

OWNER'S MANUAL

Assembly & Operating Instructions

BBT COMMERCIAL CULTIVATOR TILLER

MODEL NO. BBT-TILL-6.5HPBS



N23701



To the Owner

Thank you for purchasing our BBT Commercial Cultivator Tiller. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the Cultivator Tiller. It instructs you how to safely and easily set up, operate and maintain your Cultivator Tiller. Please be sure that you and any other persons who will operate the Cultivator Tiller carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarise yourself with the machine, its features and operation. Please be aware that this Owner's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

All the power testing information used to establish the power rating of the engine equipped on this Cultivator Tiller can be found in the engine manufacturer's manual or website. If you have any problems or questions concerning the machine, please contact our Customer Support Department.

Throughout this manual, all references to right and left side of the Cultivator Tiller are observed from the operating position. The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's Manual packed separately with your Cultivator Tiller for more information.

Customer Support

Please do NOT return the Cultivator Tiller without first contacting the Customer Support Department at bbt@bbta.com.au.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this Cultivator Tiller, please contact our Customer Support Department.

SAVE THESE INSTRUCTIONS

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IMPORTANT SAFETY INFORMATION



WARNING: Read and thoroughly understand all instructions in this manual and on the safety decals before assembling or operating this Cultivator Tiller. Failure to do so may cause serious injury or death. Do not allow anyone to operate this Cultivator Tiller who has not read this manual. As with all power equipment, a Cultivator Tiller can be dangerous if assembled or used improperly. Do not operate this Cultivator Tiller if you have any questions concerning its safe operation. To get answers to any questions, call our Customer Support Department.



This **SAFETY ALERT SYMBOL** identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury or death.



DANGER! This Cultivator Tiller was built to be operated according to the safe operation practices 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 Cultivator Tiller is capable of amputating hands and feet and throwing debris. Failure to observe the following safety instructions could result in serious injury or death.

The following signals, words and meanings are intended to explain the levels of risk associated with this product.



DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in serious injury or death.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in serious injury or death.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is important information about the proper use of your Cultivator Tiller. Failure to follow this instruction could result in damage to your Cultivator Tiller or property.

Additional Information and Potential Changes

We reserve the right to discontinue, change, and improve our products at any time without notice or obligation to the purchaser. The descriptions and sections contained in this manual were in effect at the time of printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your machine.

WARNING! Your Responsibility—Restrict the use of this power machine to persons who have read, understood and will follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!



IMPORTANT SAFETY INFORMATION

Key to Symbols

Symbol	Description
	READ THE OWNER'S MANUAL(S) Read, understand and follow all instructions in the manual(s) before attempting to assemble and operate.
	FACE PROTECTION Always wear safety goggles or safety glasses with side shields or a face shield when operating this product as well as ear protection.
	WEAR GLOVES Always wear non-slip, heavy-duty protective gloves when operating this product.
	WEAR SAFETY FOOTWEAR Always wear non-slip steel-toed safety footwear when operating this product.
	BEWARE OF FLYING OBJECTS Beware of thrown objects which can ricochet causing serious injury to the eyes. Always wear eye & ear protection when operating.
	BYSTANDERS Keep bystanders, helpers, pets, and children at least 10 metres from the machine while it is in operation. Stop machine if anyone enters the area.
	TOXIC FUMES Breathing exhaust fumes can cause loss of consciousness and may lead to death. DO NOT operate the machine in an enclosed space.
	PETROL IS FLAMMABLE Petrol is extremely flammable. Allow the engine to cool for at least ten minutes before refuelling.
	DANGER! Keep your hands and feet away from the cutting element!
	Remove the spark plug before carrying out repairs or maintenance.
	CAUTION! Tool surfaces can be hot.
	DO NOT use in the rain.
	Blades continue to rotate after the engine stops. Rotating blades are capable of amputating hands and feet and throwing objects.

SAFETY DECALS

Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the tiller to remind you of this important information while you are operating the unit.

These important safety labels are illustrated below, and are shown here to help familiarize you with the location and content of the safety messages you will see as you perform normal tilling operations.

Please review these labels, and if you have any questions regarding their meaning or how to comply with these instructions, reread the complete safety instruction text on the preceding pages. These labels are easily applied, and will act as a constant visual reminder to you, and others who may use the equipment, follow the safety instructions for safe, effective operation of your BBT Commercial Cultivator Tiller.

REMEMBER: If the safety decals have been damaged, removed, become illegible or parts have been replaced without decals, new safety decals must be applied.

WARNING

Avoid Serious Injury

- Read Owner's Manual(s) before operating.
- Know the locations and function of all controls.
- Keep all shields and guards in place and working while running.
- **NEVER** allow children to operate tiller.
- Dress appropriately. Wear sturdy footwear.
- Carefully inspect area to be tilled. Remove large rocks and other foreign objects. **DO NOT** till above underground electricity, water, gas or other utility lines and pipes. **STOP THE ENGINE AND DISCONNECT THE SPARK PLUG WIRE** before removing debris or servicing unit.
- When leaving the operating position for any reason:
 - Shut off the engine.
 - Wait for all moving parts to stop.

WARNING

WHEELS ACT AS BRAKES

- **NEVER** start or operate tiller with wheels in the FREE-WHEEL position. Make sure wheel lockouts are engaged through wheel hubs and axle.
- Wheels act as brakes to keep the tiller at a controlled speed. Disengage wheel lockouts **ONLY** when engine is stopped.

WARNING

- **DO NOT START ENGINE UNLESS BELT COVER IS ATTACHED.**
- **KEEP HANDS, FEET AND CLOTHING AWAY FROM MOVING BELTS AND PULLEYS.**
- **FAILURE TO COMPLY COULD RESULT IN INJURY**
- **SEE OWNER'S MANUAL FOR FULL SAFETY INSTRUCTIONS.**

OPERATION

REFER TO OWNER'S MANUAL FOR DETAILED OPERATING INSTRUCTIONS

TO START:

1. Release drive control levers to neutral position.
2. Lower the drag stake so that tynes do not touch the ground.
3. Check position of wheels and wheel lockouts.
4. Slide choke control to choke position.
5. Move throttle control lever to the fast position.
6. Pull starter rope.

DANGER

AVOID INJURY FROM ROTATING TYNES!



- Keep hands, feet and clothing away.
- Tynes rotate when tiller is engaged in forward or reverse.
- Tynes and wheels rotate when drive control levers are pulled down
- In reverse, tynes and wheels rotate when the reverse handle is pulled back towards the operator.
- Releasing the drive control levers to neutral stops the wheels and tynes.

