



Operator's And Parts Manual

**Model:
SC18**

MANUAL NO. 8530 REV. 01 (07/29/03)

Forward:

Congratulations on the purchase of your new BlueBird equipment!

Your purchase demonstrates trust in the BlueBird name and exemplifies your desire to own durable equipment which is easy to operate and easy to maintain.

To get the full benefit of your purchase, you will need to understand how to use the controls and many features of your machine. This operator's guide has been prepared to assist you in this process.

Please read this guide carefully and familiarize yourself with the basic safety procedures, operating tips, and maintenance information. Close consideration of the recommendations contained in this manual will save time, money, and provide years of productivity from your unit.

As we hope to meet your future needs, please take the time to record your model and serial number on the back cover of this manual. This will greatly assist in identification of your model and for future parts ordering.

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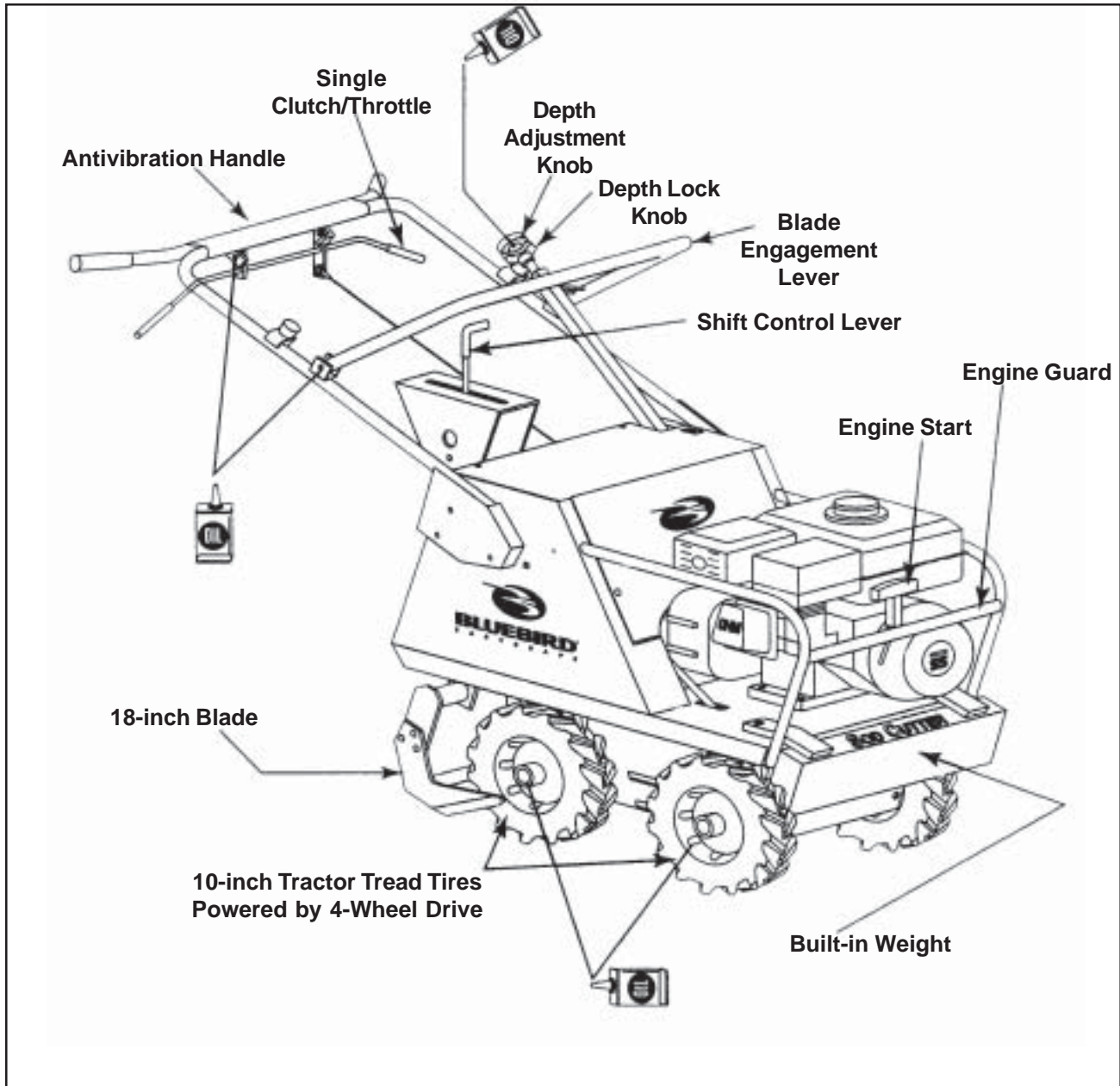
General Product Information

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SPECIFICATIONS

	U.S.	Metric
Engine - Honda:	5.5 hp	3.8 kw
Net Weight:	328 lbs	149 kg
Shipping Weight:	360 lbs	164 kg
Width:	24 in	61 cm
Height:	36 in	91 cm
Length:	54 in	137 cm
Cutting Depth (max):	2.5 in	6.3 cm
Cutting Width:	18 in	46 cm

FEATURES AND CONTROLS



Oil used in the engine (gray cap) 1. Refer to your engine manual for oil type, viscosity, weight and capacity.

