

# **FINN** **CORPORATION**

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## **B-70 Mulch Spreader** Quality Manual



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# 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 to stress safe operation.

The first four pages of this manual are a summary of all the main safety aspects associated with this unit. Be sure to read completely before operation of machine.



This symbol is used throughout the operation and maintenance sections of this manual to call attention to safety procedures.

**- Pay Attention -**



**DANGER:** Immediate hazards which **WILL** result in severe personal injury or death.



**WARNING:** Hazards or unsafe practices which **COULD** result in severe personal injury or death.



**CAUTION:** Hazards or unsafe practices which **COULD** result in minor personal injury or product or property damage.

**IMPORTANT:** Indicates that equipment or property damage could result if instructions are not followed.

**NOTE:** Gives helpful information.

## Finn Corporation

### 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

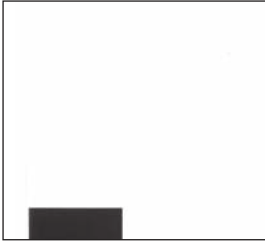
Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

# MULCH SPREADER SAFETY SUMMARY SECTION

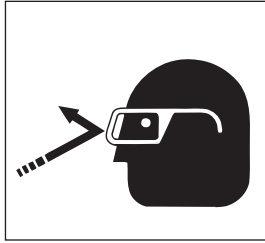
It is important that all operators of this machine are familiar with all of the safety aspects mentioned below and have read the entire Operator's Manual before operating the machine. Always keep a copy of this manual with the machine. It is the responsibility of the operator of the machine to fully understand this safety sheet. Remember that **YOU** 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; and above all, remember that safety is up to you.

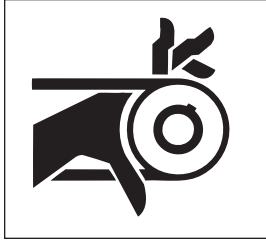
The FINN MULCH SPREADER is intended to be used as an applicator of vegetative hay or straw mulches onto the seedbed. Its use with other products or for other applications must be by approval of the product's manufacturer. If there are any questions contact FINN Corporation at 1-800-543-7166.

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


1. 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.
4. 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. Signal "All Clear" before starting the engine.

## II. MACHINE OPERATION:

1. ~~Always~~ ~~safely~~ ~~wear~~ ~~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 job-site requirements. Remove rings, watches, etc. Avoid loose fitting clothing that may get caught in rotating machinery. 

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

3. 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.
5. Operator(s) of equipment should never ride on machine at speeds greater than 5 M.P.H. (8km/h).

6. ~~Never~~ ~~operate~~ ~~the~~ ~~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. 

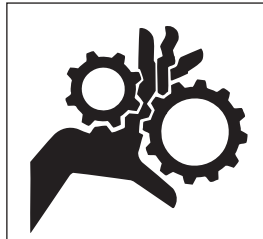
7. ~~Never~~ ~~operate~~ ~~the~~ ~~machine~~ or other machinery when fatigued, tired, under the influence of alcohol, illegal drugs or medication. You must be in good physical condition and mentally alert to operate this machine.
8. Never modify the machine. Never remove any part of the machine (except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

9. 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.
11. 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 OSHA lockout/tagout procedure (29CFR 1910.147) before removing any foreign objects. Signal "All Clear" before restarting the machine.



### III. MAINTENANCE:

1. 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 and 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. Radiator maintenance. Liquid cooling systems build up pressure as the engine gets hot. Before removing the radiator cap, stop the engine and let the system cool. Remove the radiator cap only after the coolant is cool.
4. Battery maintenance. Lead-acid batteries contain sulfuric acid which damage eyes or skin on contact. Always wear a face shield to avoid 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.