GENERAL SAFETY RULES

Equipment Safety Guidelines

- Read, understand, and follow all instructions on the machine and manual before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference. Anyone who uses this Commercial Cultivator Tiller must read the instructions and be familiar with machine.
- In order to provide a better view, certain illustrations in this manual may show an assembly with a safety guard or shield removed, however equipment should never be operated in this condition. Keep all guards and shields in place. If guard or shield removal becomes necessary for repairs, reinstall the guard or shield prior to use.
- **NEVER** operate your cultivator tiller whilst under the influence of alcohol, drugs or medication.
- **Under no circumstances should children under the age of 18 be allowed to work with or around this equipment. DO NOT allow anyone to operate or assemble this equipment until they have read this manual and have developed a thorough understanding of the safety precautions and operation. Review safety instructions with all users annually.**
- This equipment is dangerous to children and anyone unfamiliar with its operation. The operator should be a responsible, properly qualified and a physically able person, familiar with this equipment and competent in this equipment's operation.
- **NEVER** exceed the limits of the tiller. If its ability to do a job, or to do so safely, is in question-**DON'T TRY IT.**
- **DO NOT** modify the equipment in any way. Unauthorized modifications could result in serious injury or death and may impair the function and shorten the life of the equipment.
- In addition to the design of this BBT Cultivator Tiller, safety decals and safety equipment, accident prevention is dependent upon the awareness, common sense, forethought, and proper training of everyone involved in the operation, transport, maintenance, and storage of the machine. Pay close attention to the safety decals affixed to the tiller.
- Dress appropriately when operating the tiller. Always wear sturdy footwear. **NEVER** wear sandals, sneakers, or open shoes, and **NEVER** operate the tiller with bare feet. **DO NOT** wear loose clothing that might get caught in moving parts.
- Carefully inspect the area to be tilled, and remove all foreign objects. **DO NOT** till above underground water lines, petrol lines, electric cables, or pipes. **DO NOT** operate the tiller in soil with large rocks and foreign objects which can damage the equipment.
- Handle fuel with care; it is highly flammable.
 - Always store petrol in an approved, tightly sealed container. Store container in a cool, dry place.
 - **NEVER** open the cap of the fuel tank to add petrol while the engine is running or still hot.
 - Always fill up your fuel tank outside.
 - Replace petrol cap securely and clean up spilled fuel before restarting.
- **NEVER** attempt to make any adjustments while the engine is running.

GENERAL SAFETY RULES

Operation Safety

- **NEVER** start the engine or operate the tiller with the wheels in the free-wheel position. Make sure the wheel lockouts or lock pins are engaged through wheel axle. The wheels act as a brake to keep the tiller at a controlled speed.
- Disengage wheels to permit free-wheeling only when engine is stopped.
- Keep hands, feet, and clothing away from rotating parts. Keep clear of the tiller tynes at all times.
- Tynes and wheels rotate when tiller is engaged in forward or reverse-in forward, tynes and wheels rotate when the drive safety control levers are pulled down; in reverse, wheels and tynes rotate when the reverse handle is pulled back towards the operator. Releasing the drive safety control lever to neutral shift stops the wheels and tynes.
- Be extremely cautious when operating in reverse. Take extra care to avoid slipping or falling, and to keep feet clear of tynes.
- After striking a foreign object, stop the engine, remove the wire from the spark plug, thoroughly inspect the tiller for any damage, and repair the damage before restarting and operating the tiller.
- If vegetation clogs the tynes, raise the handlebars to elevate the tynes, and run the tiller in reverse, If this does not clean clogged vegetation from the tynes, **STOP THE ENGINE AND DISCONNECT THE SPARK PLUG WIRE** before removing vegetation by hand.
- The engine muffler will be hot from operation. **DO NOT** touch it with bare skin or a severe burn will result.
- If the unit should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- **NEVER** run the engine in an enclosed and/or poorly ventilated area, engine exhaust contains carbon monoxide, a colourless and odourless gas. Breathing exhaust fumes can cause loss of consciousness and may lead to death.
- **DO NOT** overload the machine capacity by attempting to till too deep at too fast a rate.
- **NEVER** operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.
- **NEVER** allow bystanders near the unit.
- Use only attachments and accessories approved by the manufacture for the tiller.
- **NEVER** operate the tiller without good visibility or light.
- Be careful when tilling in hard ground. The tynes may catch in the ground and propel the tiller forward. If this occurs, let go of the handlebars and do not attempt to hold back the machine.
- Take all possible precautions when leaving the machine unattended. Disengage all controls levers, stop the engine, wait for all moving parts to stop, and make certain guards and shields are in place.
- Keep machine, attachments, and accessories in safe working condition.
- Check shear bolts, engine mounting bolts, and other bolts at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- To prevent accidental starting, always disconnect and secure the spark plug wire from the spark plug before performing any tiller maintenance.
- Always allow muffler to cool before filling fuel tank.
- **NEVER** store the tiller with petrol in the tank or in an enclosed area where petrol fumes could reach a strong heat source or a flame. Allow the engine to cool down before you store tiller in storage.
- Always refer to the Owner's Manual for important details if the tiller is to be stored for an extended period.

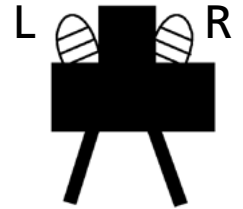
ASSEMBLY

Assembly Instructions

The BBT Commercial Cultivator Tiller comes partially assembled. The following instructions will help you assemble and adjust the tiller's depth regulator, cable tension, and handlebar height. You will need two 9/16" wrenches to complete the assembly.

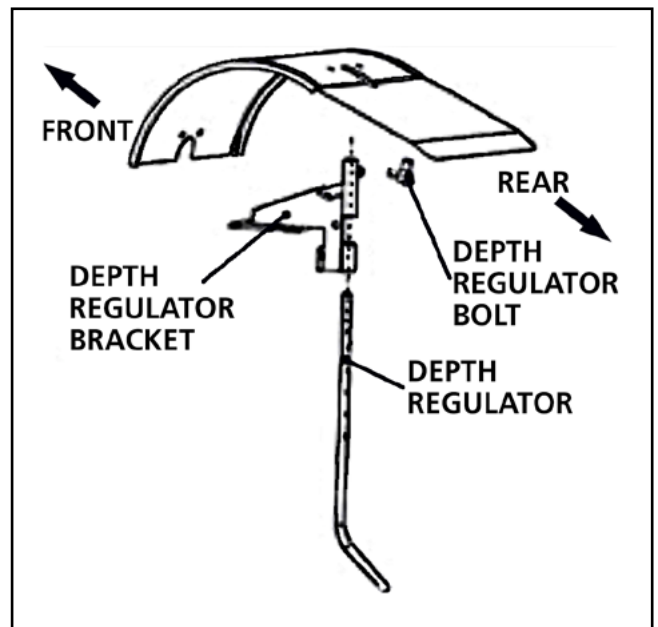
! IMPORTANT

The right and left sides of your tiller are determined from the operating position as you face the direction of forward travel.



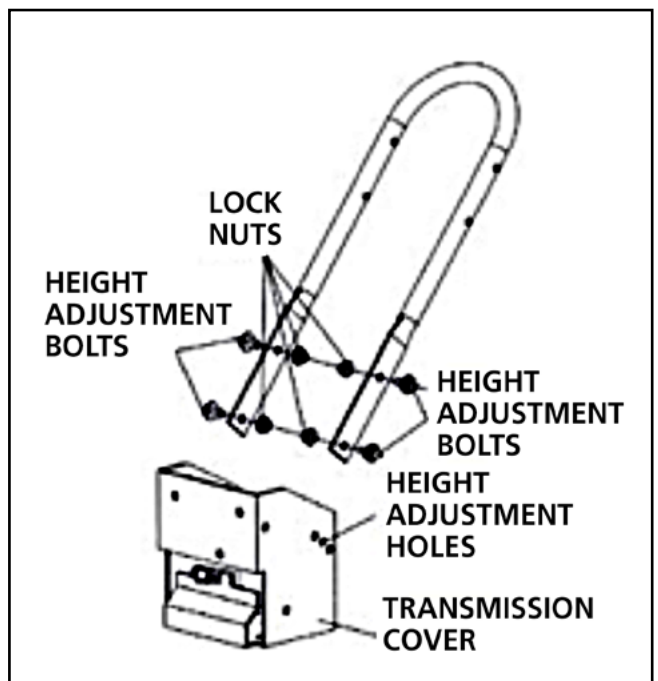
STEP 1 Install the Depth Regulator

1. Install the depth regulator into the top of the depth regulator Bracket with handle facing rearward.
2. Insert depth regulator pin through depth regulator bracket and top hole of depth regulator-tyres should clear the ground.