Oil used in the Clutch/Gear Box 1. Refer to your engine manual for oil type, viscosity, weight and capacity. Reducer (yellow cap).

Transmission grease used

1. You should not need to service the transmission. Call Tecumseh or your servicing dealer if needed.
2. Transmission is located directly behind the front axle underneath the engine.
3. There is no dipstick for transmission.
4. Tecumseh Bentonite Grease part #788067B or equivalent.

OPERATING INSTRUCTIONS

GENERAL INFORMATION

This manual will assist you in the safe operation and proper maintenance of your BlueBird equipment. Read it thoroughly before attempting to operate the machine. Do not hesitate to call your dealer or BlueBird if additional information is required.

The following safety symbols are used throughout the manual to alert you to information about unsafe actions or situations:



DANGER: indicates immediate hazards that may result in severe injury or death.



WARNING: indicates unsafe actions or situations that may cause severe injury, death and or major equipment or property damage.



CAUTION: indicates unsafe actions or situations that may cause injury and/or minor equipment or property damage.

This equipment should not be modified without the manufacturer's prior written authorization. Doing so without our written permission may not only affect the equipments performance and durability, but also create safety hazards for the operator and the surroundings. Warranty will be void if changes are made to the equipment without the manufacturer's prior written authorization.

SAFETY PROCEDURES



DO:

- Only start with shift lever in neutral.
- Read all maintenance and service instructions before attempting work.
- Follow engine manufacturer operating and maintenance instructions.
- Inspect area to be cut and remove rocks, wire, string and other objects that might present a hazard before starting.
- Identify and mark all in ground objects to be avoided, such as sprinkler heads, stakes, water valves, clothes line anchors, etc.
- This machine was designed for sod cutting only. It is not intended for any other use.



DO NOT:

- Do not start in gear.
- Do not cut at high transport speeds.
- Do not use on any surface other than grass.
- Do not operate on slopes exceeding 35% grade.
- Do not place hands or feet near moving or rotating parts.
- Do not run engine in an unventilated area.
- Do not shift with throttle engaged.
- Do not run engine while servicing. Remove spark plug wire before servicing.
- Do not remove guards when operating.
- Do not lift this 330 lb. machine.

OPERATING INSTRUCTIONS

OPERATOR'S TIPS

- To engage reverse gear you may have to push the machine back and forth while pulling the shift lever.
- Stop before shifting gears.
- Cut going down hill on unlevel ground.
- End cuts by pushing the blade engagement lever forward while still holding the throttle to cut the end of the sod strip as the blade rises.
- Soil conditions will effect cutting depth. Readjusting the blade depth may be required as you move from hard soil to soft or moist soil conditions.
- Do not attempt sharp turns while cutting.
- Should I water before cutting?

It is usually not necessary to water before cutting. In extreme conditions, such as clay soil that is very compacted, a simple test as follows will determine if you need to water before cutting. Use a garden hand spade, weed tool, or even a large screwdriver to test the ground's hardness. You should be able to push the tool into the ground 2 to 3 inches with little effort.

If you are unable to do so, then watering may be advisable. Watering the day before should give sufficient time for the soil to absorb the moisture. Use your hand tool to gauge the effectiveness of your watering. Allow the grass to dry before cutting to provide adequate traction for sod cutting.

OPERATING ON HILLS



WARNING - DO NOT operate on hills exceeding 35% grade to prevent machine from rolling over.

Please be aware that when operating on hills, you may experience:

- The need to exert greater effort to steer and maintain the balance of the machine.
- Uneven cutting depth, when operating across a hill. The shifted center of gravity may cause the downhill side of the blade to penetrate to the maximum depth, while the uphill side may not.

With these factors in mind, you may find it more effective to:

- Operate the machine cutting down rather than across hills. You will achieve even cutting depth, and enhance stability.
- Avoid hill side turns. Back up hills in reverse gear, then cut, going down.

BEFORE YOU START

- Read and understand this manual.
- Be sure engine oil is at engine manufacturer's recommended level. (Refer to engine manufacturer's manual.)
- Put the sod cutter into neutral before starting.
- Place blade in transport position before starting.

TRANSPORTING

- Push the blade engagement lever forward to raise the blade.
- Select the desired gear (slow-fast-reverse).
- Pull the throttle while maintaining a firm grip on the handlebar.
- To make turns, push down on the handlebar to do "a wheelie," then turn.
- Load into truck or trailer by driving up ramps in low gear. **DO NOT LIFT!** This 330lb machine is not intended to be lifted by hand.

OPERATING INSTRUCTIONS

SOD CUTTING See Figure - Page 4

1. Position the sod cutter at your starting point with the blade out of the ground.
2. Pull the blade engagement lever toward you with one hand while lifting the handlebar with the other hand.
3. Place the shift lever in slow gear (turtle icon).
4. Pull the throttle while maintaining a slight down pressure on the handlebar and cut a short distance, then stop. Put shift lever in neutral.
5. Lift the edge of the sod to check the cut depth.
6. To change the depth, push the blade engagement lever forward, unlock the depth lock knob (red knob), and turn the depth adjustment knob clockwise for less depth, or counterclockwise for more depth; then lock the depth lock knob.
7. Repeat steps 2 through 6 as necessary to set depth of cut.
8. End cuts by pushing the blade engagement lever forward while holding the throttle to cut the end of the sod strip as the blade exits the ground.

