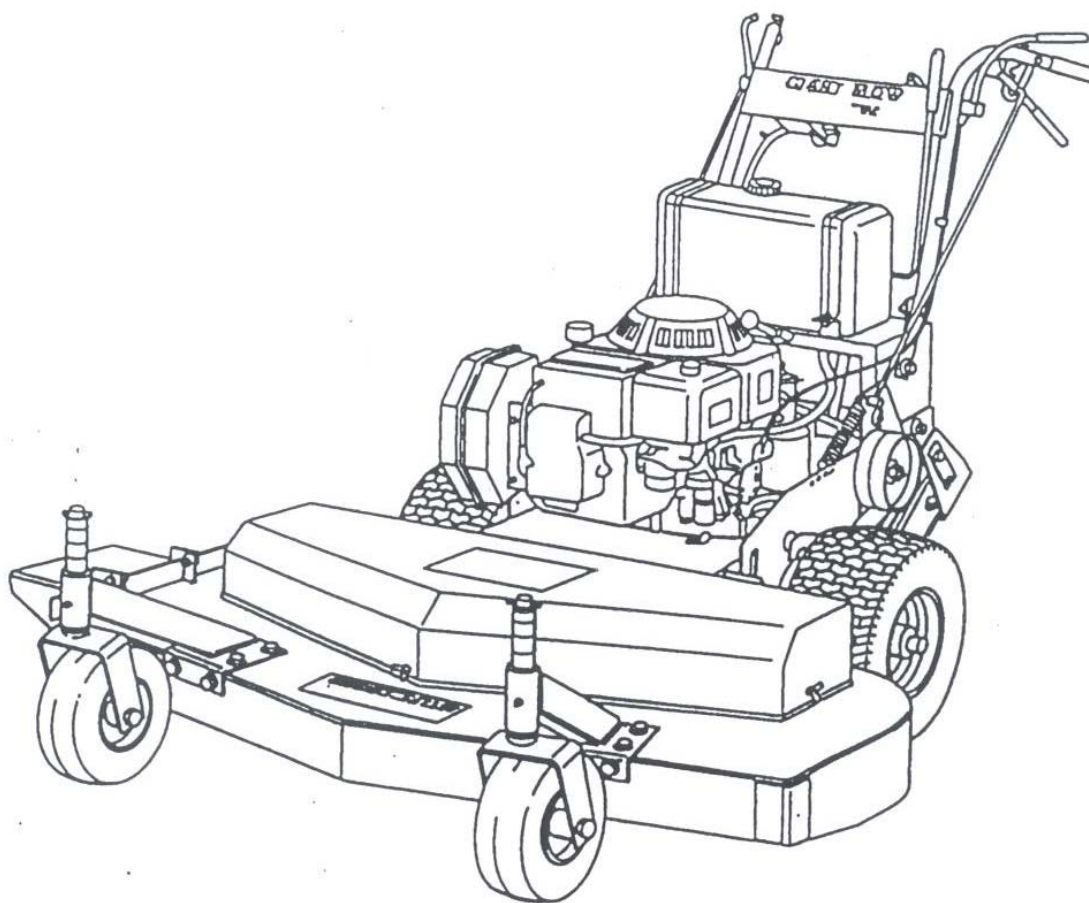




WALK-BEHIND MOWER

***ASSEMBLY INSTRUCTIONS
OPERATOR'S MANUAL
PARTS LIST***



32"
Cut Models

Actual product may differ slightly from product pictured above

Models covered:

BGF32B

BGF32KA

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1 *preliminaries*

Congratulations!

You have just purchased one of the finest pieces of outdoor power equipment on the market today. If properly cared for, your new mower will provide years of dependable service. Please read and follow this instruction manual carefully in order to get the most out of your new equipment.

As you carefully uncrate your unit, you will find the following items:

- 1 Mower Unit**
- 1 Caster Kit** including:
 - 2 - Caster arms
 - 2 - Caster horns with mounted wheels and spacers
- 1 Fuel Tank Kit** including:
 - 1 - Fuel tank
 - 2 - Fuel tank straps
 - 1 - Fuel tank cap
- 1 Handle Bar Kit** including:
 - 1 - Handle assembly with mounted brake and safety levers
 - 1 - Deflector chute
 - 1 - Transmission shift lever assembly
 - 1 - Transmission shift indicator panel
 - 2 - Upper brake rods
 - 2 - Fuel tank mounting brackets (left & right w/rubber strips)
 - 1 - Blade engagement lever assembly
 - 1 - Package of assembly hardware
 - 1 - Package containing operating manuals and warranty registration

Each product leaves our factory in excellent condition; occasionally, however, some damage may occur during shipment. If any such damage is found upon initial inspection, *immediately* notify the transport carrier who delivered your machine, as they are solely responsible for such damage, as well as any subsequent adjustments necessary.

Your new mower requires very little assembly. Simply follow the instructions contained within this manual to begin enjoying the benefits of your new unit.

Before assembly, please take a moment and record your model number and serial number below for future reference (both numbers are located on the placard attached to the right side of the engine deck):

Model number _____

Serial number _____

Also be sure to promptly fill out and return the warranty registration enclosed in your manual packet.

CALIFORNIA PROPOSITION 65 WARNING

Gasoline and Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

As an owner of off-road gasoline or diesel engine equipment and/or as an employer, you also may have an obligation under the California Occupational Safety and Health Act or under Proposition 65 to warn persons exposed to gas and diesel engine exhaust and/or other Proposition 65 chemicals in and around your workplace. See California Health and Safety Code section 25249.5, Title 22 of the California Code of Regulations at Section 1200 *et seq.*, and Title 8 of the California Code of Regulations Section 5194.

R4.02

2 *safety rules regarding outdoor power equipment*

PLEASE READ THE FOLLOWING BEFORE ASSEMBLING OR OPERATING UNIT

TRAINING

- Read, understand, and follow all instructions in the manual and on the unit before starting. If the operator(s) or mechanic(s) can not read English it is the owner's responsibility to explain this material to them.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- All operators and mechanics should be trained. The owner is responsible for training the users.
- Only allow responsible adults, who are familiar with the instructions, to operate the unit.
- Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

PREPARATION

- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Use only accessories and attachments approved by the manufacturer.
- Wear appropriate clothing including safety shoes, safety glasses and ear protection. Long hair, loose clothing or jewelry may get tangled in moving parts.
- Inspect the area where the equipment is to be used and remove all objects such as rocks, toys and wire, which can be thrown by the machine.
- Use extra care when handling gasoline and other fuels. They are flammable and vapors are explosive.
 - a) Use only an approved container.
 - b) Never remove fuel cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
 - c) Never refuel or drain the machine indoors.
- Check that operator's presence controls, safety switches and shields are attached and functioning properly. Do not operate unless they are functioning properly.

OPERATION

- Never run an engine in an enclosed area.
- Mow only in the daylight or with good artificial light, keeping away from holes and hidden hazards.

- Be sure transmission is in neutral and cutting blades are disengaged before starting engine.
- Be sure of your footing while using pedestrian controlled equipment, especially when backing up. Walk, don't run.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while traveling in reverse.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without either the entire grass catcher or the deflector in place.
- Slow down and use caution when making turns and when changing directions on slopes.
- Never raise deck with the blades running.
- Never leave a running unit unattended. Always disengage cutting blades, set transmission in neutral, stop engine, and remove keys before leaving unit. Keep hands and feet away from the cutting units.
- Disengage the cutting blades when not mowing.
- Never operate with guards not securely in place. Be sure all safety features are attached, adjusted properly and functioning properly.
- Never operate with the discharge deflector raised, removed or altered, unless using a grass catcher.
- Do not change the engine governor setting or over speed the engine.
- Stop on level ground, disengage cutting blades, set transmission in neutral, shut off engine before leaving the operator's position for any reason including emptying the grass catchers or unclogging the chute.
- Stop equipment and inspect blades after striking objects or abnormal vibration occurs. Make necessary repairs before resuming operations.
- Keep hands and feet away from the cutting units.
- Never carry passengers and keep pets and bystanders away.
- Do not operate the unit while under the influence of alcohol or drugs.
- Slow down and use caution when making turns and crossing roads and sidewalks. Stop blades if not mowing.
- Use care when loading or unloading the machine into a trailer or truck.
- Use care when approaching blind corners, shrubs, trees or other objects that may obscure vision.

2

safety rules regarding outdoor power equipment (cont.)

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 drive on it.

Do

- Mow across the face of slopes; never up and down.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the unit. Tall grass can hide obstacles.
- Use slow speed. Choose a slow speed so that you will not have to stop or change speed while on the slope.
- Use extra care with grass catchers or other attachments. These can change the stability of the unit.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.

Do Not

- Do not start or stop on a slope. If tires lose traction, disengage the blade and proceed slowly straight down the slope.
- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The operator could lose footing or balance or mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced footing or traction could cause sliding.
- Do not mow excessively steep slopes.
- Do not use grass catcher on steep slopes.

CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn unit off if children enter the area.
- Before and during reverse operation, look behind and down for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe unit operation.

- Never allow children to operate the unit.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

EMISSIONS

- Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.
- Look for the relevant Emissions Durability Period and Air Index information on the engine emissions label.

MAINTENANCE AND STORAGE

- Always observe safe refueling and fuel handling practices when refueling the unit after transportation or storage.
- Always follow the engine manual instructions for storage preparations before storing the unit for both short and long term periods.
- Always follow the engine manual instructions for proper start-up procedures when returning the unit to service.
- Never store the machine or fuel container inside where there is an open flame, such as in a water heater. Allow unit to cool before storing.
- Shut off fuel while storing or transporting. Do not store fuel near flames or drain indoors.
- Keep all hardware, especially blade attachment bolts, tight and keep all parts in good working condition. Replace all worn or damaged decals.
- Never tamper with safety devices. Check their proper operation regularly.
- Clean grass and debris from cutting units, drives, mufflers, and engine to prevent fires. Clean up oil or fuel spillage.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running unless specified otherwise.
- Park machine on level ground. Never allow untrained personnel to service machine.
- Use jack stands to support components when required.
- Carefully release pressure from components with stored energy. (e.g. springs)
- Use care when checking blades. Wrap the blade(s) or wear gloves, and use caution when servicing them. Only replace blades. Never straighten or weld them.
- Keep hands and feet away from moving parts.

2 *safety rules regarding outdoor power equipment (cont.)*

- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
- Check brake operation frequently. Adjust and service as required.
- Use only factory authorized replacement parts when making repairs.
- Always comply with factory specifications on all settings and adjustments.
- Only authorized service locations should be utilized for major service and repair requirements.
- Never attempt to make major repairs on this unit unless you have been properly trained. Improper

service procedures can result in hazardous operation, equipment damage and voiding of manufacturer's warranty.