STEP2 Attach ex-arm-rest stems to the Tiller

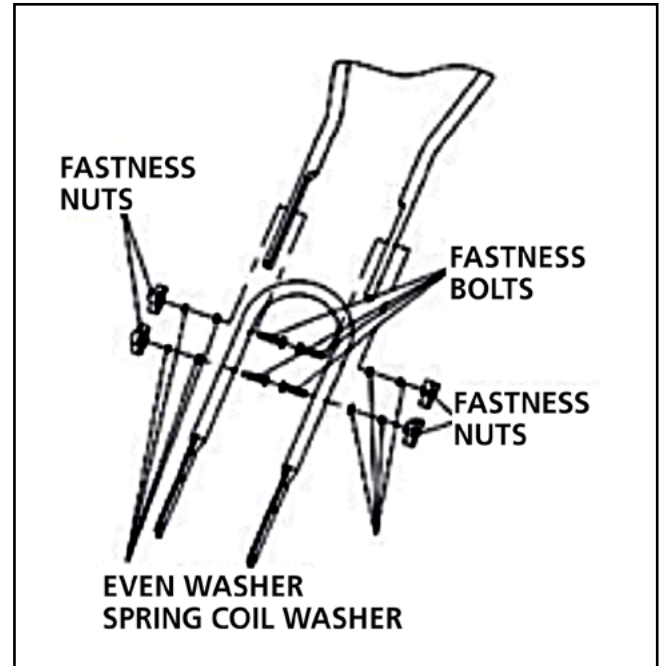
1. The ex-arm-rest stems on outside of the Transmission cover and align the lower bolts.
2. Insert one 3/8"-16x1" bolt for each side in lower holes.
3. Start 3/8"-16 nuts on each bolt.
4. Insert one 3/8"-16x 1" bolt for each side in Upper holes at desired handlebar height.
5. Tighten all the nuts.



ASSEMBLY

STEP3 Attach Handle bar to the Tiller

1. Insert four fastness bolts for each side in every hole.
2. Start fastness nuts on each bolt.
3. Tighten all the nuts.



STEP4 Fill Engine Crankcase

⚠ IMPORTANT

Engine is shipped from factory without oil.
Engine oil must be added before starting engine.

1. Add oil according to engine manual. **DO NOT** overfill. Use clean, high quality SAE30 oil. **DO NOT** mix oil with petrol. Oil level must be full. Check the oil level by removing oil fill plug.
2. Always check oil level before starting engine. Refer to engine manual for capacity.

STEP 5 ADD THE OIL INTO THE GEARBOX

Gearbox is shipped from factory without oil and must be added.

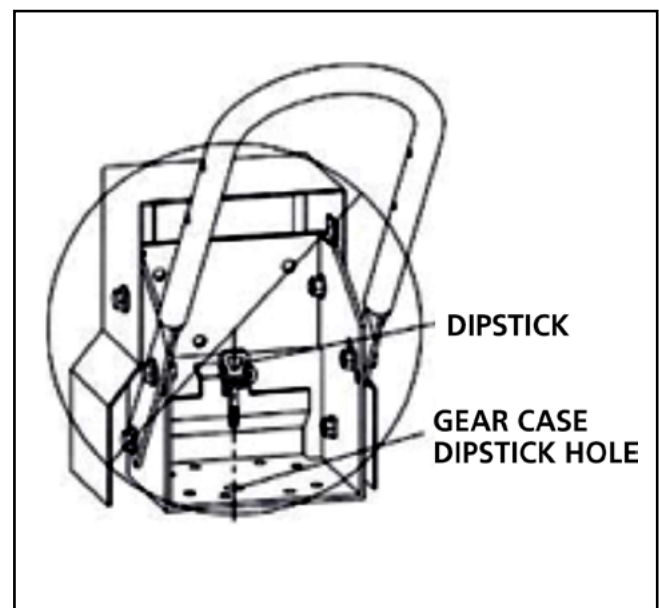
1. Draw out the dipstick from the transmission cover plate.
2. Add the oil to the gearbox.

Capacity: 0.8-1litre

Oil type: SAE 80-90W

NOTE: When you add the oil, please make the case driving the tyre higher than the case driving the tyne, to help drain the oil through the gearbox completely.

3. After filling the oil, put the dipstick into the transmission cover plate.



ADJUSTMENT

! IMPORTANT

The engine should be off before adjusting any controls.

Wheel Lock Pins

To place wheels in tilling position:

1. Remove the lock pin. Align the hole in axle with the hole in the wheel hub.
2. Insert the lock pin through the holes, fold lock pin ring to secure pin to the axle.
3. The wheel and axle should be firmly locked together before tilling.
4. Repeat for the other wheel.

To place the wheel in free-wheel position:

1. Remove the lock pin. Slide the wheel inward toward the machine.
2. Insert the pin in the axle.
3. The wheel should turn freely on the axle.



! IMPORTANT

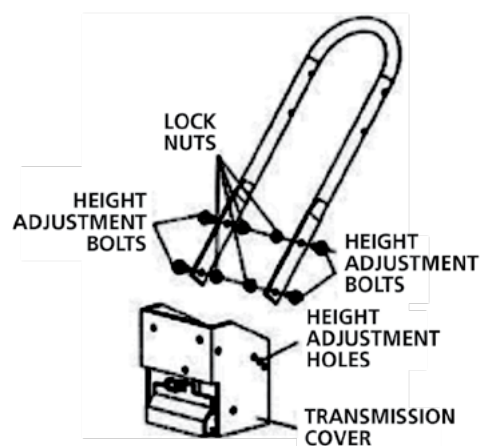
NOTE: Always have both wheel lockouts in or out. **DO NOT** operate tiller with only one wheel locked.

Handlebar Height Adjustment

Adjust handlebar height. The ideal height of the handlebar varies with operator height and the depth of tilling.

To adjust the height of handlebar:

1. Unscrew the nuts and remove top bolt on each side until the handlebar moves freely up and down.
2. Align handlebar to the desired hole on the transmission cover.
3. Install the bolts and nuts and retighten.



ADJUSTMENT

Depth Regulator

Tilling depth is controlled by the height of the depth regulator.

