This will allow the clippings to discharge out the side. See Figure 11.

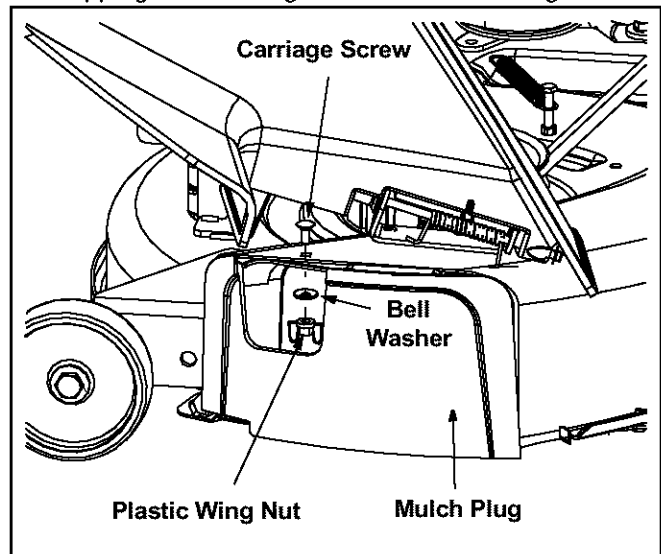


Figure 11

Operating the Headlights

To turn the tractor's headlights on:

- Start the engine following the instructions earlier in this section.
- Turn the key one notch counterclockwise into the On/Lights position of the ignition switch. Refer to Figure 5.

To turn the tractor's headlights off:

- Turn the key either into the On position (to leave the engine running) or the Off position (to shut the engine off). Refer to Figure 5.

IMPORTANT: Never move the key into the Start position while the engine is running. Doing so may cause damage to your engine's electric starter.

Moving the Tractor Manually

The Revolution™ lawn tractor has two transmissions, both of which are equipped with a hydrostatic bypass valve for occasions when it is necessary to move the tractor manually.

Opening these valves forces the fluid in each transmission to bypass its normal route, allowing the rear tires to "freewheel." To open the hydrostatic bypass valves, proceed as follows:

- Locate the hydrostatic bypass rods in the rear of the tractor. See Figure 12.
- Pull **both** the hydrostatic bypass rods outward, then up, to lock them in place.

NOTE: Neither transmission will engage when the hydrostatic bypass rods are pulled out. Return the rods to their normal position prior to operating the tractor.

IMPORTANT: Never attempt to move the tractor manually without first opening **both** hydrostatic bypass valves. Doing so will result in serious damage to the tractor's transmissions.

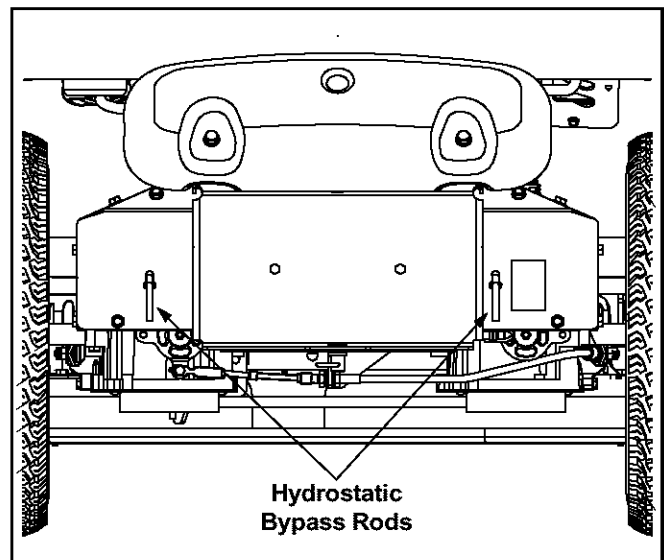


Figure 12

SECTION 7: MAKING ADJUSTMENTS



WARNING: Never attempt to make any adjustments while the engine is running, except where specified in the operator's manual.



WARNING: Disconnect the spark plug wire(s) and ground against the engine before performing any adjustments, repairs or maintenance.

Leveling the Deck

NOTE: Check the tractor's tire pressure before performing any deck leveling adjustments. Refer to *Tires* later in this section for further information regarding tire pressure.

Front To Rear

The front of the cutting deck is supported by a stabilizer bar that can be adjusted to level the deck from front to rear. The front of the deck should be between 1/4-inch and 3/8-inch lower than the rear of the deck. Adjust if necessary as follows:

- With the tractor parked on a firm, level surface, place the deck lift lever in the top notch (highest position) and rotate the blade nearest the discharge chute so that it is parallel with the tractor.
- Measure the distance from the front of the blade tip to the ground and the rear of the blade tip to the ground.

The first measurement taken should be between 1/4" and 3/8" less than the second measurement. Determine the approximate distance necessary for proper adjustment and proceed, if necessary, to the next step.

- Loosen the two jam nuts on the rear side of the deck stabilizer bracket. See Figure 13A.
- Locate the two lock nuts on the opposite side of the stabilizer bracket. See Figure 13A. Tighten the lock nuts to raise the front of the deck; loosen the lock nuts to lower the front of the deck.
- Retighten the two jam nuts loosened earlier when proper adjustment is achieved.

Side to Side

If the cutting deck appears to be mowing unevenly, a side to side adjustment can be performed. Adjust if necessary as follows:

- With the tractor parked on a firm, level surface, place the deck lift lever in the top notch (highest position) and rotate both blades so that they are perpendicular with the tractor.
- Measure the distance from the outside of the left blade tip to the ground and the distance from the outside of the right blade tip to the ground. Both measurements taken should be equal. If they're not, proceed to the next step.
- Loosen, but do NOT remove, the hex cap screw on the left deck hanger bracket. See Figure 13B.

- Balance the deck by using a wrench to turn the adjustment gear (found immediately behind the hex cap screw just loosened) clockwise/up or counterclockwise/down.

- The deck is properly balanced when both blade tip measurements taken earlier are equal.
- Retighten the hex cap screw on the left deck hanger bracket when proper adjustment is achieved.

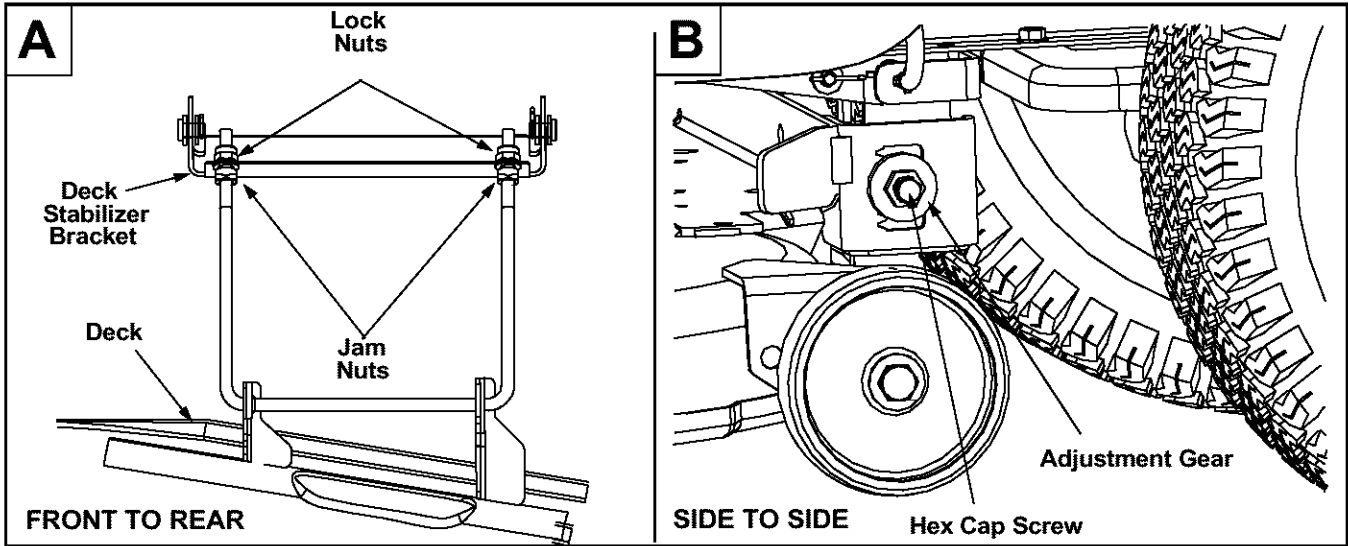


Figure 13

Seat Adjustment



WARNING: Before operating this machine, make sure the seat is engaged in the seat stop, stand behind the machine and pull back on seat until fully engaged into stop.

To adjust the position of the seat, move the seat adjustment lever (located under the seat) to the left and slide the seat forward or rearward. See Figure 14. Make sure seat is locked into one of the six adjustment positions before operating the tractor.

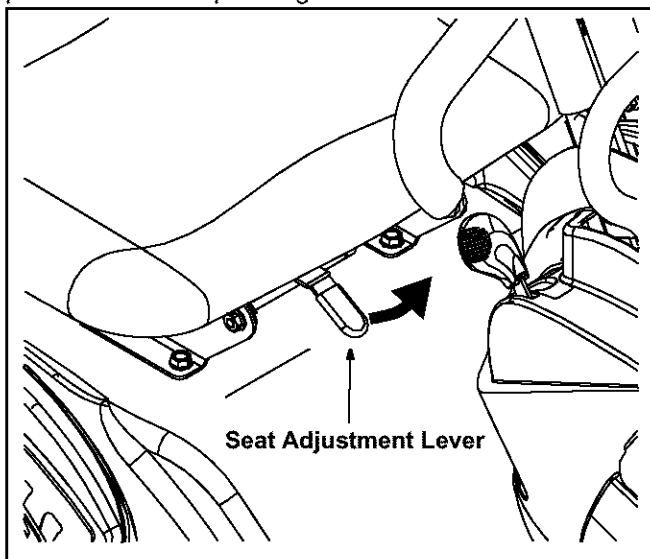


Figure 14

Control Cable Adjustment

If the tractor drifts to either the right or the left with the control handles positioned directly opposite each other while traveling, the control cable on the tractor's left transmission can be adjusted to help straighten the tractor's path of travel. To do so, proceed as follows:

NOTE: Check the tractor's tire pressure as instructed on page 26 before adjusting the control cables. Improper tire pressure will result in the tractor failing to track straight.

- Locate the adjustment yoke on the left, rear area of the lawn tractor. See Figure 15.

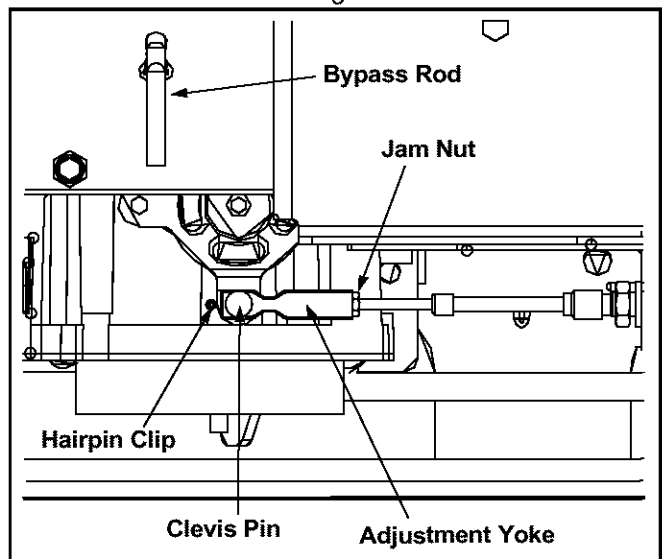


Figure 15

- Loosen the jam nut found to the rear of the yoke, threaded onto the control cable. See Figure 15.
- Remove the hairpin clip securing the yoke to the transmission and slide the clevis pin out of the yoke. See Figure 15. Save both pins as they will be reinstalled in later steps.

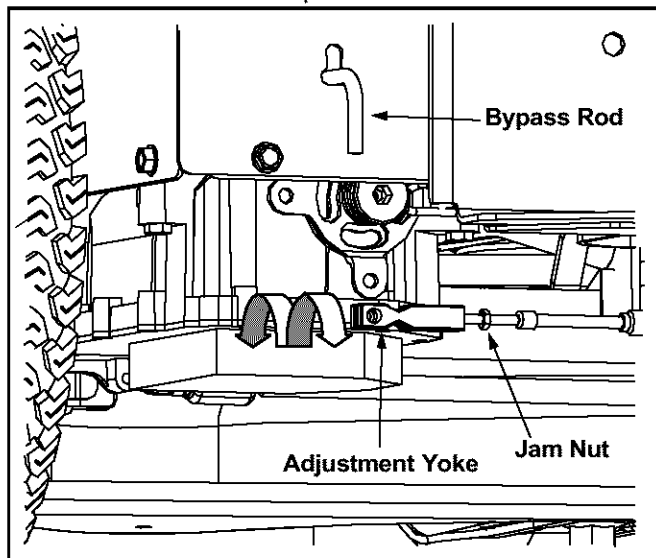


Figure 16

If the tractor is drifting slightly to the **RIGHT**, rotate the yoke 180° (½ turn) **clockwise**.

If the tractor is drifting slightly to the **LEFT**, rotate the yoke 180° (½ turn) **counter-clockwise**.

- Reinsert the clevis pin removed early and secure it with a replacement hairpin clip.
- Retighten the jam nut against the adjustment yoke.
- Test drive the tractor to see if there is a significant improvement. If there isn't, contact an authorized *MTD* Service Dealer in your area to have the transmissions "fine-tune" adjusted.

Parking Brake Adjustment

Brakes are subject to wear during normal use and should be checked periodically for adjustment. To determine if the parking brake is in need of adjustment:

- Engage the parking brake.
- Open both transmission bypass valves as instructed on page 18 before attempting to push the tractor forward.

NOTE: *There will be some resistance from the transmissions even when the bypass valves are open.*

If the tractor can roll relatively freely, adjust the parking brake as follows:



WARNING: Never attempt to adjust the brakes while the engine is running. Always turn off blades/PTO, move both control handles into neutral position, stop engine and remove key before dismounting.

- Move the tractor to a smooth, flat surface.
- Chock the left, rear tire and place the parking brake lever in the disengaged position.
- Remove the hubcap from the right, rear wheel.
- Loosen, but do NOT remove, the hex screw which secures the wheel assembly to the transmission.
- Jack the tractor up off the ground and stabilize the right, rear portion of it with a jackstand.
- Unthread the hex screw loosened earlier and remove the wheel assembly from the tractor's transmission.
- Locate the cotter pin which secures a castle nut to the transmission's brake arm. See Figure 17.