5. Filling of fuel. Never fill the fuel tank with the engine 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 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

**NOTE:** 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.

6. It is recommended that only authorized genuine FINN replacement parts be used on the machine.
7. Do not use ether cold start fluid if engine is equipped with glow plug type preheater or other intake manifold type preheater. It could cause an explosion or fire and severe injury or death.
8. Diesel fuel under pressure can penetrate the skin or eyes and cause injury, blindness or death.
9. 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 right hand corner of the decal. See page 5 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

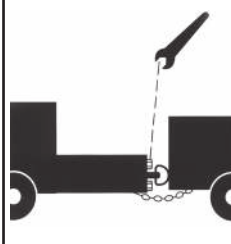


**SAFETY CHAIN INSTALLATION**

**CAUTION**

Both the single and double chains must be crossed under the tongue. They must be oriented in such a manner as to prevent the tongue from dropping to the ground in the event of failure to the hitch, 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.


P/N-31228



**CAUTION**

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


P/N-31227



**CAUTION**

Personnel should not ride this equipment  at speeds greater than 5 MPH (8 km/h).

20970



**DANGER**

**Rotating Parts.**

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

20066

**DANGER**

**HOT EXHAUST**

012278

**CAUTION**

**USE ON 2" BALL ONLY**

P/N 31336



**WARNING**

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

12251



**CAUTION**

Wear eye protection around operating equipment.


23519



**WARNING**

Do not operate without guards in place.


12179



**WARNING**

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

22357



**WARNING**

To prevent serious burning or scalding:

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

012279

**CAUTION**



**Wear proper eye protection when feeding this machine.**

22990



# Operation and Maintenance

## Manual for

### B-70 Mulch Spreader

#### **INTRODUCTION:**

This manual is designed for step by step instructions of the operation, care, and maintenance of the B-70 Mulch Spreader and, in addition, it contains illustration and descriptions of a complete list of parts and components for easy identification. For best results and to insure 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 MULCH SPREADER AND HOW IT WORKS:**

The FINN B-70 Mulch Spreader will apply vegetative mulch at a fast and uniform rate (with the specified amount of adhesive material, if so desired) 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, which 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 Mulch Spreader 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 Mulch Spreader. This hitch should be mounted as near to the end of the truck bed as possible. Use a 2" ball rated 6000 lbs. (2721 kg). The tow vehicle must be able to support 600 lbs. (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 Mulch Spreader 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:

### SAFETY CHECK TO INSURE OPERATOR SAFETY:

1. A. Skid Unit - Check condition of all mounting hardware securing the Mulch Spreader to the truck bed.  
B. Trailer Unit - Inspect hitch, safety chains, lights, brakes and breakaway switch.
2. Check the signal horn for proper operation.
3. Inspect that all railings are in place and secure.
4. Insure that all guards are in place.

### EQUIPMENT CHECK:



**CAUTION:** Equipment check is made with the engine off and all rotating parts stopped.

1. Tool kit - see that it contains all prescribed items (see tool kit list page 30).
2. Check shredder box for foreign objects that could damage the equipment or injure workers.
3. Check fuel tank. 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 No. 1-D fuel oil.
4. Check engine oil - 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 dry will permanently damage it).

### STARTING PROCEDURE:



**CAUTION:** See safety section of the manual (pages 1-4) before operating the machine.

1. Disengage the clutch.
2. Set throttle about ¼ open.
3. Turn key counter clockwise 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. or if the water temperature reaches 230° Fahrenheit (110° Centigrade).

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. The Operator 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 signals with the signal horn.
2. The Bale Handler operates from the truck bed and supplies the feeder with bales of mulch material, cut side up.
3. The Bale Feeder cuts and disposes of the twine or wire; separates the bale in 1½” to 2” bats and feeds those into the shredder box allowing about a 10” space between bats. Uniform feeding assures fast separation and more uniform application.
4. The Truck Driver 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 Mulch Spreader should be towed to a point approximately 30 ft (9 m) from the area where the mulch is to be applied. The operator elevates the discharge spout about 10° above the plain of the seedbed so that the mulch floats onto the seedbed.

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 16 for picture) 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 for more even distribution. The unit is shipped with the cover in the lower position.

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



**CAUTION:** Be sure beater chains are mounted opposite each other at all times to avoid throwing the blower shaft out of balance.

If any obstruction stops the flow of mulch, immediately disengage clutch and shut off engine. Do not reach into the beater box or attempt 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.