To adjust tilling depth:

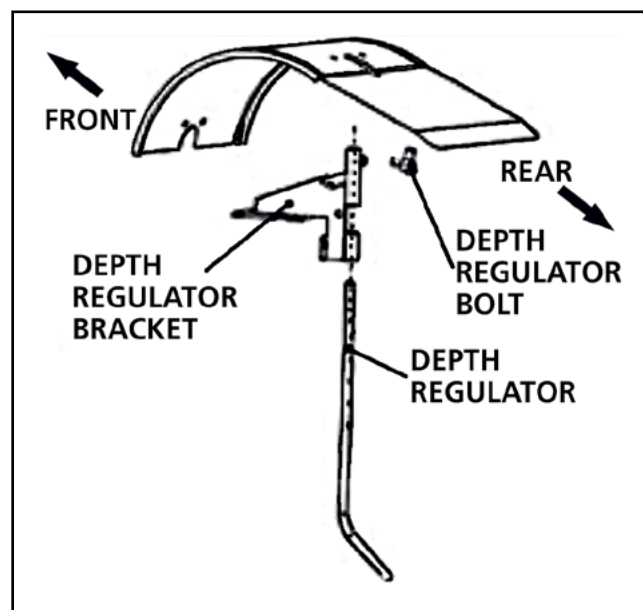
1. Remove depth regulator pin.
2. Raise the depth regulator to position the tynes at the chosen tilling depth.
3. Align hole in the depth regulator with the hole in the depth regulator bracket and replace depth regulator pin.

Depth Regulator Down = Shallower tilling.

Place the depth regulator pin in the top hole of the depth regulator for the shallowest tilling.

Depth Regulator Up = Deeper tilling.

Place the depth regulator pin in the bottom hole of the depth regulator for deepest tilling.



Belt Tension Adjustment

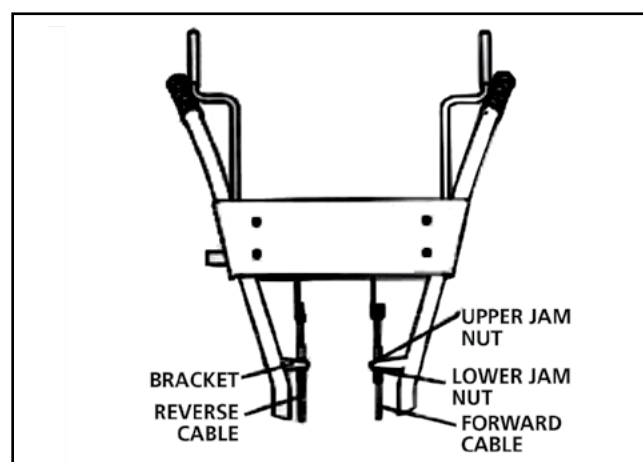
Proper belt tension is critical to good performance.

After 1/2 hour of operation, all cables may have to be adjusted due to initial stretch. Thereafter, check tension after every 2 hours of operation.

To increase belt tension:

1. Loosen the upper jam nut.
2. Turn nut up the cable in 3mm increments.
3. Tighten the lower jam nut.
4. Check adjustment.

This procedure can be repeated until the conduit adjustment bolts have no more adjustment left. If no more adjustment can be made, the belt may have to be replaced.



OPERATION

Pre-Start Inspection

1. Make sure all safety guards are in place and all nuts and bolts are secure.
2. Check oil level in engine crankcase. See your engine manual for procedure and specifications.
3. Check the fuel supply. Fill the fuel tank no closer than inch from top of tank to provide space for expansion.see your engine manual for fuel recommendations.
4. Inspect the air cleaner for cleanliness. See your engine manual for procedure.
5. Be sure spark plug wire is attached and the spark plug is tightened securely.
6. Check position of wheels and wheel lockouts.
7. Check depth regulator position.

WARNING

NEVER start engine or operate tiller with Wheels in free-wheel position.

WARNING

Always set the depth regulator pin in the highest hole of the depth regulator before starting engine.

CAUTION

DO NOT start the tiller until you have read the manual that came with your engine, and this manual. If you have read these, follow the steps to start. Always perform the pre-start checklist before starting the engine.

START-UP

The controls required to start and run the commercial cultivator tiller engine are located on the engine and are marked "**Choke**" and "**Throttle**".

A more detailed description of engine operation and all related precautions and procedures can be found in the engine manual.

WARNING

Carbon monoxide gas is toxic. Breathing it can cause unconsciousness and even death. Avoid any areas or actions that expose you to carbon monoxide.

Cold Starts

1. Move the choke lever to full choke position.
2. Move the throttle lever to the "**start**" position.
3. Pull the starting rope out slowly one time and allow to return normally.
4. Pull the starting rope out rapidly, and allow the rope to return normally.
5. When the engine starts, gradually move the choke lever to the "**no choke**" position and increase the throttle speed.

Restarting a Warm Engine

Restarting an engine that is already warm from previous running does not normally require use of the choke.

1. Move the throttle lever to the "**start**" position.
2. Pull the starting rope out rapidly until the engine starts. Allow the rope to return normally.
3. Adjust the throttle speed to "**high**" for best tiller action.

Idle Speed

Use the "**low**" position on the throttle lever to reduce stress on the engine when tilling is not being performed.

Lowering the engine speed to the "**idle**" position will help extend the life of the motor, as well as conserve fuel and reduce the noise level of the equipment.

Operating Speed

For normal tilling, set the throttle lever to the "**fast**" position.

TILLING

1. Adjust the depth regulator lever to desired tilling depth.

! WARNING

DO NOT adjust tilling depth unless drive safety control levers are released to neutral position. Raise the depth regulator lever up one hole at a time, testing tiller operation adjustment. Raising depth regulator lever too high can result in loss of control of the tiller!

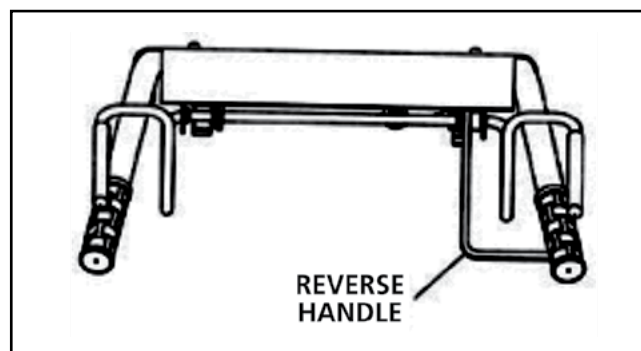
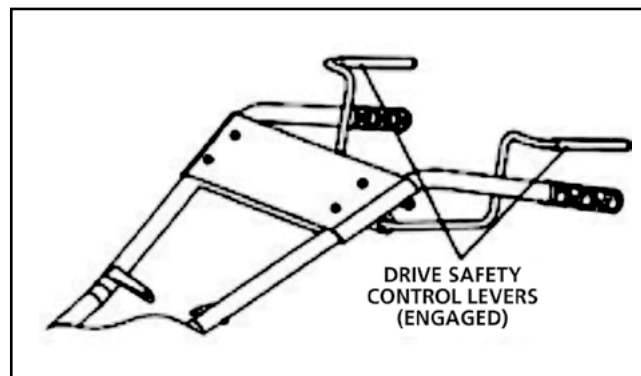
2. Move the engine throttle control to fast.
3. Place the tiller in forward by pushing down on the drive safety control levers -this will engage the wheels and tynes.
4. Releasing drive safety control levers disengages the wheels and brings the tiller to a complete stop. It is now in the neutral position.