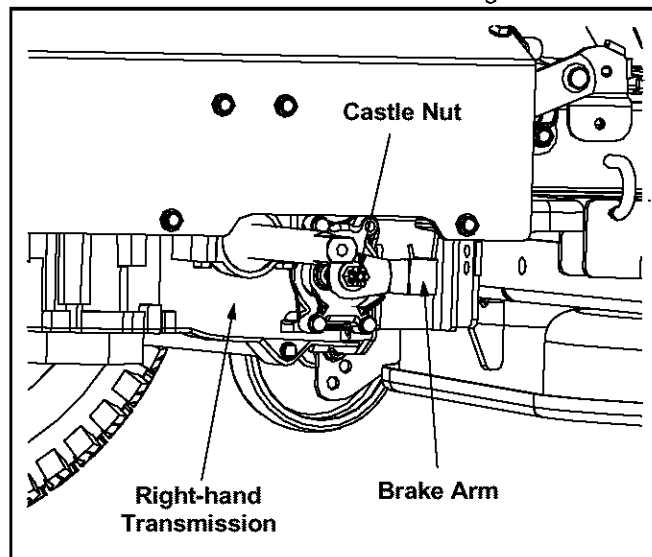


Figure 17

- Carefully remove and discard the cotter pin.
- Tighten the castle nut 11 inch-pounds, or until the brake arm has minimal up-and-down movement when you attempt by hand to pivot it.
- Back the castle nut off 1/3 turn before inserting a new cotter pin (Part 714-0507) to secure it in place.
- Remount the tractor's wheel assembly and repeat the previous steps on the left side of the tractor.

IMPORTANT: Be certain to torque the hex screw which secures the wheel assembly to the transmission to between 25 foot-pounds and 42 foot-pounds.

- Re-engage the parking brake and test it by attempting to push the tractor forward.
- If the tractor's parking brake should need further adjustment, see an authorized *MTD* service dealer.

Neutral Adjustment

If the tractor's control handles do NOT return to the neutral (STOP) position upon releasing them, the handles are in need of adjustment. Do not operate the tractor. Contact an authorized *MTD* Service Dealer in your area to have the control handles properly adjusted.

SECTION 8: MAINTAINING YOUR LAWN TRACTOR



WARNING: Before performing any maintenance or repairs, always turn off blades/PTO, move both control handles into neutral position, stop engine and remove key before dismounting.

Engine

Refer to the *Briggs & Stratton Operator/Owner Manual* for engine maintenance instructions.

Check **engine oil level** before each use as instructed in the *Briggs & Stratton Operator/Owner Manual* packed with your unit. Read and follow instructions carefully.

Changing Engine Oil

- Unscrew oil fill cap and remove dipstick from the oil fill tube. See Figure 18.

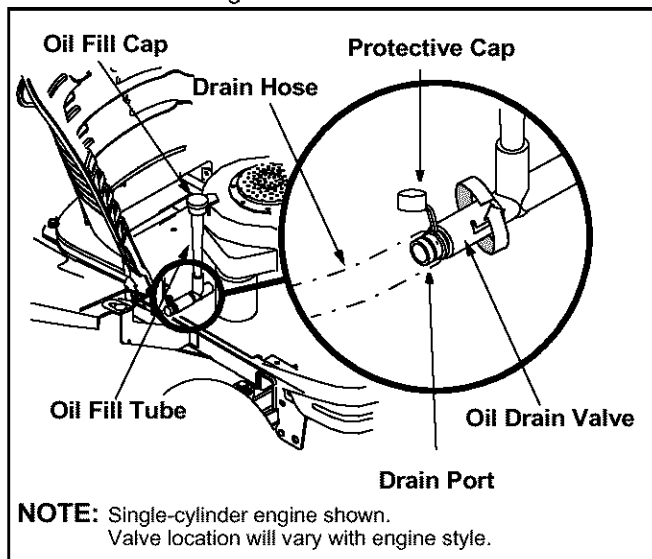


Figure 18

- Pop open the protective cap on the end of the oil drain valve to expose the drain port. See Figure 18.
- Push the drain hose (packed with this manual) onto the drain port. Route the opposite end of the hose into an appropriate oil collection container with a capacity great enough to collect the used oil (approximately 48 oz. on single-cylinder engines and 64 oz. on twin-cylinder engines).
- Push the oil drain valve in slightly, then rotate counterclockwise and pull outward to begin draining oil. See Figure 18.
- Service the **oil filter** (if so equipped) as instructed in the separate *Briggs & Stratton Operator/Owner Manual* packed with your unit.

Perform the above steps in the opposite order after oil has finished draining.

- Refill the engine with new motor oil (48 oz. on single-cylinder engines and 64 oz. on twin-cylinder engines).

IMPORTANT: Refer to the *Briggs & Stratton Operator/Owner Manual* packed with your unit for information regarding the proper weight of motor oil.

Air Cleaner

Service the pre-cleaner, if so equipped, and cartridge as instructed in the *Briggs & Stratton Operator/Owner Manual* packed with your unit.

Spark Plug(s)

The spark plug(s) should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season. Refer to the *Briggs & Stratton Operator/Owner Manual* for correct plug type and gap specifications.

Cleaning the Engine And Deck

Any fuel or oil spilled on the machine should be wiped off promptly. Do NOT allow grass, leaves, and dirt to accumulate around the cooling fins of the engine or on any other part of the machine, especially the pulleys and other moving parts.

Clean the underside of the deck with a wisk broom, scraper or forced air after each mowing.

IMPORTANT: The use of a pressure washer or garden hose to clean your tractor is NOT recommended. It may cause damage to electrical components, spindles, pulleys, bearings or the engine. The use of water will result in a shortened life of the tractor and reduce its serviceability.

Lubrication



WARNING: Before lubricating, repairing, or inspecting, always turn off blades/PTO, move both control handles into neutral position, stop engine and remove key before dismounting.

Hydrostatic Transmissions

Both hydrostatic transmissions are sealed at the factory. The fluid levels can neither be checked, nor can fluid be drained or added.

Engine

Lubricate the engine with motor oil as instructed in the *Briggs & Stratton Operator/Owner Manual* packed with your unit.

Pivot Points & Linkage

Lubricate all the pivot points on the drive system, parking brake and lift linkage at least once a season with light oil.

Rear Wheels

The rear wheels should be removed from the axles once a season. Lubricate the axles and the rims well with an all-purpose automotive grease before re-installing them.

Front Castor Wheels

Each of the front castor wheel axles and rims is equipped with a grease fitting. Lubricate with a grease gun after every 25 hours of tractor operation or at least once a season. See Figure 19.

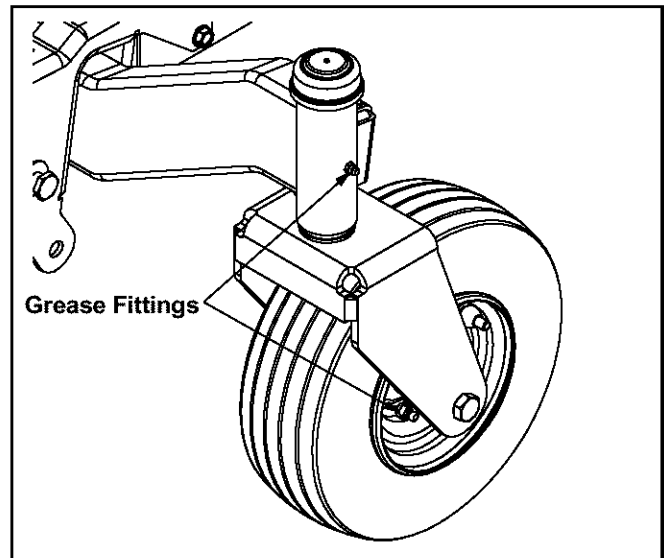


Figure 19

SECTION 9: SERVICE



WARNING: Before servicing, repairing, or inspecting, always turn off blades/PTO, move both control handles into neutral position, stop engine and remove key before dismounting.

Cutting Deck Removal

To properly remove the cutting deck, proceed as follows:

- Place the PTO knob in the disengaged (OFF) position and engage the parking brake.
- Lower the deck by moving the deck lift lever into the bottom notch on the right fender.
- Remove the PTO belt from around the electric PTO clutch and from around the PTO idler pulley(s).

NOTE: The bottommost belt on the deck does NOT need to be removed in order to remove the deck.

- Looking at the cutting deck from the left side of the tractor, locate the deck support pin on the rear left side of the deck.
- Pull the deck support pin outward to release the deck from the deck lift arm. See Figure 20.
- Rotate the pin slightly toward the rear of the tractor and release the pin into the hole provided.
- Repeat the above steps on the right side of the tractor.
- Move the deck lift lever into the top notch on the right fender to raise the lift arms out of the way.
- Gently slide the cutting deck toward the front of the tractor allowing the hooks on the deck to release themselves from the deck stabilizer rod.

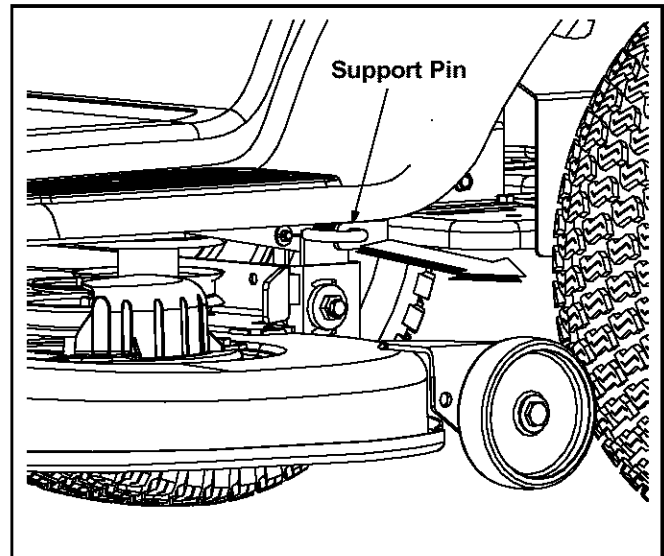


Figure 20

- Gently slide the cutting deck (from the right side) out from underneath the tractor.

Changing the Deck Belt(s)



WARNING: Be sure to shut the engine off, remove ignition key, disconnect the spark plug wire(s) and ground against the engine prior to removing the belt(s).

All belts on your tractor are subject to wear and should be replaced if any signs of cracking are present.

IMPORTANT: The V-belts found on your tractor are specially designed to engage and disengage safely. A substitute (non-OEM) V-belt can be dangerous by not disengaging completely. For a proper working machine, use factory approved belts.

To change or replace the deck belts on your tractor, proceed as follows:

- Lower the deck by moving the deck lift lever into the bottom notch on the right fender.
- Remove the belt guards by removing the self-tapping screws that fasten them to the deck.

- Grasp the rearmost portion of the PTO idler bracket and pivot it toward the discharge chute to relieve tension on the PTO belt.
- Remove the PTO belt from the electric PTO clutch and from around the PTO idler pulley.
- Grasp the deck idler pulley and pivot it toward the left side of the deck to relieve tension on the belt.
- Remove the belt from around all pulleys, including the deck idler pulley.
- Route the new belts as shown in Figure 21 (46-inch decks) or Figure 22 (42-inch decks).
- Remount the belt guards removed earlier.