SAFETY AND MAINTENANCE



CAUTION

Any modifications or additions to this equipment without written authorization from the manufacturer will void all manufacturer's warranties.

Do not operate this machine without first reading owners manual.



CAUTION

BlueBird parts have been designed and specified to meet commercial operating standards for strength and durability. For reliability and preservation of design safety standards, replacements should only be made with genuine BlueBird parts or material of equivalent type and strength.



TWO MINUTE WARNING

Sod Cutters may be tipped on their engine guard for cleaning and access for **no more than 2 minutes**. Engine damage may result from gasoline draining into the crankcase if prolonged. See engine manufacturer's operating and maintenance instructions.

ENGINE SERVICE AND WARRANTY

Contact your nearest engine manufacturers authorized servicing dealer for engine service and warranty questions. Follow the engine manufacturers maintenance instructions. Should any malfunction occur with the engine during the warranty period, take it to an Authorized Service Dealer. DO NOT tear down the engine, as this may void the Engine Manufacturer's Warranty.

PREVENTATIVE MAINTENANCE SCHEDULE

A) Inspection Schedule

Item	Each Use	Every 20 hrs
• Engine Oil (see engine manual)	X	
• Clutch Tension	X	
• Chain Tension	X	
• Decals and Warnings	X	
• Fasteners and fittings	X	
• Throttle cable		X
• Blade condition and wear	X	
• Frame condition (rust, cracks, etc.)		X
• Clutch and cable		X
• Excessive vibration	X	
• Engine air cleaner (see engine manual)	X	
• Depth adjuster	X	

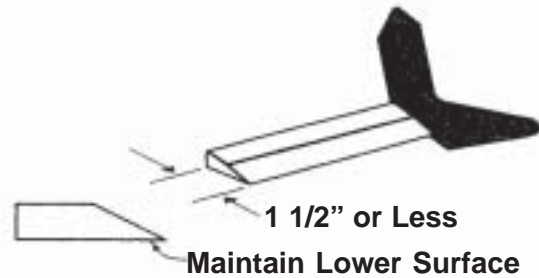
B) Lubrication Schedule

Item	Lubricant	Every 20 hrs	Every 60 hrs	As Required	Storage
• Engine	Oil, see engine owner's manual		X	X	X
• Chain	30W Motor oil or Chain lubricant	X	X	X	X
• Linkage	30W oil	X			
• Grease depth adjust screw		X		X	

SAFETY AND MAINTENANCE

BLADE WEAR

Sod cutter blades may wear quickly depending on soil condition. Replace blade when worn to 1 1/2" (3.8cm) or less. Maintain lower blade surface.



CLEANING AND WASHING

Regular cleaning and washing will prolong the service of your machine.

Note: Use care with power washers to avoid damage to Warning Decals, Operator Instruction Labels, Bearings, Chain and Engine. Avoid direct spray on these items. DO NOT EXCEED 1000 PSI WATER PRESSURE FOR CLEANING.