**DANGER:** Do not reach into the beater box or attempt any adjustment until the engine and all rotating parts have stopped.

## **CLEANING AND MAINTENANCE:**

### **AFTER FIRST 4 - 8 HOURS OPERATION:**

1. Check and adjust clutch - see page 10.
2. Retorque wheel lugs - 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 come loose or disconnected, warranty on your engine is subject to cancellation.
3. Clean the radiator and radiator guard with tap water.
4. Clean the beater chains, making 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.
7. Check hitch bolts and safety chains.
8. Remove asphalt emulsion strainer screen. Clean and re-install.
9. If the asphalt emulsion system has been used, the cleaning procedure previously described should be followed.

### **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 then 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 pounds.
5. Check clutch adjustment to insure that it "snaps" in and out of engagement.



**CAUTION: Adjust only while engine is off.**

# 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 & 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

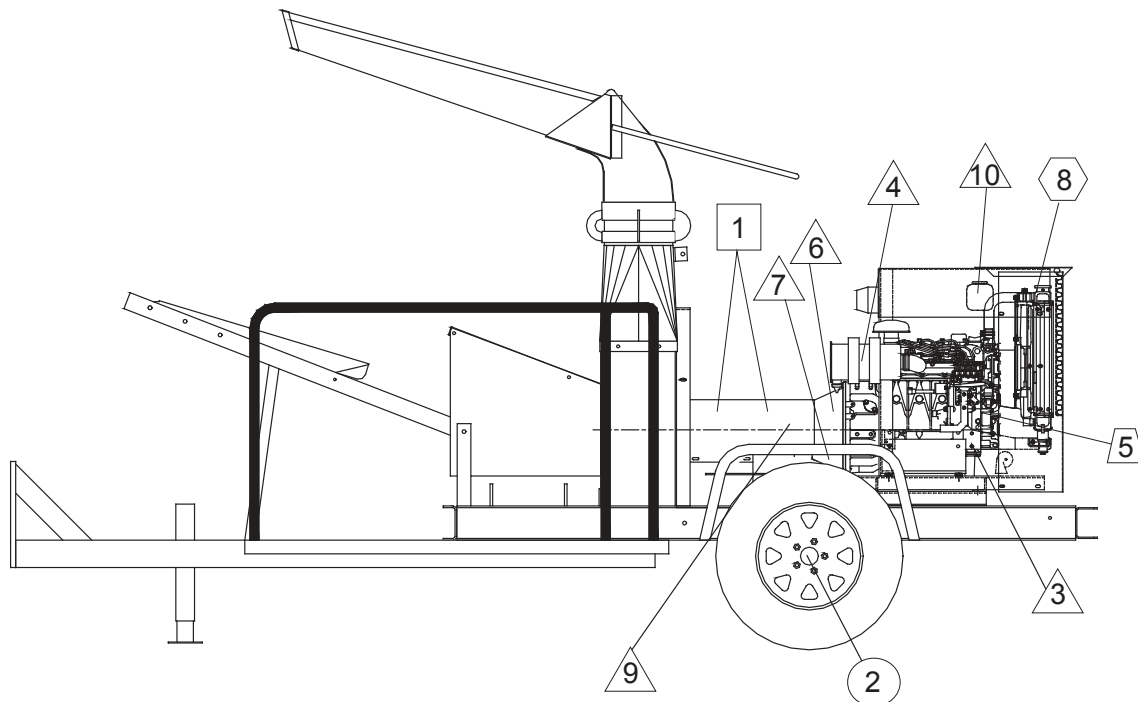
CL Chassis Lubricant  
 MO Motor oil SAE 30 CD/SF  
 AF 50/50 Anti-freeze and water mixture  
 DF Diesel Fuel

## TIME KEY

DAILY □  
 WEEKLY △  
 SEASONALLY (OR 500 HOURS) ○  
 ANNUALLY ⬡  
 SEE ENGINE MANUAL ▴

## FLUID CAPACITIES

Fuel - 13.5 gallons  
 Engine Oil - See engine manual  
 Engine Coolant - (50/50 anti-freeze and water mixture) 4 gallons



## **CLUTCH CARE AND MAINTENANCE:**

This is a short simple outline of the Twin Disk clutch adjustment and lubrication. 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 unit and specification number stamped on the name plate located on the top center of the power take-off housing.

