



9281 LeSaint Drive • Fairfield, Ohio 45014 Phone (513) 874-2818 • Fax (513) 874-2914 1-800-543-7166



B-70 Straw Blower

Parts and Operator's Manual

Model	<u>MS</u>	Serial No.	
-------	-----------	------------	--



ACTIVATE YOUR FINN EQUIPMENT WARRANTY

IMPORTANT INFORMATION ON ACTIVATING YOUR FINN EQUIPMENT WARRANTY!!!

IT IS <u>IMPERATIVE</u> THAT YOU, THE PURCHASER, COMPLETE THE FOLLOWING STEP IN ORDER TO ACTIVATE THE FINN CORPORATION LIMITED WARRANTY.



COMPLETE THE EQUIPMENT REGISTRATION FORM

AND MAIL TO THE FINN CORPORATION.

IF FINN CORPORATION DOES NOT HAVE YOUR COMPLETED REGISTRATION FORM ON FILE, YOUR WARRANTY CLAIM <u>WILL BE DENIED.</u>

Once your FINN equipment has been registered, your FINN Limited Warranty will be activated per the warranty statement on the next page.

<< What should you do if you need repairs or parts under Warranty?>>

- (B)
- ${f 1}$. NOTIFY FINN CORPORATION OF THE FAILURE OF MATERIAL OR WORKMANSHIP

1-800-543-7166 Extension (246) WARRANTY@FINNCORP.COM

- (B)
- 2. AFTER YOU OR YOUR SERVICE DEALER NOTIFY FINN, FINN WILL:
- VERIFY THAT WE HAVE YOUR REGISTRATION ON FILE
- VERIFY THAT THE WARRANTY PERIOD IS IN EFFECT
- VERIFY THAT THE RELATED PART(S) ARE INCLUDED IN THE SCOPE OF WARRANTY (PENDING FINN'S INSPECTION OF DEFECTIVE PARTS)
- SEND YOU REPLACEMENT PART(S) AND A WARRANTY INFORMATION PACKET
- REQUEST YOU FOLLOW ALL INSTRUCTIONS AS NOTED IN THE PACKET
 - Completely fill out the Parts Tag.
 - Attach the Parts Tag to the defective part(s).
 - Return the part(s) and the completed Warranty Claim Form to FINN Corporation using the return shipping label. (Within 2 weeks)
 - Tape the Orange identifier sheet, marked with the W/RMA number, on the outside of the box in which you are shipping the defective part(s).

Warranty period:



Hydroseeders & Straw Blowers 2 years or 2000 hrs which ever comes 1st All other equipment 1 year or 1200 hrs which ever comes 1st

Commercial Limited Warranty Effective 4/1/2011

OUR WARRANTY TO YOU:

Finn Corporation warrants to you, the original purchaser, for use (or rental to others for use) all new construction machinery, parts and attachments (except those referred to herein) that are manufactured by Finn to be free from defects in material and workmanship for a period noted above. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period applicable to the product to which parts are installed, as if parts were original components of the product.

WHAT FINN WILL DO:

Upon notification of Finn concerning a failure of material or workmanship in accordance with the above stated Warranty, Finn Corporation will:

- Verify claim falls within the valid warranty time frame.
- Verify the product and equipment has been <u>registered</u> with Finn in order to be eligible for warranty coverage.
- Upon affirmation of warranty period and registration, Finn will send to you a new or repaired replacement part(s), whichever Finn elects and a "Warranty Claim Information packet" containing instructions for processing the warranty claim.
- Evaluate the part when defective part is returned. Note: Failure to return defective part within <u>two weeks</u> will result in an invoice being sent to the customer. In addition, if damage to a part is determined not to be covered under the warranty, the customer will be billed.
- Reconcile costs with customer for parts and shipping, as determined by our inspection of failed parts, and confirmation of warranty coverage, per the terms of this warranty.
- Correction of nonconformities, in the manner provided above, shall constitute fulfillment of all liabilities of Finn Corporation.

WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE:

- As the purchaser covered under the above limited warranty you must
 <u>REGISTER</u> the equipment with Finn FAILURE TO REGISTER
 WILL VOID THE WARRANTY.
- <u>Claim Number</u>: Notify the warranty Dept. same day or next day of any intent to do warranty work and obtain a "Warranty Claim Number,"
- All warranty <u>labor</u> must be pre-approved by providing Finn with an
 estimate of labor costs. Once approved, Finn will issue you a Work
 <u>Authorization Number</u>, prior to work being performed.(EXCEPTION:
 Unless the labor is per the Labor Allowance Schedule or less)
- The labor costs reimbursement will be based on the <u>Labor Allowance</u> <u>Schedule</u> established by Finn and where not applicable, on a reasonable number of hours as determined by Finn.
- Notify Finn Corporation of any failure of material or workmanship as described under this warranty.
 - Web notification: Warranty@Finncorp.com
 - Phone 1-800-543-7166 extension 246
- Complete the required steps in the "Warranty Claim Information packet" (which Finn will send you) and return the defective part(s) as directed in the packet to Finn Corporation.
- Should the failed part, be a hydraulic component, Finn may send you an
 "Oil Analysis Kit," requesting that a sample of oil from the hydraulic
 system be taken, and mail it to a lab. Follow the instruction sheet, on
 how to use your Finn Oil Analysis Kit that comes with the Kit. Failure
 to comply when requested will void the warranty.

WHAT THE WARRANTY DOES NOT COVER:

- Normal wear parts and Allied Equipment or trade accessories not manufactured by it, such as but not limited to items such as various filters, fluids, brakes, clutch linings, belts, hoses, light bulbs, mechanical seal, over center clutches, tires, ignitions, starters, batteries, magnetos, carburetors, engines and labor, or like or unlike equipment or accessories. (Such being subject to the warranty, if any, provided by their respective manufacture).
- 2. Secondhand, used, altered, or rebuilt machines or parts.
- Defects, malfunctions or failures resulting from accidents, abuse, misuse, improper servicing, or neglect of required operational guidelines and maintenance service, as outlined in the Finn Corporation's Operators Manual(s).

- 4. The warranty shall be null and void to the extent any defect or failure of the products warranted arises out of or is caused by accessories or component parts not manufactured or supplied by Finn Corporation, whether same are supplied by purchaser, dealers, or any other party.
- 5. This Warranty does **NOT** cover any costs associated with transporting the equipment for warranty service, such as mileage, fuel, or man hours; such is the responsibility of the equipment owner.
- 6. Dealers & Customers are responsible to follow <u>all</u> guidelines related to Seasonal & Long Term Storage of Equipment, as advised in operation & equipment manuals. i.e. Finn, Engine, Clutch, Pump, Motor, etc. Equipment failures caused by neglect of these guidelines are <u>not</u> warrantable.

THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS:

We neither assume nor authorize anyone to assume for us any other express warranty. The Distributor/Dealer has no authority to make any representation or promise on behalf of Finn Corporation or to modify the terms or limitations of this warranty in any way.

THIS WARRANTY THEREFORE SHALL BE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED:

THE REMEDIES OF THE USER SET FORTH HEREIN ARE EXCLUSIVE, WITHOUT REGARD TO WHETHER ANY DEFECT WAS DISCOVERABLE OR LATENT AT THE TIME OF DELIVERY OF THE PRODUCT TO THE PURCHASER.

ALL WARRANTY REPAIR MUST BE DONE BY A FINN AUTHORIZED SERVICE PROVIDER OR AUTHORIZED REPAIR SHOP OF FINN'S CHOICE.

TRANSPORTATION, HAULING, STORAGE, OR OTHER SIMILAR COSTS ARE NOT PART OF FINN'S OBLIGATION UNDER THE LIMITED WARRANTIES AND IS THE RESPONSIBILITY OF THE EQUIPMENT OWNER.

THE ESSENTIAL PURPOSE of this exclusive remedy shall be to provide the original purchaser with repair or replacement of parts that prove to be defective within the period and under the conditions previously set forth. This exclusive remedy shall not have failed of its essential purpose (as that term is used in the Uniform Commercial Code) provided Finn remains willing to repair or replace defective parts within a commercially reasonable time after it obtains actual knowledge of the existence of a particular defect.

IN NO EVENT shall Finn be liable for any special, consequential, incidental or indirect damages, including lost profits or lost commercial opportunities, with respect to the sale of the above warranted product or anything done in connection therewith, or for property damage sustained by a person claiming to be a third party beneficiary of a surviving warranty under the law of any jurisdiction.

NOTICE:

FINN CORPORATION URGES the use of only Finn corporation supplied parts and attachments to assure proper performance and safe operation of Finn corporation equipment. Insist on parts and attachments manufactured or supplied by Finn corporation when you purchase, repair or replace your Finn equipment and attachments. Because Finn corporation cannot assure that parts and attachments not manufactured or supplied by Finn meet Finn corporation's quality standards, specifications, or operating requirements, our warranty is not effective to the extent any failure of or defect in a Finn corporation product arises from or is caused by parts, attachments or components not originating with Finn corporation. Use of Finn corporation equipment with parts and attachments not manufactured or supplied by Finn could result in personal injury.

INDEX

Safety First
Straw Blower Safety Summary Section
Introduction
Definition Of Mulching
The Finn B-70 Straw Blower And How It Works 5
Towing Vehicle
Loading Bales
Pre-Start Check
Equipment Check6
Starting Procedure
Crew Members and Their Duties
Blower Discharge
Cleaning and Maintenance
After First 4 To 8 Hours of Operation
Daily Clean-up Maintenance8
Weekly Maintenance8
Lubrication and Fluids Chart
Clutch Care and Maintenance
Parts Manual Section13–30
Discharge Assembly
Shredder Box and Feed Chute (Std)16
Shredder Box and Feed Chute (R-H)
Blower and Drive
Trailer Wiring
Trailer Assembly
Engine Parts22–23
Power Take-Off Assembly
Engine Wiring Harness
Control Box Wiring
B70 Decals30–31
Tool Kit

SAFETY FIRST

With any piece of equipment, new or used, the most important part of its operation is **SAFETY!**

FINN Corporation encourages you and your employees to familiarize yourselves with your new equipment and stresses safe operation.

The first five pages of this manual are a summary of the main safety aspects associated with this unit. Be sure to read and understand completely before operating the machine.

The symbols below are used throughout the operation and maintenance sections of this manual to call attention to safety procedures.

▲ DANGER

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

MARNING

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

ACAUTION

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

NOTICE

Indicates practices that are not related to personal injury

NOTE: Gives helpful information

CALIFORNIA Proposition 65 Warning

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

CALIFORNIA Proposition 65 Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

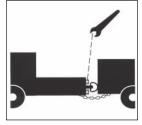
STRAW BLOWER SAFETY SUMMARY SECTION

It is important that all operators of this machine are familiar with all safety aspects mentioned below, and have read the entire <u>Operator's Manual</u> before operating the machine. Always keep a copy of this manual with the machine. It is the responsibility of the operator of the machine to fully understand this safety sheet. Remember that <u>YOU</u> are the key to safety. Good safety practices protect not only you, but also the people working with and around you. Keep in mind that this safety sheet is written for this type of machine only. Practice all other usual and customary safe working precautions. Above all, remember that safety is up to you.

The FiNN STRAW BLOWER is intended to be used as an applicator of vegetative hay or straw mulches onto the seedbed. Its use with other products or for other applications must be by approval of the product's manufacturer. If there are any questions, contact FiNN Corporation at 1-800-543-7166.

I. PRE-START EQUIPMENT CHECK (equipment check is to be made with the engine off):

 Check hitch and hitch bolts, safety chains, lights, brakes, and breakaway switch. Verify that the hitch ball is the correct size for the coupler.



- 2. Check that all guard railing is in place and secure.
- 3. Verify that all guards are in place.
- By carefully looking in the shredder box, inspect the shredder box for foreign objects.
- 5. With the ignition switch ON, verify that the signal horn is operating correctly.
- 6. Make sure no one is working on or inside the machine. Give a visual and audible signal that all is clear before starting the engine.

II. MACHINE OPERATION:

 Always wear safety goggles when operating or feeding the machine. Other safety attire, such as safety shoes, ear protection, gloves, hard hats, dust masks, etc., should be worn as required by warning decals on machine,



operator's manuals, or jobsite requirements. Remove rings, watches, etc. Avoid wearing loose-fitting clothing that may get caught in rotating machinery.

2. Do not operate the machine without all guards in place.



- Make sure the discharge spray area is clear of all persons, animals, etc.
- 4. The driver of the carrying or towing vehicle is responsible for the safety of the operator(s) and feeder(s) of the machine. Make sure the driver is aware of and avoids all possible hazards to the operator(s) on the machine, such as tree limbs, low power lines, etc. Vehicles on which equipment is mounted or towed must be started or stopped gradually. Avoid abrupt starts and stops. Never operate on a slope or a hill that may endanger the operator(s). All personnel should review and be familiar with start/stop signals between the driver and operator(s) before operation of the equipment.
- Operator(s) of equipment should never ride on machine at speeds greater than 5 MPH (8 km/h).



 Never operate machine in an enclosed area without venting the exhaust of both the equipment and the vehicle on which the equipment is mounted or towed. Deadly carbon monoxide fumes can accumulate.



- Never operate this or any other machinery when fatigued, tired, under the influence of alcohol, illegal drugs, or medication. You must be in good physical condition and mentally alert to operate this machine.
- Never modify the machine. Never remove any part of the machine (except for service and then reinstall before operating).