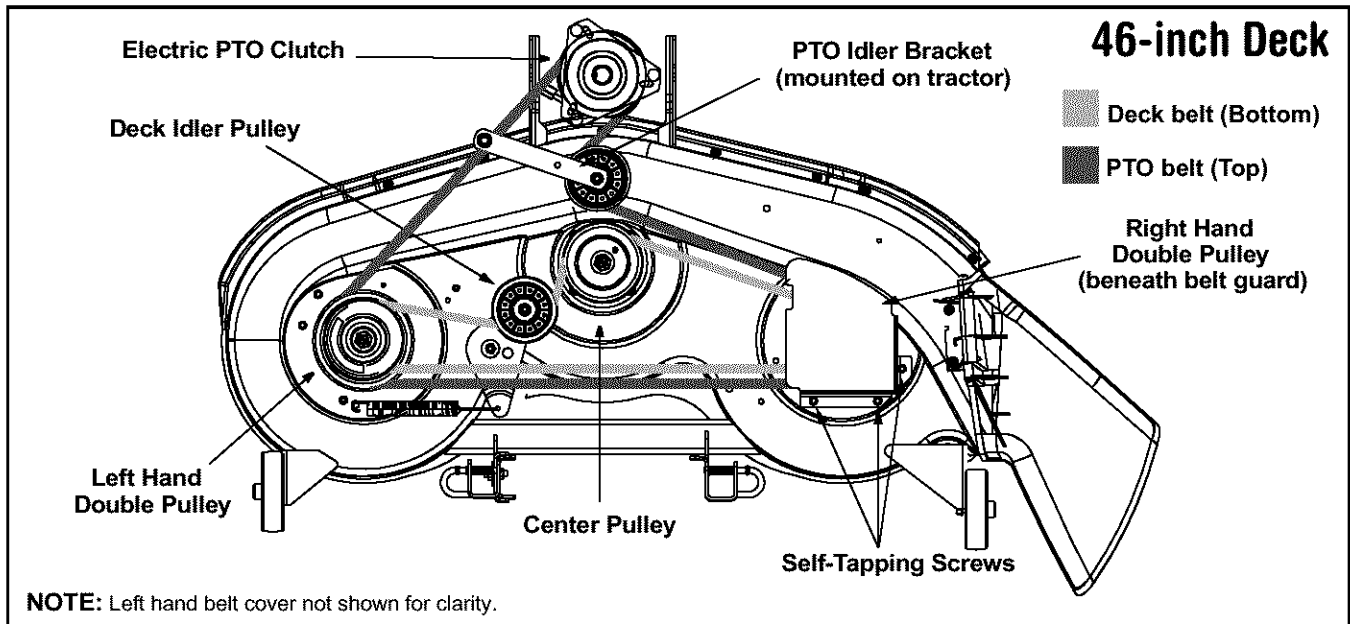


Figure 21

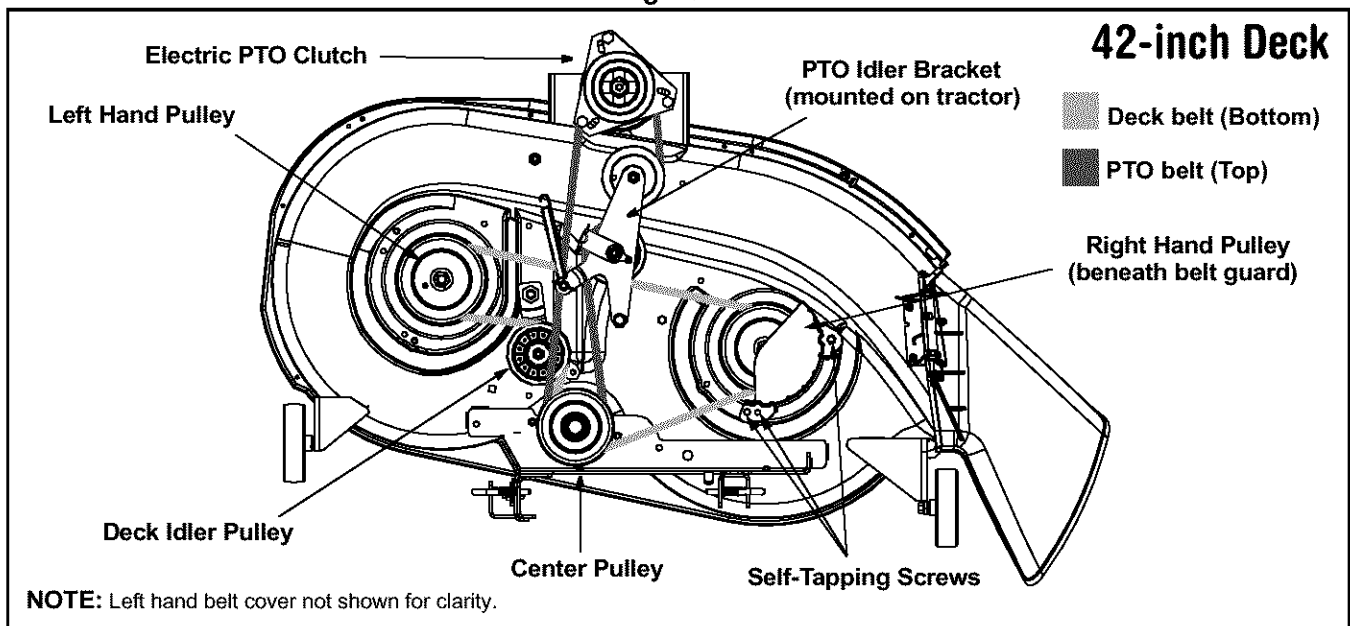


Figure 22

Changing the Transmission Drive Belt



WARNING: Be sure to shut the engine off, remove ignition key, disconnect the spark plug wire(s) and ground against the engine prior to removing the belt(s)

IMPORTANT: The V-belts found on your tractor are specially designed to engage and disengage safely. A substitute (non-OEM) V-belt can be dangerous by not disengaging completely. For a proper working machine, use factory approved belts.

To change or replace the drive belt on your tractor, proceed as follows:

- Remove the weight from the rear of the tractor by unfastening the hairpin clip from the clevis pin which secures the weight bracket to the tractor's tow bar. Carefully lift the weight up and off of the rear of the tractor and set it aside.
- Remove the eight self-tapping screws which fasten the tractor's rear access plate to the frame. See Figure 23. Save these screws as they will be used to refasten the plate in later steps.
- Carefully remove the access plate and set it aside.

IMPORTANT: Before proceeding, note the routing of the worn or damaged drive belt. Be certain to install and route the replacement drive belt in the exact same orientation.

- Looking at the tractor from the right side, locate and carefully remove the extension spring which maintains tension on the drive belt's double-idler pulley. See Figure 24.
- Remove the belt from the double-idler pulley.
- Grasp the PTO idler pulley bracket and pivot it toward the discharge chute to relieve tension on the PTO belt. Refer to Figure 21 and Figure 22.
- Remove the PTO belt from around the electric PTO clutch. Refer to Figure 21 and Figure 22.
- Remove the hex bolt from the center of the electric PTO clutch and gently lower it off of the engine crankshaft. Refer to Figure 21 Figure 22.
- The engine pulley is located directly above the electric PTO clutch. Lower the engine pulley and remove the drive belt from around it.

IMPORTANT: When remounting the engine pulley and electric PTO clutch, torque the center hex bolt to between 38 foot-pounds and 50 foot-pounds.

- In the rear of the tractor, reach into the area where the access plate previously was and carefully remove the drive belt from around both transmission pulleys. Be careful not to damage the cooling fan found on top of each transmission. See Figure 25.
- Install the replacement belt by following the above steps in reverse order.

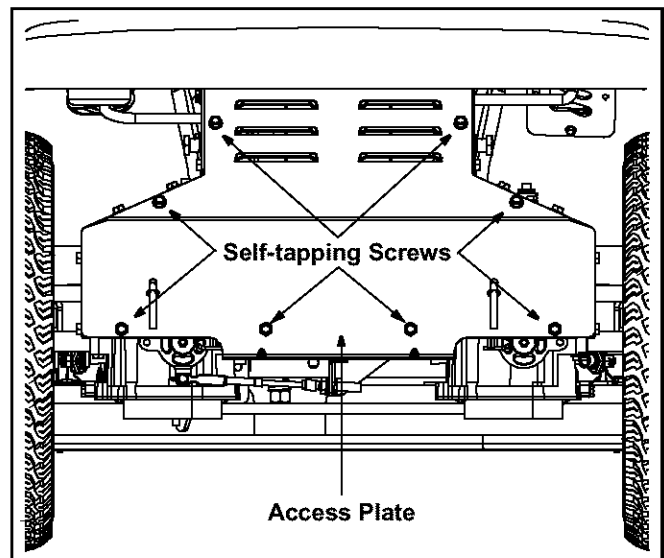


Figure 23

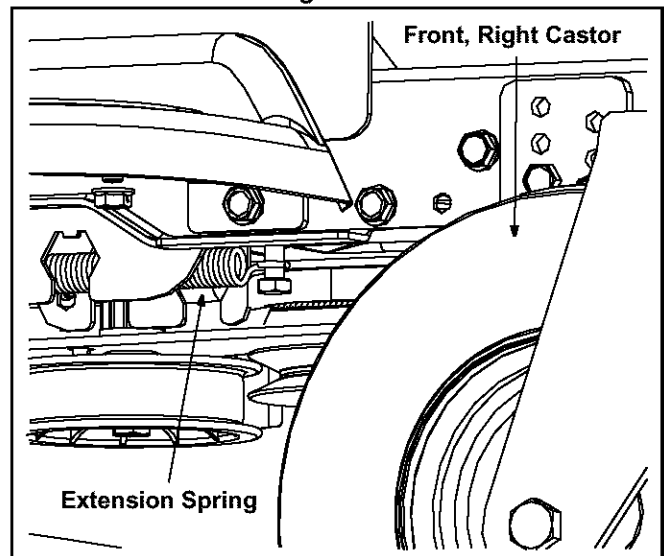


Figure 24

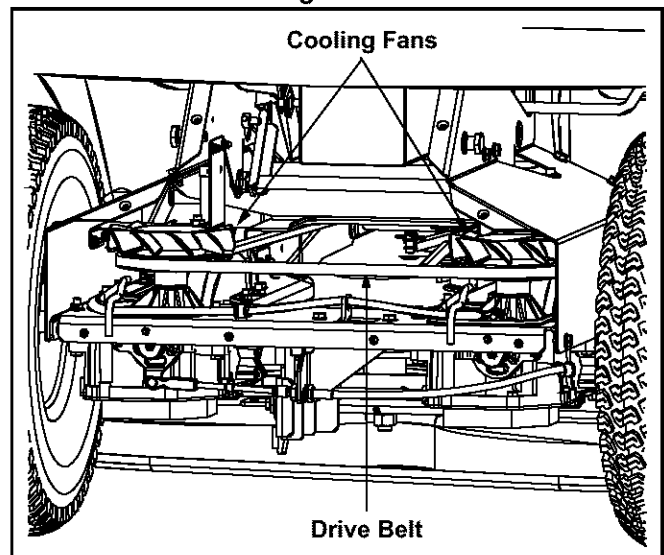


Figure 25

Cutting Blades



WARNING: Be sure to shut the engine off, remove ignition key, disconnect the spark plug wire(s) and ground against the engine before removing the cutting blade(s) for sharpening or replacement. Protect your hands by using heavy gloves or a rag to grasp the cutting blade.



WARNING: Periodically inspect the blade adapter and/or spindle for cracks or damage, especially if you strike a foreign object. Replace immediately if damaged.

The blades may be removed as follows.

- Remove the deck from beneath the tractor, (refer to **Cutting Deck Removal** on page 22 for detailed instructions) then gently flip the deck over to expose its underside.
- Place a block of wood between the center deck housing baffle and the cutting blade to act as a stabilizer. See .
- Use a 15/16" wrench to remove the hex flange nut that secures the blade to the spindle assembly. See

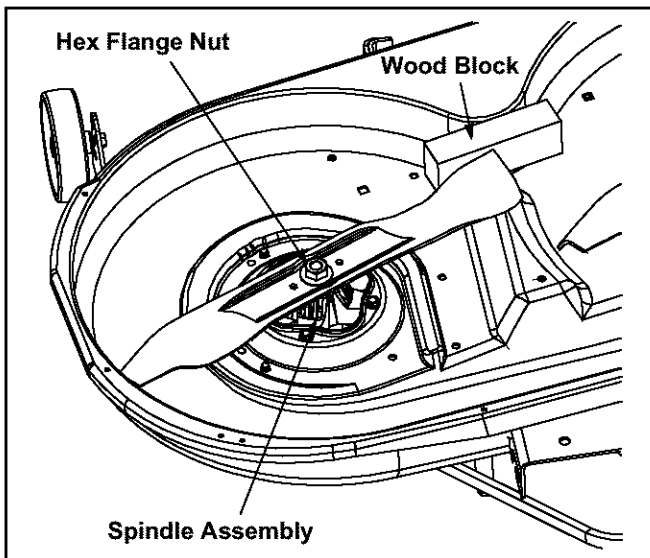


Figure 26

To properly sharpen the cutting blades, remove equal amounts of metal from both ends of the blades along the cutting edges, parallel to the trailing edge, at a 25° to 30° angle. See Figure 27.

IMPORTANT: If the cutting edge of the blade has already been sharpened to within 5/8" of the wind wing radius, or if any metal separation is present, replace the blades with new ones. See Figure 27.

It is important that each cutting blade edge be ground equally to maintain proper blade balance.

A poorly balanced blade will cause excessive vibration and may cause damage to the tractor and result in personal injury.

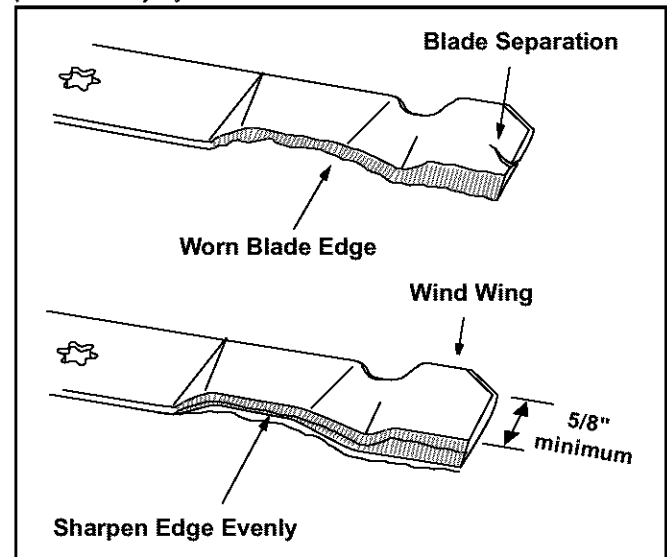


Figure 27

The blade can be tested by balancing it on a round shaft screwdriver. Grind metal from the heavy side until it balances evenly.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with a part number stamped in it) facing the ground when the mower is in the operating position.

IMPORTANT: Use a torque wrench to tighten the blade spindle hex flange nut to between 70 foot-pounds and 90 foot-pounds.

Fuse

Two fuses are installed in your tractor's wiring harness to protect the tractor's electrical system from damage caused by excessive amperage.

Always use a fuse with the same amperage capacity for replacement. If the electrical system does not function, or your tractor's engine will not crank, first check to be certain that the fuse has not blown. One can be found under the seat, mounted to the left of the battery tray on the underside of the fender. The other is clipped to the metal heat shield near the fuel tank under the hood.

Pull the fuse out and examine it to determine if it is good or blown.

Battery



WARNING: Battery posts, terminals, and related accessories contain lead and lead components. **Wash hands after handling.**

The battery is sealed and is maintenance-free. Acid levels cannot be checked.

- Always keep the battery cables and terminals clean and free of corrosive build-up.
- After cleaning the battery and terminals, apply a light coat of petroleum jelly or grease to both terminals
- Always keep the rubber boot positioned over the positive terminal to prevent shorting.

IMPORTANT: If removing the battery for any reason, disconnect the NEGATIVE (Black) wire from it's terminal first, followed by the POSITIVE (Red) wire. When re-installing the battery, always connect the POSITIVE (Red) wire its terminal first, followed by the NEGATIVE (Black) wire.

Charging

If the unit has not been put into use for an extended period of time, charge the battery with an automotive-type 12-volt charger for a minimum of one hour at six amps.



WARNING: Batteries give off an explosive gas while charging. Charge battery in a well ventilated area and keep away from an open flame or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.

Tires



WARNING: Never exceed the maximum inflation pressure shown on the sidewall of the tire.

The recommended operating tire pressure is approximately 14 psi for the rear tires and 35 psi for the front tires. Refer to the tire sidewall for exact tire manufacturer's recommended or maximum psi. Do not overinflate. Uneven tire pressure could cause the cutting deck to mow unevenly or in the tractor failing to track straight..

SECTION 10: OFF-SEASON STORAGE

Clean and lubricate the tractor as instructed in **Section 7: MAINTAINING YOUR LAWN TRACTOR** on page 21 of this manual before storing for an extended period.



WARNING: Allow engine to cool before preparing machine for storage. Always extinguish cigarettes, cigars, pipes, and other sources of ignition prior to draining fuel.

Follow the instructions in the **Service, Storage & Specifications** section of the *Briggs & Stratton* Operator/Owner Manual for proper engine care prior to storing your tractor.