⚠ WARNING

Never operate on slopes greater than 20° (36.4 percent) which is a rise of 7-1/4 feet (220 cm) vertically in 20 feet (607 cm) horizontally.

Select slow ground speed before driving onto slope. In addition to front and rear weights, use extra caution when operating on slopes with rear-mounted grass catcher.

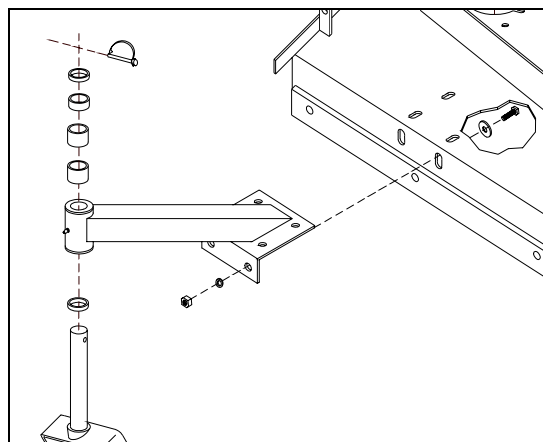
Mow ACROSS the slope, never up and down the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.

3 *unit assembly*

Note: Please refer to Parts List for correct part identification and placement. Parts list reference numbers are called out by sheet number followed by reference number(s) on that sheet: (1:1) indicates Sheet 1, reference number 1; (2:32,34-38) indicates Sheet 2, reference numbers 32 through 38 excluding 33; etc.

CASTER ASSEMBLY

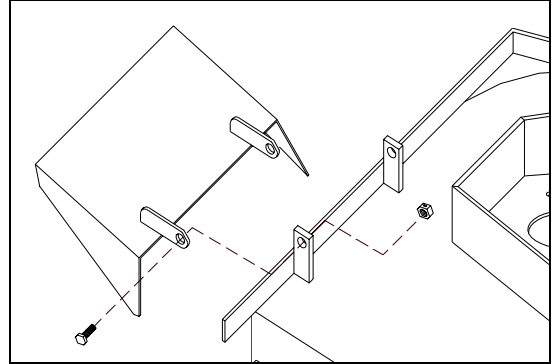
- Remove Lynch pin (1:19) and all but the bottom 1/4" spacer (1:18) from Caster horn (1:15).
- Slide Caster horn up through Caster arm (1:9), securing with same spacers and lynch pin removed in previous step. NOTE: When assembled in this manner, cutting height will be approximately 2-1/2".
- With front of mower propped up, install caster assemblies to front of Blade Deck (1:1) with twelve 3/8" x 1" bolts, flat washers, lock washers and nuts (1:10-13). (Bolts are installed from inside of mower deck.) Tighten all bolts securely. Lower front of mower.



3 *unit assembly (cont.)*

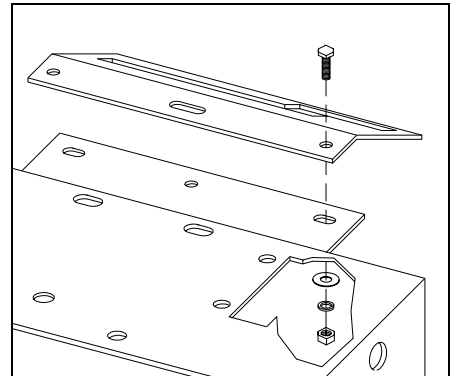
DISCHARGE DEFLECTOR ASSEMBLY

- Attach discharge deflector (1:6) using two 5/16" x 3/4" bolts and lock nuts (1:7-8). CAUTION: Do not over tighten lock nuts.

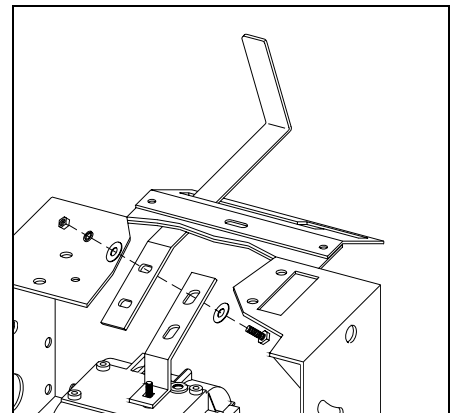


TRANSMISSION SHIFT LEVER ASSEMBLY

- Install Shift indicator panel (2:56) onto Shift indicator panel mounting plate (2:1) with three 1/4 x 1" hex bolts, flat washers, lock washers and nuts (2:57-60). Leave hardware finger tight.



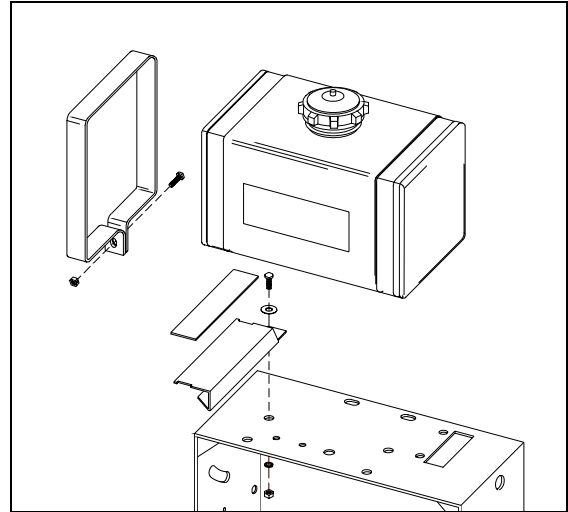
- Slip Shift lever (2:41) through slot in shift indicator panel.
- Lay bottom end of lever over mounting bracket and secure with two 5/16 x 1-1/4" hex bolts, four flat washers, two lock washers and nuts (2:44-48).
- Work shift lever through gear range, adjusting indicator panel for display alignment, then tighten indicator panel hardware.



3 *unit assembly (cont.)*

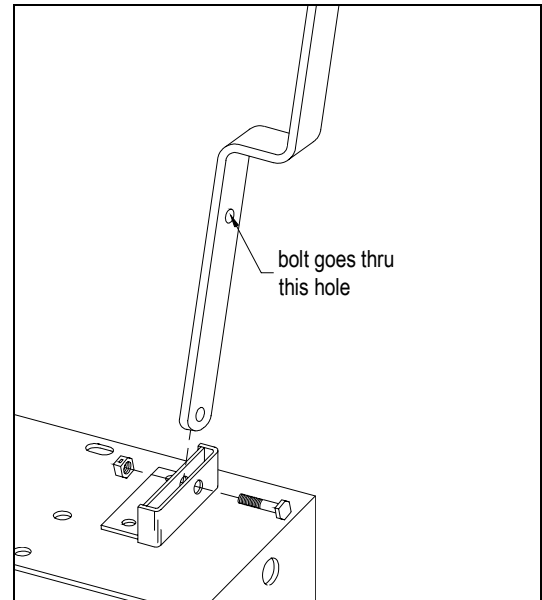
FUEL TANK ASSEMBLY

- Install fuel tank mount brackets (2:61 – right side shown) onto engine deck using four 5/16 x 3/4" hex bolts, flat washers, lock washers and nuts (2:64-67). Do not tighten.
- Place rubber pads (2:66) on top of mount brackets.
- Place fuel tank (2:70) on top of rubber pads.
- Slip fuel tank straps (2:67) around ends of tank, making sure bottom of straps slip under top ends of mounting brackets and into notches. Secure each strap with one 1/4 x 1-1/2" hex bolt and lock nut (2:68-69). Tighten both strap and mounting bracket hardware securely.
- Slip end of fuel line from engine fully onto barbed nipple of fuel shut-off valve (located under tank), securing with supplied spring clamp.



BLADE ENGAGEMENT LEVER ASSEMBLY

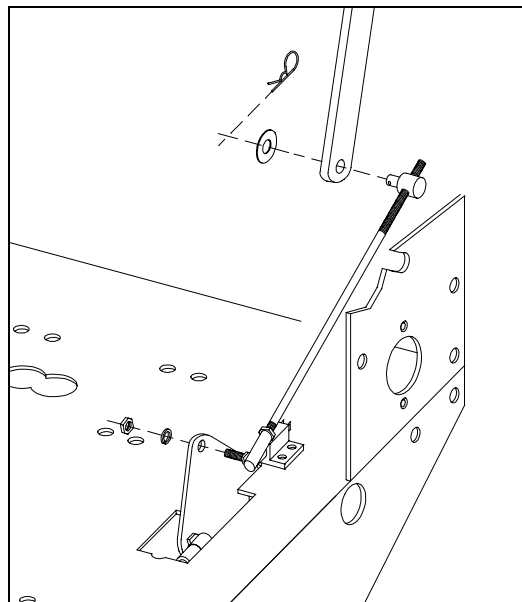
- Remove bridge pin and washer (4:10-11) holding adjustment rod to engagement lever (4:1) and remove upper adjustment rod assembly (4:9,12-16) from lever.
- Remove 3/8" bolt and lock nut (4:4-5) from engagement lever bracket (4:3 – attached to engine deck). Slip bottom of lever down through slot in engagement lever bracket, making sure bend is toward left side of mower to give clearance for fuel tank assembly. Re-install bolt and lock nut through top hole in lever. (CAUTION: Do not over tighten lock nut).



3 *unit assembly (cont.)*

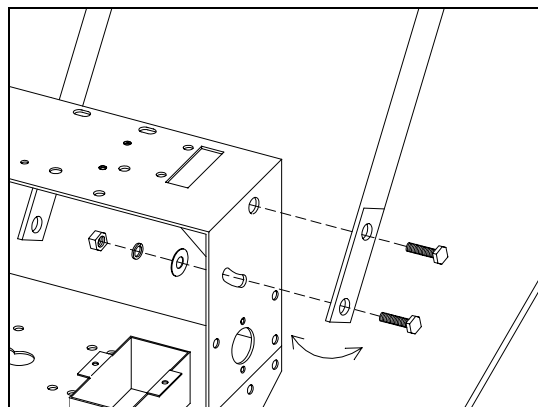
BLADE ENGAGEMENT LEVER ASSEMBLY (cont.)

- Remove jam nut and lock washer (4:15-16) from ball joint (4:14); install ball-joint stud through hole in blade belt cam (4:17) with nut and lock washer toward right side of mower. Adjust rod length to ensure cam locks when lever is fully engaged and attach to lower end of handle with washer and bridge pin previously removed.