- Use proper means for mounting and dismounting of machine. Never mount or dismount a moving machine.
- 10. Do not aim discharge at people, animals, etc. Only aim the discharge at the intended seedbed.
- Do not open any doors or access panels while machine is in operation. Severe injury may result from rotating parts.
- 12. Do not attempt to pull anything out of the feed chute or shredder box when machine is in operation. Shut down the engine using Occupational Safety and Health Administration Occupational Safety and Health Administration (OSHA) lockout/tagout



procedure (29CFR 1910.147) before removing any foreign objects. Give a visual and audible signal that all is clear before restarting the machine.

III. MAINTENANCE:

- Before servicing the machine, turn off engine and allow all moving parts to stop. Disconnect the battery cables to prevent accidental starting of the machine. Tag the engine operating area to show that the machine is being serviced. Use lockout/ tagout procedure (29 CFR 1910.147).
- 2. On trailer units, perform general maintenance such as checking the safety chains, hitch, hitch bolts, tires, and brakes. Repair or replace if worn or broken. Never operate machine on improperly inflated or damaged tires.



Always use a safety cage or cable restraints when reinflating a repaired tire.

- 3. Battery maintenance. Lead-acid batteries contain sulfuric acid, that will damage eyes or skin on contact. Always wear a face shield to avoid getting acid in the eyes. If acid contacts eyes, flush immediately with clean water and get medical attention. Wear rubber gloves and protective clothing to keep acid off skin. Lead-acid batteries produce flammable and explosive gases. Keep arcs, sparks, flames, and lighted tobacco away.
- 4. Filling of fuel. Never fill the fuel tank while the engine is running, while smoking, or when near an open flame. Never smoke while handling fuel or working on the fuel system. The fumes in an empty fuel container are explosive. Never cut or weld on fuel lines, tanks, or containers. Move at least 10 feet (3 meters) away from fueling point before starting engine. Wipe off any spilled fuel and let dry before starting engine

IMPORTANT: Be careful not to allow fuel, lubricant, hydraulic fluid, or cooling fluids to penetrate into the ground or be discharged into the water system. Collect all used fluids and dispose of them properly.

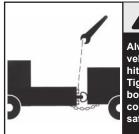
- 5. It is recommended that only authorized, genuine FiNN replacement parts be used on the machine.
- 6. Make certain that all decals on the machine are maintained in good legible condition. Replacement decals are available through FiNN Corporation by specifying the part number shown in the lower righthand corner of the decal. See page 4 for the current set of safety decals mounted on the unit. See Parts Manual for the location and quantity of all decals on this unit.

CURRENT SET OF SAFETY DECALS



⚠ CAUTION

coupler or ball. The Chains must be connected to the towing vehicle so that the slack for each length of chain, between the trailer and the towing vehicle, is the same and must have no more slack when in use than is necessary to permit proper turning of the vehicles. The forward end of the chain must be attached to the towing vehicle, not to the ball, but to the hitch or other frame member. The chain must be looped around the member and hooked back into itself.



⚠ CAUTION

Always inspect tow vehicle and equipment hitch before towing. Tighten all hitch bolts and properly connect wiring and saftey chains.



A CAUTION



▲ DANGER

Rotating Parts.

Turn off engine and allow all parts to stop completely before opening door, removing guards or attempting service.



CAUTION

USE ON 2" BALL ONLY

P/N 31336



Wear eye protection around operating equipment.



Do not operate without guards in place.



WARNING

Turn engine off, disconnect battery, and allow all moving parts to stop before servicing equipment.



₩ WARNING

To prevent serious burning or scalding:

- Pressurized cooling system.
- · Allow system to cool.
- · Remove cap slowly with gloves on.



Rotating fan hazard. Keep hands clear. Shut off engine before servicing.



Wear proper eye protection when feeding this machine.

Operation and Maintenance Manual for B-70 Straw Blower

INTRODUCTION:

This manual is designed for step-by-step instructions of the operation, care, and maintenance of the B-70 Straw Blower and, in addition, it contains illustration and descriptions of a complete list of parts and components for easy identification. For best results and to ensure longer life of the equipment, please follow the instructions carefully. For your safety, read the entire manual before operation of this unit.

DEFINITION OF MULCHING:

Mulching is the process whereby a vegetative mulch, such as hay or straw, sometimes excelsior, or other wood product or other vegetative material, is spread on previously seeded areas to promote germination, while providing temporary erosion control.

THE FINN B-70 STRAW BLOWER AND HOW IT WORKS:

The FINN B-70 Straw Blower will apply vegetative mulch at a fast and uniform rate, utilizing a minimum amount of manpower.

The baled vegetative mulch material is placed on the feed chute and separated by the bale feeder as he feeds these bales into the shredder housing. In the shredder housing, a combination of beater chains and air currents separates the mulch into individual fibers that are drawn into the blower housing and blown through the discharge assembly onto the seedbed.

TOWING VEHICLE:

The truck used to tow the FINN B-70 Straw Blower should have a bed large enough to carry the quantity of mulch needed for economical operation. The truck must be equipped with a ball or pintle type hitch to tow the Straw Blower. This hitch should be mounted as near to the end of the truck bed as possible. Use a 2-in. ball, rated 6000 lb (2721 kg): the tow vehicle must be able to support 600 lb (272 kg) down on its hitch.

LOADING BALES:

Load the bales of mulch on the truck bed with binder twine or wire on top rather than on the side. This makes it easier to grab the bales while the Straw Blower is in operation. Place the first layer of bales "lengthwise" on the truck. The second layer of bales should be placed "crosswise". Alternate successive layers lengthwise and crosswise in order to secure the load. Leave enough room at the rear of the truck bed for the bale handler to stand.

PRE-START CHECK:

- 1. Skid Unit Check condition of all mounting hardware securing the Straw Blower to the truck bed.
 - Trailer Unit Inspect hitch, safety chains, lights, brakes, and breakaway switch.
- 2. Ensure all guards are in place.

EQUIPMENT CHECK:



Equipment check should be made with the engine OFF and all rotating parts stopped.

Failure to comply could result in death or serious injury.

- 1. Tool kit make sure that it contains all prescribed items (see tool kit list, page 31).
- 2. Check beater box for foreign objects that could damage the equipment or injure workers.
- 3. Check fuel tank and fill as required. Use 2-D diesel fuel oil. If operating at ambient temperature below 40°F (4°C) or at an altitude exceeding 5000 feet (1524m), use 1-D diesel fuel oil.
- 4. Check engine oil and fill or change as required. Refer to engine operator's manual.
- 5. Check liquid level in radiator and overflow tank.
- 6. Inspect air cleaner for dust and dirt. Refer to engine operator's manual.
- 7. Engage and disengage clutch to determine if it "snaps" in and out of engagement.
- 8. Check beater chains and their mounting pins for damage or wear. Replace if necessary.
- 9. Lubricate equipment. Use hand gun only (see lube chart, page 9).
- 10. When not using an adhesive, remove the belt that drives the asphalt pump.