### **LUBRICATION:**

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

### **ADJUSTMENT:**

If the clutch does not pull, heats, or operating lever jumps out of engagement, the clutch must be adjusted. To adjust the clutch remove the name plate in 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 yoke or ring to the right or clockwise until the clutch lever requires a distinct pressure to engage (approx. 26 lbs of pull). A new clutch generally requires several adjustments until the friction surfaces are worn in. After the clutch is "worn in" the adjustment should be checked regularly.

**NOTE:** Do not adjust clutch too tight. Over tightening can cause component failure.

# NOTES

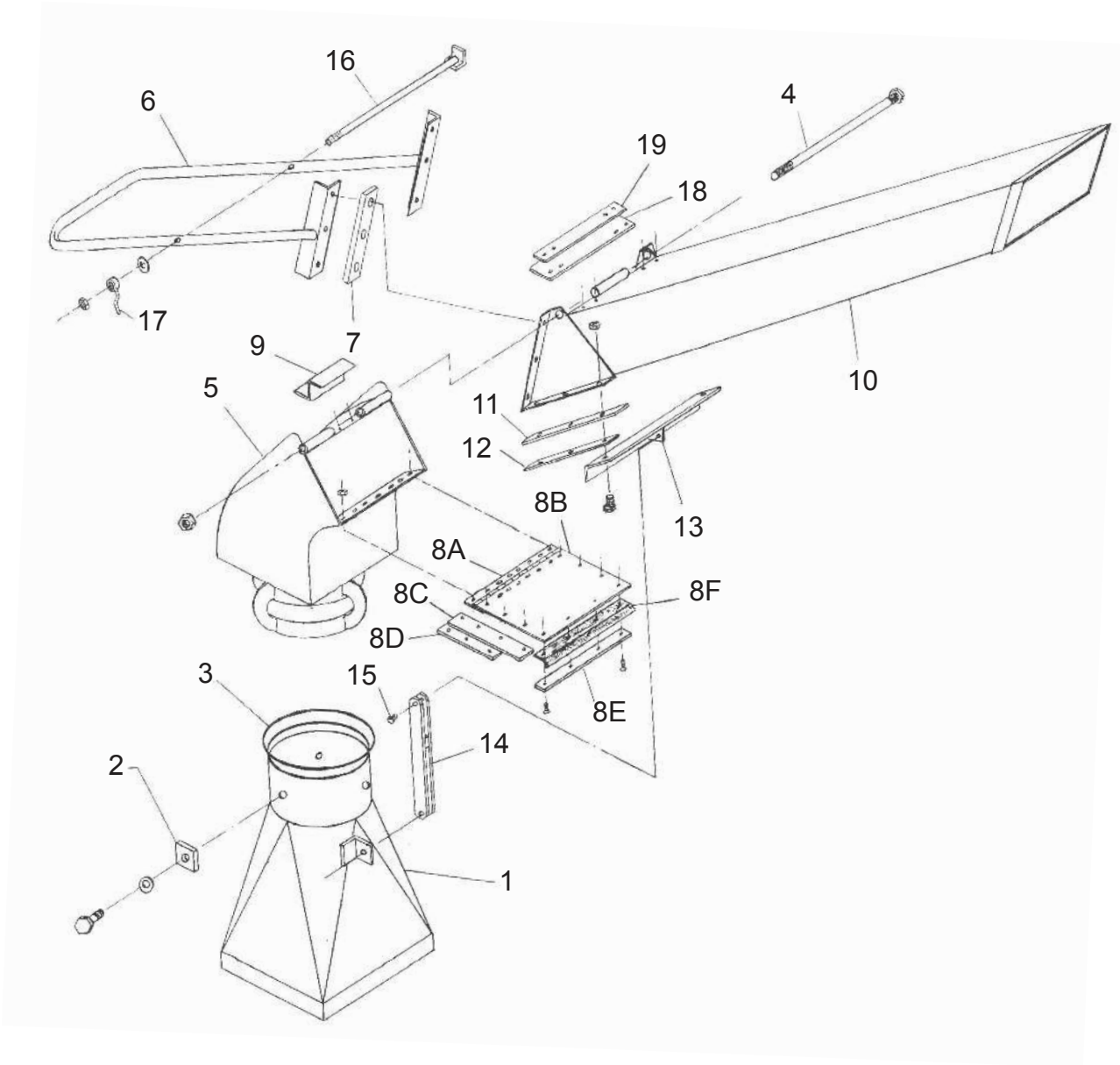
# NOTES



# **B-70 Mulch Spreader**

## **Parts Manual**

**Model SS**

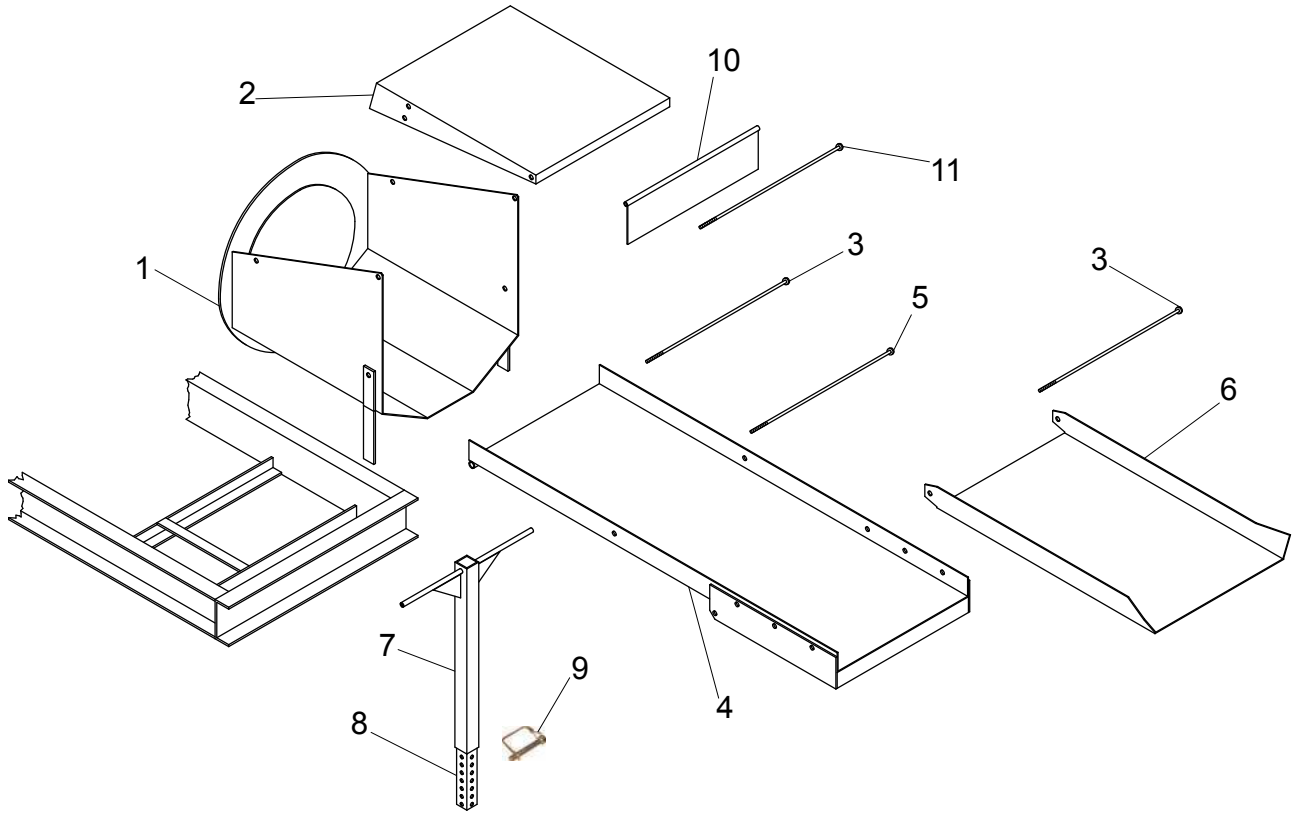


**WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE**

## 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	Seal Plate	1
8C	031338-08	Side Seal	2
8D	031338-07	Side Seal Retaining Strap	2
8E	031338-03	End Flap Seal Retaining Strap	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 Seal Retainer Strap	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 Strap	1
20	031338-12	Side Elbow Seal	2
21	031338-11	Hinge Seal	1