HANDLE ASSEMBLY INSTALLATION

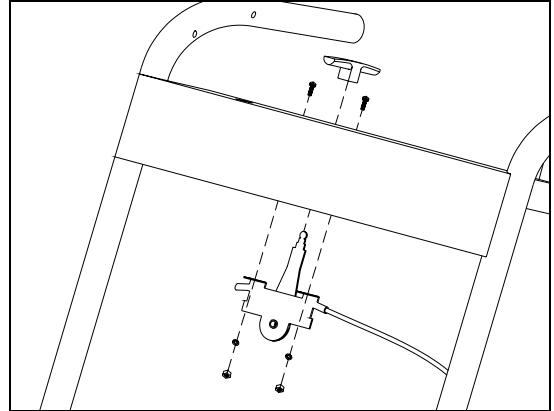
- Install handle assembly (5:1) to upper portion of engine deck using four 1/2" x 1-1/4" hex bolts, lock washers and nuts (5:3,5-6), with two flat washers (5:4) at slotted holes. Adjust for comfortable operation, then tighten securely.
- Locate wiring harness and route harness up the right side of handle assembly. Attach one terminal (marked) to ignition switch (5:28). Attach the second terminal to the handle safety switch (5:21). Attach harness to right handle bar with two plastic tie wraps.



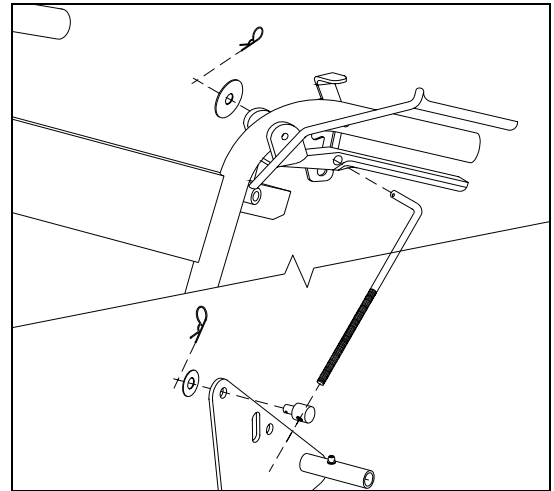
3 *unit assembly (cont.)*

HANDLE ASSEMBLY INSTALLATION (cont.)

- Locate throttle control (5:24 – attached to engine) and route cable up left side of handle assembly. Attach control to under handle dash using two 8-32 x 1/2" machine screws, lock washers and nuts. Attach cable to left side of mower handle using metal cable clip. Install push on plastic throttle handle knob (5:27). Adjust throttle cable for proper operation at carburetor end.



- Install "L" shaped end of upper brake rod (5:11), from outside, through brake handle (5:7) and brake lock handle (5:12). Secure with fender washer and bridge pin (5:16-17). Attach adjustable rod fitting end (3:44) on lower end of rod to side idler plate (3:21) using flat washer and bridge pin (3:45-46). Repeat for other side. **IMPORTANT:** Adjust upper rods for handle comfort and proper drive belt release; also adjust lower brake rods (3:14), by means of 5/16" wing nut (3:20) so that brakes will hold firmly when brake lock handle is engaged.



Your mower is now ready to be started and checked for proper operation. Some minor final adjustments may be required; see the Maintenance portion of this manual.

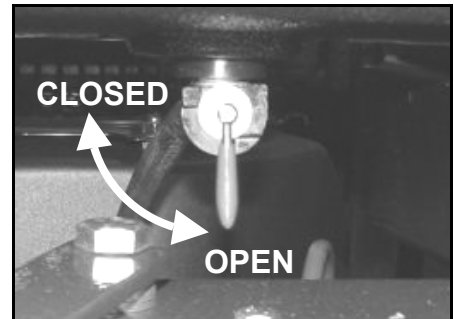
4 unit operation

STARTING THE ENGINE

IMPORTANT NOTE: The procedures outlined within this section are general guidelines, and are in no way meant to replace or supercede engine manufacturer's operating instructions. In order to obtain optimum performance from your engine, refer to your engine manual.

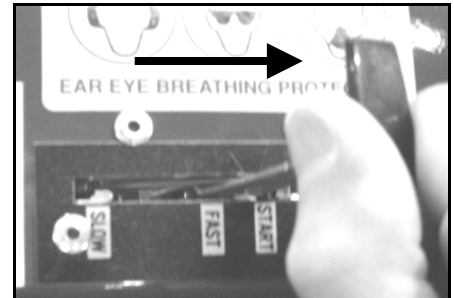
BEFORE STARTING ENGINE:

- Be sure that the unit is completely assembled, all fasteners are tightened securely, and all safety guards and components are in place.
- Be sure to check engine's **oil** and **gasoline***. (See engine manual for recommended oil and gasoline specifications.) **Never** check the engine while it is running or while you are smoking. Check only when engine is cold.
- *** All machines are shipped without oil or gasoline unless otherwise noted.**
- Be sure that fuel valve on tank is set to open position.

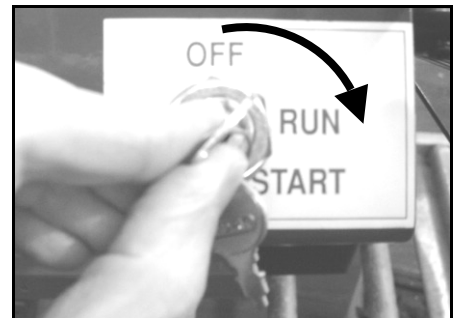


TO START ENGINE:

- Set throttle control to "Start" position. If your engine has a fuel prime button, depress it firmly three times.



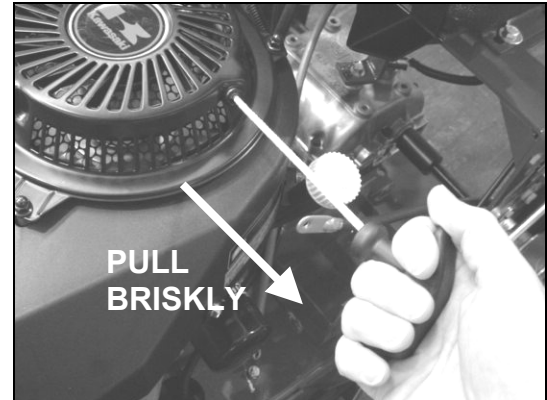
- Turn ignition key to 'run' position.



4 *unit operation (cont.)*

STARTING THE ENGINE (cont.)

- Grasp recoil handle and pull briskly. You may have to pull several times before engine starts. (If engine fails to start within a reasonable amount of time, discontinue and check engine manual for further instructions.) Note: Do not allow recoil rope to snap back into recoil; damage to the rope or recoil could result.
- After engine starts, move throttle control down to approximately half.



TO SHUT ENGINE DOWN:

- Allow engine to idle for 2-3 minutes before shutting down.
- Set throttle control to 'slow' position.
- Turn ignition key to 'off' position.
- If engine is not to be started for a prolonged period, turn fuel valve to closed position.

IMPORTANT NOTE: *If you experience problems with your engine that cannot be satisfactorily resolved by following the instructions contained within the engine manual, contact your local engine dealer, or call the toll-free service number listed in the repair section of the engine manual. All engine service, warranty or otherwise, is required to be performed by a manufacturer-authorized service center. The equipment manufacturer is neither authorized nor responsible for any type of warranty engine service, nor is it equipped to perform any such service.*

MOWER OPERATION

GENERAL RULES TO OBSERVE BEFORE AND DURING OPERATION:

- Inspect your unit before each and every use. Check for worn, bent or broken components, loose fasteners, low or flat tires, etc., and repair or replace prior to operation. **DO NOT OPERATE A DEFECTIVE UNIT – SERIOUS INJURY OR DEATH CAN RESULT.**
- Clear the entire work area of all debris that could cause damage to or become entangled in the unit. Rocks and large branches can wedge themselves between the blades and deck, causing engine seizure, blade damage, or personal injury. If in doubt, remove it.
- Do not start unit until you are ready to begin mowing, and promptly shut off unit as soon as operation is complete.
- Keep hands, feet and clothing away from rotating parts. Never place your feet or hands under mower deck when the engine is running.
- Use proper discretion in selecting your debris removal pattern, especially on uneven terrain. Avoid steep hills, especially if surface is wet. Do not travel straight down slopes exceeding 14 degrees. If tires begin to slip when climbing a slope, the grade is too steep for safe operation. Angle the unit to a less steep slope until tires stop slipping and traction is regained.
- Be keenly aware of your surroundings while operating unit – children and pets can pop out of nowhere.

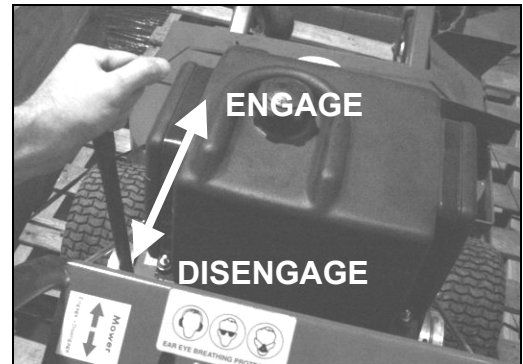
4 *unit operation (cont.)*

- Learn to listen to your machine – being aware of what a well-running unit sounds like can alert you to a potential problem. A straining engine or clanging blades or a slapping belt mean that trouble is almost sure to follow.

ENGAGING THE CUTTING BLADES:

Note: Never engage the mower blades until you are ready to mow and be certain to disengage them when finished. Never attempt any adjustment or repairs when the blades are engaged.

- To engage the cutting blades, simply push the blade engage lever, located to the left side of the fuel tank, into the forwardmost position. To disengage, pull the lever back against the handle dash. Always be sure cutting blades are disengaged before stopping the mower.

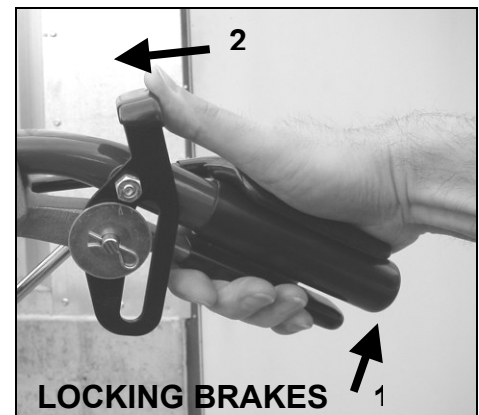


Important safety note: Power to the engine will be immediately cut if both of the safety handles (Parts List Ref #5:20) are released while cutting blades are engaged. This is an important safety feature – do not attempt to defeat it. Serious injury or death may result.

