

MODEL TMG-TFL42

Firewood 3-Point Hitch Brush Branch Logger



⚠ WARNING



- Please read and understand the product manual completely before assembly
- Check against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly
- Do not return the product to dealer. They are not equipped to handle your requests.

Missing parts or questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

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1. INTRODUCTION

Congratulations on your choice of a TMG 3 Point Hitch Branch logger to compliment your operation. This equipment has been designed and manufactured to meet the needs of a discerning timber or landscaping industry.

Safe, efficient and trouble free operation of your TMG Branch logger requires that you and anyone else who will be using or maintaining the chipper, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.

This manual covers the Firewood 3-Point Hitch Branch Logger. Use the Table of contents or Index as a guide to locate required information.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your dealer or the Distributer if you need assistance, information or additional copies of the manuals.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are determined when sitting in the tractor driver's' seat and facing in the direction of travel.

2. SAFETY

SAFETY ALERT SYMBOL

This safety alert symbol means

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

Follow the instructions in the safety message.

Why is SAFETY important to you?

Accidents Disable and Kill Accidents Cost, Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The appropriate signal word for each message has been selected using the

following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

SAFETY

You are responsible for the SAFE operation and maintenance of your Firewood 3-Point Hitch branch logger.

You must ensure that you and anyone else who is going to use, maintain or work around the 3 point hitch branch logger be familiar with the using and maintenance procedures and related safety information contained in this manual.

This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the 3 Point Hitch Branch logger.

Remember, you are the key to safety.

Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program.

Be certain that **EVERYONE** using this equipment is familiar with the recommended using and maintenance procedures and follows all the safety precautions. Most accidents can be prevented.

Do not risk injury or death by ignoring good safety practices.

- 3 Point Hitch Branch logger owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.
- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand .
- ALL Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.

- A person who has not read and understood all using and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- **THINK SAFETY! WORK SAFELY!**

2.1 GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before using, maintaining, adjusting or cleaning the 3 Point Hitch Branch logger.
2. Have a first-aid kit available for use should the need arise and know how to use it.
3. Have a fire extinguisher available for use should the need arise and know how to use it.
4. Do not allow riders.
5. Wear appropriate protective gear. This list includes but is not limited to:
 - A hard hat
 - Protective shoes with slip resistant soles
 - Protective glasses, goggles or face shield
 - Heavy gloves
 - Wet weather gear
 - Hearing Protection
 - Respirator or filter mask
6. Install and secure all guards before starting.
7. Wear suitable ear protection for prolonged exposure to excessive noise.
8. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
9. Clear the area of people, especially small children, before using the unit.
10. Review safety related items annually with all personnel who will operating or maintaining the 3 Point Hitch Branch logger.

2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing equipment. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. The operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.
2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.
5. Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works. Review the safety instructions with all users annually.
6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
7. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.
8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
9. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine.
10. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the tractor and machine manuals. Pay close attention to the Safety Signs affixed to the tractor and the machine.

2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or by stander.
2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.
3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Using instructions in the manual and to follow these. Accidents can be avoided.
4. Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:
 - A. Reads and understands the operator's manuals.
 - B. Is instructed in safe and proper use.

2.4 SAFETY SIGNS

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs displayed in Section 3 each have a part number in the lower right hand corner. Use this part number when ordering replacement parts.
5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

How to Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50 °F (10 °C).
- Determine exact position before you remove the backing paper.

- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.5 PREPARATION

1. Never use the machine until you have read and completely understand this manual, the tractor Operator's Manual and each of the Safety Messages found on the safety signs on the tractor and machine.
2. Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.
3. **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!** Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db.

Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss.

NOTE: Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.

4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
5. Use only in daylight or good artificial light.
6. Be sure machine is properly mounted, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs are properly installed and in good condition.

2.6 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. 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.
3. Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
4. Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.
5. Never work under equipment unless it is blocked securely.
6. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy or leather gloves when handling blades.
7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
8. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
9. Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.
10. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

2.7 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the 3 Point Hitch Branch logger. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
2. All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed this 3 Point Hitch Branch logger to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.

3. Close and secure rotor cover before operating.
4. Close and secure all guards, deflectors and shields before starting and operating.
5. Read and understand operator's manual before starting. Review safety instructions annually.
6. Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving. Do not allow long hair, loose-fitting clothing, or jewelry to be around moving parts.
7. Keep hydraulic lines and fittings tight, in good condition and free of leaks.
8. Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
9. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
10. Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
11. Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into branch logger. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.
12. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
13. Do not allow riders on this machine at any time. There is no safe place for any riders.
14. Never allow children or unauthorized people to operate or be around this machine.
15. Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
16. Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
17. Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
18. Do not move or transport chipper when the rotor is turning.

19. Do not exceed a safe travel speed when transporting.

2.8 HYDRAULIC SAFETY

1. Make sure that all the components in the draulic system are kept in good condition and are clean.
2. Before applying pressure to the system, make sure all components are tight, and that lines, hoses and couplings are not damaged.
3. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tapes, clamps or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
4. Wear proper hand and eye protection when searching for a high pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
5. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
6. Relieve pressure on hydraulic system before maintaining or working on system.

2.9 STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks if required.

2.10 TRANSPORT SAFETY

1. Comply with state and local laws governing safety and transporting of machinery on public roads. 2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
4. Fold up and secure feed hopper before moving or transporting.
5. Be sure the machine is hitched positively to the tractor and a retainer is used through the mounting pins.
6. Do not drink and drive.

7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing road ways.
8. Never allow riders on the machine.

3 ASSEMBLING

The machine comes from the factory in a shipping configuration. Always use tools equipment and forklifts of appropriate size and capacity for the job. Always use 2 men when lifting, moving and assembling the machine.

When the machine is shipped, follow this procedure when preparing for the customer:

1. Clear the area of bystanders especially small children before starting.
2. Use a forklift to lift the pallet/machine from the truck. Carry the load close to the ground.
3. Move the machine to the assembly area. Be sure there is sufficient clearance to access the machine from all sides.
4. Cut the tie-down straps.
5. Lay-out components next to machine.
6. Use a forklift to raise and lift the frame.
7. Or alternatively attach a lifting device to the lifting bracket on top of the frame.
8. Remove pallet and place machine on the ground.
9. Tighten anchor bolts to their specified torque.
10. Connect the PTO driveline:
 - A. Raise the input shaft guard.
 - B. Check that the driveline telescopes easily and that the shield rotates freely.
 - C. Attach the driveline to the chipper input shaft by depressing the lock pin, slide yoke over the shaft and pushing on the yoke until the lock pin clicks into position.
 - D. Lower the guard to cover the input shaft.

4. OPERATION

OPERATING SAFETY

Please remember it is important that you read the operator's manual and heed the safety signs on the 3 Point Hitch Chipper. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.

Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, or plugging. Do not allow long hair, loose-fitting clothing, or jewelry to be around moving parts.

Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.

Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into branch logger. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.

Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

Do not allow riders on this machine at any time. There is no safe place for any riders.

Never allow children or unauthorized people to operate or be around this machine.

Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.

Do not move or transport chipper when the rotor is turning.

Do not exceed a safe travel speed when transporting.

Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.

Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast

5. TO THE NEW OPERATOR OR OWNER

The Firewood 3-Point Hitch Branch Logger are designed to chop scrap lumber, small trees, brush, limbs and other wood debris. The chipped material is fine enough to be composted or used in a variety of ways.

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator bystanders and the area around the worksite. Untrained operators are not qualified to use the machine.

Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to use the chipper safely and how to set it to provide maximum field efficiency. By following the using instructions in conjunction with a good maintenance program, your 3 Point Hitch Branch logger will provide many years of trouble-free service.

5.1 MACHINE COMPONENTS

The Firewood 3-Point Hitch Branch Logger is a rotor with blades for chopping wood. A hinged feed hopper moves the wood material into the rotor. Each rotor is designed with 6 blades to generate the small chops of firewood.

The tractor provides rotational power through a PTO shaft on the front of the frame and hydraulic power for the hydraulic feed hopper.

5.2 MACHINE BREAK-IN

Although there are no operational restrictions on the Branch logger when used for the first time, it is recommended that the following mechanical items be checked:

A. After operating for 1 hour:

1. Torque all fasteners and hardware.
2. Check condition of rotor bearings.
3. Check the condition and clearance of the twig-breaker, rotor and stationary blades.

adjust or replace as required.