NOTE: You can slow the tiller's forward advance at any time by putting slight downward pressure on the handlebars, or you can stop the tiller by releasing the drive safety control levers to the neutral position.

5. Pulling reverse handle back towards operator engages wheels and tynes in reverse.

! IMPORTANT

Practice operating the controls and tiller with tynes out of the ground before beginning to till. It is important that you know how to use the tiller properly, how to keep control at all times, how to stop the tynes and wheels from turning ,and how to stop the engine if necessary.



Extreme caution should be used when operating tiller in the reverse direction.

DO NOT operate both the reverse handle and drive safety control levers at the same time.

TILLING

Tilling Tips

The key to successful tilling is to begin with a shallow cut on the first pass, and then work an inch or two deeper on each successive pass.

- Tilling depth will vary with ground conditions.
- When beginning to till in unbroken ground or in extremely hard soil, set the depth regulator pin in the highest hole of the depth regulator, this will allow for shallow tilling. With the depth regulator in this position, make several light passes over the area to be tilled, Reset for deeper depths with successive passes.
- If tiller jumps or skids uncontrollably, lower the depth regulator by placing the depth regulator pin in a higher hole. This will allow for shallower tilling. Hold the handlebars firmly to control sudden lurches.
- If weeds, tall grasses, vines, or other materials clog or jam the tynes, reverse the tiller to unwind the vegetation. Immediately release the drive control levers if the tynes jam or you strike a foreign object. With the drive control levers in neutral, push the throttle control to the stop position and turn off the engine. Disengage the spark plug wire. When tynes have stopped, remove foreign objects and check for damage.

Cultivating Tips

If you plan to use your tiller for cultivating:

- Plant rows on 50cm to 55cm centres for ease of turning.
- Set the depth regulator with the depth regulator pin in one of the higher holes. This will allow the shallow cultivation necessary to turn over weeds, and break up and aerate the soil.

MAINTENANCE

Keeping the tiller in top running condition will prolong the tiller's life, and help it obtain optimum performance whenever you wish to till your garden. To help you properly care for the BBT Commercial Cultivator Tiller, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a qualified mechanic.

- Good maintenance is your responsibility, poor maintenance is an invitation to trouble. Follow good shop practices.

Keep service area clean and dry.

Be sure electrical outlets and tools are properly grounded. Use adequate light for the job at hand.

- Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:

Carbon monoxide poisoning from engine exhaust.

Be sure there is adequate ventilation whenever you operate the engine. **NEVER** operate the engine in an enclosed building.

Burns from hot parts.

Let the engine and exhaust system cool before touching.

Injury from moving parts.

DO NOT run the engine unless instructed to do so.

- Read the instructions before you begin, and make sure you have the tools and skills required.
- To reduce the possibility of fire or explosion, be careful when working around fuel. Use only a non-flammable solvent, not petrol, to clean parts. Keep cigarettes, sparks and flames away from all fuel-related parts.
- Always use personal protection devices such as eye, hand and hearing protectors when performing any service or maintenance.
- Frequently check tiller tynes. They should be free of nicks and cracks and securely fastened in place.
- Periodically tighten all bolts, nuts, screws, and check that all pins are properly installed to make certain unit is safe to operate.
- When completing maintenance or service, make sure all safety guards and devices are installed before using the tiller.
- Where replacement parts are necessary for periodic maintenance and servicing, use only new, original replacement parts or their equivalents for repair and replacement to restore your equipment to original specifications.
- The manufacturer and/or distributor will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
- A first aid kit should be kept readily accessible while performing maintenance on this equipment.

MAINTENANCE

Maintenance Schedule

The maintenance schedule applies to normal operating conditions. If you operate your engine under unusual conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

		Before each use	First month or every 20 hours	Every 3 months or every 50 hours	Every 6 months or 100 hours	Every year or 300 hours
Drive Belt Tension	Check	X				
	Change	X				
Engine Oil	Check level	X				
	Change		X		X	
	Check level	X				
Air Filter	Check	X				
	Clean					
	Replace			X (1)	X (1)	
Tiller Transmission Oil	Check	X				X
	Replace			X		
Tire Pressure	Check	X				
Tine Shaft	Clean	X				
Wheel Axle Shaft	Lubricate			X		

1) Service more frequently when used in dusty areas.

WARNING

To prevent accidental starting: Engine must be turned off and cool, and wire must be removed and secured from spark plug before checking and adjusting engine or equipment.

Check Tyre Pressure

Recommended tyre pressure is 20 PSI. If tyres do not have equal pressure, tiller will pull to one side.

Lubrication

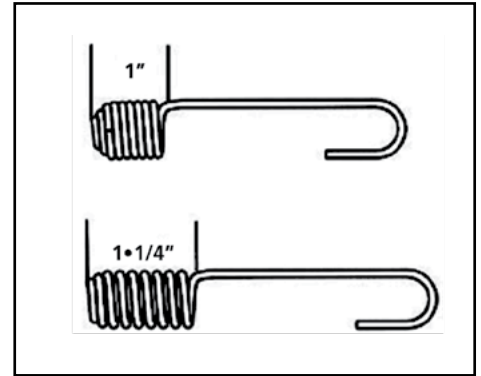
Proper lubrication of moving mechanical parts of your Tiller is a very important part of care and maintenance. You should oil the moving parts shown at 10 hour intervals using a SAE 30 oil.

MAINTENANCE

Check Forward Belt Tension

Forward belt tension may decrease over time. It must be adjusted within the first half hour of operation, and checked after every two hours of operation. Proper adjustment will assure long belt life. Too much or too little belt tension will cause premature belt failure. To check and adjust the forward belt tension:

1. Turn off engine. Engine must be cool.
2. Remove and secure spark plug wire from spark plug.
3. With drive safety control levers in neutral position, measure length of spring when compressed.
4. Pull down on drive safety control levers and re-measure length of spring when stretched out. Ideal length would be 1/4" longer.

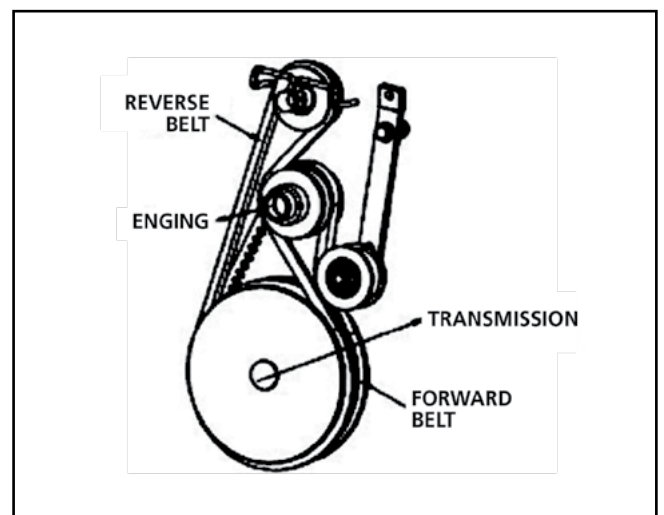


Check Reverse Belt Tension

Reverse belt tension is not adjustable.