ENGAGING THE TRANSMISSION:

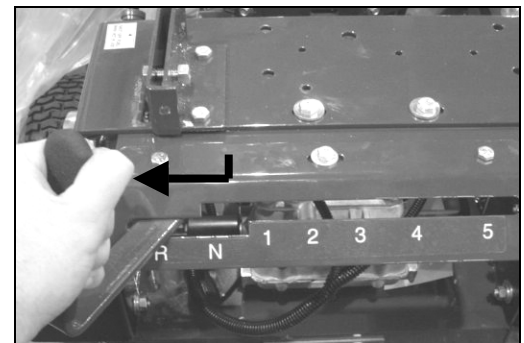
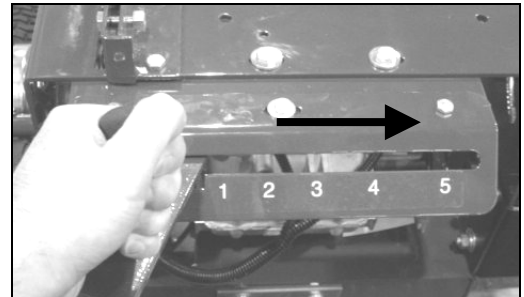
Note: Never attempt any adjustment or repairs with the transmission engaged.

- Always start your mower in neutral with brake handles in locked position.



4 unit operation (cont.)

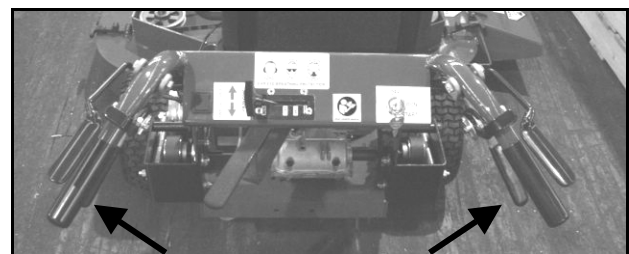
- Move the shift lever to first gear ('1'), unlock brakes, and slowly release the brake handles.
- Your mower has five forward speeds ('1' – '5'); simply slide the shifter lever to the appropriate indicator position to select that gear. The machine can be shifted on the run. **NOTE:** If climbing a hill, the brake squeeze handles might have to be momentarily activated. **CAUTION:** The shift lever should never be left or held in drive position for an extended time when the brake squeeze handles are in the locked position.
- To engage transmission in reverse, slide shifter lever into neutral ('N'), lock both left and right brake thumb locks, press down on shifter lever and slide into reverse ('R'); unlock thumb locks and slowly release brake levers. **NOTE:** Machine will reverse towards operator. Use caution while using this feature. If control is lost, release grip on handles – see note below.



Important safety note: Power to the engine will be immediately cut if both of the safety handles (Parts List Ref #5:20) are released while transmission is engaged. This is an important safety feature – do not attempt to defeat it. Serious injury or death may result.

STEERING THE UNIT:

- Squeezing either brake handle will turn the machine in that direction.



squeeze to turn left

squeeze to turn right

ADJUSTING CUTTING HEIGHT:

- See **Adjustments** in the Maintenance section of this manual.

5 ***maintenance***

GENERAL:

- Follow **implicitly** the engine manufacturer's recommendations for maintenance.
- Always keep your machine clean - especially the engine deck. Check all adjustments periodically. Also, periodically check that all fasteners are secure. Remember, sharp blades cut better. Always have an extra set on hand. After re-sharpening blades, be certain they are checked for balance. Do not use blades out of balance. Before doing any of these, check your safety and assembly instructions.
- Never make any adjustments to the unit until the engine is **off** and the spark plug wire is disconnected.
- If carburetor adjustment is necessary, stand to one side and **keep feet and hands** in the clear while making adjustments.
- Keep engine free of accumulations of grass, leaves or excessive grease. An accumulation of these combustible materials may result in a fire.
- Store gasoline in a **safe and approved** container in a cool, dry place.
- Keep the unit and any fuel containers in locked storage to prevent children from playing and/or tampering with them.
- Do not store gasoline powered equipment or fuel containers in a basement or any closed area where heating or heat appliances or open pilot lights are present, unless the fuel is completely drained from the power equipment and the fuel containers.

LUBRICATION:

- Your mower is equipped with numerous greaseable assemblies to ensure long life and minimal wear. It is imperative that the owner address these areas. All fittings should be lubricated using a high-performance, automotive quality grease. See maintenance schedule below.

***LUBRICATION CHART**

Qty	Location	Daily	Weekly
2	Caster Wheel Pivots	X	
2	Caster Wheel Bearings	X	
2	Mower Spindle Bearings		X
2	Drive Wheel Bearings		X
All	Pivot Points		X

In addition all linkage points and threaded adjustments should be oiled on a weekly schedule.

***NOTE:** This maintenance is necessary to keep your warranty in effect.

5 *maintenance (cont.)*

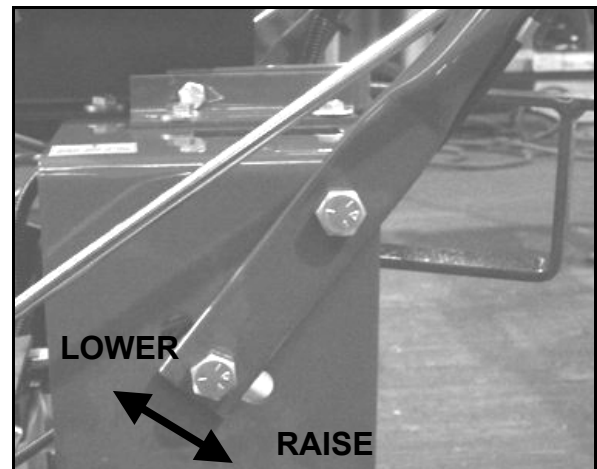
TROUBLESHOOTING:

- **UNIT WILL NOT START:** Check to make sure cutting blades are disengaged. Check to make sure transmission is in neutral. Check fuel and oil levels. Check to make sure throttle control engages engine choke when set to 'start' position; adjust if needed. Check all electrical connections for positive contact; repair or replace as necessary. If condition persists, contact dealer.
- **UNIT STALLS WHEN CUTTING BLADES ENGAGED:** Make sure safety handles are depressed when engaging blades. Check under handle dash to be sure safety rod depresses plunger on safety switch; adjust as necessary – see Safety Switch Rod Adjustment. Check all electrical connections for positive contact; repair or replace as necessary. If condition persists, contact dealer.
- **UNIT STALLS WHEN TRANSMISSION ENGAGED:** Make sure safety handles are depressed when engaging transmission. Check under handle dash to be sure safety rod depresses plunger on safety switch; adjust as necessary – see Safety Switch Rod Adjustment. Check all electrical connections for positive contact; repair or replace as necessary. If condition persists, contact dealer.
- **BLADE CUT POOR:** Replace blade. Note: See Cutting Blade Height Adjustment for proper spacer positioning when replacing blade.
- **BLADE BELT SLIPPING:** See Blade Belt Adjustment.
- **BLADE BELT VIBRATION:** See Blade Belt Adjustment or Blade Deck Pulley Alignment.
- **DRIVE BELTS SLIPPING:** Check spring tension on each drive idler – spring at factory is 8-1/4" oal extended length. If adjustment is needed, see Side Idler Tension Spring Adjustment. If tension is correct, check brake band adjustment. Then check upper and lower brake rod adjustment.
- **DRIVE BELTS ROLL OFF IN REVERSE:** See Drive Pulley Alignment.

ADJUSTMENTS:

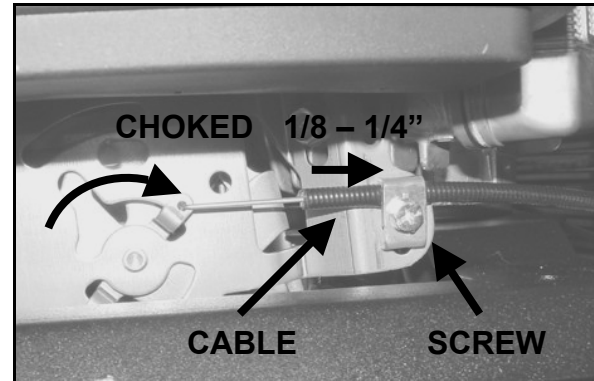
Note: Before making any adjustments or repairs, place the shift lever in the neutral position and the lock brakes. Stop engine and disconnect spark plug wire.

- **HANDLE HEIGHT ADJUSTMENT:** Handle height adjustment is achieved by loosening the four 1/2" bolts securing the handle assembly to the upper portion of the engine deck and raising or lowering the handle assembly for the greatest comfort. Be certain both sides are adjusted the same. After adjustment is made, the upper and lower brake rods may have to be readjusted as well. See brake adjustment.

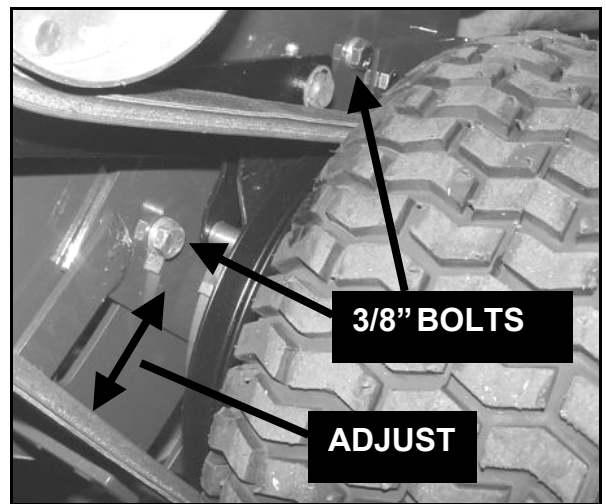


5 *maintenance (cont.)*

- **THROTTLE CABLE ADJUSTMENT:** Correct cable adjustment engages choke mechanism on engine when throttle control on handle dash is set all the way to right ('Start'). To adjust, loosen cable clip screw on engine, then slide cable out approximately 1/8-1/4". Retighten screw, recheck, readjust as needed.