4. Check for entangled material. Remove all entangled material before resuming work.
5. Lubricate all grease fittings.

B. After operating for 10 hours:

1. Repeat steps 1 through 5 listed above. (Section A)
2. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

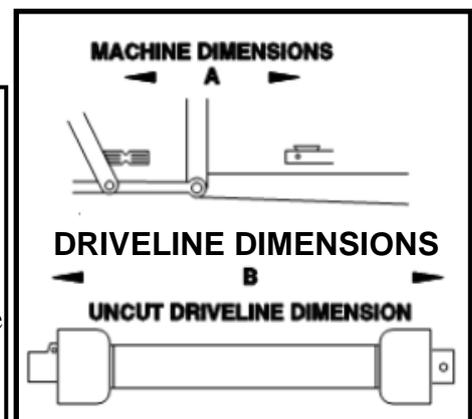
5.3 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Firewood 3-Point Hitch Branch Logger requires that each operator reads and understands the using procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining good mechanical condition that this checklist is followed. Before operating the Branch logger and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outline in the Maintenance Section.
2. Check the rotor, blades and twig-breaker. Remove any twine, wire or other material that has become entangled.
3. Check the condition and clearance of the twigbreaker, rotor and stationary blades. Adjust or replace as required.
4. Check that all bearings turn freely. Replace any that are rough or seized.
5. Make sure that all guards and shields are in place, secured and functioning as designed.
6. Check the condition of the curtain in the feed hopper. It must be in good condition to prevent chips from flying out.

5.4 DRIVELINE DIMENSION

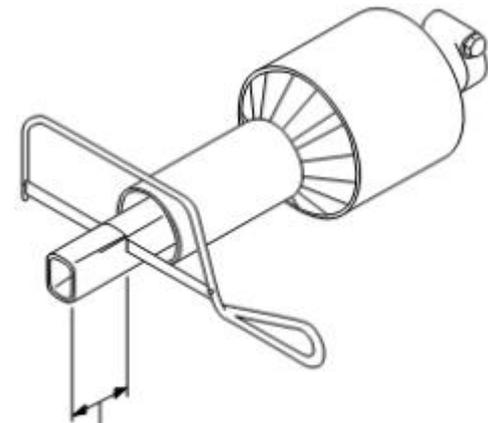
A PTO driveline is supplied with the machine. To accompany the variety of 3 point hitch geometry available today, the driveline can be too long for most machines or too short for others. It is very important that the driveline be free to telescope but not to bottom out when going through its working range. If the driveline bottoms out, the bearings on both the machine and tractor PTO shaft will be overloaded and fail in a short time.



1. To determine the proper length of the driveline, follow this procedure:

- a. Clear the area of bystanders, especially small children.
- b. Attach the chipper to the tractor but do not attach the driveline.
- c. Raise the machine until the input shaft is level with the tractor PTO shaft.
- d. Measure the dimension between the locking grooves on the tractor PTO shaft and the machine input shaft.
- e. Measure the same dimensions on the compressed driveline.
- f. If the compressed driveline dimension exceeds the machine dimension, the driveline will have to be cut.

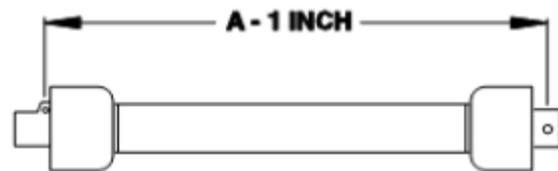
CUT OFF DIMENSION



$$(B-A) + 1 \text{ INCH} = C \text{ (CUT OFF DIMENSION)}$$

SHORTENING

SHORTENED DRIVELINE



2. When cutting the driveline, follow this procedure:

- A.** subtract the machine dimension (A) from the uncut driveline dimension (B) or (B-A). This dimension determines how much too long the driveline is.
- B.** Add another inch (25 mm) to the dimension to be sure it doesn't bottom out, to determine (C) the cut off dimension.
- C.** Use a hacksaw to cut dimension (C) from both ends. Cut both the plastic tubes and the metal cores. **d.** Use a file to remove the burrs from the edges that were cut.
- E.** Assemble the 2 ends of the shaft.
- F.** Make sure the shaft can telescope freely. If it does not, separate the 2 parts and inspect for burrs or cuttings on the shaft ends. Be sure it telescopes freely before installing.

5.5 TRANSPORTING

1. Comply with state and local laws governing safety and transporting of machinery on public roads.

2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
4. Fold up and secure feed hopper before moving or transporting.
5. Be sure the trailer is hitched positively to the towing vehicle and a retainer is used through the mounting pins.
6. Do not drink and drive.
7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
8. Never allow riders on the machine. When transporting the machine, review and follow these instructions:
 - Clear the area of bystanders, especially small children.
 - Check that all the lights and reflectors required by the highway authorities are in place, clean and working.
 - Insure that the machine is securely attached to the tractor with a retainer through the mounting pins.
 - Do not allow riders.
 - Never exceed a safe travel speed. Slow down when encountering rough road conditions and cornering.
 - Do not drink and drive.
 - Raise and secure the feed hopper before transporting.
 - Turn the discharge hood and point toward the rotor to reduce the width of the machine

6. SERVICE AND MAINTENANCE

MAINTENANCE SAFETY

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 there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.
- Never work under equipment unless it is blocked securely.
- Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling sharp components.

6.1 SERVICE

6.1.1 FLUIDS AND LUBRICANTS

1. Grease:

Use an SAE multipurpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium base grease.

2. Storing Lubricants:

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

6.1.2 GREASING

Use the Maintenance Checklist provided to keep a record of all scheduled maintenance.

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
3. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary

6.1.3 SERVICING INTERVALS

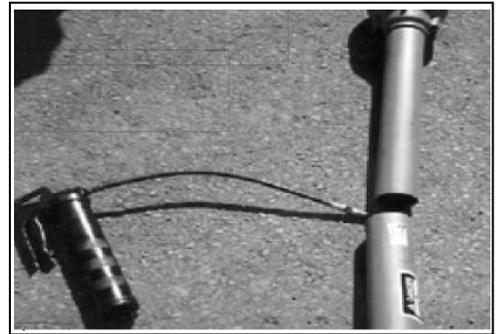
The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication or oil changes.

8 Hours or Daily

1. Grease PTO driveline.

40 Hours or Weekly

1. Grease the telescoping section of the PTO shaft.
2. Check sharpness of blades:
 - A. Rotor
 - B. Stationary Remove, sharpen or switch edge as required.



100 Hours

Grease rotor bearings.

IMPORTANT

Do not over grease.

Annually Clean machine.

6.2 MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years or trouble-free operation.

6.2.1 DRIVELINE MAINTENANCE

The PTO driveline is designed to telescope to allow for dimensional changes as the machine goes through its operational range. A tubular guard encloses the driving components and is designed to turn relative to the driving components. The driveline should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to insure that all components function as intended. To maintain the driveline, follow this procedure

1. Remove the driveline from the machine.
2. Pull driveline apart.

3. Use a screwdriver to turn lock studs on each end. There are 2 studs per guard.
4. Pull the shaft out of the plastic tubular guard.
5. Use a solvent to clean the male and female portions of the telescoping ends.
6. Apply a light coat of grease to each end.
7. Use a solvent to wash the grooves on each end where the studs are located. Clean each end also.
8. Apply a light coat of grease to each groove.
9. Insert the shaft into its respective guard and align the studs with the holes.
10. Insert the studs through the holes and seat in the groove.
11. Turn each stud to secure guard to shaft.
12. Check that each guard turns freely on the shaft.
13. Assemble the driveline.
14. Check that the driveline telescopes easily.
15. Replace any components that are damaged or worn.
16. Install the driveline on the machine



Guard Removal



**Disassembled
DRIVELINE COMPONENTS**

7. TROUBLE SHOOTING

The Firewood 3-Point Hitch Branch Logger is designed with blades on a rotor to cut, shear and chip wooden material. It is a simple and reliable system that requires minimal maintenance.

In the following section, we have listed many of the problems, causes and solutions to the problems that you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please call your local distributor or dealer. Before you call, please have this Operator's Manual from your unit and serial number ready.

PROBLEM	CAUSE	SOLUTION
Rotor does not turn	Obstructed discharge	Shut down and clear debris
	Rotor plugged	Clear rotor
	Broken shear pin	Replace shear pin
Slow feeding	Knives are dull	Sharpen knives
	Blade angle wron	Re-sharpen knives to specified angle
	Discharge hood clogged	Clear discharge hood
Chipper requires excessive power or stalls	Obstructed discharge	Clear discharge hood
	Rotor plugged	Clear rotor
	Green material will not discharge	Allow material to dry or alternately feed in dry material
	Dull knives	Sharpen knives
High power required	Plugged rotor	Clear rotor.
	Dull knives.	Sharpen knives.
Vibration while running	Driveline vibration.	Check driveline phasing.
		Yokes must be aligned.
		Check rotor to see if it wobbles.
		Check to see if rotor is assembled correctly.

8. TFL42 CONVEYOR INSTRUCTION STEP

Step 1: Unlock Lock plate.