ADJUSTING CHAIN TENSION

Upper Chain

- No adjustment is required

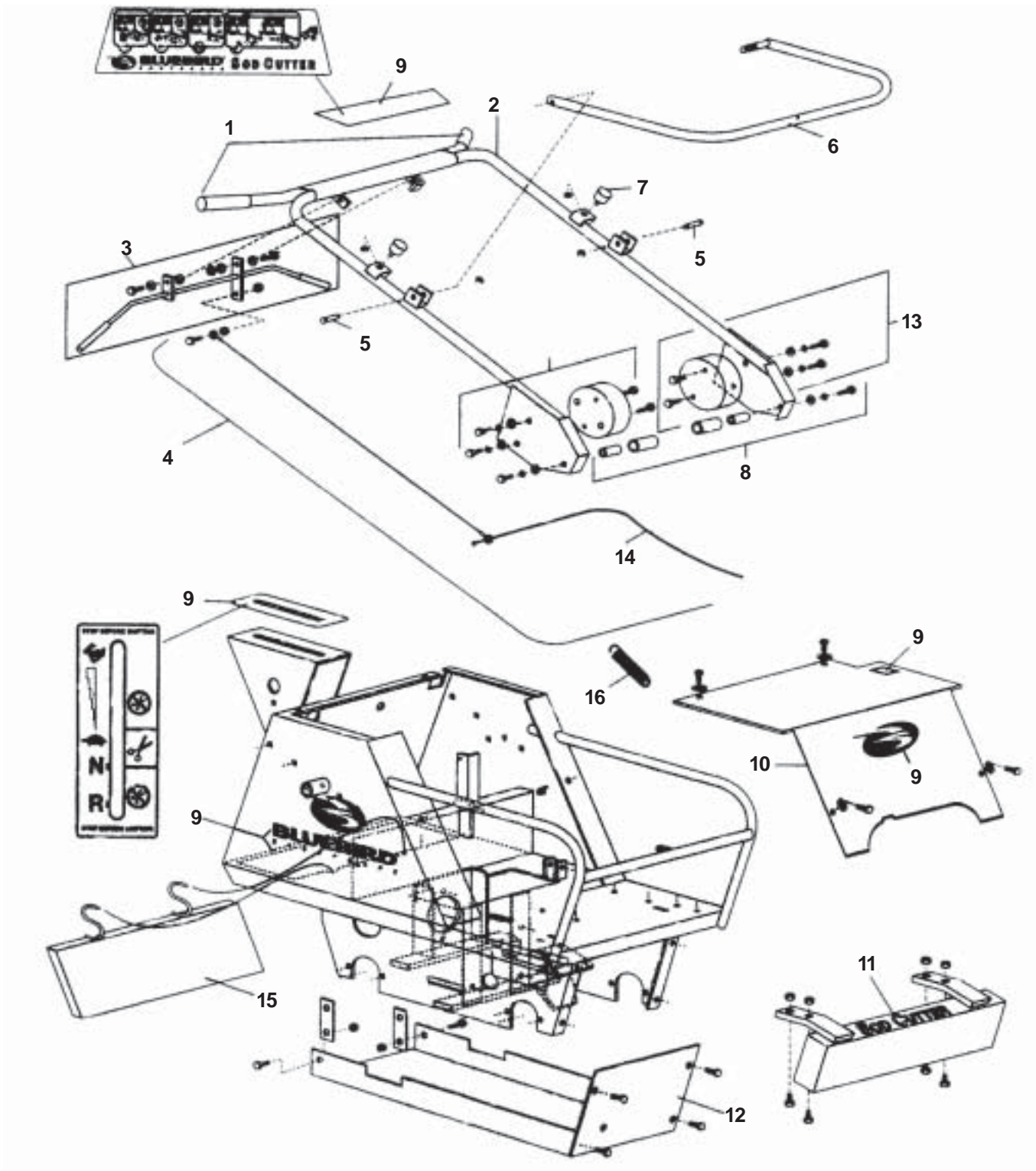
Lower Chain

- Remove chain guard
- Tilt the sod cutter forward onto the front weight.
- Tighten the 1/2" lock nut on the chain idler until the #40 chain flexes approximately 1/4" (6mm) at mid span.
- Install chain guard.
- Set sod cutter back to level.

STORAGE

1. Refer to engine manufacturer's instructions for engine storage information.
2. Clean machine.
3. Cover all scratches with touch up paint.
4. Lubricate according to Lubrication Schedule (see page 8).
5. Lightly oil or mil board paint blade to inhibit rust.
6. Covered or indoor storage is recommended.