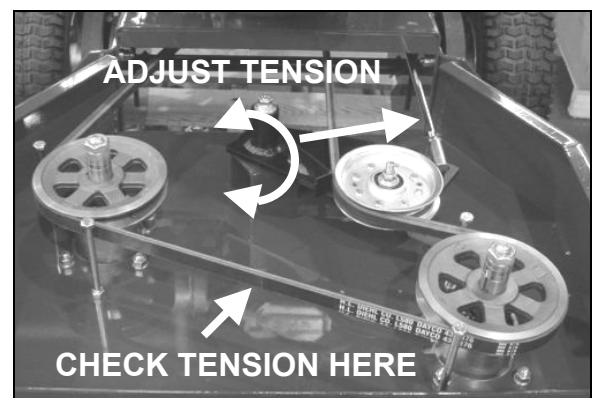
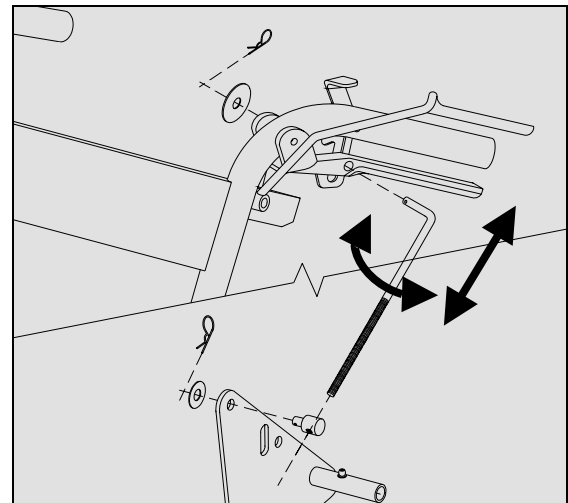
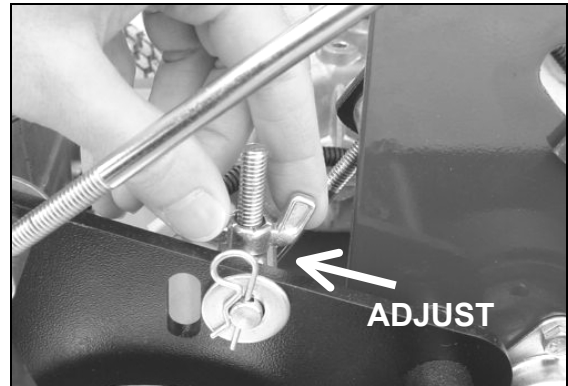


- **SAFETY SWITCH ROD ADJUSTMENT:** Loosen set screws on safety handles, raise each handle approximately 1/4 – 1/2", retighten one set screw, check for uniform contact between both handles with handle assembly, retighten other set screw. Note: tighten set screws to 150 in. lbs.
- **STEERING ADJUSTMENT:** Check tire pressure – 20psi rear, 50psi front. If correct, see Brake adjustment.
- **CUTTING BLADE HEIGHT ADJUSTMENT:** Each blade assembly contains six 1/4" blade spacers: three on the bottom of the spindle assembly between blade and spindle, and three above between the spindle and the blade bolt jam nut. Combined with the axle adjustment set at the factory, cutting height is set at approximately 2-1/2". Cutting blade height can be adjusted to between 1-3/4" and 3-1/4" by removing jam nut and repositioning washers. Retighten jam nut to 60 ft. lbs.
- **AXLE HEIGHT ADJUSTMENT:** Your unit comes with a unique rapid-adjust axle assembly for additional cutting height adjustment. Initial factory adjustment sets the bottom rear edge of the blade deck approximately 1-1/2" above the mowing surface; however, it can be adjusted to over 4" in height. To adjust, first position a jack under the rear of engine deck and raise. Loosen the two 3/8" bolts on either side of axle assembly (held in place by press-fit nuts, so only one wrench is needed). Drop or raise axle assembly to provide desired height, then retighten bolts. Remove jack and adjust the front casters by repositioning the spacers. Note: Remember that factory-set cutting blade height is 1" above bottom edge of blade deck.



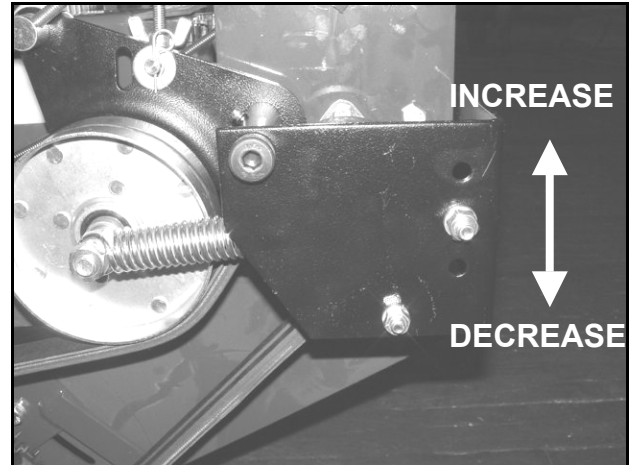
5 maintenance (cont.)

- BRAKE ADJUSTMENT: LOWER ROD** - The brake assembly has been set at the factory. However, they may periodically need adjustment. As a rule of thumb, the bottom bend of the lower brake rod (3:14) should be $\frac{3}{8}$ " lower than the center of the pivot boss hole in the brake arm (3:5). If adjustment is needed, simply thread the $\frac{5}{16}$ wing nut (3:20) in or out to obtain specified adjustment.
- UPPER ROD** - To adjust brake handles for comfortable grip, remove bridge pin and fender washer securing top of upper brake rod to brake lever assembly. Slide end of rod out of brake handle, turn rod in or out of rod fitting end and replace rod into brake handle, check, readjust as needed; when set to desired position, replace washer and bridge pin. **NOTE:** After adjustment, be sure mower stops completely and uniformly when brake handles are squeezed.
- BLADE BELT ADJUSTMENT:** We recommend checking belt tension after one hour and then after the next 10 hours of operation, then re-check after each 50 hours of use. To check tension, first engage cutting blades. Place a belt tensioning gauge in the center of the belt span. The gauge should read 10 pounds pressure with a $\frac{3}{8}$ " deflection. To adjust belt tension, loosen the jam nut (4:25) securing lower blade engaging rod against lower ball joint (4:27). The upper and lower ball joints have opposing threads, one right hand, the other left; consequently, by turning the rod in either direction, rod assembly length will be increased or decreased, thus adjusting the belt tension when engaged. Engage cutting blades, recheck, readjust as needed. Also noted that there is a second hole in the brake idler arm that can be used if needed.



5 ***maintenance (cont.)***

- **SIDE IDLER TENSION SPRING ADJUSTMENT:** To increase tension, remove nut and lock washer securing rear spring hanger bolt (3:36) in middle tension hole, and replace bolt in uppermost hole. To decrease tension, replace in lowest hole. Replace lock washer and nut, tightening securely. If tension is still slack, replace springs and/or drive belts.



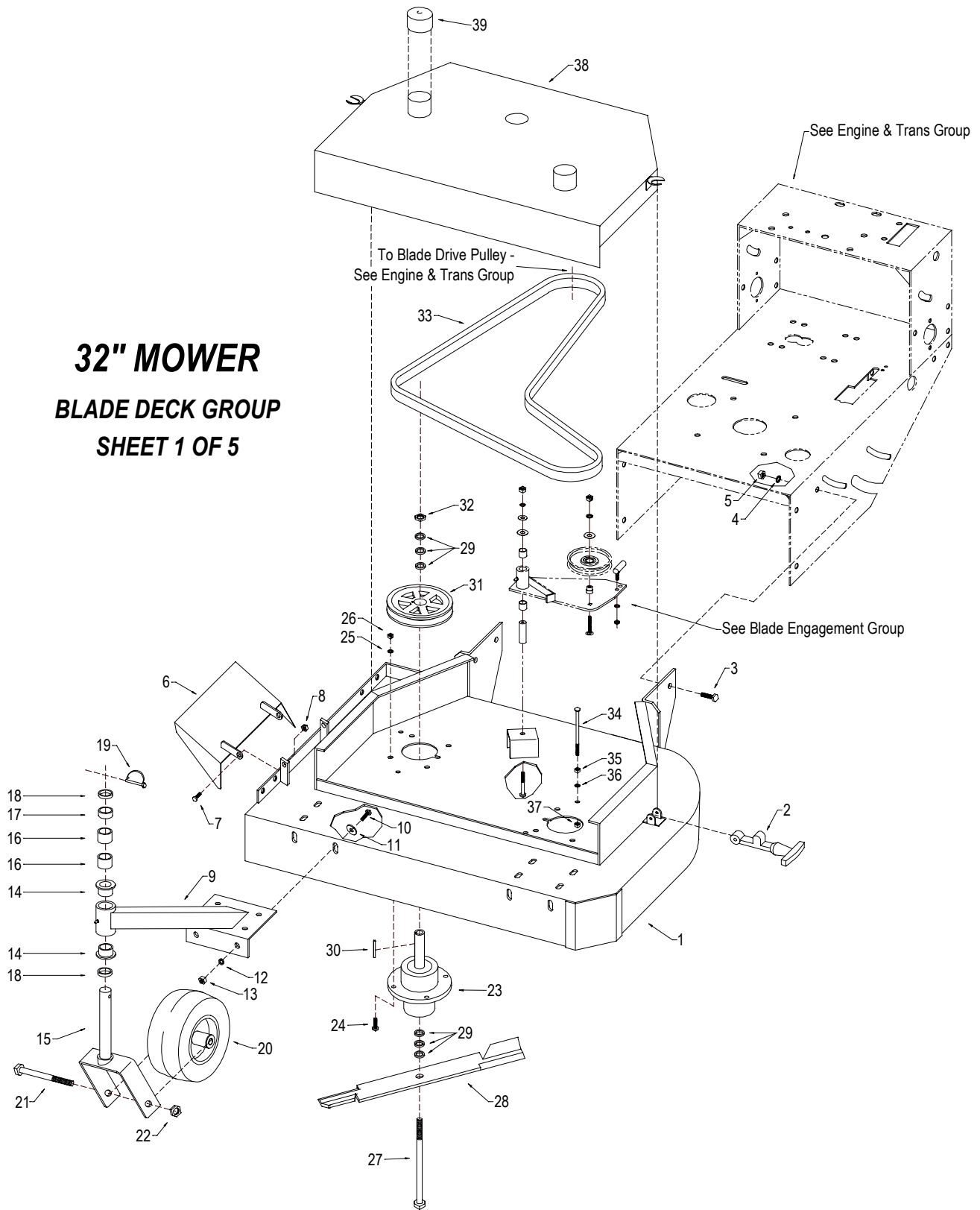
- **BLADE DECK PULLEY ALIGNMENT:** Check initial alignment of each pulley with blade clutch pulley on engine shaft (2:13) with straight edge; adjust as needed by loosening set screws in each pulley and raising or lowering pulley. Retighten set screws to 150 in. lbs. when final adjustment is complete.
- **DRIVE PULLEY ALIGNMENT:** Check to see that drive pulleys are in line with side idler pulley and wheel drive pulley; adjust as needed by loosening set screw in pulley and realigning pulley. Retighten set screws to 150 in. lbs.

REPLACEMENT PARTS:

- Replacement parts are available through your Ferris dealer.