Step 2: Loose winch, lay conveyor on ground and tight bolts on both sides



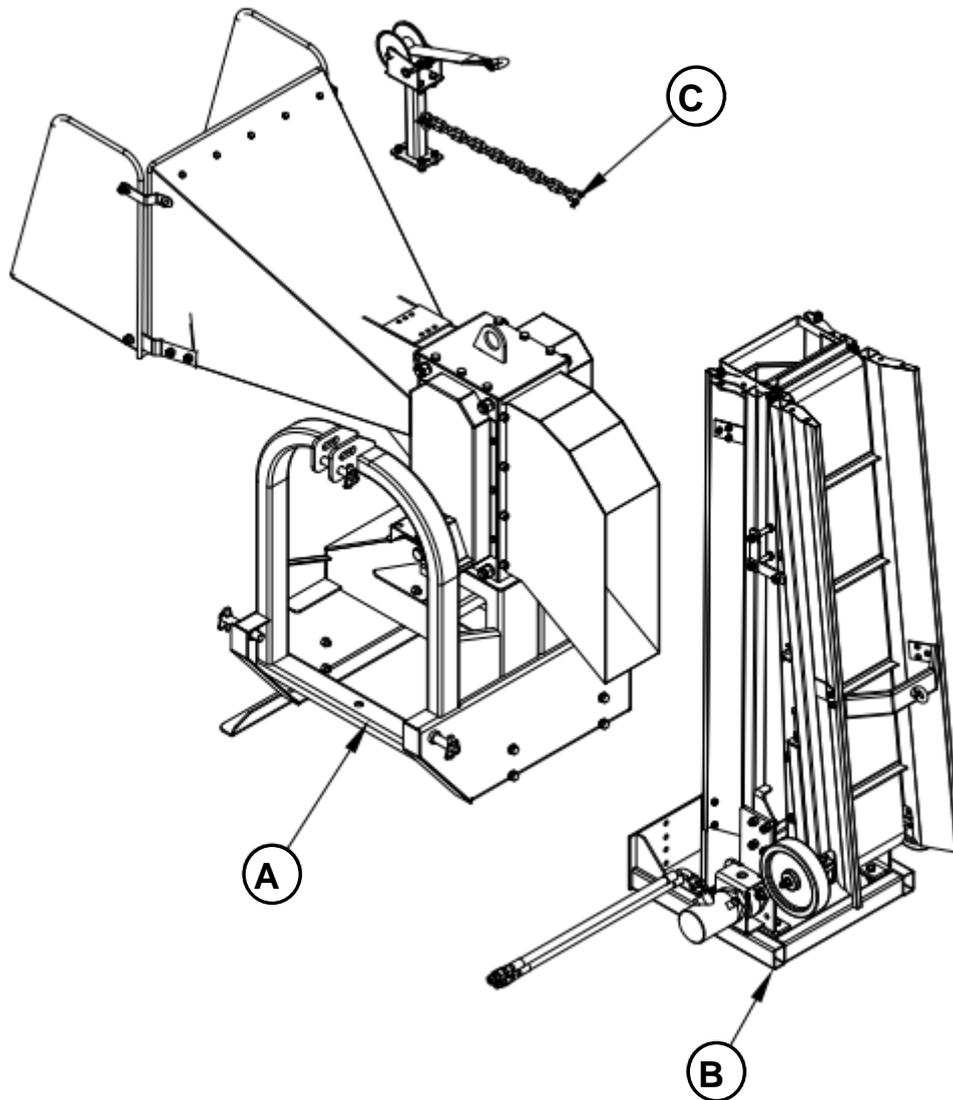
STEP 3: Turn winch and adjust conveyor to proper angle



STEP 4: Start tractor engine and machine is ready for wood feeding.

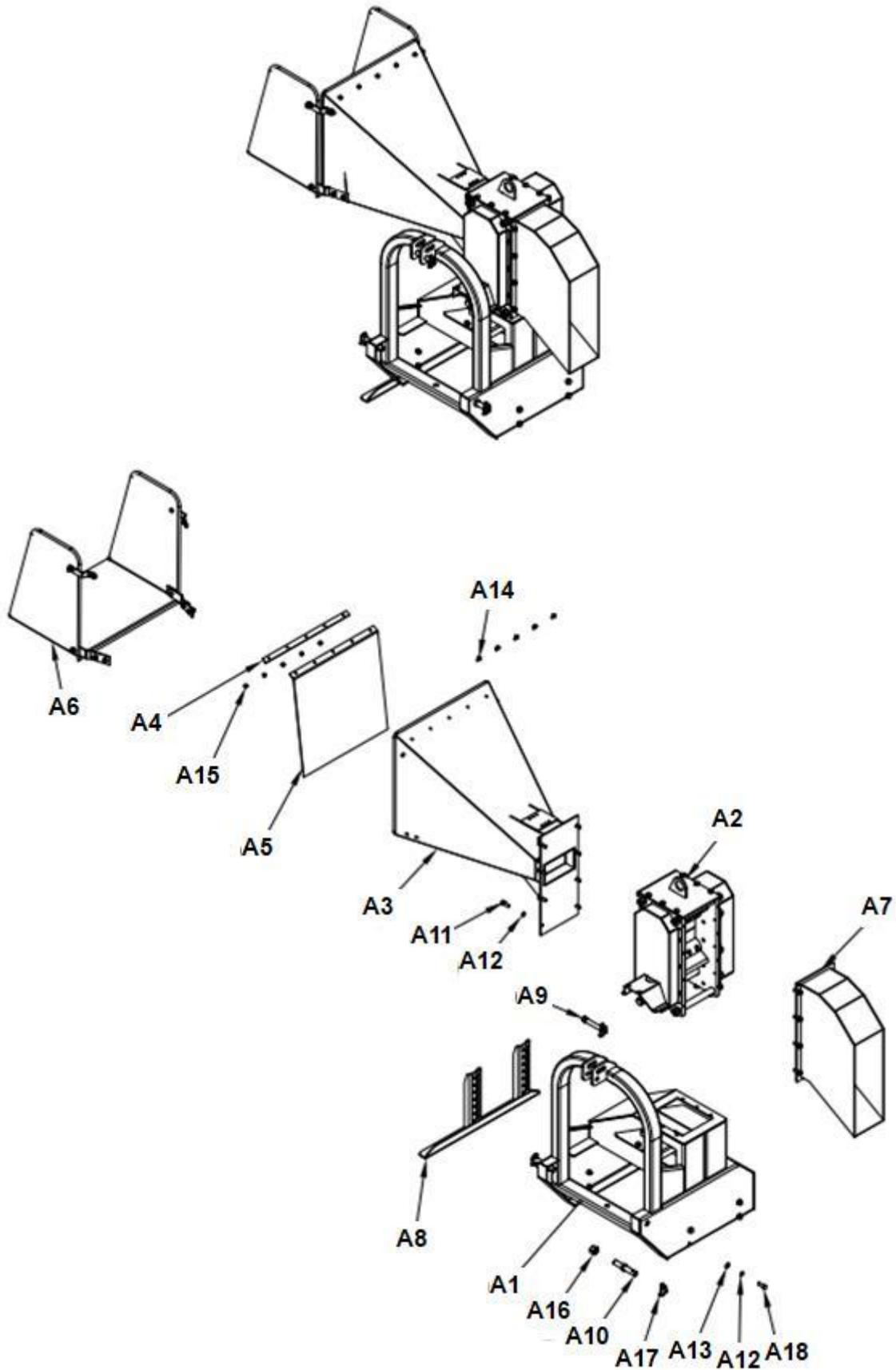
STEP 5: Stop tractor engine, fold conveyor to transportation position