WARNING: Never store the machine or fuel container indoors where there is an open flame, spark or pilot light such as on water heater, furnace, clothes dryer or other gas appliance.

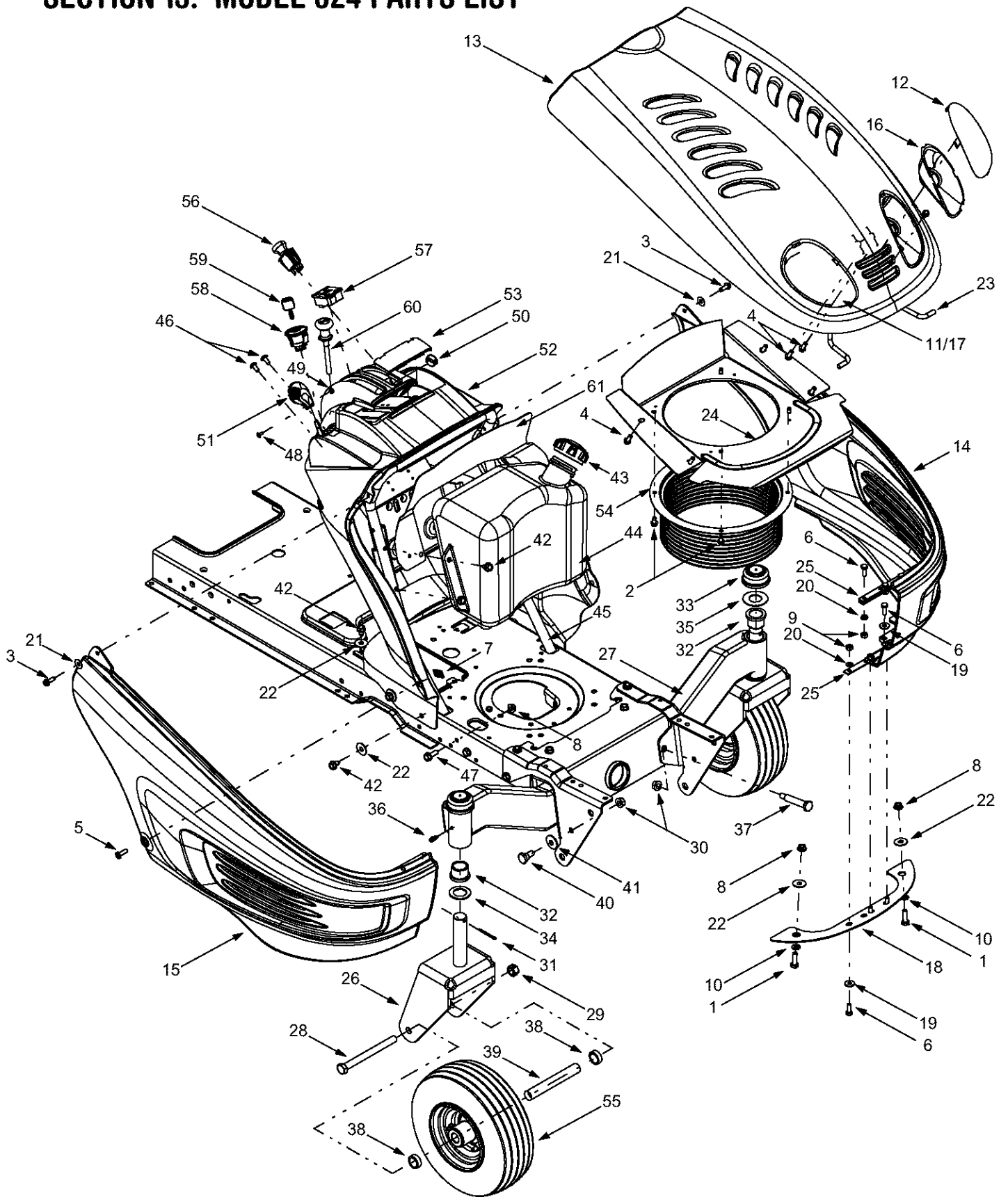
SECTION 11: ATTACHMENTS & ACCESSORIES

MODEL	DESCRIPTION
OEM-190-625	FastAttach™ Twin Bagger Grass Collector (For Revolution™ tractors with 42-inch Decks Only)
OEM-190-626	FastAttach™ Twin Bagger Grass Collector (For Revolution™ tractors with 46-inch Decks Only)
OEM-190-116	Mulch Kit (For 42-inch Decks Only)
OEM-190-118	Mulch Kit (For 46-inch Decks Only)
OEM-190-822	FastAttach™ 46-inch Front Dozer Blade
723-0490	Rear Tire Chains, 20 x 7 (available individually)
734-2019	Turf-Grip Tires, 20 x 7 (available individually)

SECTION 12: TROUBLESHOOTING

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	PTO switch engaged. Parking brake not engaged. Spark plug wire(s) disconnected. Throttle control lever not in correct starting position. Choke not applied. Fuel tank empty, or stale fuel. Blocked fuel line. Faulty spark plug. Engine flooded.	Place PTO knob in disengaged (OFF) position. Engage parking brake. Connect wire(s) to spark plug. Place throttle lever to FAST or CHOKE, if so equipped, position. Pull the choke knob or place throttle lever in CHOKE, if so equipped, position. Fill tank with clean, fresh (less than 30 days old) gas. Clean fuel line or replace fuel filter, if so equipped. Clean, adjust gap or replace plug. Crank engine with throttle in FAST position.
Engine runs erratic	Unit running with CHOKE applied. Spark plug wire loose. Blocked fuel line or stale fuel. Vent in gas cap plugged. Water or dirt in fuel system. Dirty air cleaner.	Place throttle lever in FAST position or push choke knob inward. Connect and tighten spark plug wire. Clean fuel line; fill tank with clean, fresh (less than 30 days old) gasoline. Replace fuel filter, if so equipped. Clear vent or replace cap if damaged. Drain fuel tank. Refill with clean, fresh (less than 30 days old) gasoline. Replace air cleaner cartridge or clean pre-cleaner, if so equipped.
Engine overheats	Engine oil level low. Air flow restricted.	Fill crankcase with proper capacity and weight of oil. Clean grass clippings and debris from around the engine's cooling fins and blower housing.
Engine hesitates at high RPM	Spark plug gap too close.	Remove spark plug(s) and reset the gap at .030".
Idles poorly	Spark plug fouled, faulty or gap too wide. Dirty air cleaner.	Replace spark plug(s). Set plug gap at .030". Replace air cleaner cartridge or clean pre-cleaner, if so equipped.
Excessive vibration	Cutting blade loose or unbalanced. Damaged or bent cutting blade.	Tighten blade and spindle. Balance blade. Replace blade.
Mower will not mulch grass	Engine speed too low. Wet grass. Excessively high grass. Dull blade.	Place throttle in FAST (rabbit) position. Do not mow when grass is wet; wait until later to cut. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting swath. Sharpen or replace blade.
Uneven cut	Deck not balanced properly. Dull blade. Uneven tire pressure.	Perform side-to-side deck adjustment. Sharpen or replace blade. Check tire pressure in rear tires.
Tractor will not drive (propel)	Transmission bypass valves are open. Drive belt damaged or broken. Control cables damaged or snapped.	Reposition transmission bypass rods. Replace drive belt. See an authorized <i>MTD</i> service dealer to have the control cables replaced.
Tractor drifts to the left or right	Control cables out of adjustment. Uneven rear tire pressure.	Perform control cable adjustment. Refer to tire's sidewall for proper PSI and inflate or deflate as necessary.
Tractor moves with control handles in neutral (STOP) position.	Control handles out of adjustment. Control cables out of adjustment. Transmissions in need of adjustment.	See an authorized <i>MTD</i> service dealer to have the tractor's drive system properly adjusted.

SECTION 13: MODEL 624 PARTS LIST

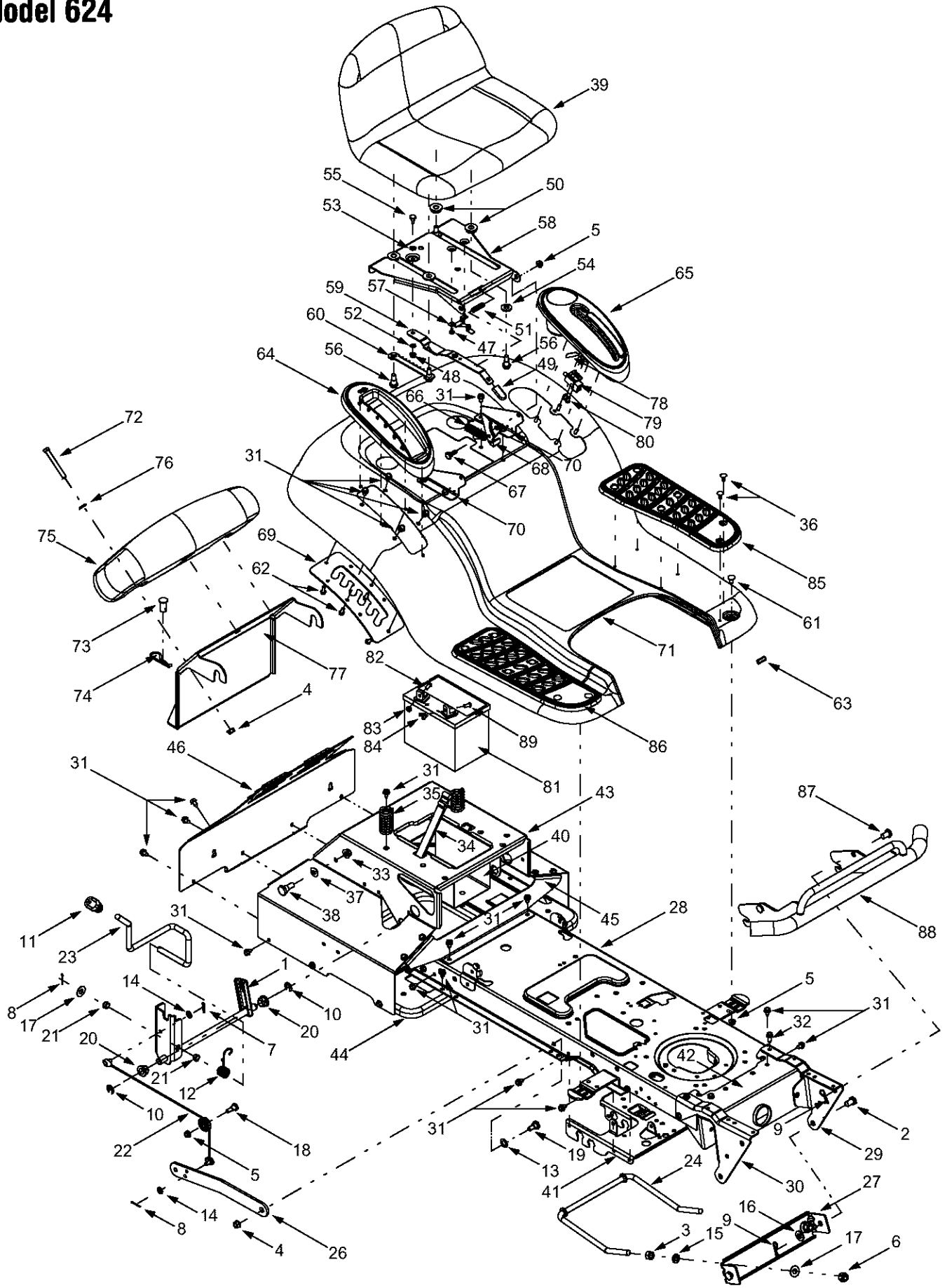


REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	710-0376	Hex Cap Screw, 5/16-18 x 1.0	33	731-0556	Plastic Cap
2	710-0599	Self-tapping Screw, 1/4-20 x .5	34	736-0277	Flat Washer, 1.031 x 1.620 x .095
3	710-0642	Self-tapping Screw, 1/4-20 x .75	35	736-0345	Flat Washer, 1.010 x 2.0 x .065
4	710-0895	Self-tapping Screw, 1/4-15 x .75	36	737-0280	Grease Fitting, 1/4-28
5	710-0924	Pan Phillips Screw, 1/4-20 x .75	37	738-1011	Shoulder Screw, .50 x 2.23, 3/8-16
6	710-3015	Hex Cap Screw, 1/4-20 x .75	38	750-0456	Spacer, .790 x .347
7	712-0292	U-type Speed Nut, 1/4-20	39	750-3197A	Wheel Spacer
8	712-3004A	Flange Lock Nut, 5/16-18	40	738-0143	Shoulder Screw, 3/8-16
9	712-3006	Hex Nut, 1/4-20	41	736-0331	Bell Washer, .39 x 1.13 x .062
10	726-0201	Speed Nut	42	710-0604A	Self-tapping Screw, 16-18 x .625
11	731-1978	RH Head Light Lens	43	751-0603	Fuel Tank Cap (fits both fuel tanks)
12	731-1979	LH Head Light Lens	44	751-0659A	Fuel Tank, Two-gallon (shown)
13	731-1980A	Hood, 4-style (Yellow)		751-0658B	Fuel Tank, Three-gallon (not shown)
14	731-1981A	LH Side Panel, 4-style (Yellow)	45	683-0316	Dash Support Assembly
15	731-1982A	RH Side Panel, 4-style (Yellow)	46	710-1017	Torx Self-tapping Screw, 1/4-14 x .625
16	731-1995	LH Head Light Reflector	47	710-1238	Hex Head Washer Screw, 5/16-18 x .875
17	731-1996	RH Head Light Reflector	48	710-3217	Torx Screw, #8-32 x .375
18	731-2272	Heat Shield	49	712-0142	Hex Nut, 8-32
19	736-0173	Flat Washer, .28 x .74 x .063	50	720-0425	Cap Plug, .812
20	736-0329	Lock Washer, 1/4	51	731-1857	Throttle Control Lever
21	736-0342	Flat Washer, .283 x .75 x .030	52	731-2321	Dash Panel
22	736-3078	Flat Washer, .349 x 1.0 x .063	53	731-2483	Dash Cap
23	747-1132A	Hood Support Rod	54	731-2232	Intake Bellow (Intek Single)
24	783-0808A	Heat Shield, 4-style		731-2234	Intake Bellow (Intek Twin)
25	783-1000A	Grille Support Bracket	55	634-3169	Wheel Assembly, 11 x 4 x 5 (Yellow Rim)
26	683-0425	Castor Assembly	56	725-1716	Electric PTO Switch
27	683-0453	Pivot Bar Axle Assembly	57	725-1976	Systems Indicator Monitor/Hour Meter
28	710-0506	Hex Cap Screw, 1/2-20 x 5.5	58	725-1741	Ignition Switch
29	712-0239	Hex Lock Nut, 1/2-20	59	725-1745	Ignition Key w/ Plastic Cover
30	712-0431	Flange Lock Nut, 3/8-16	60	746-1134	Choke Control/Cable (if so equipped)
31	714-3001	Cotter Pin, .125 x 1.5	61	783-1350	Heat Shield
32	731-0374	Flange Bearing			

NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

Yard-Man Green: 0665
 Yard-Man Yellow: 0674
 Powder Black: 0637

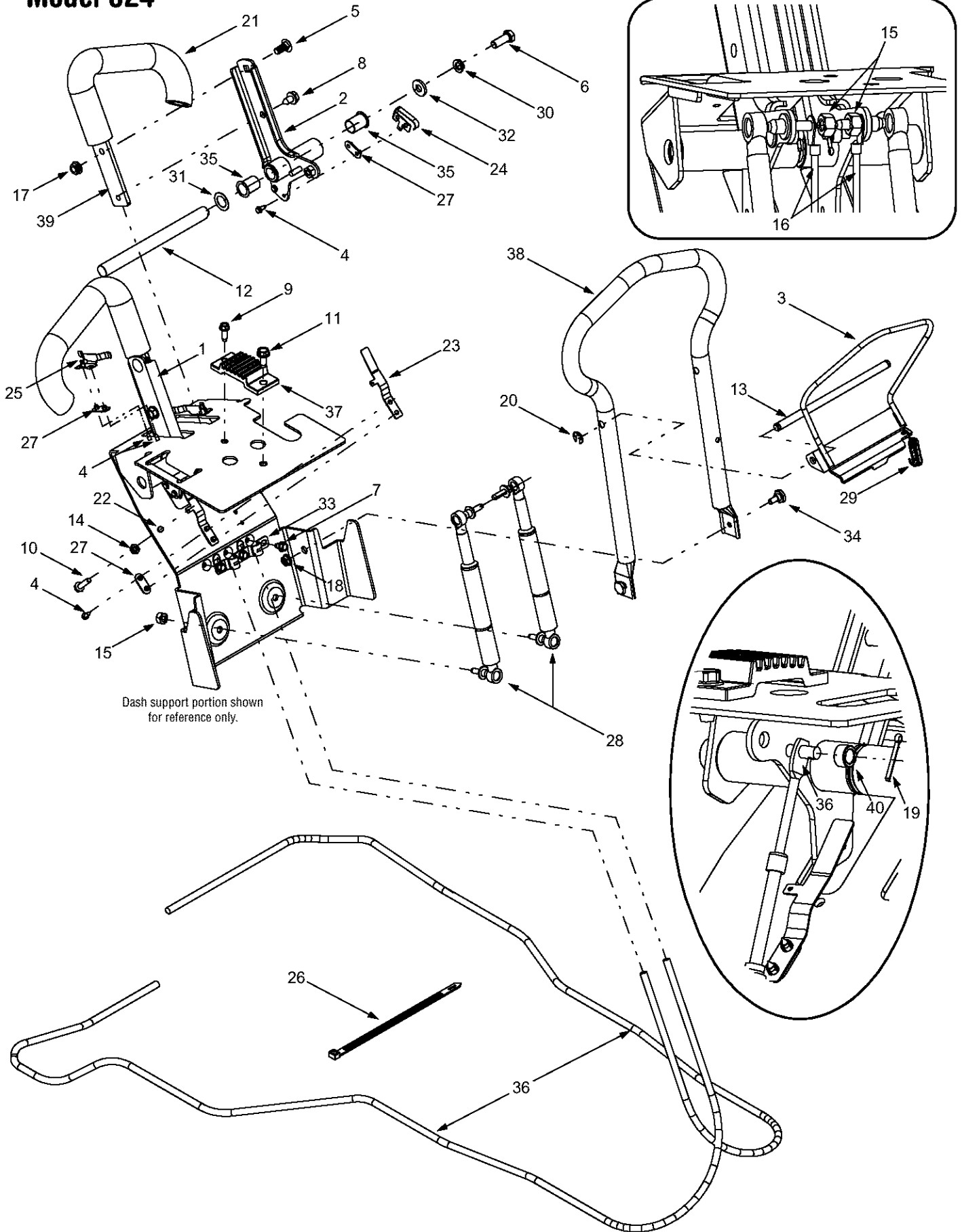
Model 624



Model 624

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	683-0197	Lift Shaft Assembly	46	783-1047	Rear Access Plate
2	711-0332	Clevis Pin, .5 x .78	47	710-1268	Screw, #10-16 x .375
3	712-0206	Hex Nut, 1/2-13	48	712-3027	Hex Flange Lock Nut, 1/4-20
4	712-0431	Flange Lock Nut, 3/8-16	49	720-0309A	Seat Adjuster Grip
5	712-3004A	Flange Lock Nut, 5/16-18	50	731-1989	Spacer
6	712-3083	Hex Nut, 1/2-13	51	732-0499	Compression Spring, .41 x 1.5
7	714-0104	Internal Cotter Pin	52	736-0175	Spring Washer, .265 x .562 x .025
8	714-0111	Cotter Pin, 3/32 x 1.0	53	736-0204	Flat Washer, .344 x .62 x .03
9	714-0145	Internal Cotter Pin	54	736-3019	Flat Washer, .31 x 1.062 x .134
10	716-0106	E-ring	55	738-0137A	Shoulder Screw, .340 x .285, 1/4-20
11	720-0311	Handle Grip	56	738-1007	Shoulder Screw, .50 x .50, 3/8-16
12	732-0874	Torsion Spring	57	783-0611	Seat Stop
13	736-0160	Flat Washer, .53 x .93 x .050	58	783-0738	Seat Pivot Bracket
14	736-0275	Flat Washer, .344 x .688 x .065	59	783-0739	Seat Adjustment Lever
15	736-0921	Lock Washer, 1/2	60	783-0753	Seat Adjustment Selector
16	736-3019	Flat Washer, .31 x 1.062 x .134	61	710-0260A	Carriage Screw, 5/16-18 x .62
17	736-3084	Flat Washer, .51 x 1.12 x .06	62	710-0895	Self-tapping Screw, 1/4-15 x .75
18	738-0138A	Hex Cap Screw, 5/16-18 x .62	63	731-0511	Trim Strip
19	738-0143	Shoulder Screw, 3/8-16	64	731-1990	Lift Lever Cover
20	741-0225	Hex Flange Bearing	65	731-2319	Parking Brake Lever Cover w/ Cup Holder
21	741-0715	Snap Flange Bearing	66	732-1027	Extension Spring, .750 x 3.8
22	746-0968	Lift Cable, 16.16	67	738-0296	Shoulder Screw, .437 x .286
23	747-1111	Lift Handle	68	783-0209	Seat Lift Bracket
24	747-1130A	Deck Stabilizer Rod	69	783-0677	Lift Adjuster Bracker
25	756-1154	Roller Pulley	70	783-0715A	Seat Mounting Bracket
26	783-0678A	Lift Arm	71	783-1349	Revolution™ Fender
27	783-0720A	Deck Stabilizer Bracket	72	710-3130	Hex Cap Screw, 3/8-16 x 3.25 (Grade 8)
28	683-0314	Frame Assembly	73	711-0309A	Clevis Pin, .62 Diameter
29	683-0589	LH Pivot Support Bracket Assembly	74	714-0117	Internal Cotter Pin, .148 x 3.0
30	683-0590	RH Pivot Support Bracket Assembly	75	731-2341	Rear Bumper Weight
31	710-0604A	Self-tapping Screw, 16-18 x .625	76	736-3010	Flat Washer, .407 x .812 x .135
32	710-1260A	Self-tapping Screw, 5/16-18 x .75	77	783-1275	Bumper Support Bracket
33	712-0459	Flange Lock Nut, 7/16-20	78	725-1774	Spring Switch
34	723-0444	Battery Strap	79	725-3223	Plunger Switch (Parking Brake)
35	732-3080	Compression Spring, 1.28 x 3.5	80	710-1823	Pan Phillips Screw, #12-16 x .625
36	726-3046	Ratchet Clip, .25	81	725-1706	Battery, 270 CCA
37	736-0407	Bell Washer, .45 x 1.0 x .062	82	710-0703	Hex Cap Screw, 1/4-20 x .75
38	738-1020	Shoulder Screw, .625 x .50, 7/16-20	83	712-0271	Hex Sems Nut, 1/4-20
39	757-0372	Seat, Yellow	84	712-3087	Wing Nut, 1/4-20
40	783-0349	Battery Tray	85	735-0657	LH Foot Pad
41	783-0653D	Steering Support Bracket	86	735-0678	RH Foot Pad
42	783-0728	Pivot Bar Bracket	87	711-0332	Clevis Pin, .50 x .78
43	783-1044	Upper Frame	88	768-0010	Bumper Assembly
44	783-1045	Transmission Bracket	89	738-1132	Shoulder Screw, 1/4-20, .25 x .15
45	783-1046	Support Bracket			

Model 624

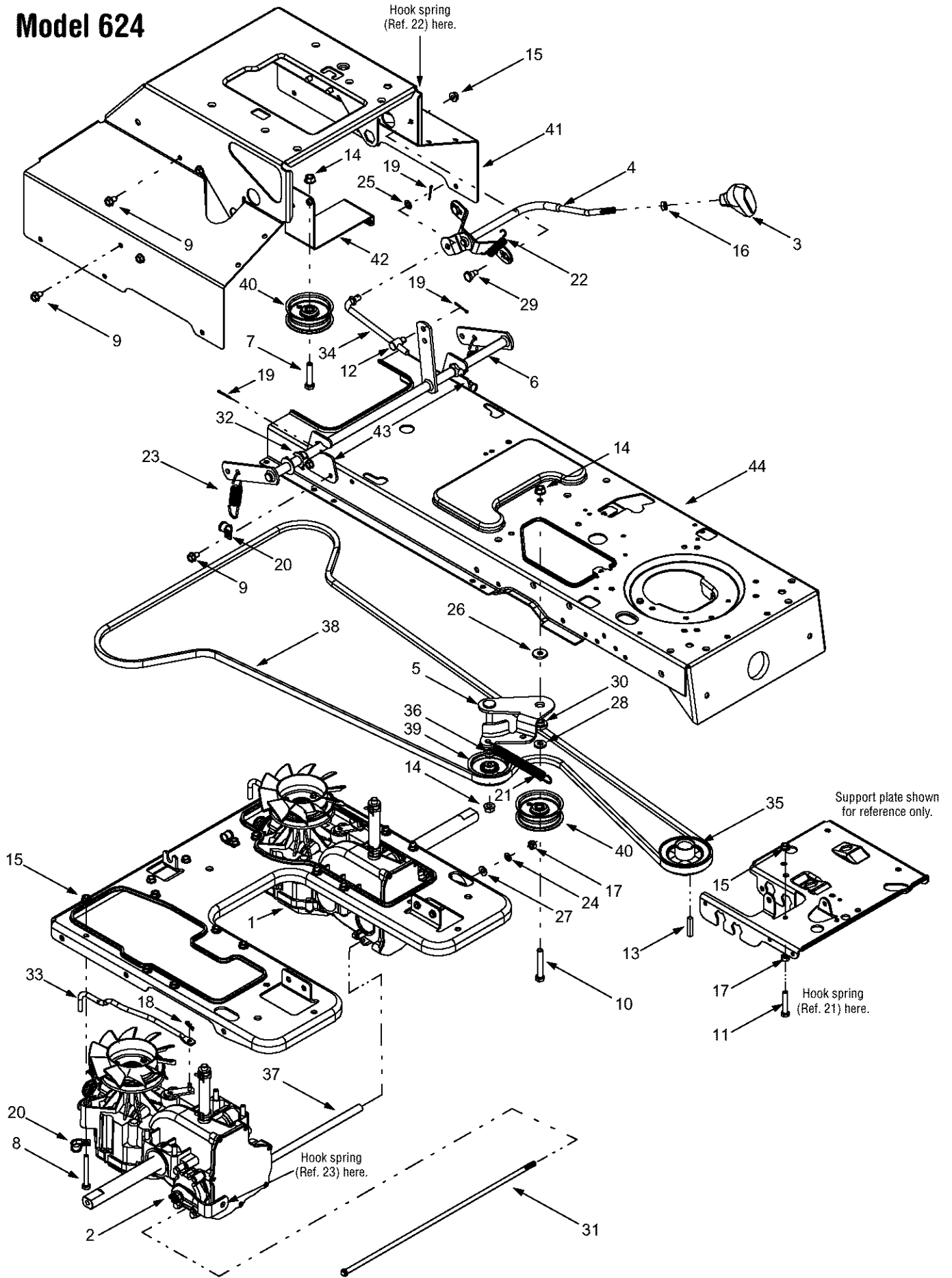


REF. NO.	PART NO.	DESCRIPTION
1	683-0317	RH Handle Bracket Assembly
2	683-0318	LH Handle Bracket Assembly
3	683-0320	Bail Assembly
4	710-0227	Self-tapping Screw, #8-18 x .5
5	710-0451	Carriage Screw, 5/16-18 x .75
6	710-0514	Hex Cap Screw, 3/8-16 x 1.0
7	710-0599	Self-tapping Screw, 1/4-20 x .5
8	710-0604A	Self-tapping Screw, 16-18 x .625
9	710-0642	Self-tapping Screw, 1/4-20 x .75
10	710-0788	Self-tapping Screw, 1/4-20 x 1.0
11	710-1260A	Self-tapping Screw, 5/16-18 x .75
12	711-1509	Control Shaft
13	711-1535	Rod, .375 x 8.0
14	712-0298	Jam Nut, 1/4-20
15	712-0365	Center Lock Hex Nut, M8
16	629-1083	Ground Jumper Wire Assembly
17	712-3004A	Flange Lock Nut, 5/16-18
18	712-3027	Hex Flange Lock Nut, 1/4-20
19	714-0507	Cotter Pin, 3/32 x .75
20	716-0125	E-Ring, .375
21	720-0278A	Foam Grip
22	720-0322	Dipped Cap, .187
23	725-1760	Spring Switch
24	725-1773	Short Spring Switch
25	725-1980	Lever Spring Switch
26	726-0209	Cable Tie
27	726-0320	Insulator Nut Plate
28	727-3113	Damper Cylinder
29	732-0568	Extension Spring, .50 x 2.54
30	736-0169	Lock Washer, 3/8
31	736-0349	Flat Washer, .63 x 1.0 x .020
32	736-3004	Flat Washer, .406 x .875 x .105
33	783-1265	Clamp Cable Bracket
34	738-0255	Shoulder Screw, .375 x .181
35	741-0591	Flange Bearing, .630 x .693
36	746-1121	Control Cable, 77.5
37	748-0438	Index Plate
38	749-1236	Hand Rest Tube
39	749-1237	Control Handle
40	750-1298	Spacer, .280 x .437 x .250

NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

Yard-Man Green: 0665
 Yard-Man Yellow: 0674
 Powder Black: 0637

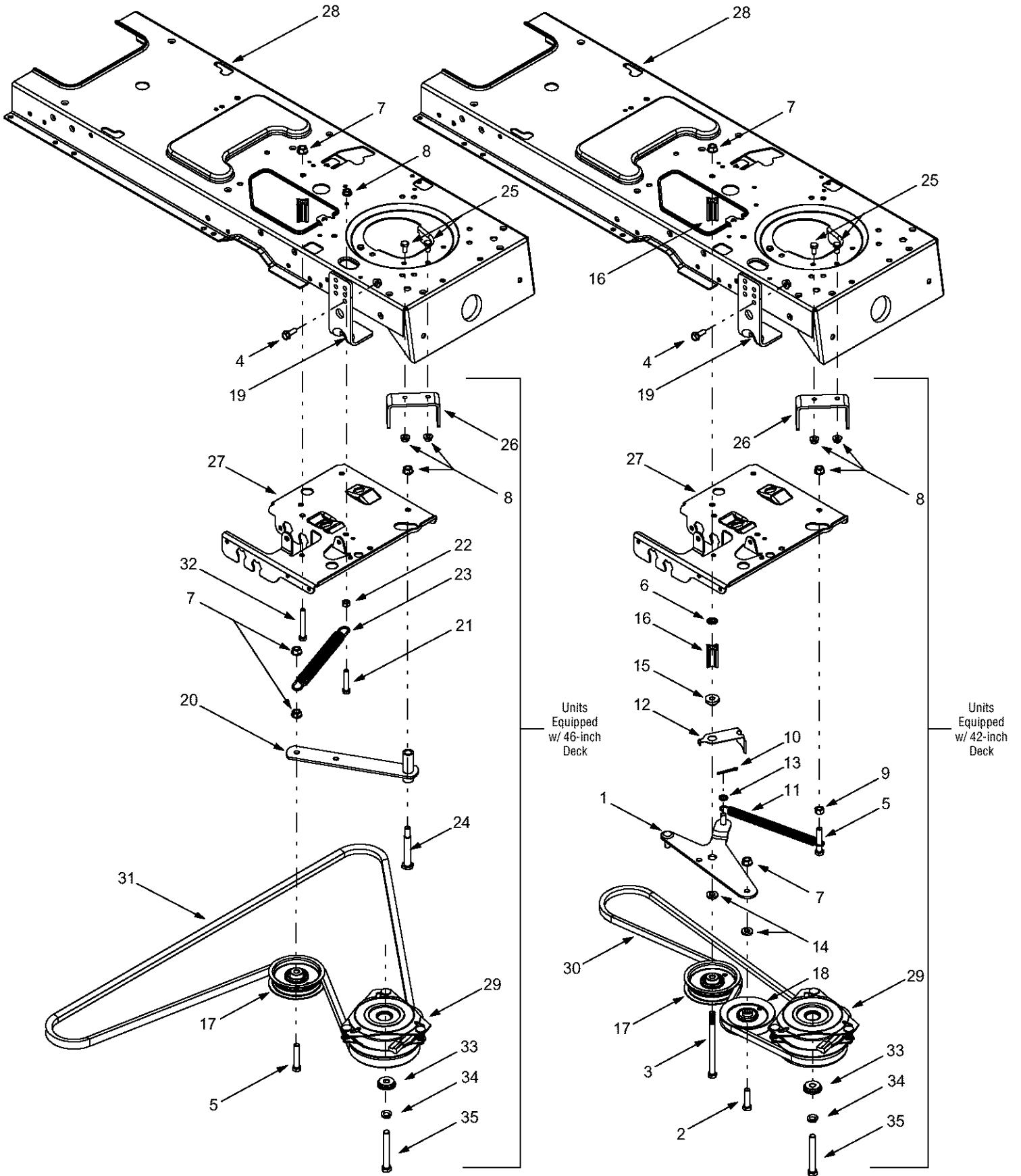
Model 624



Model 624

REF. NO.	PART NO.	DESCRIPTION
1	618-0437	LH IZT Transmission
2	618-0438	RH IZT Transmission
3	631-0009A	Knob
4	647-0051	Brake Lever Assembly
5	683-0251	Double-idler Bracket
6	683-0452A	Brake Bracket Assembly
7	710-0347	Hex Cap Screw, 3/8-16 x 1.75
8	710-0378	Hex Cap Screw, 5/16-18 x 2.5
9	710-0604A	Self-tapping Screw, 5/16-18 x .625
10	710-3011	Hex Cap Screw, 3/8-16 x 2.25
11	710-3180	Hex Cap Screw, 5/16-18 x 1.75
12	711-0832	Ferrule, 3/8-24 x .375
13	714-0118	Square Key, 1/4 x 1.5
14	712-0431	Flange Lock Nut, 3/8-16
15	712-3004A	Flange Lock Nut, 5/16-18
16	712-3008	Jam Nut, 3/8-16
17	712-3010	Hex Nut, 5/16-18
18	714-0104	Internal Cotter Pin, .072 x 1.12†
19	714-0111	Cotter Pin, 3/32 x 1.0
20	726-0272	Clamp, 9/16
21	732-0384	Extension Spring, .62 x 6.12
22	732-0433	Extension Spring, .5 x 2.75
23	732-1154A	Disc Brake Spring
24	736-0119	Lock Washer, 5/16
25	736-0140	Flat Washer, .385 x .62 x .063
26	736-0258	Flat Washer, .385 x 1.0 x .135
27	736-0275	Flat Washer, .344 x .688 x .065
28	736-3010	Flat Washer, .407 x .812 x .135
29	738-0141	Shoulder Screw, .435 x .350, 5/16-18
30	738-0372	Shoulder Spacer, .380
31	738-1155	Rod, .312 x 18.437
32	741-3065A	Split Hex Flange Bearing, .628
33	747-1222	Hydro Bypass Rod
34	747-1263A	Brake Link Rod
35	756-0978A	Engine Pulley
36	750-0535	Spacer, .376 x .625 x .220
37	750-1286	Spacer, .334 x .50 x 14.88
38	754-0491	Drive Belt, Poly
39	756-0116	V-Idler Pulley, 3.06
40	756-0981A	Flat Idler, 2.75
41	783-1044	Upper Frame
42	783-1145	Idler Support Bracket
43	783-1305	Brake Pivot Support Bracket
44	683-0314	Lower Frame

Model 624

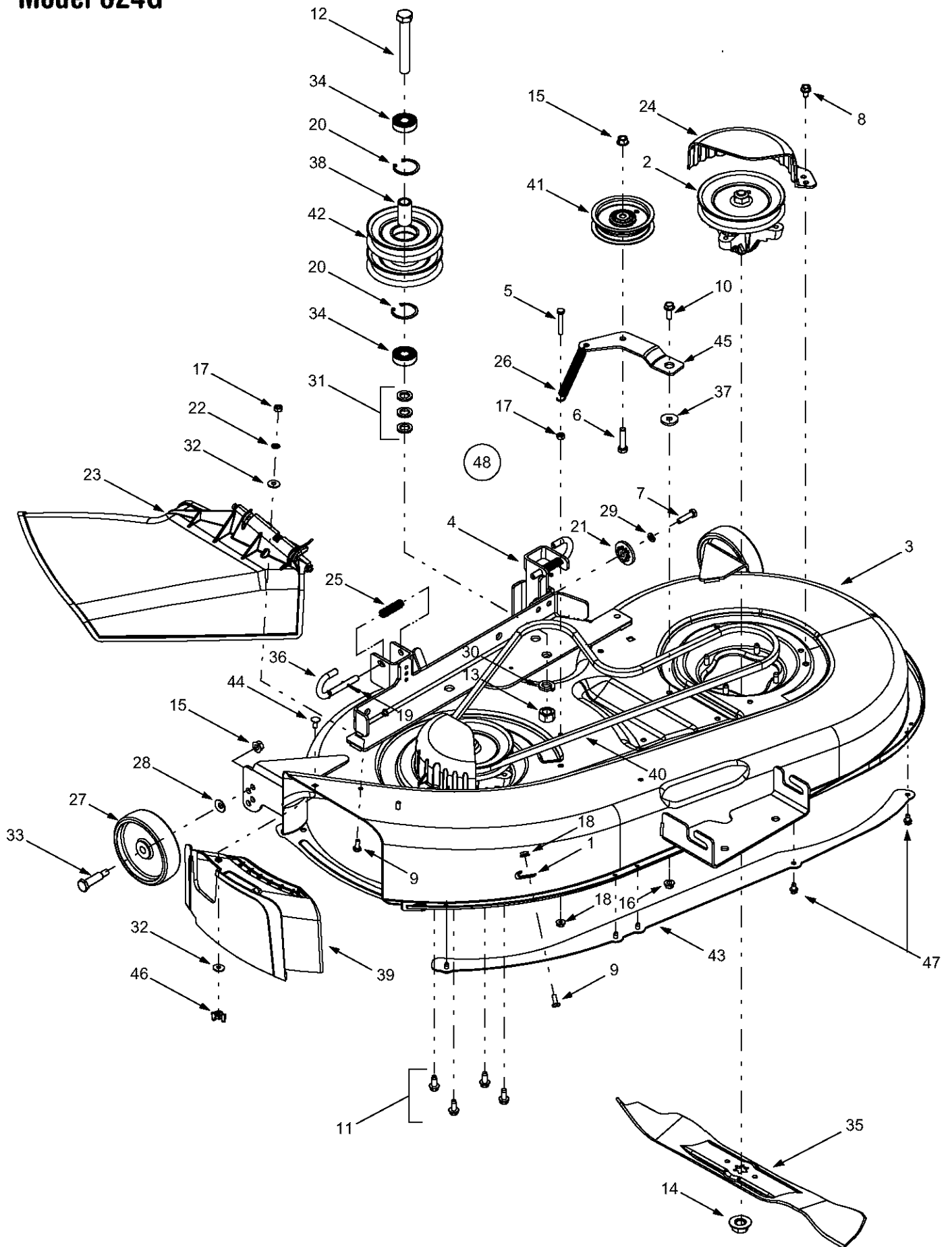


REF. NO.	PART NO.	DESCRIPTION
1	683-0450	Engagement Plate Assembly
2	710-0520	Hex Cap Screw, 3/8-16 x 1.5
3	710-0831	Hex Cap Screw, 3/8-16 x 5.5
4	710-1238	Hex Head Washer Screw, 5/16-18 x .875
5	710-3144	Hex Cap Screw, 3/8-16 x 2.0
6	712-0229	Push Nut, 3/8
7	712-0431	Flange Lock Nut, 3/8-16
8	712-3004A	Flange Lock Nut, 5/16-18
9	712-3017	Hex Nut, 3/8-16
10	714-0470	Cotter Pin, 1/8 x 1.25
11	732-0384	Extension Spring, .62 x 6.12
12	732-0991A	Belt Guard
13	736-0140	Flat Washer, .385 x .62 x .063
14	736-3010	Flat Washer, .407 x .812 x .135
15	738-0372	Shoulder Spacer, .380
16	748-0415A	Spacer, 3/8 x 1.54
17	756-0627B	Idler Pulley, 3.5
18	756-1208	Idler Pulley, 4.0
19	783-0891B	Deck Stop
20	683-0297	Idler Bracket Assembly
21	710-3180	Hex Cap Screw, 5/16-18 x 1.75
22	712-3010	Hex Nut, 5/16-18
23	732-0978	Extension Spring, .62 x 5.62
24	738-3056	Shoulder Screw, 1/2 x 2.5
25	710-3025	Hex Cap Screw, 5/16-18 x .625
26	783-1003	Electric Clutch Anti-rotation Bracket
27	783-0653D	Steering Support Bracket
28	683-0314	Frame Assembly
29	717-1708	Electric PTO Clutch
30	754-0497	PTO Belt (42-inch Decks)
31	754-0474	PTO Belt (46-inch Decks)
32	710-0859	Hex Cap Screw, 3/8-16 x 2.5
33	738-0785	Shoulder Spacer, 1.38 x .445 x .36
34	736-0171	Lock Washer, 7/16
35	710-3157	Hex Cap Screw, 7/16-20 x 3.25 (Grade 5)

NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

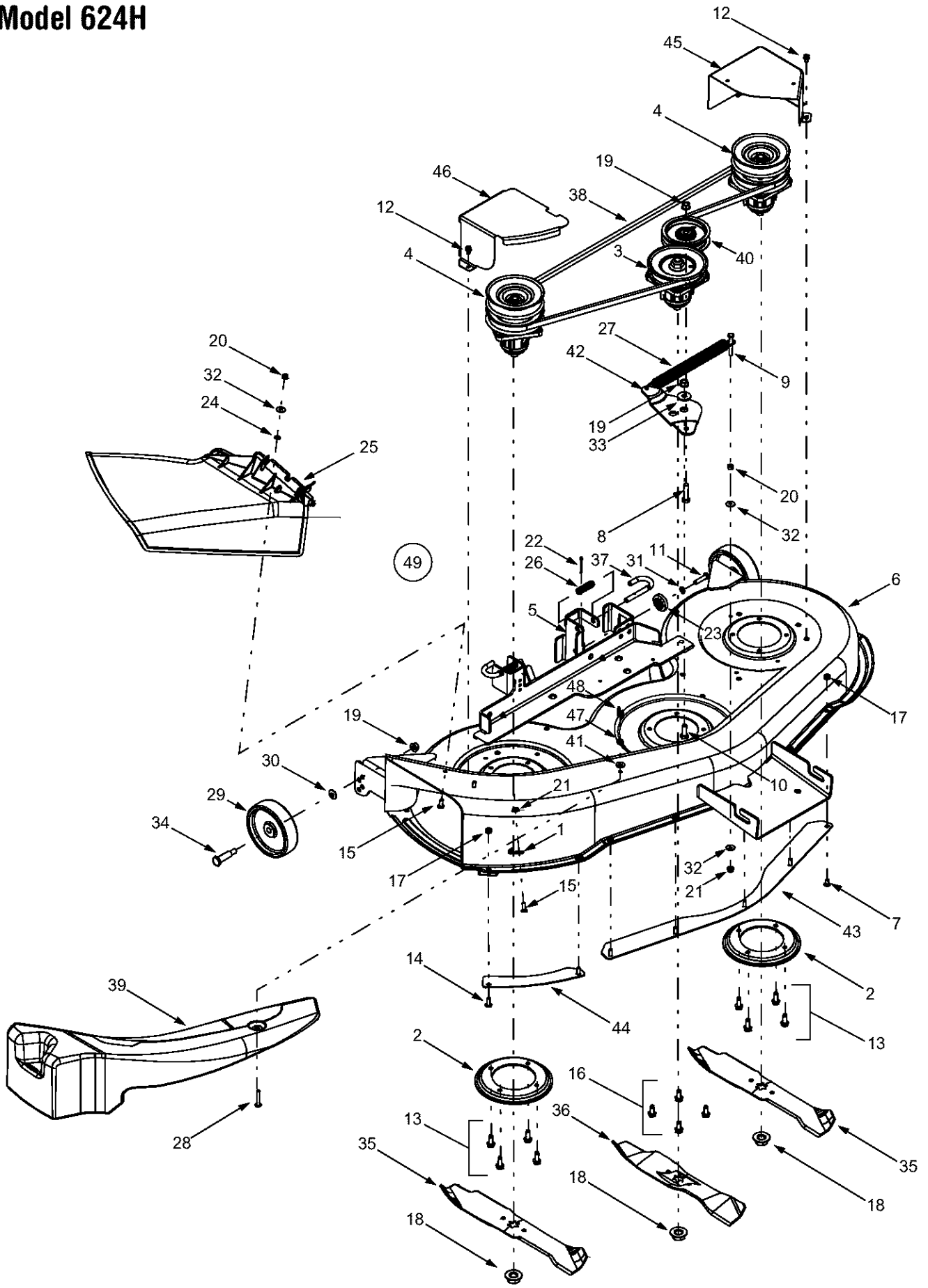
Yard-Man Green: 0665
 Yard-Man Yellow: 0674
 Powder Black: 0637

Model 624G



REF. NO.	PART NO.	DESCRIPTION
1	16606	Retainer Hook
2	618-0565	Spindle Assembly, 5.75 Dia.
	756-0980	Pulley Only
3	683-0198D	42-inch Deck Shell
4	683-0254	Deck Adjustment Bracket w/ Weld Nut
5	710-0136	Hex Cap Screw, 1/4-20 x 1.75
6	710-0520	Hex Cap Screw, 1/4-20 x 1.5
7	710-0528	Hex Cap Screw, 5/16-18 x 1.25
8	710-0604A	Self-tapping Screw, 5/16-18 x .625
9	710-0751	Hex Cap Screw, 1/4-20 x .62
10	710-1238	Hex Head Washer Screw, 5/16-18 x .875
11	710-1260A	Self-tapping Screw, 5/16-18 x .75
12	710-3151	Hex Cap Screw, 5/8-18 x .875
13	712-0337	Hex Nut, 5/8-18
14	712-0417A	Hex Flange Nut, 5/8-18
15	712-0431	Flange Lock Nut, 3/8-16
16	712-3004A	Flange Lock Nut, 5/16-18
17	712-3006	Hex Nut, 1/4-20
18	712-3027	Hex Flange Lock Nut, 1/4-20
19	714-0470	Cotter Pin, 1/8 x 1.25
20	716-3020	Internal Snap Ring
21	717-1553A	Deck Adjustment Gear
22	726-0233	Push Nut .25 x .5
23	731-1032B	Side Discharge Chute Assembly
24	731-2486	Belt Cover
25	732-0306	Compression Spring, .406 x .531 x 1.75
26	732-0470A	Extension Spring, .50 x 4.74
27	734-0973	Deck Wheel, 5 x 1.38
28	736-0105	Bell Washer, .401 x .87 x .063
29	736-0119	Lock Washer, 5/16
30	736-0158	Lock Washer, 5/8
31	736-0162	Flat Washer, .64 x 1.0 x .12
32	736-0270	Bell Washer, .265 x .75 x .062
33	738-0373	Shoulder Screw, .498 x 1.53
34	741-0524	Bearing, .625 x 1.574 x .470
35	742-0616	Three-in-one Blade, Star Center, 21.23"
36	747-1116	Deck Release Pin
37	748-0331	Shoulder Spacer, .625 x .324
38	750-0932A	Spacer, .635 x .88 x 1.72
39	731-2363	Mulch Plug
40	754-0498	Deck Belt
41	756-0627B	Idler Pulley, 3.5
42	756-1202	Double Pulley, 5.0
43	783-1146A	Deck Skirt
44	710-0134	Carriage Screw, , 1/4-20 x .62
45	783-1291	Idler Bracket
46	712-3087	Wing Nut, 1/4-20
47	710-0599	Self-tapping Screw, 1/4-20 x .5
48	753-0896	42-inch Deck Assembly Complete (w/o Mulch Kit)

Model 624H

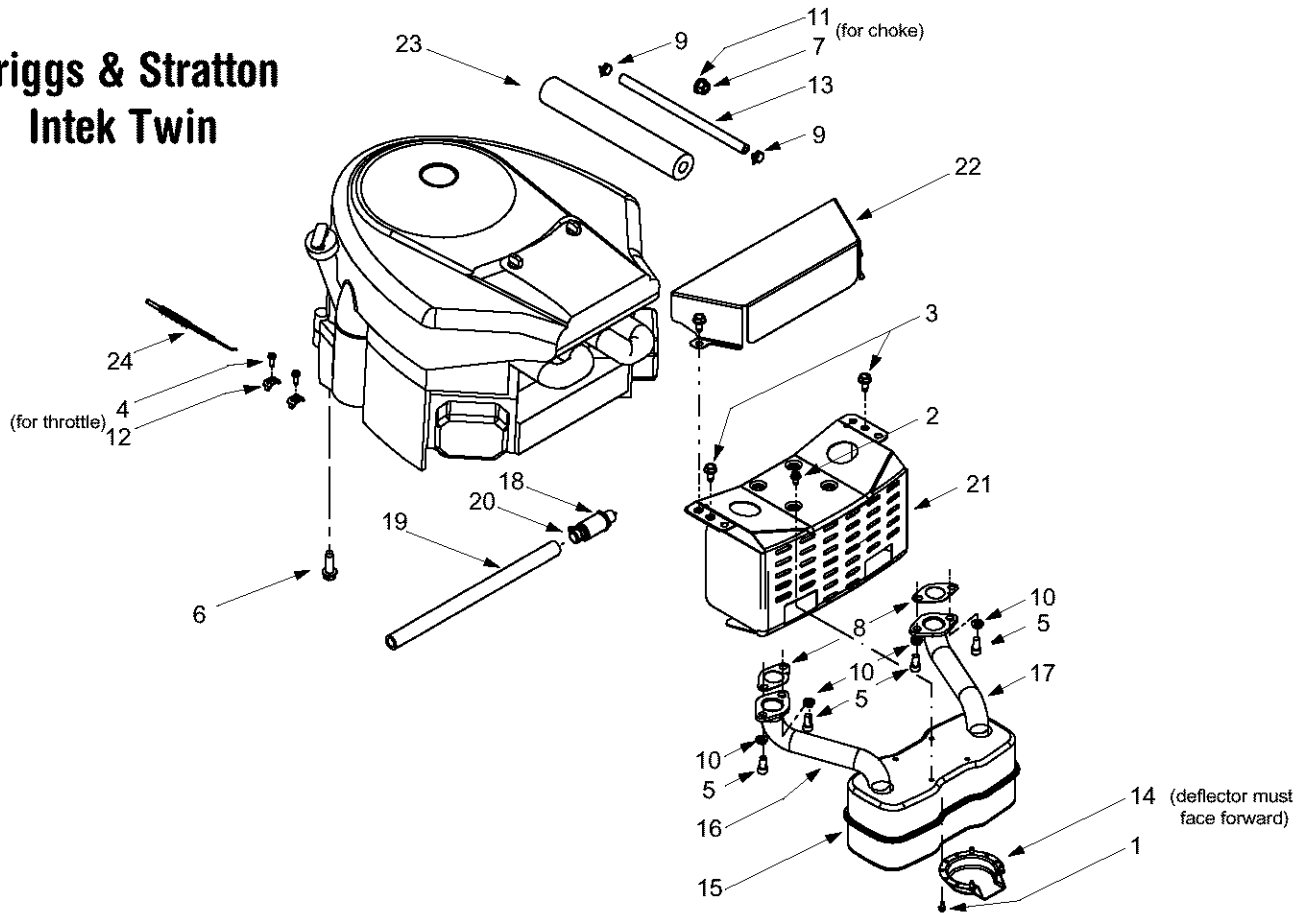


Model 624H

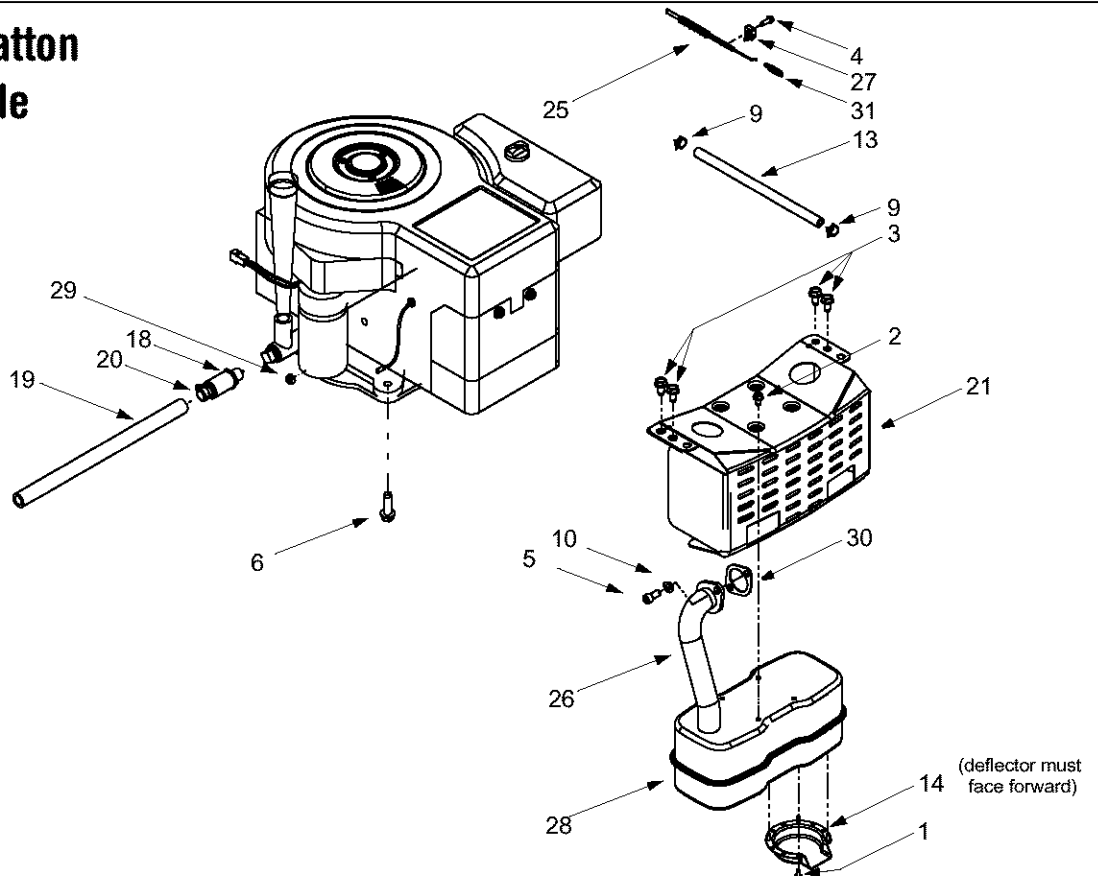
REF. NO.	PART NO.	DESCRIPTION
1	16606	Retainer Hook
2	17982	Spindle Reinforcement Plate
3	618-0240A	Spindle Assembly, 5.0 Dia.
	756-1187	Pulley Only
4	618-0241	Double Pulley Spindle Assembly
	756-0603	Pulley Only
5	683-0254	Deck Adjustment Bracket w/ Weld Nut
6	683-0265C	46-inch Deck Shell
7	710-0167	Carriage Screw, 1/4-20 x .50
8	710-0344	Hex Cap Screw, 3/8-16 x 1.5
9	710-0501	Hex Cap Screw, 1/4-20 x 2.0
10	710-0514	Hex Cap Screw, 3/8-16 x 1.0
11	710-0528	Hex Cap Screw, 5/8-18 x 1.25
12	710-0599	Self-tapping Screw, 1/4-20 x .5
13	710-0650	Self-tapping Screw, 15/16-18 x .875
14	710-0703	Hex Screw, 1/4-20 x .75
15	710-0751	Hex Cap Screw, 1/4-20 x .62
16	710-1260A	Self-tapping Screw, 5/16-18 x .75
17	712-0271	Hex Sems Nut, 1/4-20
18	712-0417A	Hex Flange Nut, 5/8-18
19	712-0431	Flange Lock Nut, 3/8-16
20	712-3006	Hex Nut, 1/4-20
21	712-3027	Hex Flange Lock Nut, 1/4-20
22	714-0470	Cotter Pin, 1/8 x 1.25
23	717-1553A	Deck Adjustment Gear
24	726-0233	Push Nut. .25 x .5
25	731-1032B	Side Discharge Chute Assembly
26	732-0306	Compression Spring, .406 x .531 x 1.75
27	732-0594A	Extension Spring, .91 x 7.3
28	710-0578	Screw, 1/4-20 x 1.5
29	734-0973	Deck Wheel, 5 x 1.38
30	736-0105	Bell Washer, .401 x .87 x .063
31	736-0119	Lock Washer, 5/16
32	736-0270	Bell Washer, .265 x .75 x .062
33	738-0347	Shoulder Spacer, .625 x 1.16
34	738-0373	Shoulder Screw
35	742-0611	Three-in-one Blade, Star Center, 16.28"
36	742-0612	Three-in-one Blade, Star Center, 14.88"
37	747-1116	Deck Release Pin
38	754-0349	Deck Belt, Poly
39	731-1636	Mulch Plug
40	756-0627B	Idler Pulley, 3.5
41	736-0173	Flat Washer, .28 x .74 x .063
42	783-0139A	Idler Bracket
43	783-0141	Center Deck Skirt
44	783-0142	RH Deck Skirt
45	783-0747	LH Belt Cover
46	783-0805A	RH Belt Cover
47	712-3006	Hex Nut, 1/4-20
48	712-3087	Wing Nut, 1/4-20
49	753-0874	46-inch Deck Assembly Complete (w/o Mulch Kit)