Change Forward/Reverse Belt

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire and secure from spark plug.
3. Remove belt guard.
4. Remove the forward belt from engine pulley.
 - Gently pull the engine recoil rope to rotate the pulley.
 - With the pulley turning, force the forward belt out of the V-groove.
 - Slide the belt free of the engine pulley
 - Pull the forward belt down and out of the way.
5. Remove the reverse belt from the reverse engine pulley:
 - Gently pull the engine recoil rope to rotate the pulley.
 - With the pulley turning, force the reverse belt out of the V-groove.
 - Slide the belt free of engine pulleys and reverse belt guides.
 - Pull belt down and away from transmission pulley.
6. Install new reverse belt:
 - Thread belt up from bottom.
 - Place belt around transmission pulley in groove.
 - Place belt under reverse belt guides.
 - Gently pull engine recoil rope while forcing the belt over the edge of the engine pulley into the V-groove.
7. Install new forward belt:
 - Place forward belt in transmission pulley groove.
 - Gently pull the engine recoil rope to rotate the pulley while forcing the forward belt into the V-groove.
8. Replace belt guard.
9. Attach spark plug wire.



MAINTENANCE

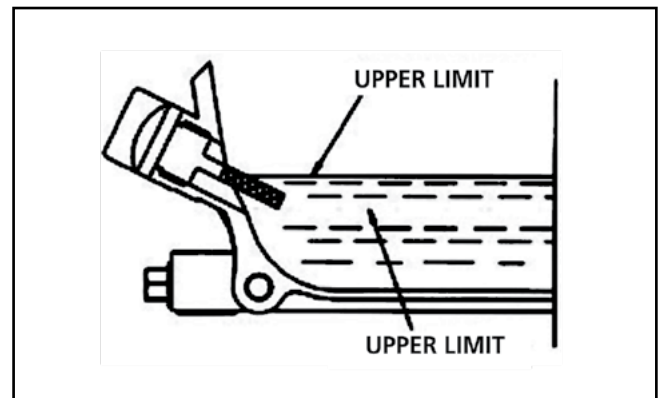
Engine Maintenance

Refer to the engine manual for information on engine maintenance. The engine manual provides detailed information and a maintenance schedule for performing the following tasks:

1. Check oil level before each use or after every 8 hours of operation.
2. Change oil after first 5-8 hours of operation. Change oil while engine is warm. Refill with new oil of recommended grade of SAE30.
3. Check spark plug yearly or every 100 hours of operation.
4. Service air cleaner.
5. Keep engine and parts clean.
6. Check engine and equipment often for loose nuts and bolts and keep tightened.

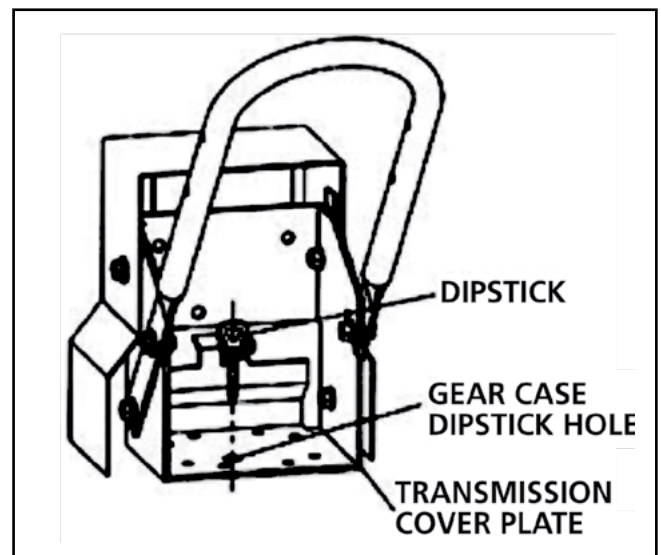
Check or Fill Engine Crankcase

1. Add oil according to engine manual. **DO NOT** overfill.
2. Use a clean, high quality detergent oil. **DO NOT** mix oil with fuel. Oil level must be full. Check the oil level by removing oil fill plug. Oil level should be up to the bottom of the fill plug opening.
3. Always check oil level before starting engine. Refer to engine manual for capacity and type of oil to use.



Check the oil level in the gearbox:

1. Move tiller to level ground.
2. Replace oil level, dipstick is located between the handlebar mounts in the front transmission cover. Correct oil level is indicated between the high and low levels on the dipstick.
3. Replace oil level dipstick in the filler hole.
4. **NOTE** that the front wheel transmission and rear tyne transmission are one common reservoir. When you add to the front transmission, you must wait a short period of time for the oil to flow rearward and equalize in both front and rear. The dipstick will read correctly on level ground for both gear units.



Clean Tyne Axle Shaft

1. Turn off engine. Engine must be cool.
2. Remove spark plug wire and secure from spark plug.
3. Tip the tiller forward. Block the tiller in position so that it rests on the engine mount and the tynes are exposed.
4. Remove all vegetation, string, wire, and other material that may have accumulated on the axle between the inside set of tynes and the seal on the transmission housing.
5. Tip the tiller back to a level position.
6. Replace spark plug wire.

STORAGE

Follow the steps below to prepare your tiller for storage. Read your engine manual for detailed instructions on preparing the engine for storage.

1. Protect wheels and axles from rust:
 - Loosen locking bolt inside wheel. Slide wheel towards machine.
 - Coat the axles lightly with axle grease.
 - Move wheel back into position and snug locking bolt.
 - Back off locking bolt 1/16 turn and lock jam nut.
2. Drain fuel system completely following engine manufacturer's instructions or add fuel stabilizer to prevent fuel from gumming up during extended periods of storage.
3. While engine is still warm, drain the oil from the engine. Refill with fresh oil the recommended grade.
4. Clean external surfaces and engine.
5. Plug hole and pull starter cord slowly to distribute oil evenly.
6. Reinstall spark plug.
7. Transport unit to a suitable storage location. If you choose to use a fuel stabilizer and have not drained the fuel system, follow all safety instructions and storage precautions in this manual to prevent the possibility of fire from the ignition of fuel fumes. Remember, fuel fumes can travel to distant sources of ignition and ignite, causing risk of explosion and fire.
8. Store the unit in an area away from human activity.
9. If there is any possibility of unauthorized use or tampering, remove the spark plug and store it in a safe place before storing your BBT Commercial Tiller unit away. Be sure to plug the spark plug hole to prevent foreign material from entering.

WARNING

DO NOT store tiller in an unventilated area where fuel fumes may reach flame, sparks, pilot lights or an ignited object. Drain fuel outdoors away from any ignition sources. Use only approved fuel containers.

TROUBLESHOOTING

While normal care and routine maintenance will extend the life of your BBT Commercial Tiller, prolonged or constant use may eventually require a service to be performed to allow it to continue operating properly. The troubleshooting guide below lists the most common problems, causes and remedies.