9. Exploded view and parts list



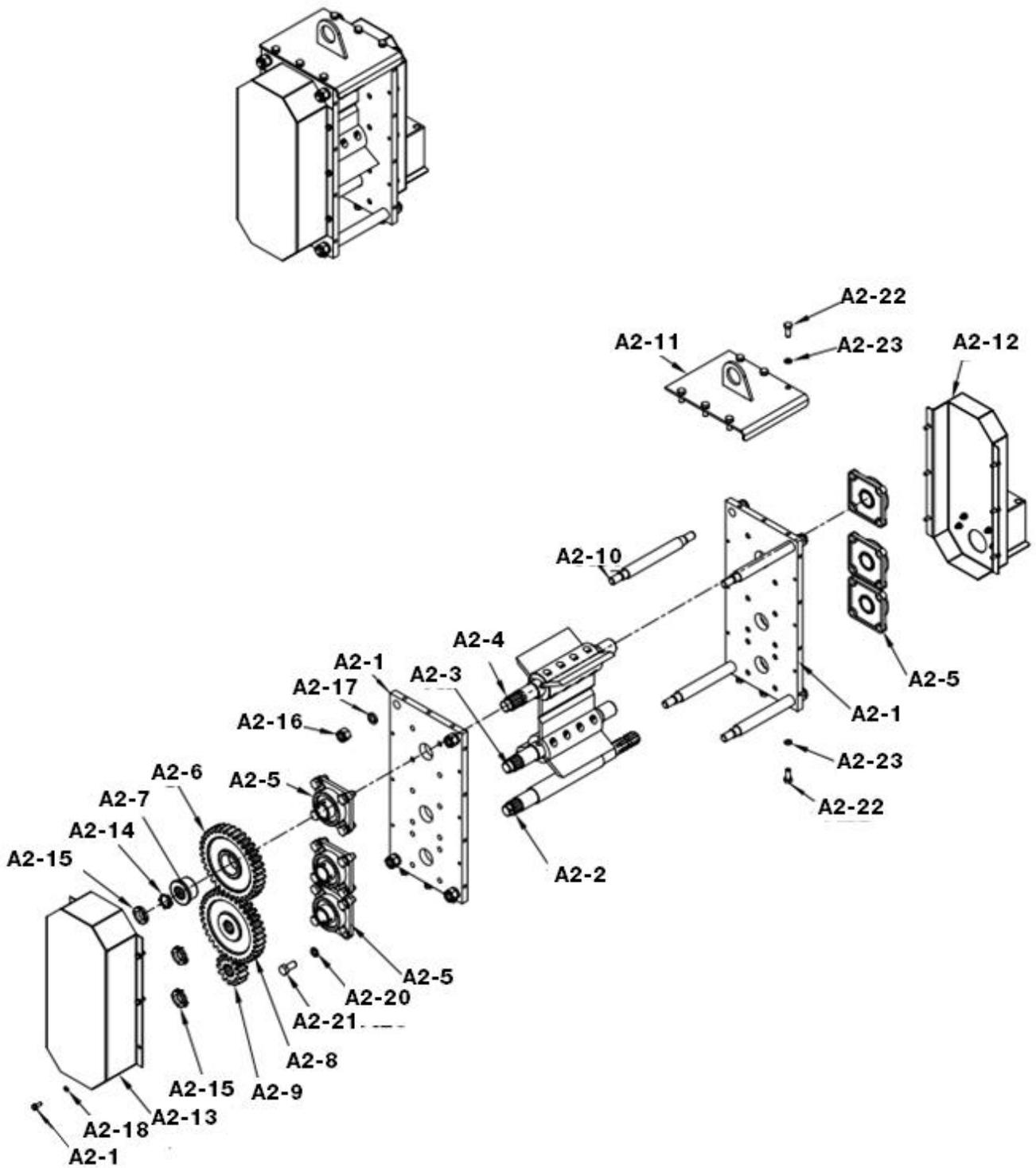
TNG-TFL42 Part List (1)			
Parts Code	PART No	Description	Qty
A	TR110.001B	WOOD R,ASSEMBLY	1
B	TRS110A.000	CONVEYOR,ASSEMBLY	1
C	TRS110A.009	WINCH,ASSEMBLY	1

9.1 (A) WOOD R, ASSEMBLY Exploded view and parts list.



(A) WOOD R, ASSEMBLY Part List (2)			
Parts Code	PART No	Description	Qty
A1	TR110.015	BASE, WELDMENT	1
A2	TRS110.002	CUTTERMECHANISM,ASSEMBLY	1
A3	TRS110.013	FEED CHUTE, WELDMENT	1
A4	TRS110.113	PLATE	1
A5	TRS110.114	FLAP	1
A6	TRS110.005	EXTRA-CHUTE,ASSEMBLY	1
A7	TRS110.014D	DISCHARGECHUTE, WELDMENT	1
A8	BX40S.00.012	R-SUPPORT.WELDMENT	1
A9	TMC120.106	UPPER HITCH PIN	1
A10	FM150.114	LOWER HITCH PIN	2
A11	GB70.1-M12x30	SCREW M12x30	16
A12	GB93-12	LOCK WASHER 12	24
A13	GB97.1-12	PLAIN WASHER 12	8
A14	GB5783-M8x30	BOLT M8x20	5
A15	GB889.1-M8	LOCK NUT M8	5
A16	GB6176-M22x1.5	NUT M22x1.5	2
A17	LP-11x45	LOCK PIN 11x45	3
A18	GB5783-M12x35	BOLT M12x35	8

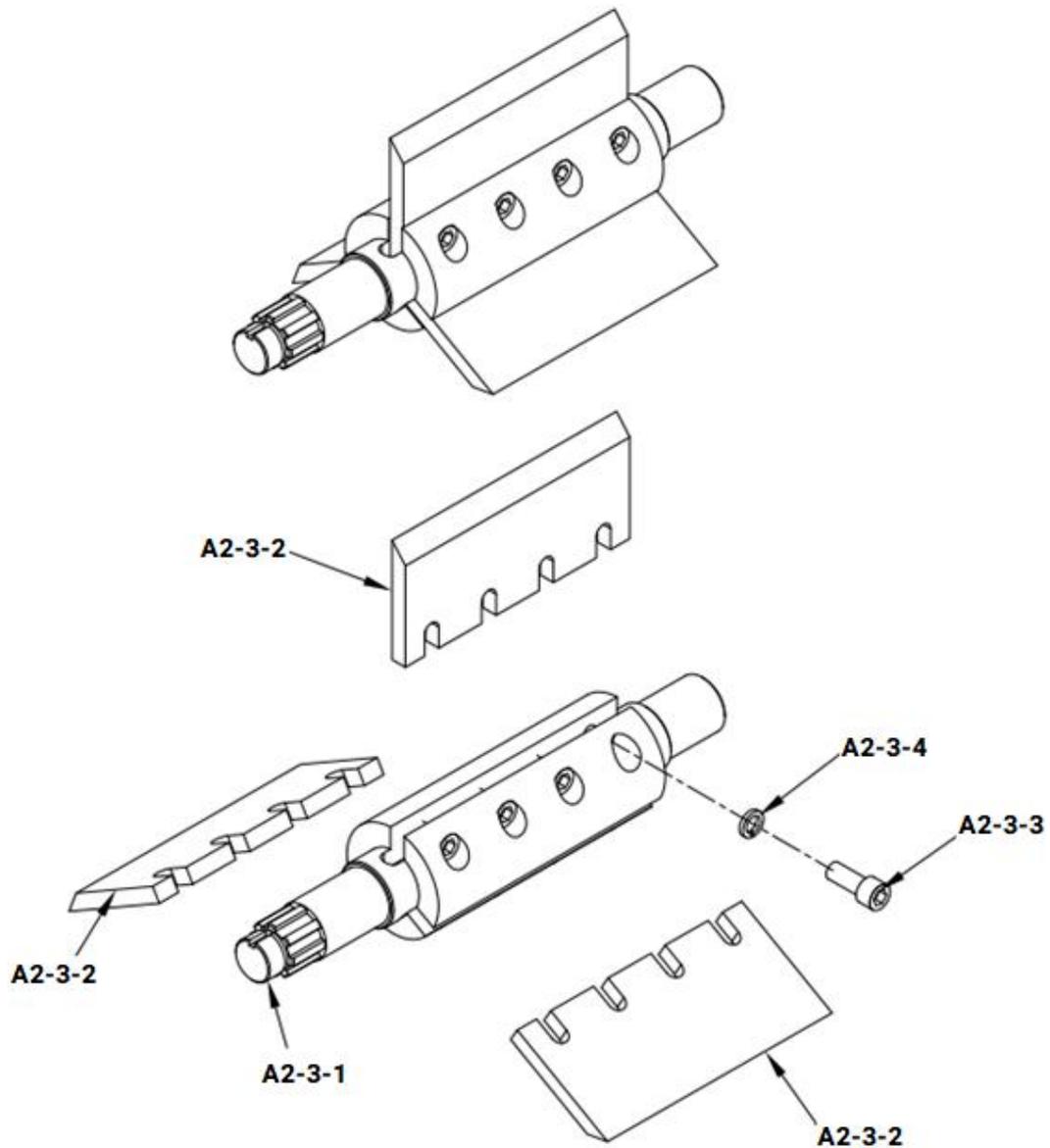
9.1.1 (A2) CUTTER MECHANISM, ASSEMBLY Exploded view and parts list.