Running the pump while it is unlubricated will permanently damage it.

STARTING PROCEDURE:



See safety section of the manual (pages 2 through 4) before operating the machine. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

- 1. Disengage the clutch.
- 2. Set throttle about 1/4 open.
- 3. Turn key counterclockwise and hold until the glow plug indicator light goes out.
- 4. While holding in the safety switch button, turn the key clockwise until the starter engages and the engine starts.
- 5. Continue to hold safety switch in for approximately 10 seconds. Allow the engine to warm up for 3 to 5 minutes.

NOTE:

This engine has a safety system that will shut the engine off if the engine oil pressure drops below 7 psi (0.5 bar) or if the water temperature reaches 230°F (110°C).

6. With the engine still idling, engage the clutch slowly. Move the throttle to wide-open position and let the governor control the engine speed.

CREW MEMBERS AND THEIR DUTIES:

- 1. <u>The Operator</u> controls the placement of the mulch on the seedbed by moving the discharge assembly. He also controls the movement of the towing truck along the seedbed by using a predetermined set of hand signals.
- 2. <u>The Bale Handler</u> operates from the truck bed and supplies the feeder with bales of mulch material, cut side up.
- 3. <u>The Bale Feeder</u> cuts and disposes of the twine or wire. He also separates the bale into 1-1/2 to 2 in (35 to 50mm) bats and feeds those into the shredder box allowing about 10 inches of space between bats. Uniform feeding assures fast separation and more uniform application.
- 4. <u>The Truck Driver</u> follows the directions of the operator for the movement of the towing truck. The truck driver should be cautious in starting or stopping the truck so that the crew members are not thrown off balance.

BLOWER DISCHARGE:

The B-70 Straw Blower should be towed to a point approximately 20 ft (6 m) from the area where the mulch is to be applied. The operator should elevate the discharge spout to about 10 degrees above the plane of the seedbed so that the mulch floats onto the seedbed.

NOTE: Do not drive the mulch into the seedbed with air pressure. The higher the tube is held, the more uniform the application will be.

A full circle horizontal travel of the discharge spout allows the operator to vary the direction of the discharge spout according to the prevailing winds. The tube should never be directed into the wind, towards any persons, or at the towing vehicle. Use the engine throttle to control the distance of the mulch.

Except for the side feed model, the shredder box cover (see page 15) has two positions. The lower position directs material more quickly to the blower blade and provides higher capacity with bright straw. The upper position is better for most hay materials since it retains the material in the shredder box longer, resulting in a more even distribution. The unit is shipped with the cover in the lower position.

The B-70 Straw Blower has a beater roll on the extended blower shaft. Mounted on this beater roll are four beater chains, installed opposite of each other. This arrangement will work well for most materials. If a longer discharged fiber length is desired, remove two opposing chains

ACAUTION

Be sure beater chains are mounted opposite each other at all times to avoid throwing the blower shaft out of balance. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

If any obstruction stops the flow of mulch, immediately disengage clutch and shut off engine. Do not reach into the beater box or attempt to make any adjustment until the engine and all rotating parts have stopped. When the obstruction has been removed, the motor can be restarted and mulch application can continue.



Do not reach into the beater box or attempt to make any adjustment until the engine and all rotating parts have stopped. Failure to comply WILL result in death or serious injury.

CLEANING AND MAINTENANCE:

AFTER FIRST 4 TO 8 HOURS OF OPERATION:

- 1. Check and adjust clutch. See page 10.
- 2. Torque wheel lugs. Torque again after 7 days (Trailer option only).

DAILY CLEAN-UP MAINTENANCE:

Follow this procedure daily to keep the equipment in good operating condition:

- 1. Clean the air cleaner following the instructions in the engine operator's manual.
- 2. Check air cleaner connections. If they loosen or become disconnected, the warranty on your engine is subject to cancellation.
- 3. Clean the radiator and radiator guard with tap water.
- 4. Clean the beater chains. Make sure to remove all twine, wire, and other foreign objects. Check pins and nuts.
- 5. Lock the discharge tube into place.
- 6. Check engine oil level and fill as necessary.
- 7. Check hitch bolts and safety chains. Repair or replace as necessary.

WEEKLY MAINTENANCE:

After each 50 hours of operation, follow this procedure:

- 1. Change engine oil, following engine manufacturer's recommendations, after the first 50 hours and every 200 hours thereafter.
- 2. Change the engine oil filter cartridge with every oil change (once every 200 hours).
- 3. Lubricate bearings with general-purpose chassis lubricant, using a grease gun. Wipe each bearing before lubrication to remove dirt and prevent overheating.
- 4. Inflate tires to 35 psi (241 kPa).
- 5. Check clutch adjustment to ensure that it "snaps" in and out of engagement.



Perform maintenance only while engine is off. Failure to comply could result in minor to moderate personal injury. Failure to comply could also result in product or property damage.

LUBRICATION AND FLUIDS CHART

Ref. No.	Location	Lubricant	Frequency	Number
1.	Grease drive shaft bearings.	CL	Weekly	2
2.	Repack wheel bearings.	CL	Annually	2
3.	Check engine oil level.	MO	Daily	1
4.	Check air cleaner.	MO	Daily	1
5.	Change engine oil and filter.	MO	See Eng. Manual	1
6.	Grease clutch shaft bearings.	CL	Daily	1
7.	Grease clutch lever bearing.	CL	Daily	1
8.	Change engine coolant.	AF	Seasonally	1
9.	Check fuel tank level.	DF	Daily	1
10.	Check engine coolant.	AF	Daily	1

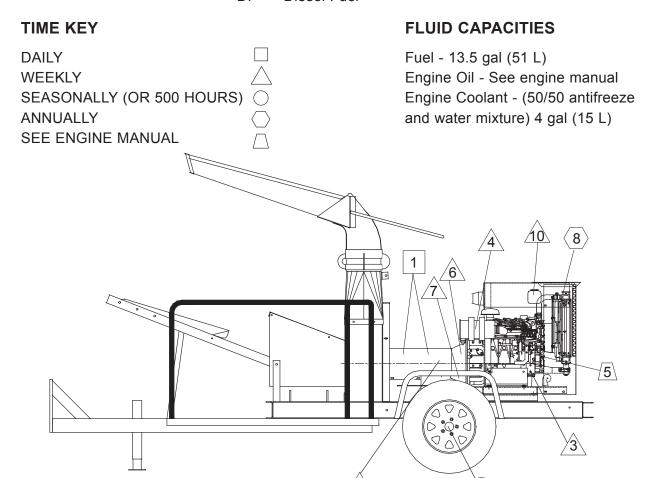
LUBRICANT OF FLUID USED

CL Chassis Lubricant

MO Motor oil SAE 30 CD/SF

AF 50/50 Antifreeze and water mixture

DF Diesel Fuel



CLUTCH CARE AND MAINTENANCE:

This is a short, simple outline of the Twin Disk clutch adjustment and lubrication procedure. When performing maintenance beyond this brief outline, refer to the Twin Disk Care and Operations manual. In order to properly identify parts when ordering replacement parts, always refer to the unit and specification number stamped on the nameplate located on the topcenter of the power take-off housing.