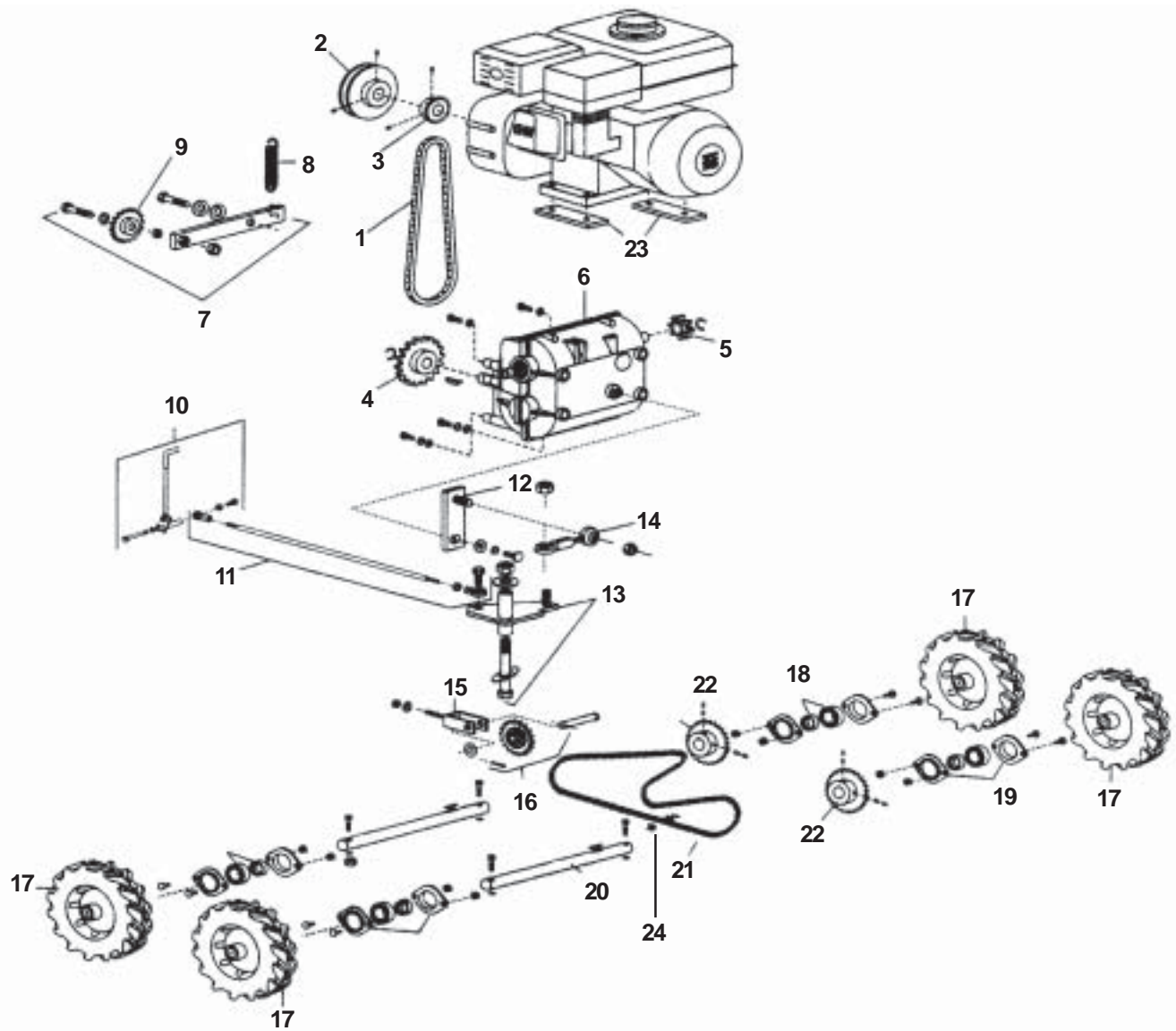
PARTS - MAIN FRAME



PARTS - MAIN FRAME

ITEM	PART NO.	DESCRIPTION
1	7191	Grips pair
2	3142	Handle kit, complete with grips and hardware
3	7149	Clutch/throttle control kit, with grips and hardware
4	3139	Cable, throttle cable kit
5	3140	Pins, depth handle with clip
6	3141	Blade engagement lever
7	3143	Bumpers, handle (complete)
8	3145	Stand off kit
9	3172	Decal kit, SC18
10	3155	Shield cover kit, upper housing with hardware
11	3154	Weight weldment with hardware
12	3159	Skid pan, complete w/brackets and mounting hardware, deflector
13	3144	Handle attachment hardware kit complete
14	3161	Throttle cable, carb
15	3162	Deflector with "S" links
16	3173	Spring
.....	0729	Paint, quart can (Blue)