PROBLEM	REMEDY / ACTION
Engine will not start	Add fuel to the fuel tank.
	Connect spark plug wire to spark plug.
	Throttle must be positioned at choke for a cold start.
Engine is hard to start	Drain old fuel and replace with fresh. Use fuel stabilizer at the end of the season.
	Make sure spark plug wire is securely attached to spark plug.
	Drive safety control levers must be released to neutral to start the engine.
Engine misses or lacks power	Raise the tynes for shallower tilling by lowering the depth regulator.
	Clean or replace air cleaner.
	Improper carburettor adjustment, take to authorized service centre.
	Replace spark plug and adjust gap.
	Drain and refill fuel tank.
Engine will not stop	See engine manual to check and adjust throttle linkage
Tiller moves forward during starting	Drive safety control levers must be released to neutral to start the engine
Tiller is difficult to control when tilling	Lock wheels in tilling position.
	Raise the tynes for shallower tilling by lowering the depth regulator.
Tynes turn, wheels do not turn	Lock wheels in tilling position.
	Internal transmission failure, contact customer service.
Tynes turn, wheels turn, tiller does not move	Lower the tynes for deeper tilling by raising the depth regulator
Belts squeal in neutral and/or reverse	Adjust forward belt guide: <ul style="list-style-type: none"> • Turn engine off and allow muffler to cool. • Disconnect spark plug wire and secure from spark plug. • Remove belt guard. • Pull down on drive safety control levers. • Manually bend forward belt guide so there is 1.5mm or less clearance between belt guide and belt. • Replace belt guard and spark plug wire.
Belts squeal in forward operation	Adjust tabs on the reverse belt guide: <ul style="list-style-type: none"> • Turn engine off and allow muffler to cool. • Disconnect spark plug wire and secure from spark plug. • Release drive safety control levers to neutral. • Remove belt guard.
	Adjust tabs of reverse belt guide: <ul style="list-style-type: none"> • While drive safety control levers are released, bend metal tabs on reverse belt guide to 1mm or less clearance from reverse belt. • Replace belt guard and spark plug wire.
Excessive heat build up in transmission/tyne area during tilling	Remove vegetation by following instructions in Clean Tyne Axle Shaft of Normal Care section. FOLLOW ALL SAFETY INSTRUCTIONS.
	Check transmission fluid and fill if needed

WARRANTY & SERVICE

Warranties

Bigger Boyz Toyz offer a 1-year parts warranty on all products used for domestic use from the date of purchase. For all commercial use, a 3-month parts warranty period applies, unless specified in the item listing. All conditions below are based upon the product being faulty or not performing as described. In the instance where a return is required, the purchaser is liable for any shipping cost. Warranties will only be determined by a Bigger Boyz Toyz Technician upon inspection.

Warranties do not cover accidents, misuse, neglect, natural disaster or act of God or other external causes, or damage caused by operating the equipment in a manner that is not described in the instructions.

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Parts purchases, consumable components and accessories such as chains, carry bags, batteries, hoses, grinding discs, covers, belts, cable, wheels and blades are not covered by standard warranty.

Spare Parts

Spare parts are available. Please see our website (www.bbta.com.au) or contact us at bbt@bbta.com.au for more details.

SPECIFICATIONS

Model	BBT-TILL-6.5HPBS
Engine	6.5HP M13 Briggs & Stratton Vanguard Engine
Operation	Forward and Reverse
Hight Adjustment	Up to 350mm
Tyre	12"
Fuel Capacity	4 litre
ENGINE	
HP (gross)	6.5 HP
Number of Cylinders	One
Bore x Stroke	2.69 in (68mm) x 2.20 in (56mm)
Compression Ratio	8.3:1
Ignition System	Magnetron®
Lubrication System	Splash
Carburettor	Single Barrel Float Feed

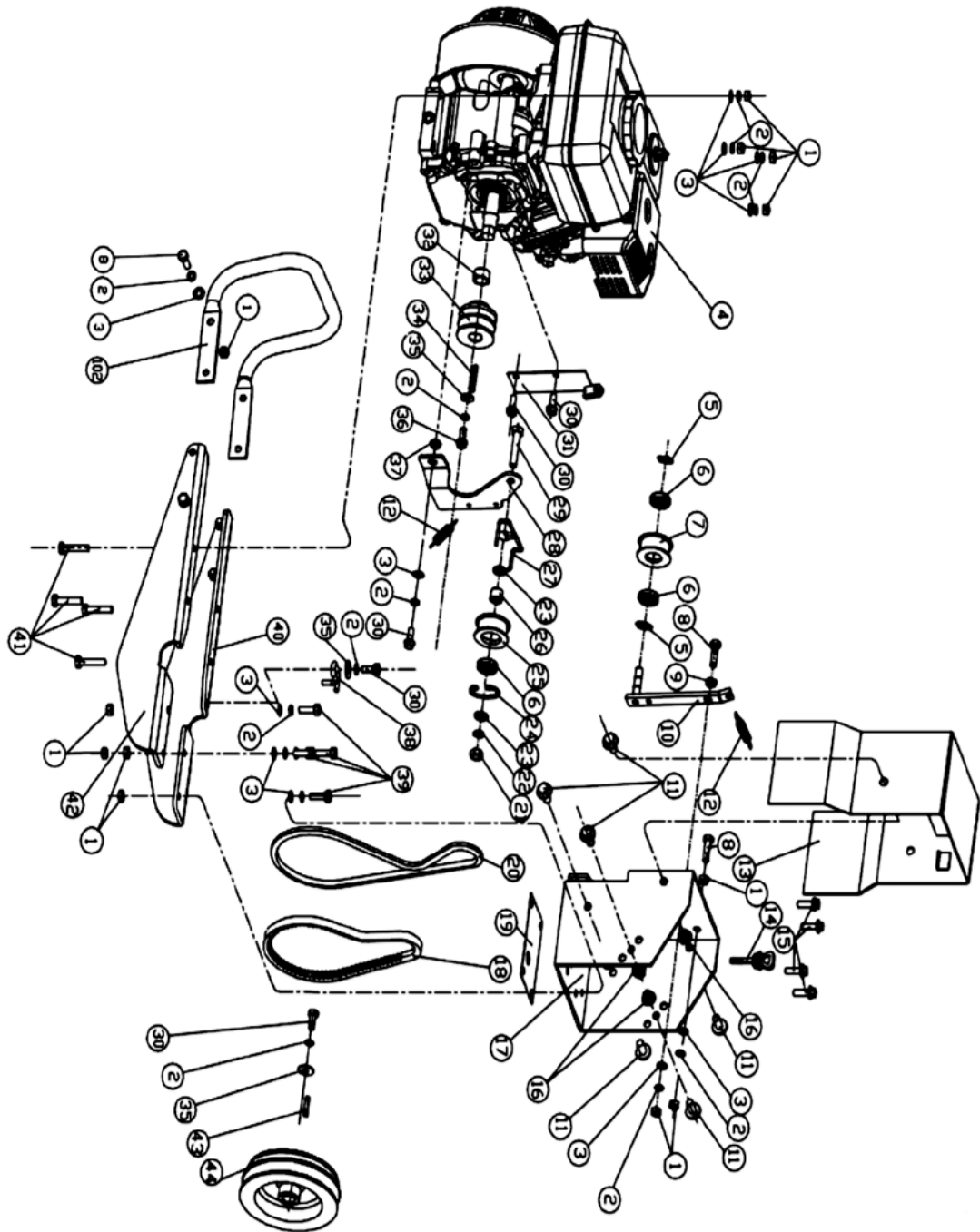
Technical Data subject to change without notice.