LUBRICATION:

The Twin Disk clutch is equipped with lifetime internal-lubrication bearings, and should not be lubricated. The operating shaft bearing (located where the drive shaft exits the clutch housing) should, however, be lubricated every 1 to 3 months, depending on usage. The clutch engage lever shaft should be lubricated weekly.

ADJUSTMENT:

If the clutch does not pull, heats, or if the operating lever jumps out of engagement, the clutch must be adjusted. To adjust the clutch, remove the name plate located on the top center of the power take-off housing. Turn the clutch shaft assembly until the adjusting lock pin can be reached. Disengage the adjusting lock pin and turn the adjusting ring clockwise until the clutch lever requires a distinct pressure to engage (approximately 26 lb (116 N) of pull). A new clutch generally requires sevral adjustments until the friction surfaces are worn in. After the clutch is "worn in", the adjustment should be checked regularly.



Do not adjust clutch too tightly. Overtightening can cause component failure.

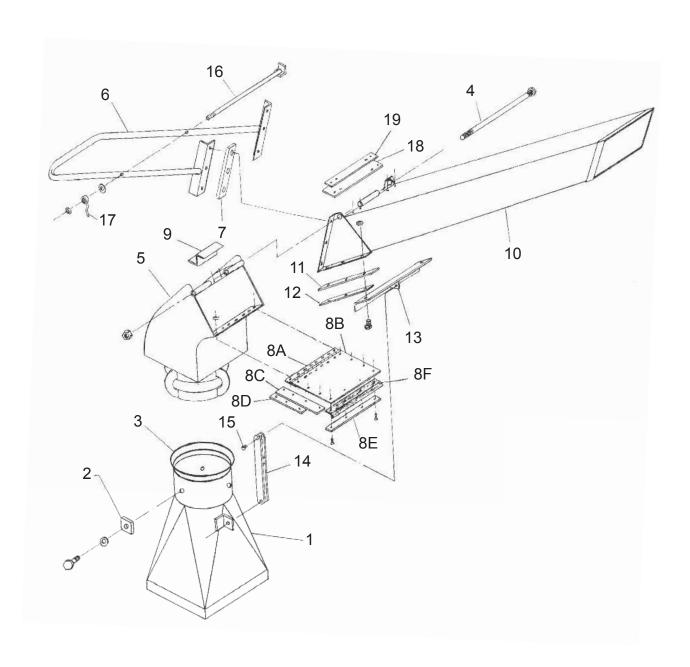
NOTES

NOTES

B-70 Straw Blower

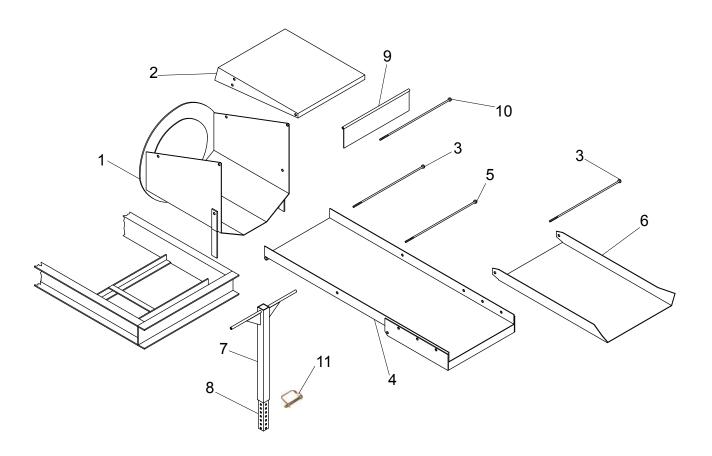
Parts Manual

Model MS



DISCHARGE ASSEMBLY

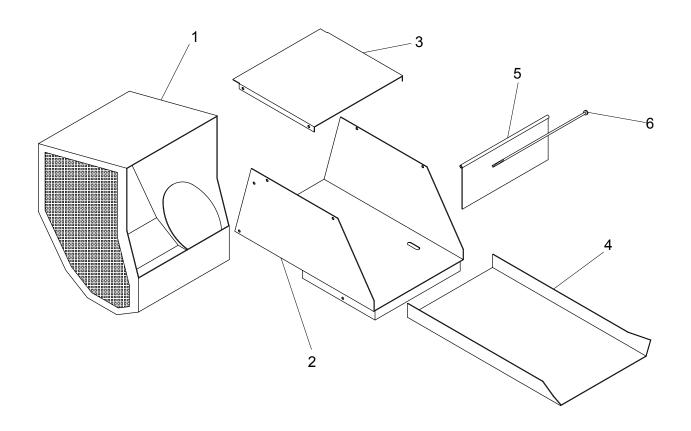
Ref. No.	Part Number	Description	No. Req'd
1	031247	Transition Assembly	1
2	031018-01	Elbow Bearing	3
3	031086	Transition Seal	1
	031109	Seal Banding	32"
4	031243-08	Elbow Hinge Rod	1
5	031239	Elbow Assembly	1
6	031241	Elbow Handle	1
7	031242-03	Elbow Seal-Upper	2
8	031341	Seal Plate Assembly	1
8A	031338-01	Seal Plate Hinge	1
8B	031238-04	Bottom Seal Plate	1
8C	031338-08	Side Seal	2
8D	031338-07	Side Retaining Plate	2
8E	031338-03	End Flap Seal Retainer	1
8F	031338-04	End Flap Seal	1
9	031238-05	Hinge Seal	1
10	031240	Discharge Tube	1
11	031242-04	Elbow Seal-Lower	2
12	031242-07	Elbow Side Seal Retaining Plate	2
13	031243-01	Discharge Tube Hold Down Bracket	1
14	031243-04	Discharge Tube Hold Down Arm	1
15	031245	Snapper Pin	1
16	031243-07	Elbow Tensioning Rod	1
17	031258	Lever Nut	1
18	031338-09	Top Seal	1
19	031338-10	Top Seal Retaining Plate	1
	031338-12	Side Elbow Seal	2
	031338-11	Hinge Seal	1



SHREDDER BOX AND FEED CHUTE

(STANDARD TRAILER MODEL)