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32" MOWER **BLADE DECK GROUP** **SHEET 1 OF 5**



All specifications subject to change without notice

Parts List

32" Mower

SHEET 1 - BLADE DECK GROUP

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
1	48098	10244	1	Blade deck
---	48000	79166	1	Decal – 'Operating Rules 1-8'
2	48001	31895	2	Rubber hood strap (w/attaching hardware)
---	25370	31100	4	3/16 pop rivet (attaches strap receiving cup to hood)
3	25003-8	31033	6	3/8-16 x 1" hex bolt
4	25171	31008	6	3/8" lock washer
5	25034	31009	6	3/8-16 hex nut
6	48003	27139	1	Discharge deflector
---	48004	79090	1	Decal – 'Danger – Keep Hands & Feet Away'
---	48005	79088	1	Decal – 'Danger – Flying Material'
7	25011-6	31031	2	5/16-18 x 3/4" hex bolt
8	25057	31436	2	5/16-18 lock nut
9	48006	33118	2	Caster arm
---	21637	31437	2	Grease fitting – 3/16" push-in
10	25013-8	31033	12	3/8-16 x 1" hex bolt
11	25156	31034	12	3/8" flat washer
12	25171	31008	12	3/8" lock washer
13	25034	31009	12	3/8-16 hex nut
14	48007	31306	4	1" flange bushing
15	48008	33117	2	Caster horn
16	48009	31440	4	Caster height spacer – 1"
17	48010	31441	2	Caster height spacer – 1/2"
18	48011	31442	4	Caster height spacer – 1/4"
---	48012	31588	2	Caster spacer set (complete 1 side)
19	48013	31305	2	Lynch pin
20	21181	33115	2	9-3.50 x 4 wheel & tire assy
21	25361	33116	2	5/8-11 x 5" hex bolt
22	25282	31571	2	5/8-11 jam lock nut
23	30301	36300	2	Spindle assy
24	25003-8	31033	8	3/8-16 x 1" hex bolt
25	25171	31008	8	3/8" lock washer
26	25034	31009	8	3/8-16 hex nut
27	25019-76	31892	2	5/8-11 x 9-1/2" hex bolt
28	48014	21584	2	16" lo-lift blade
29	41477	31309	12	1/4" spacer
30	50407-1	31170	2	Spindle shaft key – 1/4" x 1"
31	48015	36145	2	Blade belt pulley
---	25061-2	31439	4	5/16-18 x 1/4" socket set screw
32	25300	31893	2	5/8-11 jam nut
33	48016	36206	1	L580 Blade belt
34	25362	31894	4	5/16-18 x 4-1/2" hex bolt
35	25032	31004	4	5/16-18 nut
36	25170	31003	4	5/16 lock washer

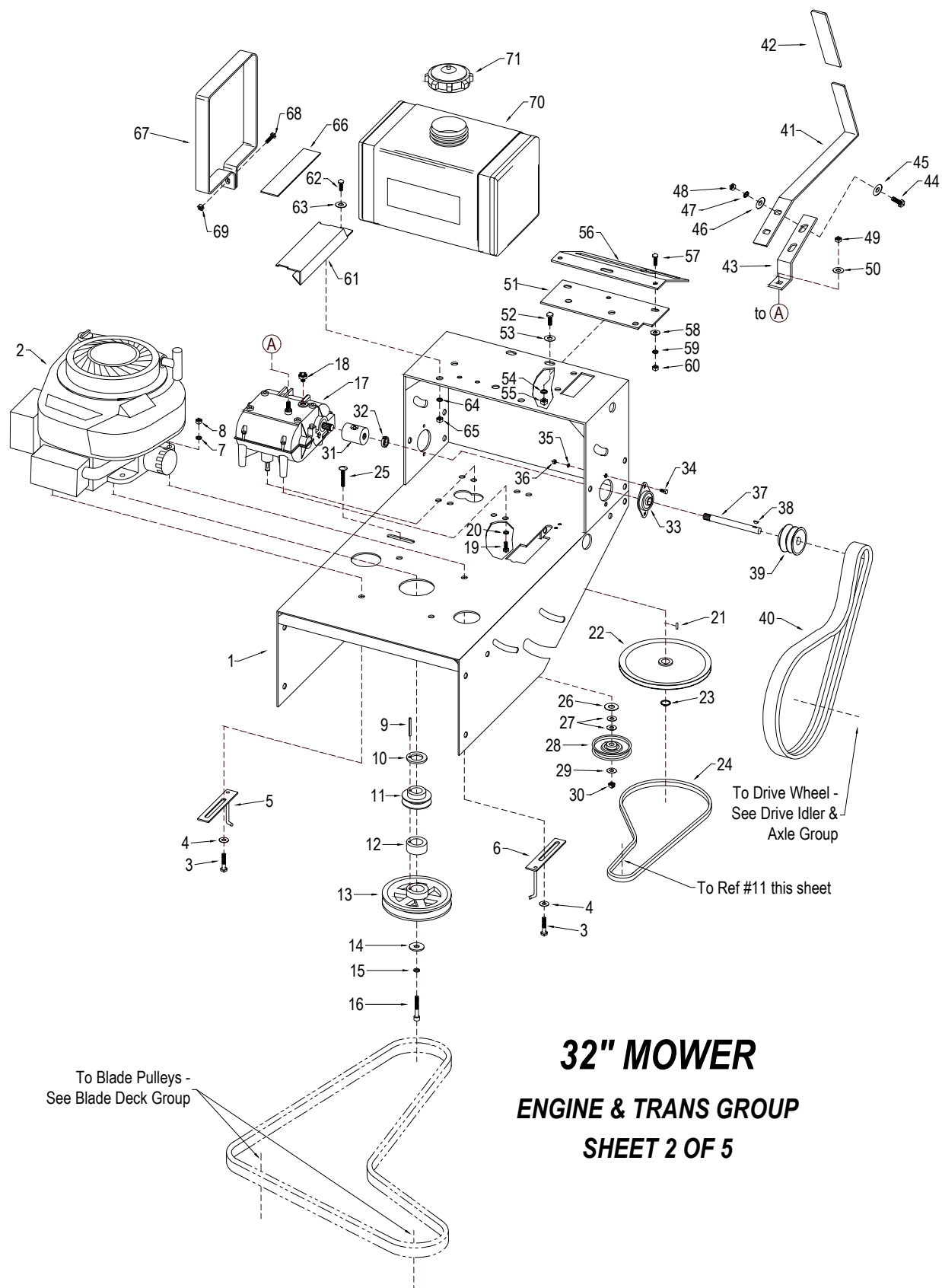
All specifications subject to change without notice

Parts List

32" Mower

SHEET 1 - BLADE DECK GROUP (cont.)

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
37	25032	31004	4	5/16-18 nut
38	48017	27415	1	Deck hood
---	50853-27	31917	1	Mower hood edge trim – 27" length
---	22940	79185	1	Decal – 'Ferris Durabelt '
---	22895	79186	1	Decal – '32" '
---	48004	79090	1	Decal – 'Danger – Keep Hands & Feet Away'
---	48005	79088	1	Decal – 'Danger – Flying Material'
39	48019	31900	2	2" rubber hood cap



32" MOWER **ENGINE & TRANS GROUP** **SHEET 2 OF 5**

Parts List

32" Mower

SHEET 2 - ENGINE & TRANS GROUP

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
1	48099	10243	1	Engine deck
2	22941	39104	1	Engine - 13.5hp Briggs & Stratton Intek
2	22942	39040	1	Engine – 12.5hp Kawasaki
3	25011-12	31294	4	5/16-18 x 1-1/2" hex bolt – B&S Intek only
3	25237	31589	4	8mm x 25mm hex bolt – Kawasaki only
---	25170	31003	4	5/16 lock washer – Kawasaki only
4	25155	31027	2	5/16 flat washer
5	48020	23096	1	Belt guide - engine right front
6	48021	23097	1	Belt guide - engine left rear
7	25170	31003	4	5/16 lock washer – B&S Intek only
8	25032	31004	4	5/16-18 nut – B&S Intek only
9	50407-4	31415	1	Engine shaft key - 1/4" x 2-3/4"
10	48022	36222	1	1/4" spacer
11	48023	36143	1	Engine-to-trans pulley
12	48024	31912	1	3/4" spacer
13	48025	36144	1	Blade drive pulley
14	48026	31409	1	7/16" heavy duty washer
15	25172	31319	1	7/16" lock washer
16	25363	31414	1	7/16-20 x 2 socket head cap screw – B&S Intek only
16	25358	31742	1	10-8.8 x 30mm hex bolt – Kawasaki only
17	22246	33229	1	Transmission
18	21843	37088	1	Transmission ball switch
19	25011-6	31031	4	5/16-18 x 3/4" hex bolt
20	25170	31003	4	5/16" lock washer
21	20051	31314	1	#9 woodruff key
22	48027	36142	1	Transmission pulley
---	25061-2	31439	1	5/16-18 x 1/4" socket set screw
23	25371	31423	1	5/8" snap ring
24	48028	36140	1	Transmission belt
25	48029	31388	1	Trans idler bolt
26	25156	31034	1	3/8" flat washer
27	25155	31027	2	5/16" flat washer
28	48030	36141	1	Trans idler pulley
29	25155	31027	1	5/16" flat washer
30	25096	31355	1	3/8-16 lock nut
31	22248	36301	2	Trans axle coupler
---	20095	31419	2	Grease fitting – 1/4-28 threaded
32	20441	31302	2	5/8" locking collar
33	21846	36153	2	5/8" bearing unit
34	25010-5	31635	4	1/4-20 x 5/8" hex bolt
35	25169	31013	4	1/4" lock washer
36	25030	31030	4	1/4-20 hex nut
37	22247	36302	2	Trans axle
38	22058	31107	2	#9 woodruff key