(A2) CUTTER MECHANISM, ASSEMBLY Part List (3)

Parts Code	PART No	Description	Qty
A2-1	TR110.107	WALL	2
A2-2	TRS110.106	SHAFT-III	1
A2-3	TRS110.003	LOWER-CUTTER,ASSEMBLY	1
A2-4	TRS110.004	UPPER-CUTTER,ASSEMBLY	1
A2-5	GB7810-UCF208	BEARING WITH SEAT UCF208	6
A2-6	TR110.101	DRIVEN GEAR	1
A2-7	TR110.111	SPLINED HUB	1
A2-8	TR110.102	MID GEAR	1
A2-9	TR110.103	DRIVING GEAR	1
A2-10	TR110.109	FIXED ROD	4
A2-11	TR110.011	HEAD COVER. WELDMENT	1
A2-12	TR110.006	PTO-COVER,ASSEMBLY	1
A2-13	TR110.017	GEAR-COVER, WELDMENT	1
A2-214	GBT858-30	LOCK WASHER 30	3
A2-15	GB889.1-M30x1.5	ROUND NUT M30x1.5	3
A2-16	GB889.1-M20	LOCK NUT M20	8
A2-17	GB93-20	LOCK WASHER 20	8
A2-18	GB93-8	LOCK WASHER 8	6
A2-19	GB5783-M8x20	BOLT M8x20	6
A2-20	GB93-16	LOCK WASHER 16	24
A2-21	GB5783-M16x35	BOLT M16x35	24
A2-22	GB5783-12x30	BOLT M12x30	12
A2-23	GB93-12	LOCK WASHER 12	12

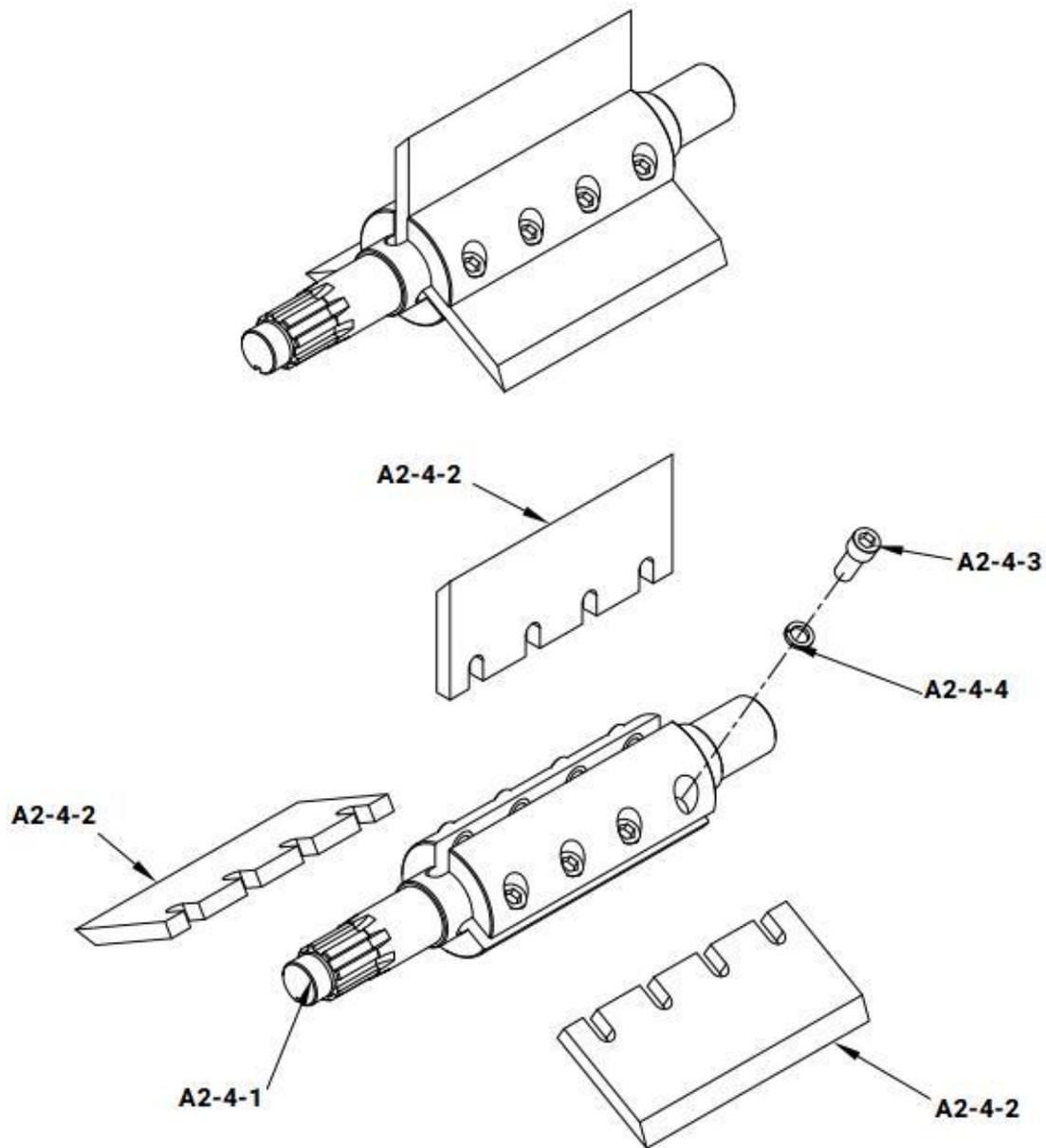
9.1.2 (A2-3) LOWER-CUTTER, ASSEMBLY Exploded view and parts list.



(A2-3) LOWER-CUTTER, ASSEMBLY Part List (3)

Parts Code	PART No	Description	Qty
A2-3-1	TR110.105	SHAFT-II	1
A2-3-2	TRS110.108	BLADE	3
A2-3-3	GB70.1-M12x30	SCREW M12x40	12
A2-3-4	GB93-12	LOCK WASHER 12	12

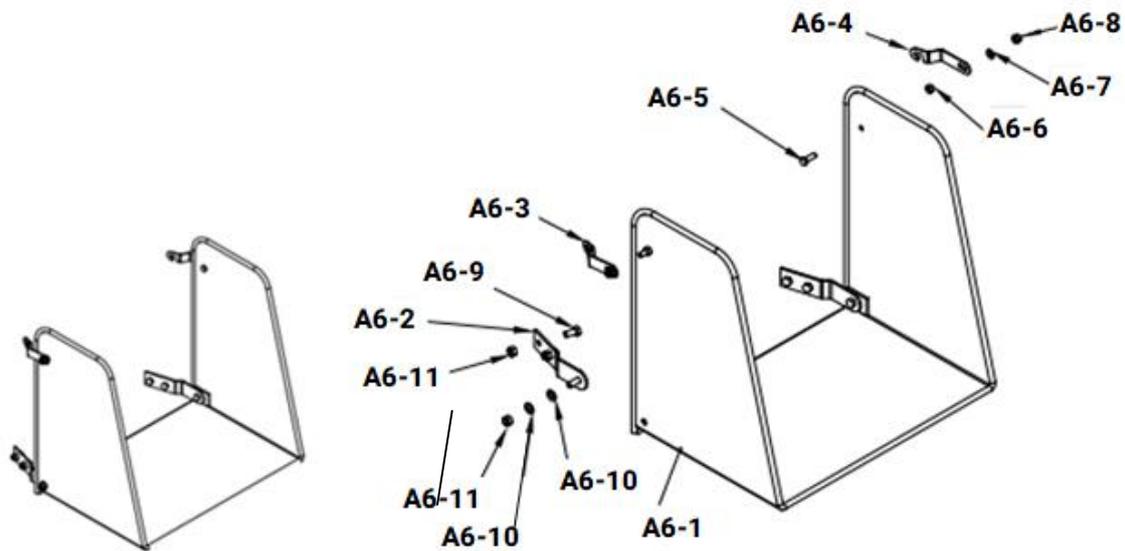
9.1.3 (A2-4) UPPER-CUTTER, ASSEMBLY Exploded view and parts list.



(A2-4) UPPER-CUTTER, ASSEMBLY Part List (4)

Parts Code	PART No	Description	Qty
A2-4-1	TR110.104	SHAFT-I	1
A2-4-2	TRS110.108	BLADE	3
A2-4-3	GB70.1-M12x30	SCREW M12x40	12
A2-4-4	GB93-12	LOCK WASHER 12	12