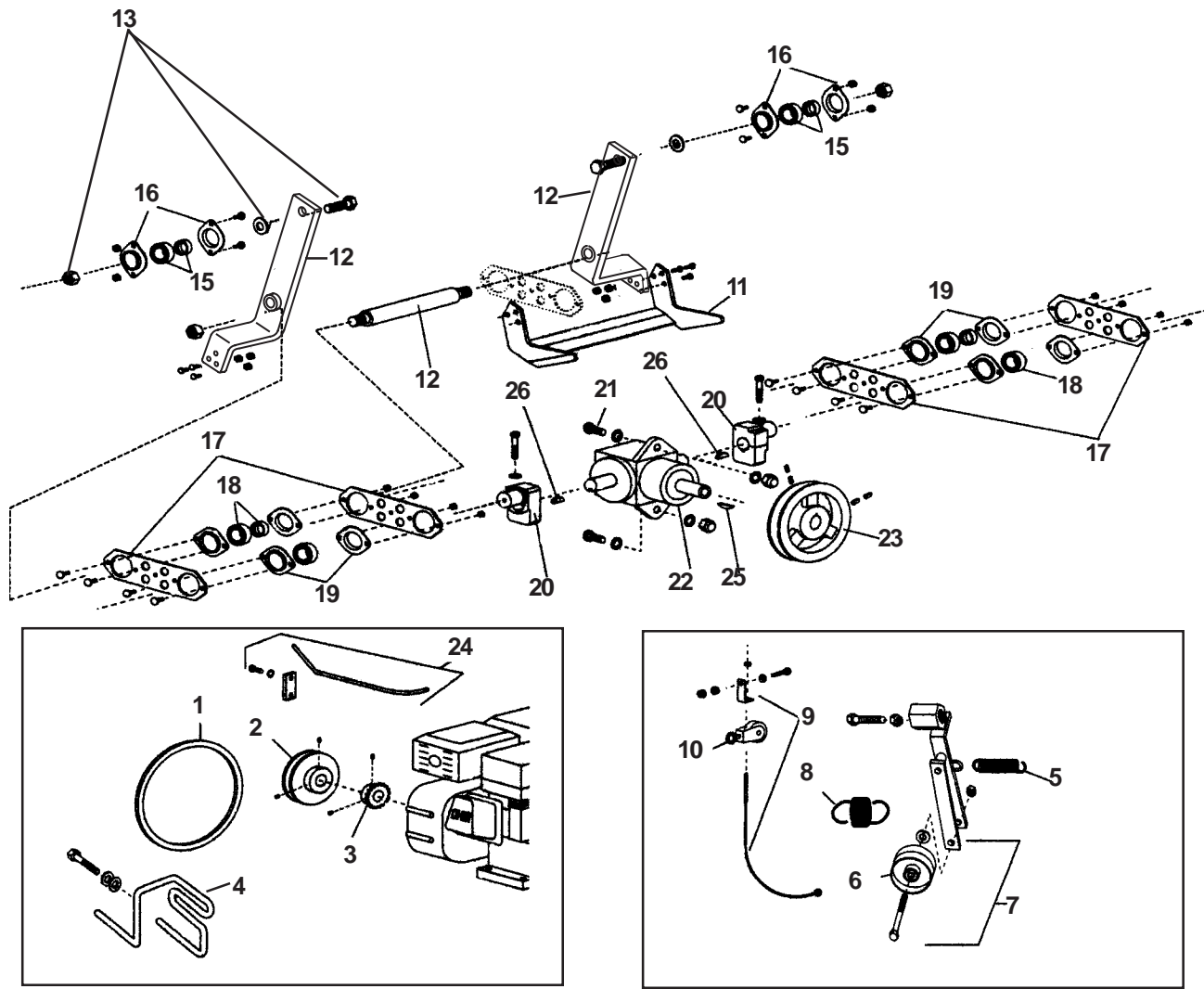
PARTS - POWER TRAIN



PARTS - POWER TRAIN

ITEM	PART NO.	DESCRIPTION
1	3107	Chain, transmission 26 5/8" length
2	3108	V-pulley 4" special, with key
3	3109	Sprocket with key
4	3148	Sprocket with key and ring
5	3149	Sprocket, transmission, 8 tooth
6	3150	Transmission with hardware
7	53171	Chain idler arm assembly
8	7195	Spring, 3 3/4"
9	3127	Sprocket, idler arm
10	3146	Lever, shift kit
11	3147	Linkage, shift
12	3135	Arm, transmission shift with hardware
13	3136	Bell crank shift kit
14	3137	Rod end, linkage bell crank
15	3133	Tensioner assembly, drive train
16	3134	Sprocket, drive train tensioner
17	3123	Wheel, 10" with hardware
18	0317	Bearing, 1" with locking collar
19	5786	Stamping kit, with fasteners (1" bearing)
20	3153	Axle, wheel, with hardware
21	3151	Chain, 55", drive
22	0303	Sprocket, with key, rotor
23	3170	Motor space plate kit with hardware
24	0307	Master link

PARTS - BLADE DRIVE

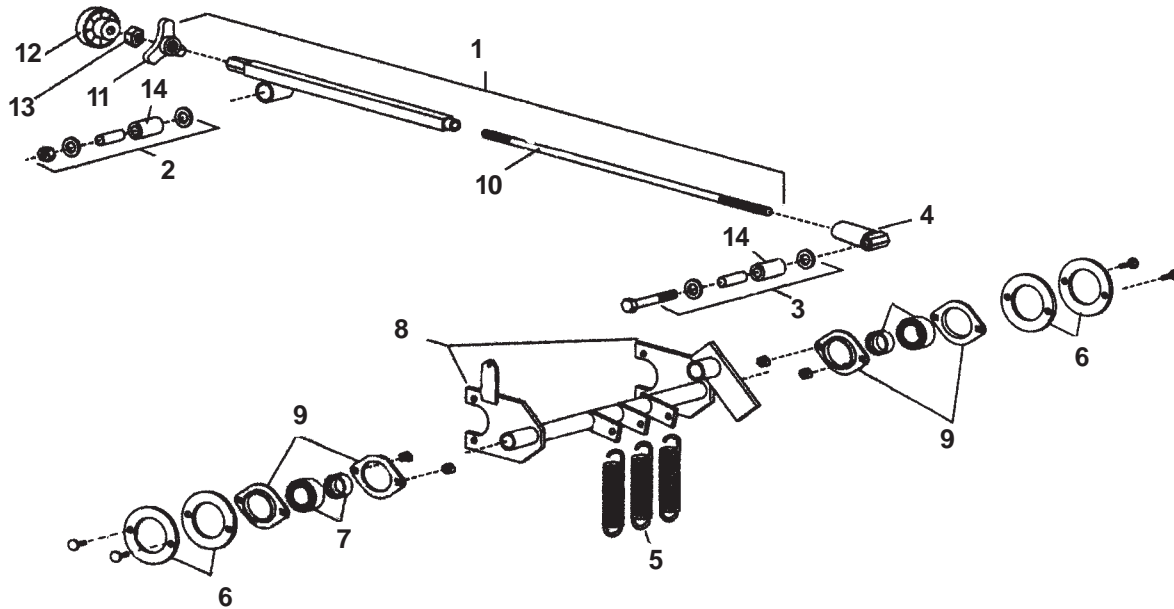


PARTS - BLADE DRIVE

ITEM	PART NO.	DESCRIPTION
1	3106	V-belt, A-26" special
2	3108	V-pulley 4" special, with key
3	3109	Sprocket with key, engine
4	3166	Belt keeper kit with hardware
5	7195	Spring , 3 3/4"
6	0343	Pulley, idler 2 3/4"
7	3111	Belt idler assembly
8	3112	Spring, 4", blade/clutch
9	3113	Cable, blade/clutch with hardware
10	3114	Pulley, swivel eye, clutch
11	3167	Blade with hardware
12	30219	Kit, shaft/arms
13	540200679	Kit, upper blade arm hardware
15	0315	Bearing, 3/4" with locking collar with fasteners
16	3122	Stamping kit, for 3/4" bearing
17	3125	Plate, rod
18	0317	Bearing, 1" with locking collar
19	3124	Stamping kit, with fasteners (1" bearing)
20	3129	Crank, eccentric kit
21	3132	Hardware kit, gear box
22	3131	Gear box, right angle "T" drive
23	3130	Pulley 5 1/4" OD, with key, gear box
24	3152	Tube, throttle cable, assembly
25	3175	Key, #6 woodruff (5/32 x 5/8)
26	3176	Key, #9 woodruff (3/16 x 3/4)

NOTE: Call factory for a breakdown of Gear Box Item 22

PARTS - BLADE DEPTH CONTROL



ITEM	PART NO.	DESCRIPTION
1	3100	Depth adjuster assembly control
2	3101	Fastener kit, upper depth, adjustment assembly
3	3102	Fastener kit, lower depth, adjustment assembly
4	3105	Rod end, coupler, depth control
5	3115	Spring, blade lift
6	3116	Spacer, bearing
7	0317	Bearing, 1" with locking collar
8	3118	Trunnion assembly
9	0318	Stamping kit for 1" bearing
10	3163	Depth adjust screw
11	3164	Knob, three prong (depth lock)
12	3165	Knob, depth
13	3174	Nut, hex, jam, 1/2-13
14	3117	Bushing, polyurethane

TROUBLESHOOTING



WARNING: Before servicing unit, engine **MUST** be off.