All specifications subject to change without notice

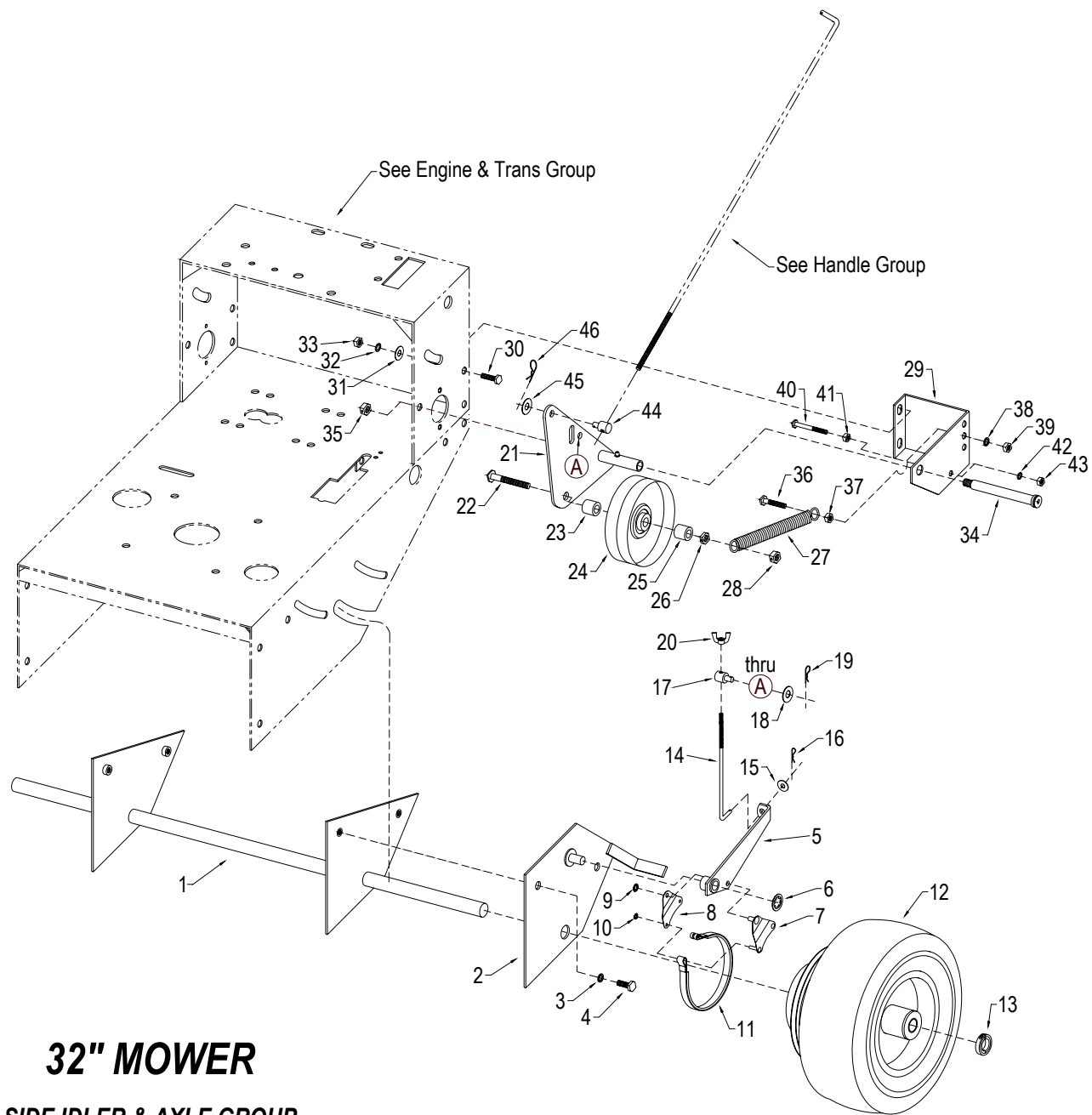
Parts List

32" Mower

SHEET 2 - ENGINE & TRANS GROUP (cont.)

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
39	21445	36311	2	2-V drive pulley
---	25061-2	31439	2	5/16-18 x 1/4" socket set screw
40	21447	36312	2	2-V drive belt
41	44640	23265	1	Shift lever
42	25510	31284	1	Handle grip – 1/4" x 1" x 4"
43	44638	23266	1	Shift lever mounting bracket
44	25011-10	31144	2	5/16-18 x 1-1/4" hex bolt
45	25155	31027	2	5/16" flat washer
46	25155	31027	2	5/16" flat washer
47	25170	31003	2	5/16" lock washer
48	25032	31004	2	5/16-18 nut
49	25096	31915	1	3/8-16 nylon lock nut
50	25156	31034	1	3/8" flat washer
51	48031	27414	1	Shift indicator mounting plate
52	25011-6	31031	2	5/16-18 x 3/4" hex bolt
53	25155	31027	2	5/16 flat washer
54	25170	31003	2	5/16 lock washer
55	25032	31004	2	5/16-18 nut
56	44641	27413	1	Shift indicator panel
---	48032	79183	1	Shift decal
57	25010-6	31316	3	1/4-20 x 3/4" hex bolt
58	25154	31317	3	1/4 flat washer
59	25169	31013	3	1/4" lock washer
60	25030	31030	3	1/4-20 hex nut
61	48033	27423	1	Fuel tank mount - right
---	48034	27422	1	Fuel tank mount - left
62	25011-6	31031	4	5/16-18 x 3/4" hex bolt
63	25155	31027	4	5/16 flat washer
64	25170	31003	4	5/16 lock washer
65	25032	31004	4	5/16-18 nut
66	21877	31891	2	Rubber pad - 1/8" x 3" x 7-1/2"
67	44694	27411	2	Fuel tank strap
68	25010-12	31292	2	1/4-20 x 1-1/2" hex bolt
69	25095	31098	2	1/4-20 lock nut
70	21869	40146	1	Fuel tank (w/valve)
71	22158	40147	1	Fuel cap
---	50831-20	31755	1	1/4" rubber fuel line - 20" length – B&S Intek
---	20835	34095	2	1/2" spring clamp – B&S Intek
---	50831-10	31755	2	1/4" rubber fuel line – lower – 10" length – Kawasaki
---	21178-3	27343	1	Fuel filter - Kawasaki
---	20835	34095	4	1/2" spring clamp – Kawasaki
---	48035	79086	1	Decal – 'Shut Off Fuel When Not In Use' (applied to upper engine deck)

All specifications subject to change without notice



32" MOWER

SIDE IDLER & AXLE GROUP

SHEET 3 OF 5

Parts List

32" Mower

SHEET 3 - SIDE IDLER & AXLE GROUP

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
1	48036	33231	1	Axle assembly
2	48037	27407	1	Brake pivot plate - left
---	48038	27408	1	Brake pivot plate - right
3	25003-8	31033	4	3/8-16 x 1 hex bolt
4	25171	31008	4	3/8" lock washer
5	48039	23152	1	Brake arm - left
---	48040	23151	1	Brake arm - right
---	22943	31613	2	Grease fitting – 1/4" push-in
6	25372	31423	2	5/8" retaining washer
7	48041	23153	2	Brake link plate w/pins
8	48042	23154	2	Brake link plate - no pins
9	25373	31426	2	3/8" push-on washer
10	25374	31425	4	5/16" push-on washer
11	48043	31427	2	Brake band
12	48044	33218	2	13-5.00 x 6 wheel & tire assy
13	20602	31583	2	1" locking collar
14	48045	23150	2	Lower brake rod
15	25155	31027	2	5/16 flat washer
16	25369	31382	2	#2 bridge pin
17	48046	31910	2	Rod fitting end - unthreaded
18	25155	31027	2	5/16 flat washer
19	25369	31382	2	#2 bridge pin
20	25277	31896	2	5/16-18 wing nut w/nylon insert
21	48047	23255	1	Side idler plate - left
---	48048	23256	1	Side idler plate - right
---	22943	31613	2	Grease fitting – 1/4" push-in
22	25017-28	31467	2	1/2-13 x 3-1/2" hex bolt
23	48049	31417	2	1/2" id x 5/8" spacer
24	48050	36156	2	Side idler pulley
25	48051	31911	2	1/2" id x 3/8" spacer
26	25056	31406	2	1/2-13 lock nut
27	48052	31860	2	Side idler tension spring
28	25056	31406	2	1/2-13 lock nut
29	48053	27405	1	Side idler spring bracket - left
---	48054	27406	1	Side idler spring bracket - right
30	25013-8	31033	4	3/8-16 x 1 hex bolt
31	25156	31034	4	3/8" flat washer
32	25171	31008	4	3/8" lock washer
33	25034	31009	4	3/8-16 hex nut
34	25376	31862	2	5/8 x 4-1/4" shoulder bolt
35	25056	31406	2	1/2-13 lock nut
36	25013-12	31112	2	3/8-16 x 1-1/2" hex bolt
37	25034	31009	2	3/8-16 hex nut
38	25171	31008	2	3/8" lock washer

All specifications subject to change without notice

Parts List

32" Mower

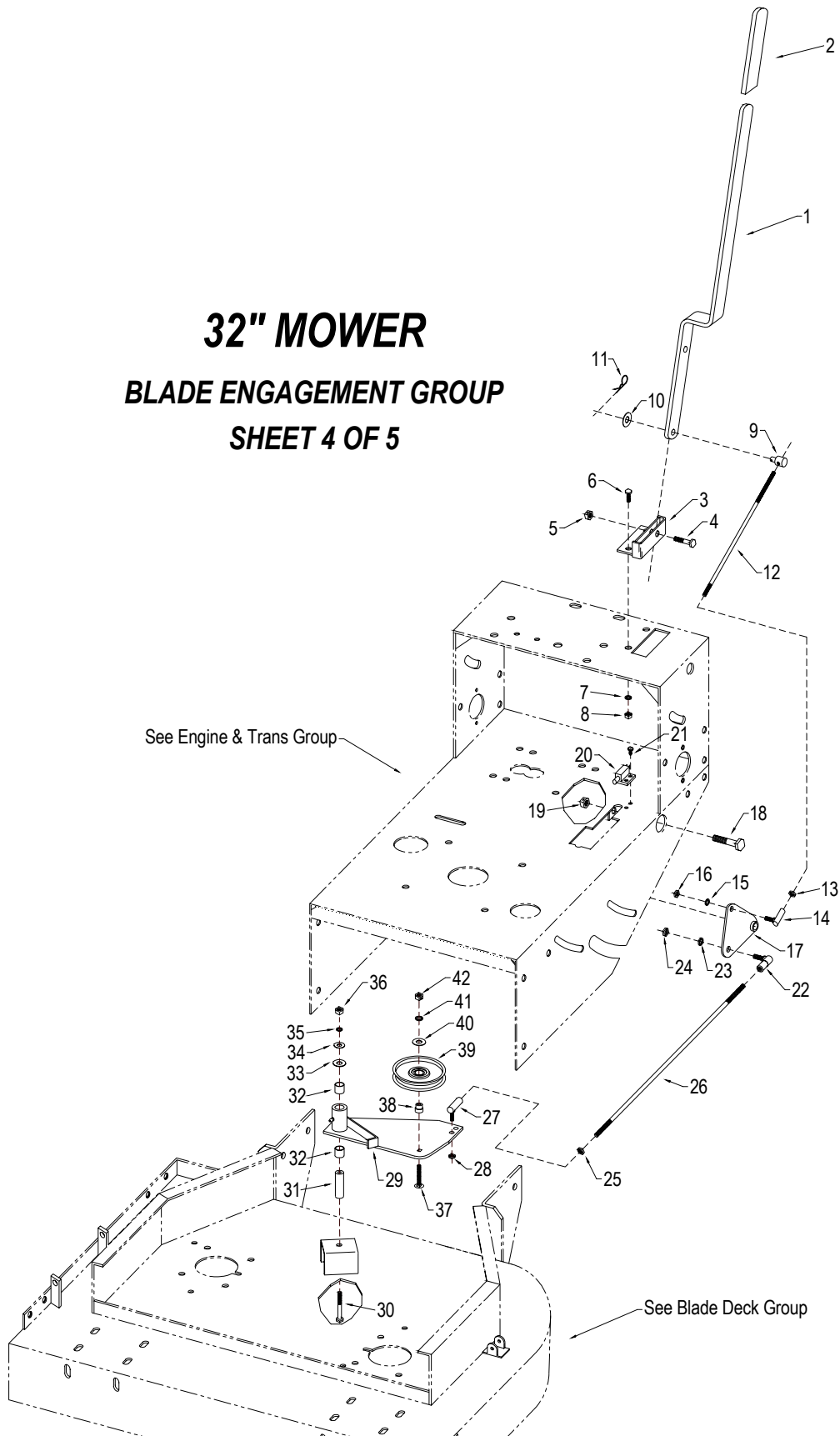
SHEET 3 - SIDE IDLER & AXLE GROUP (cont.)