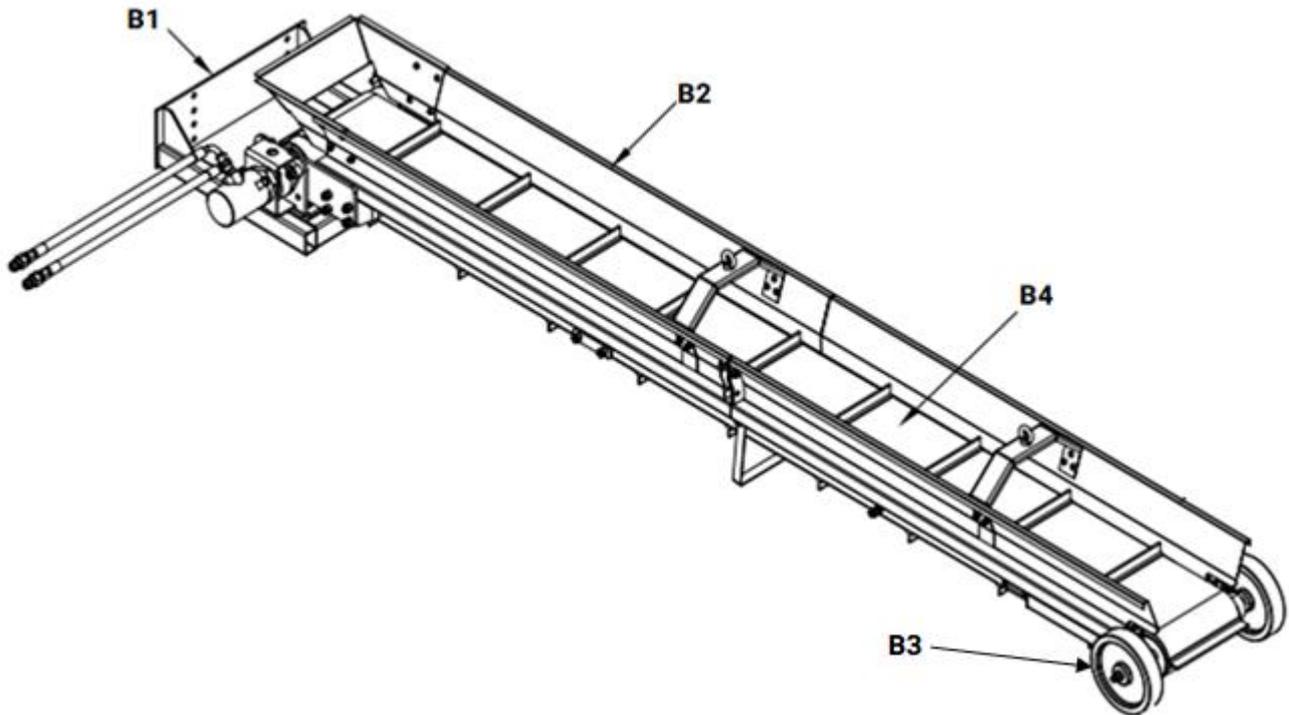
9.1.4 (A6) EXTRA-CHUTE, ASSEMBLY Exploded view and parts list.



(A2-4) UPPER-CUTTER, ASSEMBLY Part List (5)

Parts Code	PART No	Description	Qty
A6-1	TR110.016	EXTRACHUTE,WELDMENT	1
A6-2	TR110.018	LINK PLATE, WELDMENT	2
A6-3	TR110.115	L-PLATE	1
A6-4	TR110.116	R-PLATE	1
A6-5	GB5783-M10x30	BOLT M10x30	2
A6-6	GB6170-M10	NUT M10	2
A6-7	GB97.1-10	PLAIN WASHER 10	2
A6-8	GB889.1-M10	LOCK NUT M10	2
A6-9	GB5783-M12x25	BOLT M12x25	4
A6-10	GB97.1-12	PLAIN WASHER 12	4
A6-11	GB889.1-M12	LOCK NUT M12	6

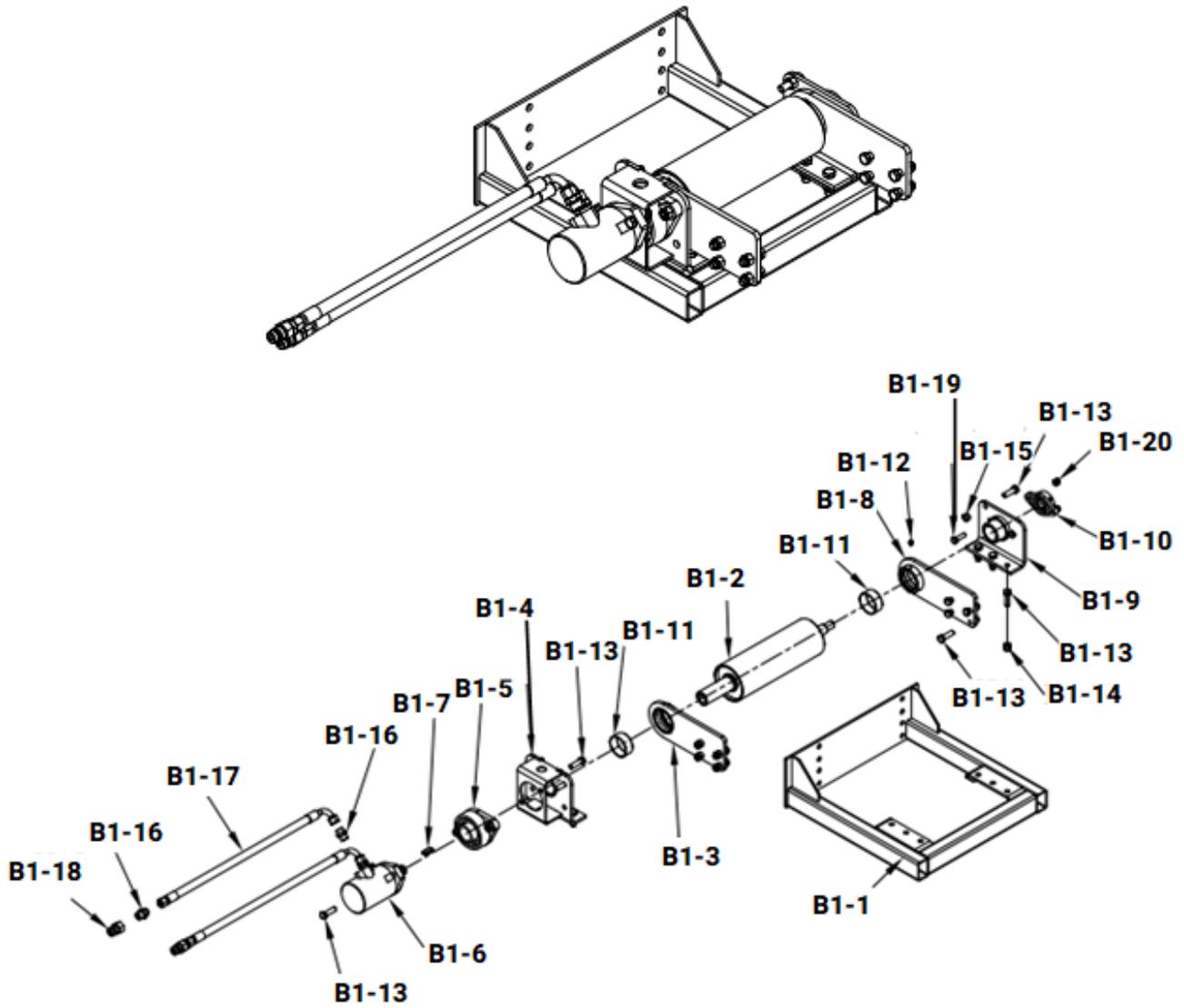
9.2 (B) CONVEYOR, ASSEMBLY Exploded view and parts list.



(B) CONVEYOR, ASSEMBLY Part List (6)

Parts Code	PART No	Description	Qty
B1	TRS110A.003	BASE,ASSEMBLY	1
B2	TRS110A.002	UPPER FRAME.ASSEMBLY	1
B3	TRS110A.001	LOWER FRAME.ASSEMBLY	1
B4	TRS110A.101	CONVEYER BELT	1