PROBLEM	ANSWER/COMMENT
Transmission shaft broke	<ol style="list-style-type: none"> 1. Ensure debris is not caught in the Transmission Chain or wrapped around the transmission output shaft. 2. Ensure the unit has a Skid Pan installed. 3. Contact your servicing dealer.
Drive wheels won't engage	<ol style="list-style-type: none"> 1. Ensure the Drive Chain is on all sprockets. 2. Ensure the Transmission Chain is on all sprockets. 3. Ensure the Chain Idler Spring is attached. 4. Check for side play in the Transmission Output Drive Sprocket (If there is side play, the transmission could be damaged). 5. Verify the Shift Linkage is attached at the Shift Lever and at the Bell Crank and Rod End is attached at Bell Crank and Transmission Arm. 6. Check sprockets for proper alignment.
Unit jumps out of gear	<ol style="list-style-type: none"> 1. Adjust Shift linkage. Tighten Shift Lever Pivot Bolt to hold shift lever in place.
Bushings on depth control assembly are wearing quickly.	<ol style="list-style-type: none"> 1. The bushings are wearable items. 2. Grease (polyurethane compatible) ID and OD of bushings before installing. 3. Ensure that proper Blade Lift Springs are installed. (Springs have 1.5-inch OD.) 4. Be sure the maximum RPM is set correctly at 3000. See Technical Bulletin Throttle Cable Adjustment. 5. Be sure red bushings are installed.
Bushings "ooze out" when installed	<ol style="list-style-type: none"> 1. This is normal. Trim with knife if desired.
Right Angle T-drive leaking	<ol style="list-style-type: none"> 1. Contact your local Tecumseh dealer or servicing dealer.
What RPM should my engine be set to?	<ol style="list-style-type: none"> 1. 3000 RPM maximum. See Technical Bulletin "Throttle Cable Adjustment."
Chain (Transmission) wearing prematurely or coming off	<p>The Transmission Input Sprocket is a fixed (non adjustable) sprocket which is splined and snap-ringed in place.</p> <ol style="list-style-type: none"> 1. Align the Engine Sprocket and Chain Idler Sprocket to the Transmission Input Sprocket (fixed) 2. Idler Sprocket position is adjusted by adding or subtracting washers between the sprocket and the idler arm. 3. The Engine Sprocket is adjusted by sliding it on the engine output shaft.

TROUBLESHOOTING



WARNING: Before servicing unit, engine **MUST** be off.

PROBLEM	ANSWER/COMMENT
Chain (Drive) is coming off, drive sprocket wearing	<p>The Transmission Output Sprocket is a fixed (non adjustable) sprocket which is splined and snap-ringed in place.</p> <ol style="list-style-type: none"> 1. Align the Axle Sprockets (double set screws) to the Transmission Output Sprocket. Position the Axle Sprockets the same distance from the chassis wall. 2. Replace the Tensioner Sprocket if it has a bent or twisted bracket or bent teeth. 3. Check chain tension between Axle Sprockets (1/4" - 3/8" deflection at mid-span).
Pulleys not staying tight or coming off.	<ol style="list-style-type: none"> 1. Inspect shaft, pulleys and keys for damage. Note: Gear box pulley has double set screws. 2. Replace any damaged parts. 3. Use blue loctite on the set screws.
Blade Replacement	<ol style="list-style-type: none"> 1. Replace when worn to 1 1/2" from the cutting edge to the back edge. 2. Sharpen blade from top only. Maintain a flat lower surface. 3. Sharpen sides of blades from outside only.
Blade doesn't move or stops cutting	<ol style="list-style-type: none"> 1. If the operator tries to cut deeper than 2 1/2", pivoting the machine back on its rear wheels while cutting can cause machine to cut too deeply. 2. Make sure the blade is sharp. 3. Moisture, oil or grease on the belt will cause it to slip. Replace with a BlueBird belt. 4. Tension can be increased by tightening the Cable Tension Nut. If additional adjustment is not available, add a 1/2" stack of washers between Tension Nut and Cable Bracket. 5. IMPORTANT: Engine must be off before checking clearance of pulleys. Adjust tap bolt for 1/8" to 1/4" clearance between all pulleys, Belt Idler Pulley, Engine Pulley, Right Angle Drive Pulley, with the belt removed. Lock adjustment with jam nut.
Blade not cutting full depth or inconsistent depth	<ol style="list-style-type: none"> 1. Replace the Depth Control Bushings when worn. 2. Be sure the Depth Control Rod is installed properly. See Technical Bulletin "Installation of Depth Adjuster Assembly Control. 3. If blade is dull or improperly sharpened, sharpen it from top only (see page 9) or replace. 4. Check to see if the cutting surface is uneven 5. Replace the Blade Lift Springs when worn or broken.