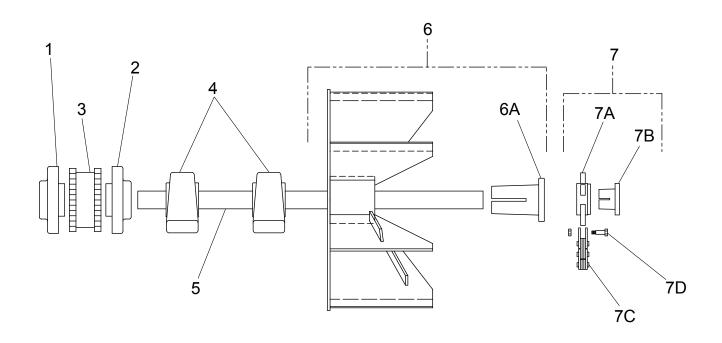
Ref. No.	Part Number	Description	No. Req'd
1	031287	Shredder Box	1
2	031284	Shredder Box Cover	1
3	031158-10	Feed Chute Hinge Pin w/ Nuts	2
4	031157	Feed Chute	1
5	031158-05	Feed Chute Stop w/ Nuts	1
6	030898	Feed Chute Extension	1
7	031184-01	Upper Feed Chute Stand	1
8	031184-03	Lower Feed Chute Stand	1
	030893	Clevis Pin	1
	030894	Hairpin Cotter	1
9	031096-01	Shredder Door	1
10	031096-04	Shredder Door Hinge Pin w/Nut	1
11	FW71225	Snapper Pin	1



SHREDDER BOX AND FEED CHUTE

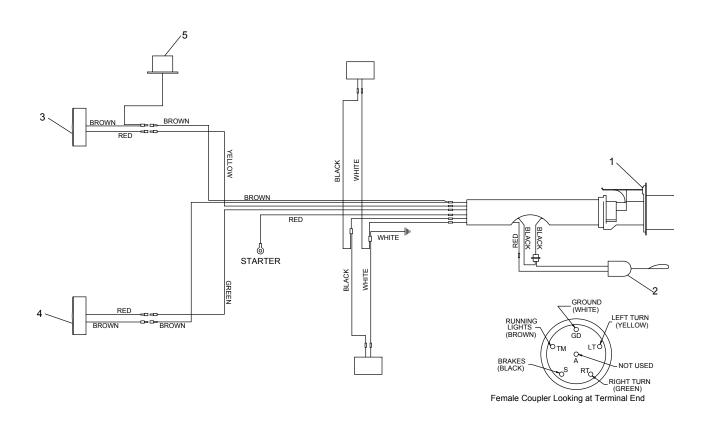
(R-H SKID MODEL)

Ref. No.	Part Number	Description	No. Req'd
1	031292	Shredder Box Weldment	1
2	031293	Feed Chute Weldment	1
3	031289-01	Feed Chute Cover	1
4	031294	Feed Chute Extension	1
5	031295-01	Door	1
6	031096-04	Hinge Pin	1
	031295-04	Left Leg Weldment	1
	031295-05	Right Leg Weldment	1



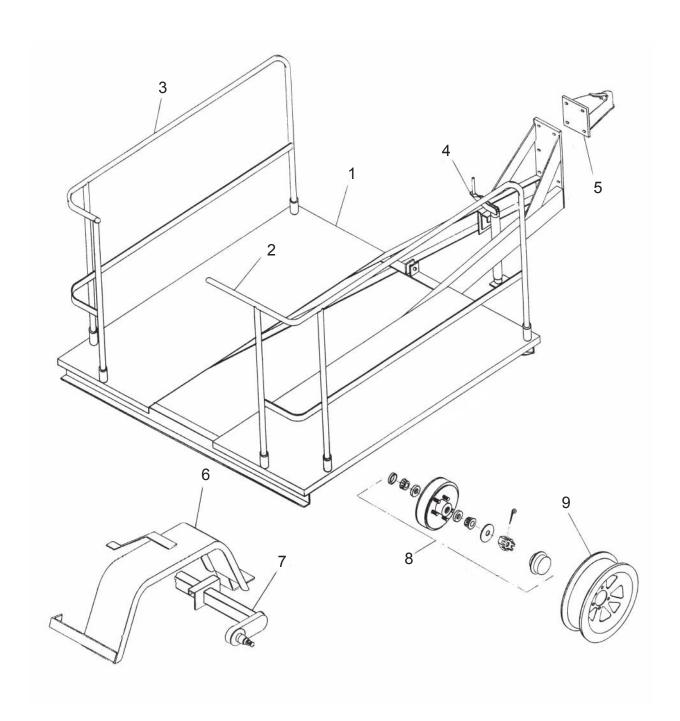
BLOWER AND DRIVE

Ref. No.	Part Number	Description	No. Req'd
1	031273	Coupling Half, Motor	1
2	031272	Coupling Half, Blower	1
3	031274	Coupling Insert	1
4	030712	Bearing	2
5	030904	Blower Shaft	1
6	031029	Blower Blade w/Hub	1
6A	030877	Blower Hub	1
	190125-80	Key, Bushing to Shaft - 3/8 x 3/8 x 5	1
	030873	Key, Hub to Bushing - 3/8 x 3/8 x 3	1
7	030950	Beater Roll Assembly	1
7A	030872	Beater Roll Hub	1
7B	030876	Beater Roll Bushing	1
7C	020111	Beater Chain 3-Pitch	4
7D	020119	Beater Bolt	4
	022487	Flex Nut	4
	031278	Coupling Guard	1
	031389	Tool Box	1



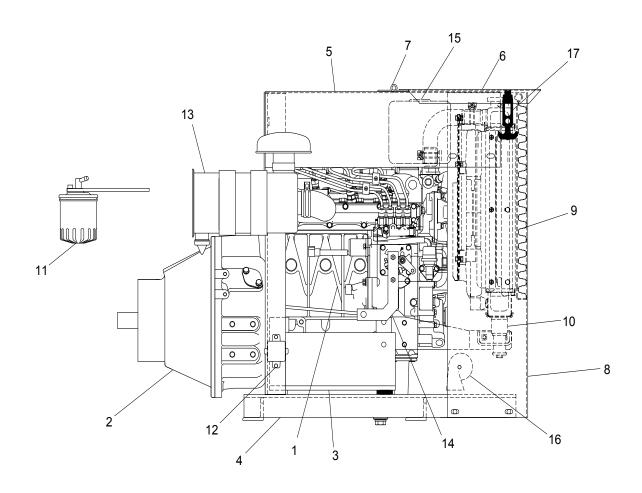
TRAILER WIRING

Ref. No.	Part No.	Description	No. Req'd
	031210	Trailer Wiring Harness	1
1	075592	Trailer Plug	1
2	023424	Breakaway Switch	1
3	005138	Right Tail Light	1
4	005137	Left Tail Light	1
	005137-A	Lens	1
5	005436	License Light	1
	004720	License Plate Bracket	1