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
39	25034	31009	2	3/8-16 hex nut
40	25011-24	31088	2	5/16-18 x 3" hex bolt
41	25032	31004	2	5/16-18 nut
42	25170	31003	2	5/16 lock washer
43	25032	31004	2	5/16-18 nut
44	48055	31383	2	Rod fitting end (trunion)
45	25155	31027	2	5/16 flat washer
46	25369	31382	2	#2 bridge pin

32" MOWER

BLADE ENGAGEMENT GROUP

SHEET 4 OF 5



All specifications subject to change without notice

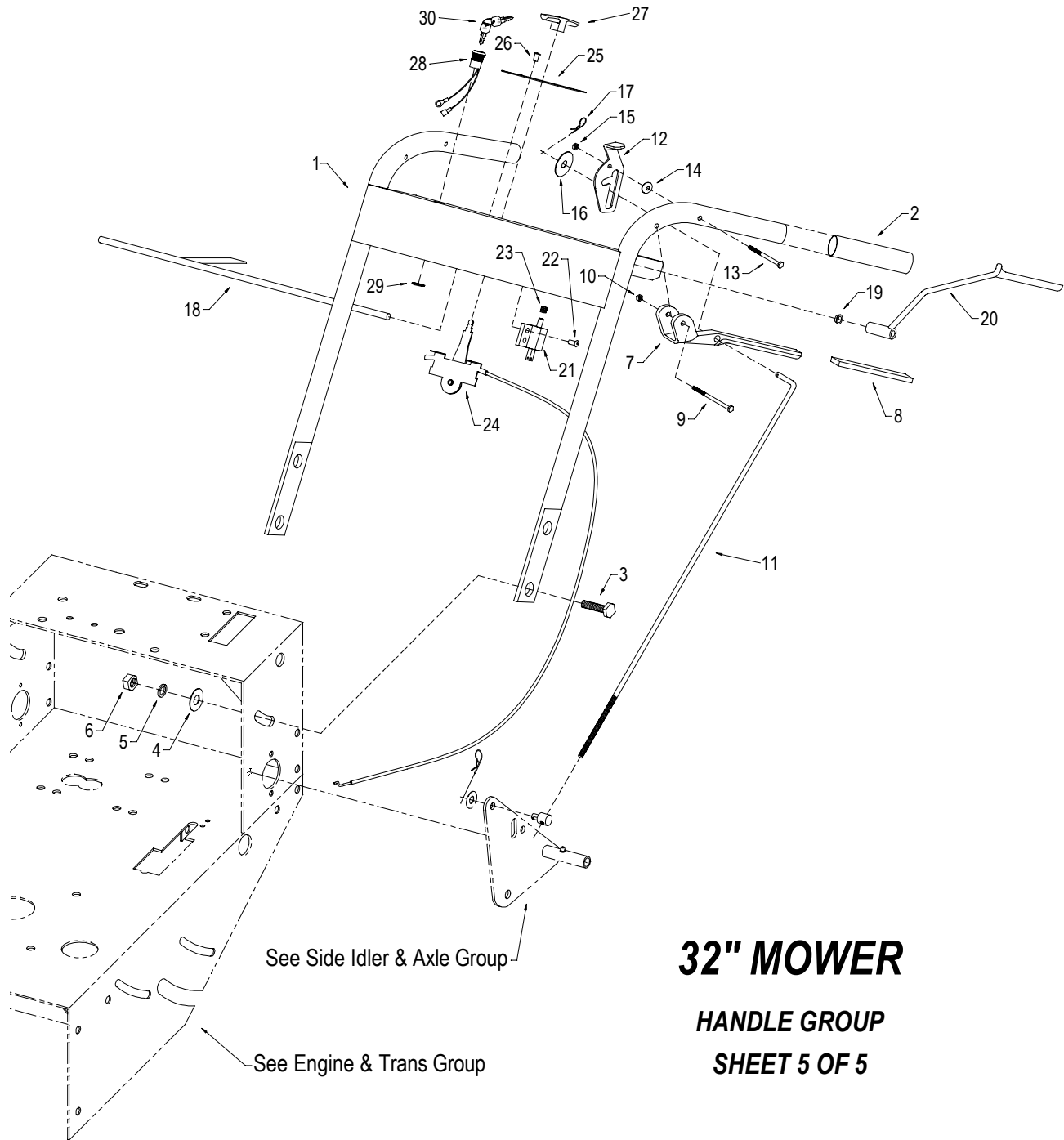
Parts List

32" Mower

SHEET 4 - BLADE ENGAGEMENT GROUP

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
1	48056	23132	1	Blade engage lever
2	48057	31284	1	Handle grip - 3/4" dia x 4"
3	48058	23180	1	Blade engage mounting bracket
4	25013-10	31097	1	3/8-16 x 1-1/4" hex bolt
5	25096	31388	1	3/8-16 lock nut
6	25011-8	31032	2	5/16-18 x 1" hex bolt
7	25170	31003	2	5/16 lock washer
8	25032	31004	2	5/16-18 nut
9	48055	31383	1	Rod fitting end – 5/16-18 tap
10	25156	31034	1	3/8" flat washer
11	25369	31382	1	#2 bridge pin
12	48059	23181	1	Upper engage rod
13	25364	31569	1	5/16-24 jam nut
14	48060	31288	1	5/16 ball joint
15	25170	31003	1	5/16 lock washer
16	25364	31569	1	5/16-24 jam nut
17	48061	23140	1	Blade engage cam
---	21637	31437	1	Grease fitting – 3/16" push-in
18	25017-18	31405	1	1/2-13 x 2-1/4" hex bolt
19	25056	31637	1	1/2-13 nylon lock nut
20	48062	31481	1	Deck safety switch
21	22945	31573	2	#10 x 1/2" sheet metal screw
22	48063	31401	1	3/8" ball joint - left hand thread
23	25171	31008	1	3/8 lock washer
24	25309	31568	1	3/8-24 jam nut
25	25309	31568	1	3/8-24 jam nut
26	48064	23263	1	Lower control rod – 19-1/2"
27	48065	31402	1	3/8" ball joint - right hand thread
28	25309	31568	1	3/8-24 jam nut
29	48066	23213	1	Deck idler arm
---	21637	31437	1	Grease fitting – 3/16" push-in
30	25365	31883	1	3/8-16 x 3-1/4" hex bolt
31	48067	36309	1	Deck idler arm pivot boss
32	48068	31224	2	3/4" sleeve bushing
33	25158	31043	1	1/2" flat washer
34	25156	31034	1	3/8" flat washer
35	25171	31008	1	3/8" lock washer
36	25034	31009	1	3/8-16 hex nut
37	25146-16	31410	1	3/8-16 x 2" carriage bolt
38	48069	31686	1	3/4" spacer bushing
39	48070	36120	1	Deck idler pulley
40	25156	31034	1	3/8" flat washer
41	25171	31008	1	3/8" lock washer
42	25034	31009	1	3/8-16 hex nut

All specifications subject to change without notice



Parts List

32" Mower

SHEET 5 - HANDLE GROUP

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
1	48071	23127	1	Handle assembly
---	48072	79092	1	Eye/ear/breathing decal
---	48073	79089	1	Off/run/start decal
---	48074	79112	1	Mower engage decal
---	48075	79184	1	'Read owner's manual' decal
2	48076	31283	2	Handle grip - 1"dia x 4-1/2"
3	25017-10	31122	4	1/2-13 x 1-1/4" hex bolt
4	25158	31043	2	1/2" flat washer
5	25173	31078	4	1/2" lock washer
6	25038	31022	4	1/2-13 nut
7	48077	23259	2	Brake handle
8	48078	31379	2	Handle grip - 1/4" x 3/4" x 4"
9	25010-16	31710	2	1/4-20 x 2" hex bolt
10	25095	31098	2	1/4-20 lock nut
11	48079	23131	2	Upper brake rod
12	48080	23184	1	Brake lock - left
---	48081	23130	1	Brake lock - right
13	25010-12	31292	2	1/4-20 x 1-1/2" hex bolt
14	25367	31579	2	1/4" spring washer
15	25095	31098	2	1/4-20 lock nut
16	25164	31890	2	5/16" fender washer
17	25368	31381	2	#1 bridge pin
18	48082	23168	1	Safety switch rod
19	48083	31693	2	3/8" id flange bushing
20	48084	23167	1	Safety handle - left
---	48085	23166	1	Safety handle - right
---	25061-2	31439	2	5/16-18 x 1/4" socket set screw
21	48086	31480	1	Handle safety switch
22	22946	31100	2	3/16 pop rivet
23	48087	31585	1	Safety switch spring
24	22944	35017	1	Throttle control - 32"
---	25283-4	31943	2	#8-32 x 1/2" machine screw (attaches throttle to handle dash)
---	25152	31983	2	#8 lock washer
---	25339	31949	2	#8-32 machine nut
---	48089	31007	2	Throttle cable clip (fastens cable to handlebar)
25	48090	31586	1	Throttle label
26	22946	31100	2	3/16 pop rivet
27	48091	31584	1	Throttle T-handle
28	48092	31384	1	Off switch - Oslo *
28	21275	32011	1	Off switch - Indak *
29	25377	31805	1	3/4-16 jam nut - Oslo *
29	22792	31581	1	5/8-18 jam nut - Indak *
---	22793	31806	1	5/8 star washer - Indak *

Parts List

32" Mower

SHEET 5 - HANDLE GROUP (cont.)

REF #	FERRIS PART #	GV PART #	QTY	DECSRIPTION
30	48093	39103	1	Key set (set of 2) – Oslo *
30	22789	39108	1	Key set (set of 2) – Indak *
---	48100	31808	1	Jumper wire – 3" – 1/4" female to 1/4" ring - Indak *
---	25010-5	31635	1	1/4-20 x 5/8" hex bolt (attaches ground lead to under handle dash)
---	25366	31806	1	1/4" star washer
---	25169	31013	1	1/4" lock washer
---	25030	31030	1	1/4-20 hex nut
---	48094	31544	1	Wiring harness - all
---	48095	31864	2	8" wire tie (secures harness to handlebar)
---	48096	31914	1	9" female-spade-to-pin harness jumper wire for engine kill – B&S Intek
---	48097	31916	1	5" female-spade-to-bullet harness jumper wire for engine kill – Kawasaki

* Oslo switches used on all units up to serial # 220; Indak switches used on serial # 221 and up

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