TROUBLESHOOTING



WARNING: Before servicing unit, engine **MUST** be off.

PROBLEM

ANSWER/COMMENT

Blade not disengaging

New Unit or New Belt:

1. Run the machine with the blade engaged until the belt stretches.

Used Unit or Old Belt:

1. Adjust the Belt Keeper so each leg touches when idler pulley is not engaged and so idler pulley clears Belt Keeper when engaged.
2. Be sure the correct BlueBird belt is being used. If not, replace with a BlueBird belt.
3. Belt Idler Pivot Bolt may be too tight or need lubrication.
4. Belt Idler Return Spring may be broken or came off anchors. Reattach or replace as necessary.
5. Check to see if the Tension Cable is out of pulley. Install cable in pulley and squeeze bracket sides to minimize the gap to pulley.

Belt coming off

1. RPM may be too high. Set to 3000 RPM See Technical Bulletin "Throttle Cable Adjustment."
2. Align pulleys. See Technical Bulletin "Inspection Procedure for Belt Tension".
3. Replace the Belt Idler Pulley Arm if it is bent.

Belt glazed or slipping

1. Limit maximum depth of cut to 2 1/2".
2. Be sure the updated Blade Lift Springs are installed. (Springs have 1.5 inch OD.)
3. If the Blade Lift Springs are worn they will allow the blade to cut too deeply, which causes the belt to slip. Replace if necessary.
4. Be sure the maximum RPM is set at 3000. See Technical Bulletin "Throttle Cable Adjustment."
5. Be sure the correct BlueBird belt is being used. If not, replace with a BlueBird belt.
6. Check if belt is being stretched by comparing with a new belt.
7. Check to see if the Tension Cable is out of pulley. Install cable in pulley and squeeze bracket sides to minimize the gap to pulley.
8. If the Gear Box Pulley or the Engine Pulley is wet, oily, or damaged, clean or replace.
9. Belt tension can be increased by tightening the Cable Tension nut. If additional adjustment is unavailable, add a 1/2" stack of washers between Tension Nut and Cable Bracket.

TROUBLESHOOTING



WARNING: Before servicing unit, engine **MUST** be off.

PROBLEM	ANSWER/COMMENT
Belt glazed or slipping	<ol style="list-style-type: none"> 10. Be sure the Belt Idler Assembly is adjusted correctly. See Technical Bulletin "Inspection Procedure for Belt Tension." 11. Important: Engine must be off before checking clearance of pulleys. Adjust tap bolt for 1/8" to 1/4" clearance between all pulleys, Belt Idler Pulley, Engine Pulley, Right Angle Drive Pulley with belt removed. Lock adjustment with jam nut.
Depth Control Rod broke	<ol style="list-style-type: none"> 1. Contact Action Center to order Depth Control Rod Assembly and two red bushings.
Depth Control Rod will not turn (frozen)	<ol style="list-style-type: none"> 1. Steam cleaning machines without lubricating threads afterwards will cause rust resulting in locked threads. 2. Note that the Rod End is a left-handed thread. 3. Flood frozen joints with penetrating oil.
Unit is creeping	<p>The transmission contains a centrifugal clutch and may creep if left in gear. Some creeping is normal because of the lubricant resistance between the clutch plates. Also, too heavy a lubricate in Gear Reducer can cause creeping.</p> <ol style="list-style-type: none"> 1. Put in neutral - unit will not creep. 2. RPM at idle should be 1,400 (+200/-150). Clutch will engage at 1,800 RPMs. A high idle RPM may cause creeping. 3. If unit continues to creep, contact your local Honda dealer or servicing dealer.
Handle Stand Off Kit - how to tighten bolts	<ol style="list-style-type: none"> 1. Remove rubber bushings. 2. Remove bolt. 3. Apply blue loctite. 4. Hold stand off with pliers, vice-grips, etc. and tighten bolt.
Bolts breaking	<ol style="list-style-type: none"> 1. The vibration of the machine may cause bolts to come loose. Check and tighten all bolts periodically. 2. Use Grade 8 bolts with lock nuts to bolt wheels to axle.
Tires wearing too quickly	<ol style="list-style-type: none"> 1. Only cut in first or second gear. 2. Tire wear is normal and to be expected. Running the machine on excessively hard or abrasive surfaces can increase wear.

ONE YEAR LIMITED WARRANTY

For one year from purchase, BlueBird, Inc. will replace for the original purchaser, free of charge, any part or parts, found upon examination by any Factory Authorized Service Center, or by the Factory at Beatrice, Nebraska, to be defective in material or workmanship or both.

All transportation charges on parts submitted for replacement under this warranty must be paid by purchaser.

THERE IS NO OTHER WARRANTY EXPRESSED OR IMPLIED.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase and to the extent permitted by law any and all implied warranties are excluded. This is the exclusion is permitted by law.

The engines on all units are warranted by the engine manufacturer. Consult Warranty shipped with each unit. BlueBird, Inc. will not be responsible for any engine claims.

BlueBird, Inc. reserves the right to make changes in design and changes or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.



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