TRAILER ASSEMBLY

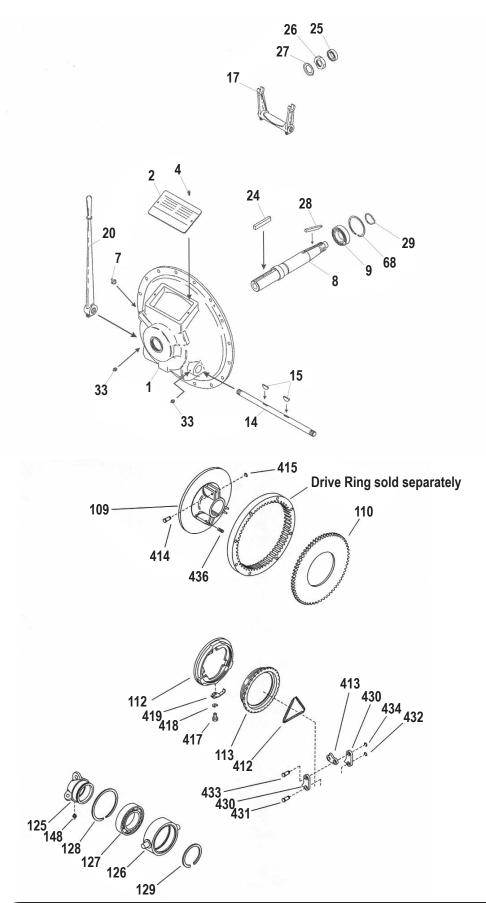
Ref. No.	Part No.	Description	No. Req'd.
1	031205	Platform Assembly	1
2	031183-01	Guard Rail-Right	1
3	031183-02	Guard Rail-Left	1
4	031189	Jack	1
5	031202	2" Ball Hitch Assembly	1
	030482	2" Ball (Optional)	
	080043	2-1/2" Lunette Eye (for Pintle Hitch)	
6	031196-01	Fender Assembly - Right	1
	031196-02	Fender Assembly - Left	1
7	031167	Axle Assembly	1
	031220 -01	Axle Shim Plate	2
8	055789	Axle Assembly	2
	055789-11	Hub	2
	055789-13	Outer Bearing Cup	2
	055789-15	Spindle Washer	2
	055789-18	Grease Cap	2
	055789-19	Rubber Plug	2
	055789-17	Cotter Pin	2
	055789-16	Spindle Nut	2
	055789-14	Inner Bearing Cone	2
	055789-12	Bearing Seal	2
	055789-8	Left-Hand Brake Assembly	1
	055789-9	Right-Hand Brake Assembly	1
	055789-10	Nut	8
	031222	Right Brake Assembly	1
	031223	Left Brake Assembly	1
9	031187	Wheel	2
	031188	Tire (Not Shown)	2
	031179	Safety Chain (Not Shown)	2
	031180	Clevis Grab Hook (Not Shown)	2
	031181	Chain Connecting Link (Not Shown)	2
10	031269	Bumper (Not Shown)	1



ENGINE PARTS

Ref. No.	Part Number	Description	No. Req'd
	004470	Mula de MACOCO DO Carrios	4
1	031473	Kubota V1505B-86 Engine	1
2	031452	Clutch Assembly	1
	031219	Clutch Arm	1
0	031219	Clutch Handle	1
3	031424	Engine Mount	1
	031376	Center Bushing Mount	4
4	055505	Snubbing Washer	4
4	031400	Engine Cradle Weldment	1
5	031395	Engine Top Cover	1
6	031419	Engine Cover Lid	1
7	031404-01	Engine Lid Hinge	1
8	031402	Radiator Shroud	1
9	031403	Radiator Screen	1
	190087	Screen Rubber Trim	1.5'
10	031470	Radiator Assembly	1
	031444	Upper Radiator Hose	1
	031445	Lower Radiator Hose	1
	KU16285-74110	Fan	1
11	KU15224-43018	Fuel Filter Assembly	1
	KU7000-43081	Filter Element	1
	005502-01	Filter Support Arm	1
	080105	Pre-Fuel Filter	1
12	080103	Fuel Pump	1
13	KU16616-11010	Air Cleaner Assembly	1
	KU15741-11080	Element	1
	031356	Pre Cleaner	1
	055548	Mounting Band	2
	031441	Rubber Shock Mount	4
14	031397-02	Throttle Plate	1
	005176	Throttle Cable	1
	007675	Ball Joint	1
15	KU155501-72400	Coolant Recovery Tank w/Bracket	1
16	006499	Horn and Bracket	1
17	023758	Soft Latch	2
	KU1G994-12110	Muffler	1
	055568	Temperature Switch	1
	KU16271-32090	Oil Filter	1
	031464	Fuel Tank	1
	005726	Fuel Cap	1
	031459	Fuel Level Gauge	1
	031197-02	Mounting Strap	2
		· .	

WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

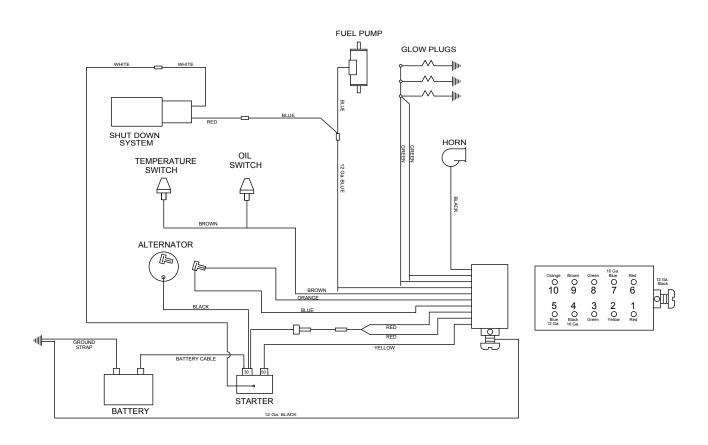


WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE

POWER TAKE OFF ASSEMBLY

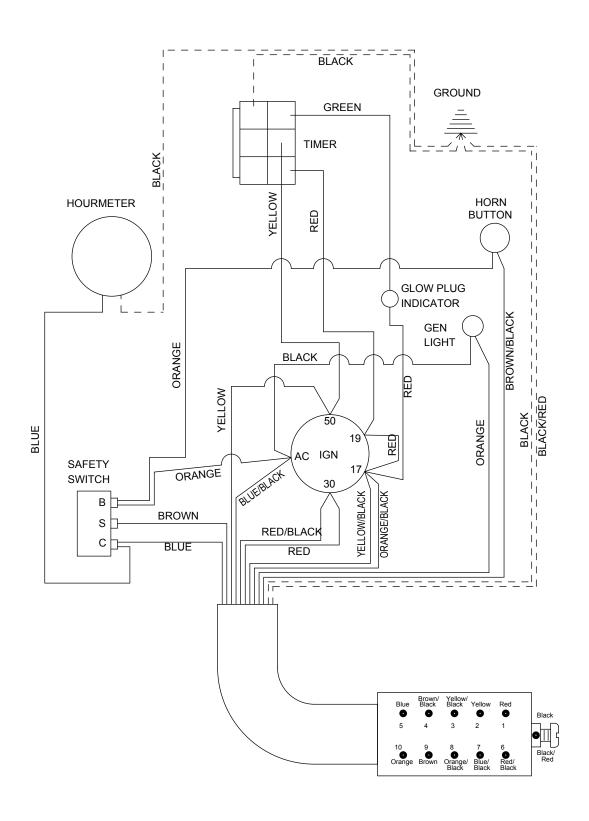
Ref. No.	Part No.	Description	No Req'd
1	204274AM	Bell Housing	1
2	101687AM	Name Plate	1
4	206092AM	Bolt	2
7	260843AM	Grease Fitting	1
8	206252AM	Drive Shaft	1
9	207438AM	Main Bearing	1
14	206425AM	Cross Shaft	1
15	204536AM	Woodruff Key	2
17	308371AM	Yoke Sub Assy	1
20	31219	Shifting Lever Sub Assembly	1
24	204475AM	Output Key	1
25*	207464AM	Pilot Bearing	1
26	204746AM	Nut	1
27	207231AM	Locking Washer	1
28	204467AM	Clutch Key	1
29	206710AM	External Snapring	1
33	207953AM	Grease Fitting (cross shaft)	2
68	LC100571	Internal Snapring	1
79	418814AM	Clutch Assembly (Includes Keys 109 through 436)	1
109	202998AM	Clutch Body	1
110	203573AM	Facing Plate	1
112	205496AM	Pressure Plate (also see #136)	1
113	205825AM	Adjusting Ring	1
125	215512AM	Release Sleeve	1
126	203296AM	Bearing Carrier	1
127	207511AM	Release Bearing	1
128	206803AM	Internal Snapring	1
129	206714AM	External Snapring	1
136	308805AM	Pressure Plate Assembly	
		(Includes Key Numbers 112 and 113)	1
137	318818AM	Sleeve & Bearing Assembly (Includes Key	
		Numbers 125-129, 148, 430, 431, and 432)	1
148	207954AM	Grease Fitting	1
412	X	Lever Spring	1
413	X	Lever	3
414	X	Clevis Pin	3
415	X	Retaining Ring	3
417	X	Lock Bolt	1
418	X	Lock Washer	1
419	X	Adjustment Lock	1
430	X	Link	6
431	X	Clevis Pin	3
432	X	Retaining Ring	3
433	X	Clevis Pin	3
434	X	Retaining Ring	3
436	X	Separator Spring	3
	205854AM	Drive Ring	1

^{*} If greasable pilot bearing use 207437AM



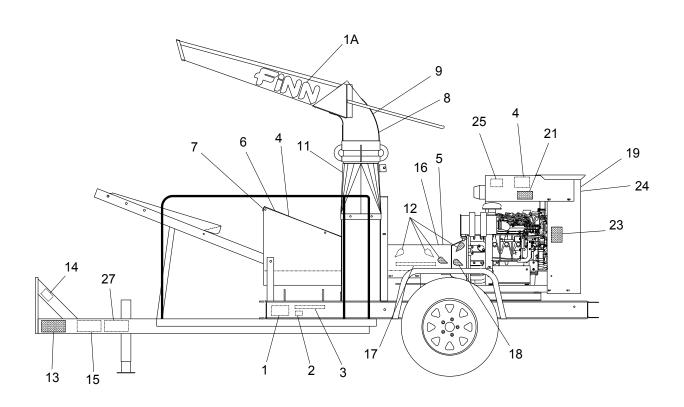
ENGINE WIRING HARNESS

Part No.	Description	No. Req'd.
031457	Wiring Harness	1
002256-12	Battery	1
080096	Battery Cable	1
031350	Ground Strap	1
006499	Horn Assembly	1
007274	Hour Meter	1
020886	Horn Button	1
055568	Temperature Switch	1
022119	Safety Switch	1
KU66711-55131	Ignition Switch	1
004934	Oil Switch	1
KU15403-64490	Glow Plug Indicator Light	1
080103	Fuel Pump	1
170028	Fuse with Holder	1
KU15694-65990	Glow Plug Timer	1
006245	Generator Light	1
031368	Battery Holddown Strap	1
005561	Electrical Housing	1
023602	Electrical Housing Insert	1



CONTROL BOX WIRING

Part No.	Description	No. Req'd	
007274	Hour Meter	1	
022119	Safety Switch	1	
KU15694-65592	Glow Plug Timer	1	
020886	Horn Button	1	
KU15403-64491	Glow Plug Indicator Light	1	
006245	Generator Light	1	
KU66706-55120	Ignition Switch	1	
023604	Electrical Housing	1	
023601	Electrical Housing Plug	1	
080304	Liquid Tight Fitting	3	
031426	Control Box Wiring Harness	1	



B70 DECALS

Ref. No.	Part No.	Description	No. Req'd
1	011690	FINN Name Plate	1
1A	031235	Decal "FINN"	2
2	020976	Decal "Patent Infringement"	1
3	031168	Decal "Patent Numbers"	1
4	022357	Decal "Caution: Turn Off Engine"	2
5	031297	Decal "Important: Clutch Adjustment"	1
6	020068	Decal "Danger: Do Not Open"	1
7	022690	Decal "Caution: Eye Protection"	1
8	020970	Decal "Caution: Do Not Ride Over 5MPH"	1
9	023519	Decal "Caution: Wear Eye Protection"	1
10	006870-HORN	Decal "HORN"	1*
11	080442	Decal "Throttle"	1
12	007231	Decal "Service Weekly"	5
13	031227	Decal "Caution: Tighten Hitch"	1
14	023423	Decal "Warning: Breakaway Switch"	1
15	031228	Decal "Caution: Safety Chain Installed"	1
16	012179	Decal "Warning: Do Not Operate"	1
17	023391	Decal "Diesel Fuel Only"	1
18	007351	Decal "Hand Gun Only"	1
19	007429	Decal "Radiator Protection"	1
20	006870-GEN	Decal "Gen"	1*
21	012260	"Maintain Decals" Plate	1
22	080108-03	Decal "Glow Plug"	1*
23	012251	Decal "Warning: Rotating Fan Hazard"	2
24	012279	Decal "Warning: Radiator Cap"	1
25	012278	Decal "Danger: Hot Exhaust"	1
26	022082	Decal "Hold Button In For 10 Seconds"	1*
27	031465	Decal "GVWR"	1

^{*:} Not Shown Located On Control Box Face.

Note: 150028 Decal kit includes all decals reference numbers 2 through 26.

TOOL KIT

Part No.	Description	No Req'd.
020057	#13 Twine Knife	1
020063	#11 Twine Knife	1
	Manual, Engine	1
	Manual, Parts and Operation	1