EXPLODED DIAGRAM & PARTS LIST

NO	SKU	DESCRIPTION	QTY
1	SP-TILL-6.5HPBS-001	Nut M8	11
2	SP-TILL-6.5HPBS-002	Spring Washer8	22
3	SP-TILL-6.5HPBS-003	Flat Washer8	19
4	SP-TILL-6.5HPBS-004	Engine	1
5	SP-TILL-6.5HPBS-005	Shaft Scheibe10	2
6	SP-TILL-6.5HPBS-006	Bearing6200RS	3
7	SP-TILL-6.5HPBS-007	Reverse/Forward Idler Pulley	1
8	SP-TILL-6.5HPBS-008	Bolt M8x30	2
9	SP-TILL-6.5HPBS-009	Washer Bushing	1
10	SP-TILL-6.5HPBS-010	Forward Idler Arm	1
11	SP-TILL-6.5HPBS-011	Bolt M8x22	6
12	SP-TILL-6.5HPBS-012	Federn	2
13	SP-TILL-6.5HPBS-013	Belt Cover	1
14	SP-TILL-6.5HPBS-014	Dipstick	1
15	SP-TILL-6.5HPBS-015	Bolt M8x25	4
16	SP-TILL-6.5HPBS-016	Nut M10	6
17	SP-TILL-6.5HPBS-017		1
18	SP-TILL-6.5HPBS-018	Forward Belt	2
19	SP-TILL-6.5HPBS-019	Transmission Cover Gasket	2
20	SP-TILL-6.5HPBS-020	Reverse Belt	1
21	SP-TILL-6.5HPBS-021	Nut M10	13
22	SP-TILL-6.5HPBS-022	Spring Washer10	13
23	SP-TILL-6.5HPBS-023	Flat Washer10	16
24	SP-TILL-6.5HPBS-024	Hole Scheibe30	1
25	SP-TILL-6.5HPBS-025	Reverse/Forward Idler Pulley	1
26	SP-TILL-6.5HPBS-026	Bushing	1
27	SP-TILL-6.5HPBS-027	Reverse Belt Guide	1
28	SP-TILL-6.5HPBS-028	Reverse Pivot Army	1
29	SP-TILL-6.5HPBS-029	Bolt M10x50	1
30	SP-TILL-6.5HPBS-030	Bolt M8x20	5
31	SP-TILL-6.5HPBS-031	Engine Bracket	1
32	SP-TILL-6.5HPBS-032	Shaft Bushing	1
33	SP-TILL-6.5HPBS-033	2 Groove Engine Pulley	1
34	SP-TILL-6.5HPBS-034	Key	1
35	SP-TILL-6.5HPBS-035	Washer8	3
36	SP-TILL-6.5HPBS-036	Hex Bolt5/16"	1
37	SP-TILL-6.5HPBS-037	Washer Bushing	1
38	SP-TILL-6.5HPBS-038	Forward Belt Guide	1
39	SP-TILL-6.5HPBS-039	Bolt M8x25	14
40	SP-TILL-6.5HPBS-040	Motor Mount Bracket I	1
41	SP-TILL-6.5HPBS-041	Bolt M8x40	4
42	SP-TILL-6.5HPBS-042	Motor Mount Bracket II	1
43	SP-TILL-6.5HPBS-043	Key5x25	1
44	SP-TILL-6.5HPBS-044	2 Groove Transmission Pulley	1
45	SP-TILL-6.5HPBS-045	Bolt M6x12	2
46	SP-TILL-6.5HPBS-046	Bolt M8x12	2
47	SP-TILL-6.5HPBS-047	Tiller Shield Hood	1
48	SP-TILL-6.5HPBS-048	Depth Regulator Bracket	1
49	SP-TILL-6.5HPBS-049	Pin3.2x30	2
50	SP-TILL-6.5HPBS-050	Left Tine	6

NO	SKU	DESCRIPTION	QTY
51	SP-TILL-6.5HPBS-051	Tine Shaft	2
52	SP-TILL-6.5HPBS-052	Bolt M10x25	12
53	SP-TILL-6.5HPBS-053	Right Tine	6
54	SP-TILL-6.5HPBS-054	Shaft Pin B10x42	2
55	SP-TILL-6.5HPBS-055	Depth Regulator	1
56	SP-TILL-6.5HPBS-056	Star Bolt	1
57	SP-TILL-6.5HPBS-057	Bolt M6x25	6
58	SP-TILL-6.5HPBS-058	Oil Seal20x35x7	1
59	SP-TILL-6.5HPBS-059	Front Bearing Cap	1
60	SP-TILL-6.5HPBS-060	Front/Rear Bearing Cap Gasket	2
61	SP-TILL-6.5HPBS-061	Bearing7024B	2
62	SP-TILL-6.5HPBS-062	Timing Washer	6
63	SP-TILL-6.5HPBS-063	Scheibe	6
64	SP-TILL-6.5HPBS-064	Driving Shaft	1
65	SP-TILL-6.5HPBS-065	Semicircular Key 6x25	1
66	SP-TILL-6.5HPBS-066	worm wheel	1
67	SP-TILL-6.5HPBS-067	Lock Pin	2
68	SP-TILL-6.5HPBS-068	Tyre	1
69	SP-TILL-6.5HPBS-069	worm wheel	1
70	SP-TILL-6.5HPBS-070	Shaft Scheibe25	2
71	SP-TILL-6.5HPBS-071	Oil Seal25x40x7	3
72	SP-TILL-6.5HPBS-072	Hole Scheibe40	3
73	SP-TILL-6.5HPBS-073	Output Shaft	1
74	SP-TILL-6.5HPBS-074	Bushing	4
75	SP-TILL-6.5HPBS-075	Tiller Transmission Casting	1
76	SP-TILL-6.5HPBS-076	Tyre	1
77	SP-TILL-6.5HPBS-077	Block the turn	2
78	SP-TILL-6.5HPBS-078	worm	1
79	SP-TILL-6.5HPBS-079	Rear Bearing Cap	1
80	SP-TILL-6.5HPBS-080	Handle Grip-drive Control Lever	2
81	SP-TILL-6.5HPBS-081	Drive Control Lever	1
82	SP-TILL-6.5HPBS-082	Reverse Handle	1
83	SP-TILL-6.5HPBS-083	Nut M5	7
84	SP-TILL-6.5HPBS-084	Bracket Drive Control Lever,Right	1
85	SP-TILL-6.5HPBS-085	Handle Grip	2
86	SP-TILL-6.5HPBS-086	ScrewM5x12	4
87	SP-TILL-6.5HPBS-087	Spring Washer5	4
88	SP-TILL-6.5HPBS-088	Flat Washer5	7
89	SP-TILL-6.5HPBS-089	Reverse Pole	1
90	SP-TILL-6.5HPBS-090	Reverse Cable	2
91	SP-TILL-6.5HPBS-091	Triangle Nut	4
92	SP-TILL-6.5HPBS-092	Bolt	4
93	SP-TILL-6.5HPBS-093	Ex-arm-rest	1
94	SP-TILL-6.5HPBS-094	Flat Washer6	2
95	SP-TILL-6.5HPBS-095	Cable Ear	2
96	SP-TILL-6.5HPBS-096	Pin2x16	2
97	SP-TILL-6.5HPBS-097	Shaft Pin6x16	2
98	SP-TILL-6.5HPBS-098	Empress Arm-rest	1
99	SP-TILL-6.5HPBS-099	Conical Spring	1
100	SP-TILL-6.5HPBS-100	Bracket Drive Control Lever,Left	1

EXPLODED DIAGRAM & PARTS LIST



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