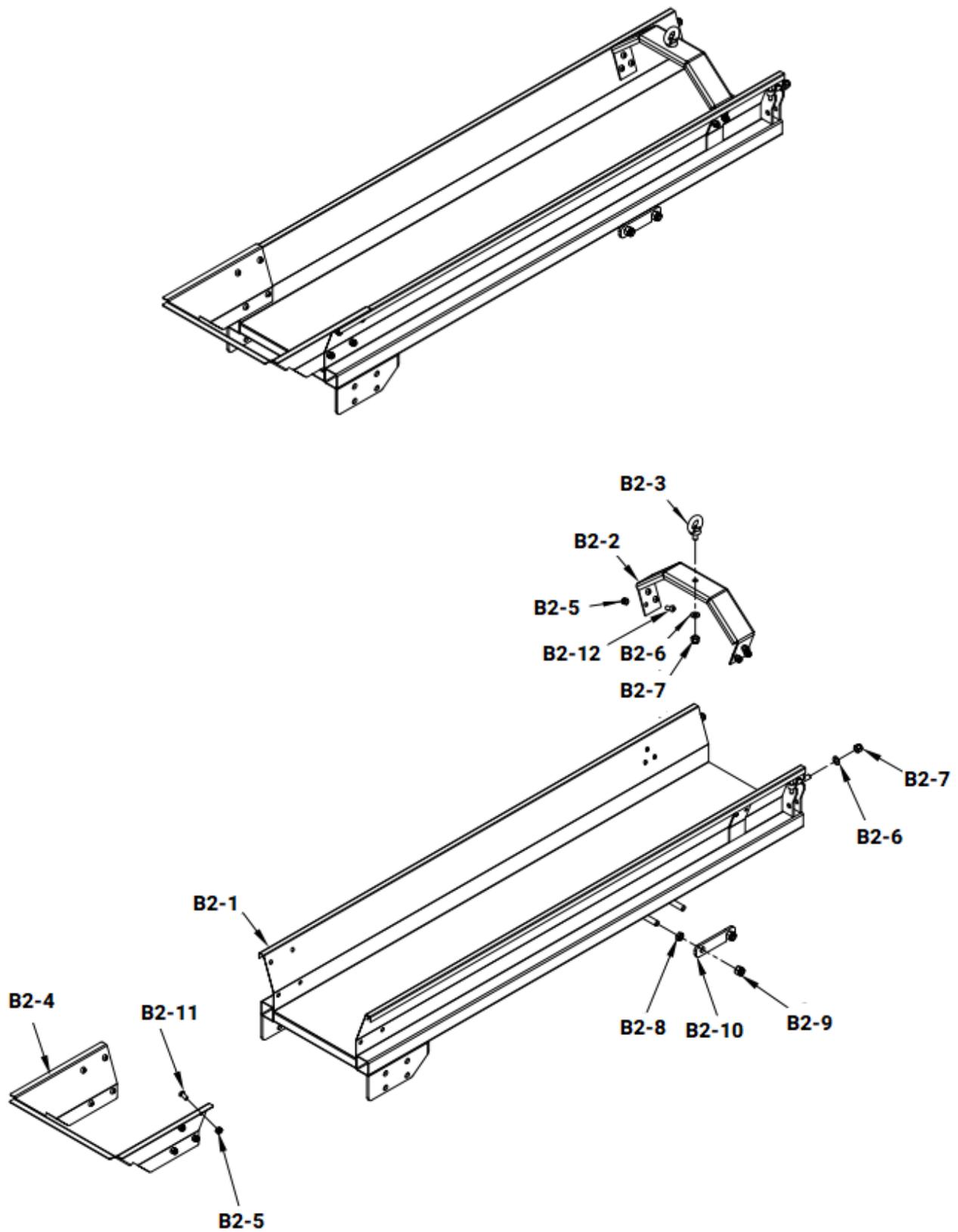
9.2.1 (B1) BASE,ASSEMBLY Exploded view and parts list.



(B1) CONVEYOR, ASSEMBLY Part List (7)

Parts Code	PART No	Description	Qty
B1-1	TRS110A.011	BASE, WELDMENT	1
B1-2	TRS110A.012	LOWERROLLER, WELDMENT	1
B1-3	RS110A.013	CONNECTING PLATE,LEFT	1
B1-4	RS110A.014	BEARING SEAT,LEFT	1
B1-5	GB7810-UCFLU208	BEARING SEAT,LEFT	1
B1-6	BMP160	MOTOR BMP160-2DA	1
B1-7	GB1096-A8x10x32	KEY A8x10x32	1
B1-8	TRS110A.015	CONNECTINGPLATE,RIGHT	1
B1-9	TRS110A.016	BEARING SEAT,RIGHT	1
B1-10	GB7810-UCFLU204	BEARING UCFLU204	1
B1-11	SF62x2x25	OILLESS BEARING 62x2x25	2
B1-12	GB1152-M8x1	GREASE FITTING M8x1	2
B1-13	GB/T5783-M12x40	BOLT M12x40	20
B1-14	GB/T889.1-M12	LOCK NUT M12	18
B1-15	GB/T6170-M12	NUT M12	2
B1-16	S1CT-18-08SP	ADAPTER R1/2-M18x1.5	4
B1-17	TRS110A.021	HOSE	2
B1-18	KSA-08F-BSP-1-2	QUICK CONNECTER RI/2	2
B1-19	GB/T5783-M10x35	BOLT M10x35	2
B1-20	GB/T889.1-M10	LOCK NUT M10	2

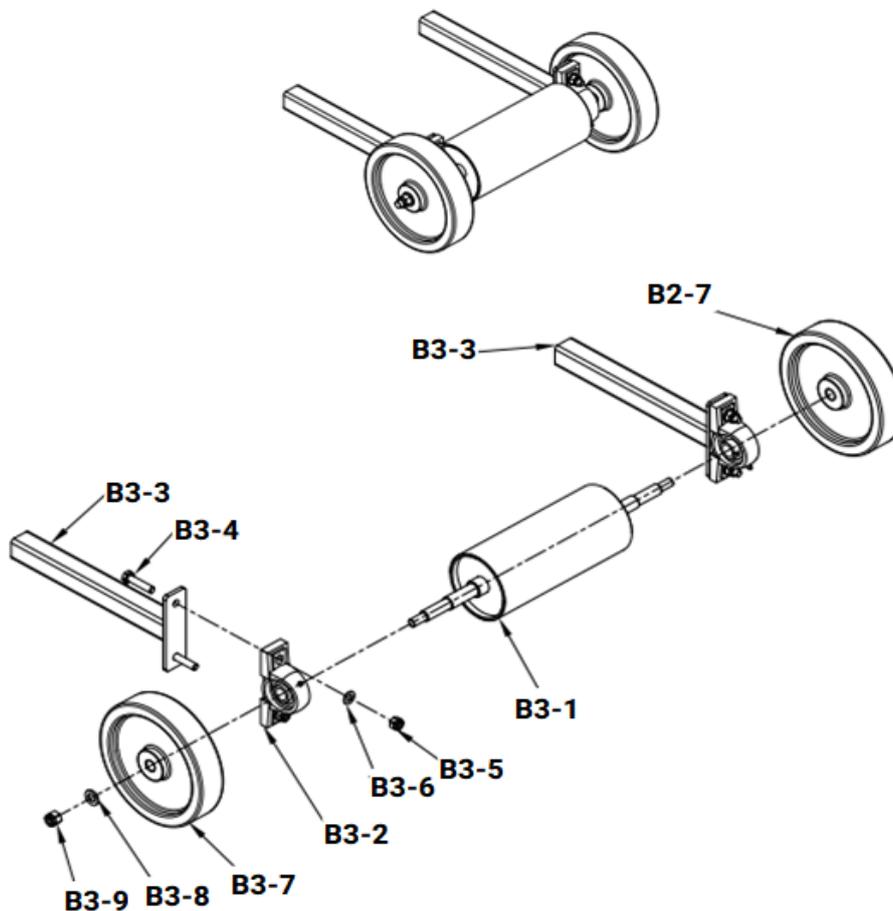
9.2.2 (B2) UPPER FRAME.ASSEMBLY Exploded view and parts list.



(B2) CONVEYOR, ASSEMBLY Part List (8)

Parts Code	PART No	Description	Qty
B2-1	TRS110A.017	LOWERFRAME,WELDME NT	1
B2-2	TRS110A.104	HAND RING,BASE	1
B2-3	GB825-M10x20	LIFTING BOLT M10x20	1
B2-4	TRS110A.103	HAND RING,BASE	1
B2-5	B/T 889. 1-M8	LOCK NUT M8	14
B2-6	B95-10	WASHER 10	3
B2-7	B/T 889. 1-M10	LOCK NUT M10	3
B2-8	B/T 6172. 1-M12	THIN NUT M12	2
B2-9	B/T889. 1-M12	LOCK NUT M12	2
B2-10	RS110A.105	LOCK PLATE	1
B2-11	B/T 70. 2-M8×16	SCREW M8×16	8
B2-12	B/T 70. 2-M8×20	SCREW M8×20	6