Model 624

Briggs & Stratton Intek Twin



Briggs & Stratton Intek Single



REF. NO.	PART NO.	DESCRIPTION
1	710-0227	Self-tapping Screw, #8-18 x .5
2	710-0599	Self-tapping Screw, 1/4-20 x .5
3	710-0604A	Self-tapping Screw, 5/16-18 x .625
4	710-1237	Screw, #10-32 x .625
5	710-1314	Socket Cap Screw, 5/16-18 x .625
6	710-1315	Self-tapping Screw, 3/8-16 x 1.25
7	712-3017	Hex Nut, 3/8-16
8	721-0460	Exhaust Gasket (Intek Twin)
9	726-0205	Hose Clamp
10	736-0119	Lock Washer, 5/16
11	736-0300	Flat Washer, .406 x .875 x .059
12	751B221535	Casing Clamp
13	751-0535	Fuel Line Hose
14	751-0564	Muffler Deflector
15	751-0616	Muffler, Twin Inlet
16	751-0650	RH Exhaust Pipe (Intek Twin)
17	751-0651	LH Exhaust Pipe (Intek Twin)
18	751-3140	Oil Drain Valve
19	751-3141	Oil Drain Hose
20	751-3142	Oil Drain Cap
21	783-0615	Muffler Heat Shield
22	783-0625B	Engine Heat Shield
23	722-0263	Foam (fits over fuel line)
24	746-1086	Throttle Cable (Intek Twin)
25	746-1084	Throttle/Choke Cable (Intek Single)
26	751-0619	Exhaust Pipe (Intek Single)
27	751B213146	Casing Clamp
28	751-0617	Muffler, Single Inlet
29	712-0271	Hex Sems Nut, 1/4-20 (for starter cable)
30	721-0208	Exhaust Gasket (Intek Single)
31	732-0966	Extension Spring, .275 x 1.25

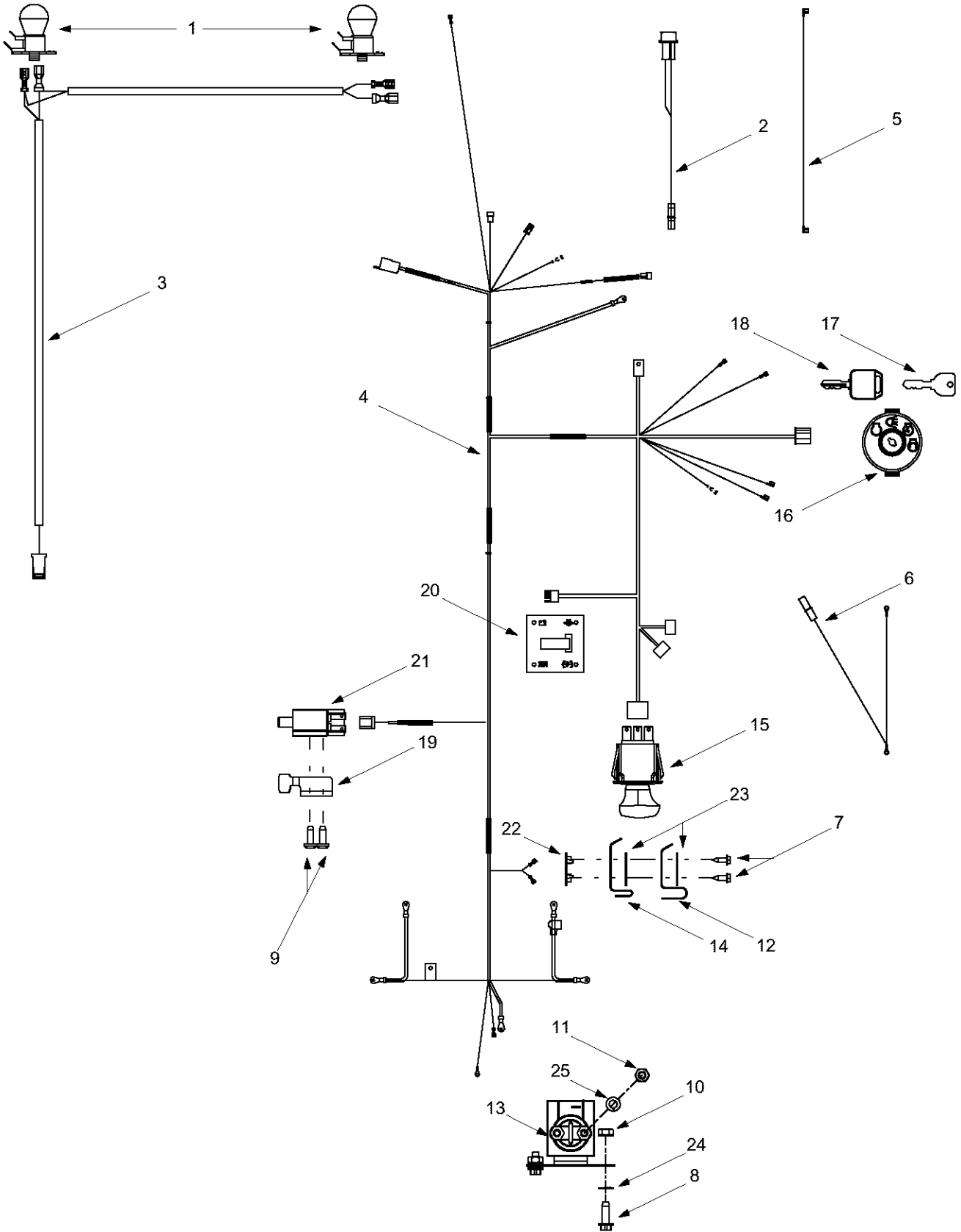
NOTE: For **painted parts**, please refer to the list of color codes below. Please add the applicable color code, wherever needed, to the part number to order a replacement part. For instance, if a part numbered 700-xxxx is painted Yard-Man Green, the part number to order would be 700-xxxx-0665.

Yard-Man Green: 0665

Yard-Man Yellow: 0674

Powder Black: 0637

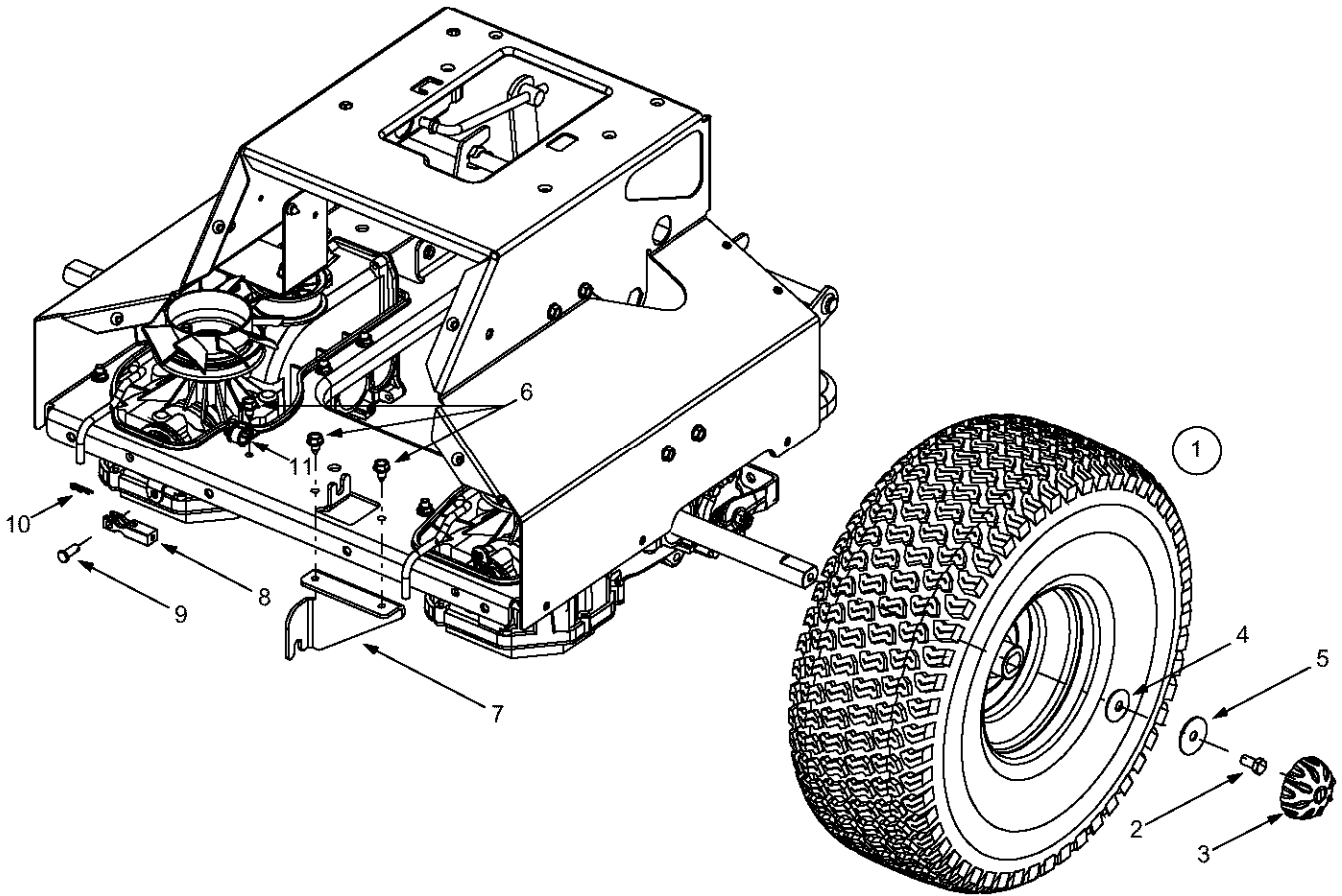
Model 624



Model 624

REF. NO.	PART NO.	DESCRIPTION
1	625-0051	Bulb/Socket Headlight Assembly
2	629-0126	Wire Harness, Afterfire Solenoid, #18 x 5
3	629-0469A	Wire Harness, Headlight
4	629-1055	Wire Harness, Main
5	629-1077	Wire Assembly, Reverse Jumper
6	629-1083	Wire Assembly, Ground Jumper
7	710-0227	Self-tapping Screw, #8-18 x .5
8	710-0642	Self-tapping Screw, 1/4-20 x .75
9	710-1823	Pan Phillips Screw, #12-16 x .625
10	712-0271	Hex Sems Nut, 1/4-20
11	712-3006	Hex Nut, 1/4-20
12	725-1303	Outer Seat Spring Switch
13	725-1426	12V Solenoid, 100 Amp
14	725-1439	Inner Seat Spring Switch
15	725-1716	Electric PTO Switch
16	725-1741	Ignition Swicth
17	725-1744	Ignition Key
18	725-1745	Ignition Key w/ Plastic Cover
19	725-1774	Parking Brake Switch Spring
20	725-1976	Systems Indicator Monitor, Hour Meter
21	725-3223	Plunger Switch (Parking Brake)
22	726-0278	Insultaor Boss Plate
23	726-0279	Insulator Plate
24	736-0222	External Lock Washer, 1/4
25	736-0329	Lock Washer, 1/4

Model 624



REF. NO.	PART NO.	DESCRIPTION
1	634-0210	Wheel Assembly Complete, 20 x 7
	634-0209	Rim Only
	734-0255	Air Valve
	734-2018	Tire Only, 20.4 x 7.0 x 8.0 Turf Master
2	710-0180	Hex Cap Screw, 3/8-24 x .75
3	731-2290A	Hub Cap
4	736-0356	Bell Washer, .391 x 1.38 x .062
5	736-0372	Flat Washer, .410 x 1.59 x .062
6	710-0604A	Self-tapping Screw, 16-18 x .625
7	783-1069	Cable Bracket
8	748-0452	Control Yoke
9	711-1601	Clevis Pin, .3125 x .81
10	714-0104	Internal Cotter Pin, 5/16
11	726-0272	Clamp, 9/16

NOTES

MANUFACTURER'S LIMITED WARRANTY FOR:



The limited warranty set forth below is given by MTD PRODUCTS INC ("MTD") with respect to new merchandise purchased and used in the United States, its possessions and territories.

MTD warrants this product against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in material or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by MTD Products Inc. for use with the product(s) covered by this manual will void your warranty as to any resulting damages.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear part or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in material or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires. Batteries are covered by a 90-day limited replacement warranty.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE THROUGH YOUR LOCAL AUTHORIZED SERVICE DEALER. To locate the dealer in your area, please check for a listing in the Yellow Pages or contact the Customer Service Department of MTD PRODUCTS INC by calling 1-800-800-7310 or writing to P.O. Box 368022, Cleveland, Ohio 44136-9722.

This limited warranty does not provide coverage in the following cases:

- a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Please refer to the applicable manufacturer's warranty on these items.
- b. Log splitter pumps, valves and cylinders have a separate one year warranty.

- c. Routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments; and normal deterioration of the exterior finish due to use or exposure.
- d. MTD does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through MTD's authorized channels of export distribution.

No implied warranty, including any implied warranty of merchantability or fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty or guaranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product shall bind MTD. During the period of the Warranty, the exclusive remedy is repair or replacement of the product as set forth above. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

The provisions as set forth in this Warranty provide the sole and exclusive remedy arising from the sales. MTD shall not be liable for incidental or consequential loss or damages including, without limitation, expenses incurred for substitute or replacement lawn care services, for transportation or for related expenses, or for rental expenses to temporarily replace a warranted product. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.)

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. Alteration of the safety features of the product shall void this Warranty. You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the use or misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser, original lessee or the person for whom it was purchased as a gift.

How State Law Relates to this Warranty: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.