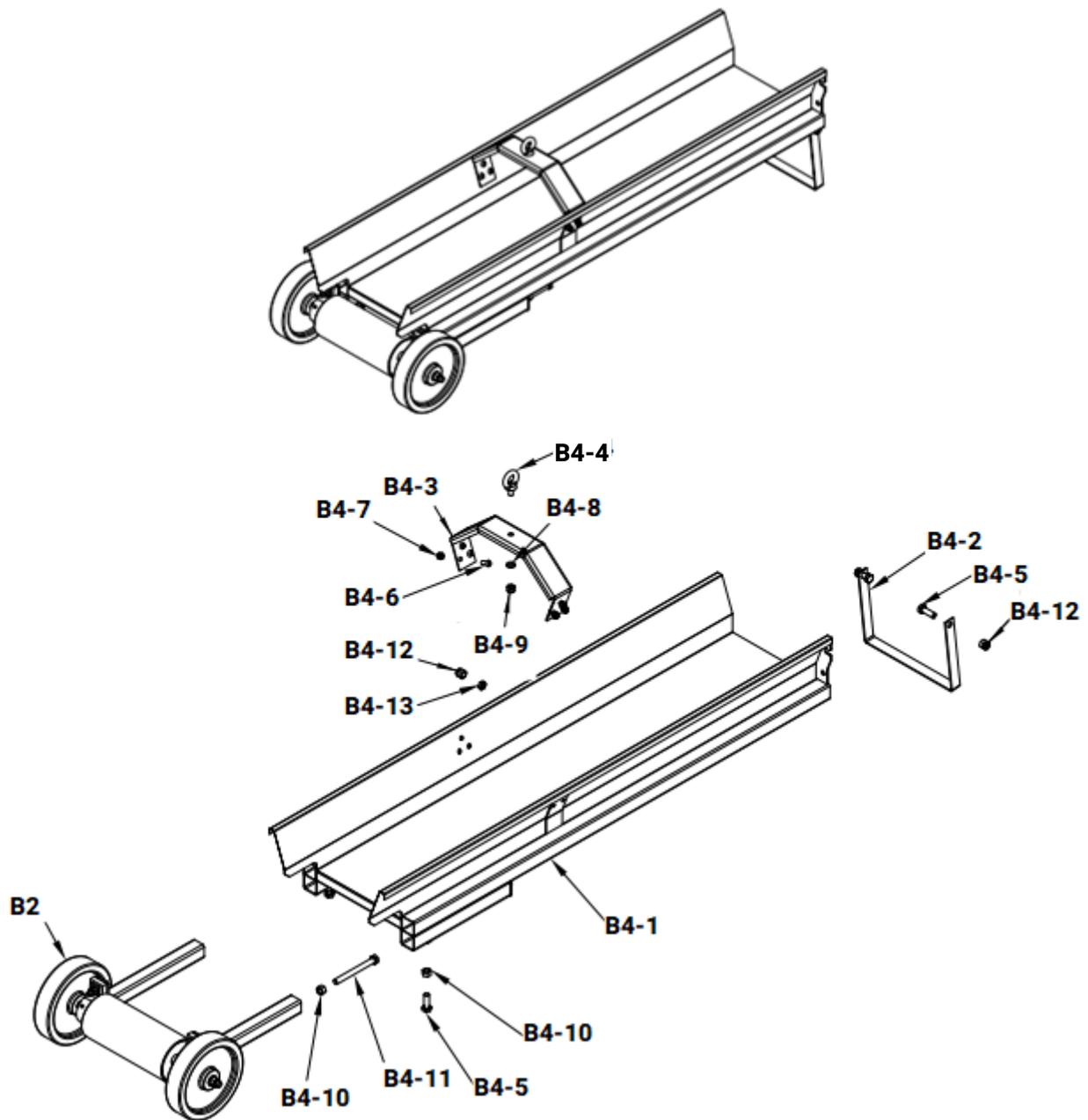
9.2.3 (B3) LOWER FRAME, ASSEMBLY Exploded view and parts list.



(B3) LOWER FRAME, ASSEMBLY Part List (9)

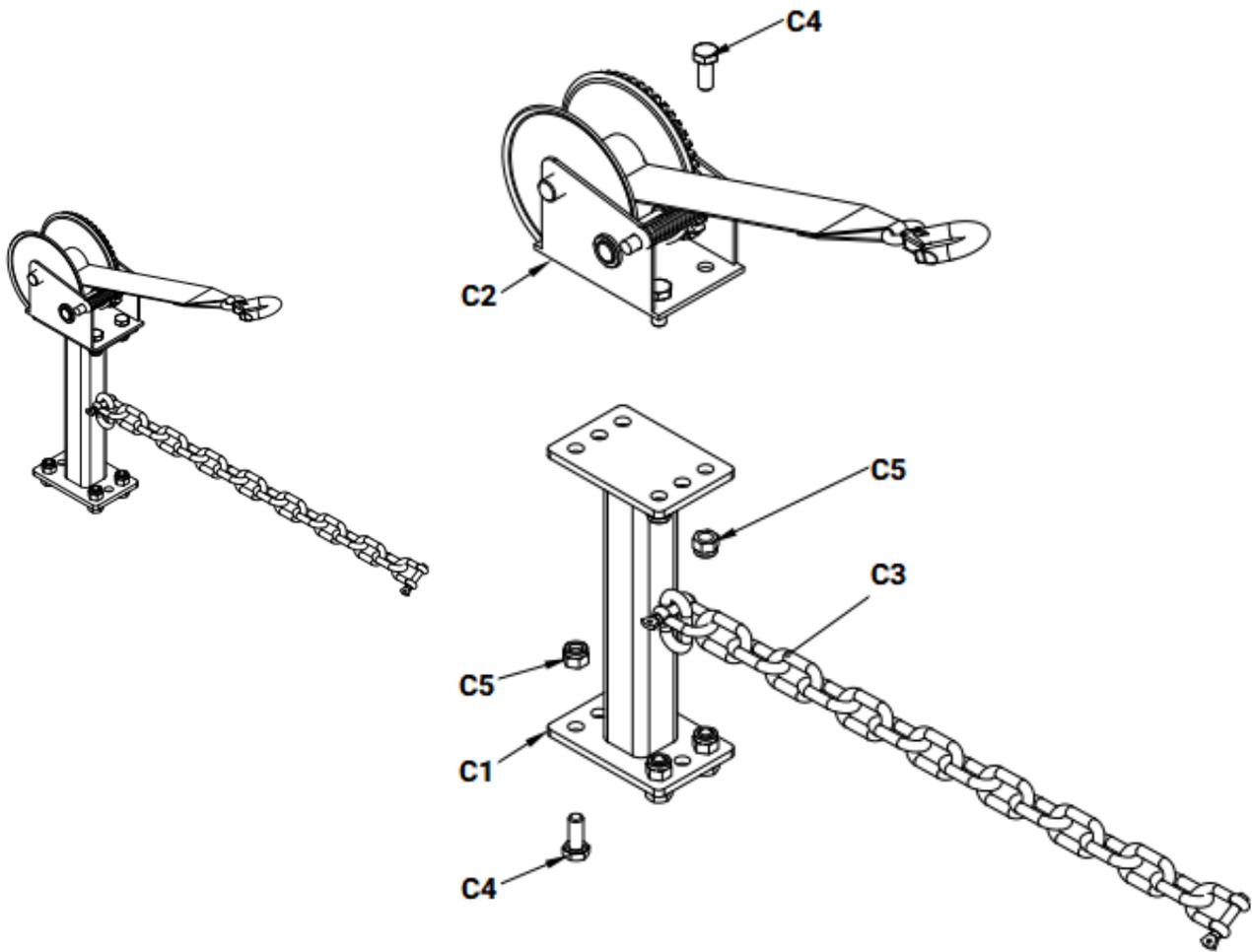
Parts Code	PART No	Description	Qty
B3-1	TRS110A.019	UPPER ROLLER,WELDMENT	1
B3-2	GB7810-UCP204	BEARING UCP204	2
B3-3	TRS110A.020	ADJUSTING TUBE,WELDMENT	2
B3-4	GB5783-M10×45	BOLT M10×40	4
B3-5	GB / T 889.1-M10	LOCK NUT M10	4
B3-6	GB95-10	WASHER 10	4
B3-7	TRS110A.106	WHEEL	2
B3-8	GB / T97.1-12	PLAIN WASHER 12	2
B3-9	GB / T 889.1-M12	LOCK NUT M12	2

9.2.4 (B4) CONVEYER BELT Exploded view and parts list.



(B4) CONVEYER BELT Part List (8)			
Parts Code	PART No	Description	Qty
B4-1	TRS110A.018	UPPER FRAME, WELDMENT	1
B4-2	TRS110A.102	FLAP	1
B4-3	TRS110A.104	HAND RING,BASE	1
B4-4	GB825-M10x20	LIFTING BOST M10x20	1
B4-5	GB/T5783-M12×35	BOLT M12x35	4
B4-6	GB/T 70. 2-M8×20	SCREW M8x20	6
B4-7	GB/T 889. 1-M8	LOCK NUT M8	6
B4-8	GB95-10	WASHER 10	1
B4-9	GB/T 889. 1-M10	LOCK NUT M10	1
B4-10	GB/T6170-M12	NUT M12	4
B4-11	GB/T5783-M12×120	BOLT M12x120	2
B4-12	GB/T889. 1-M12	LOCK NUT M12	3
B4-13	GB/T 61721-M12	THIN NUT M12	1

9.3 (C) WINCH, ASSEMBLY Exploded view and parts list.



(B) CONVEYOR, ASSEMBLY Part List (6)

Parts Code	PART No	Description	Qty
C1	TRS110A.030	BASE, WINCH	1
C2	HW800.001	WINCH	1
C3	TRS110A.091	CHAIN	1
C4	GB/T 5783-M10x25	BOLT M10x25	7
C5	GB/T 889. 1-M10	LOCK NUT M10	7