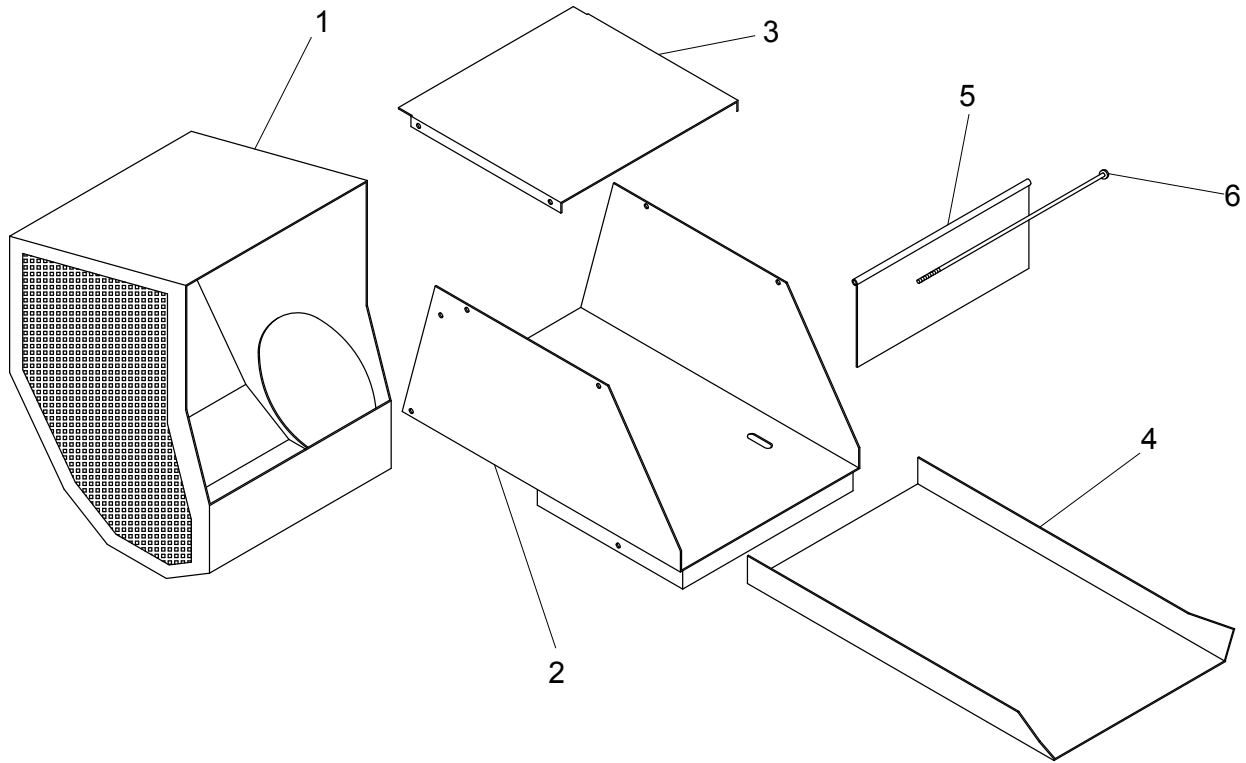
**WHEN ORDERING PARTS, BE SURE TO STATE  
SERIAL NUMBER OF MACHINE**



## 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	031158-04	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
9	FW71225	Snapper Pin	1
10	031096-01	Shredder Door	1
11	031096-04	Shredder Door Hinge Pin w/Nut	1

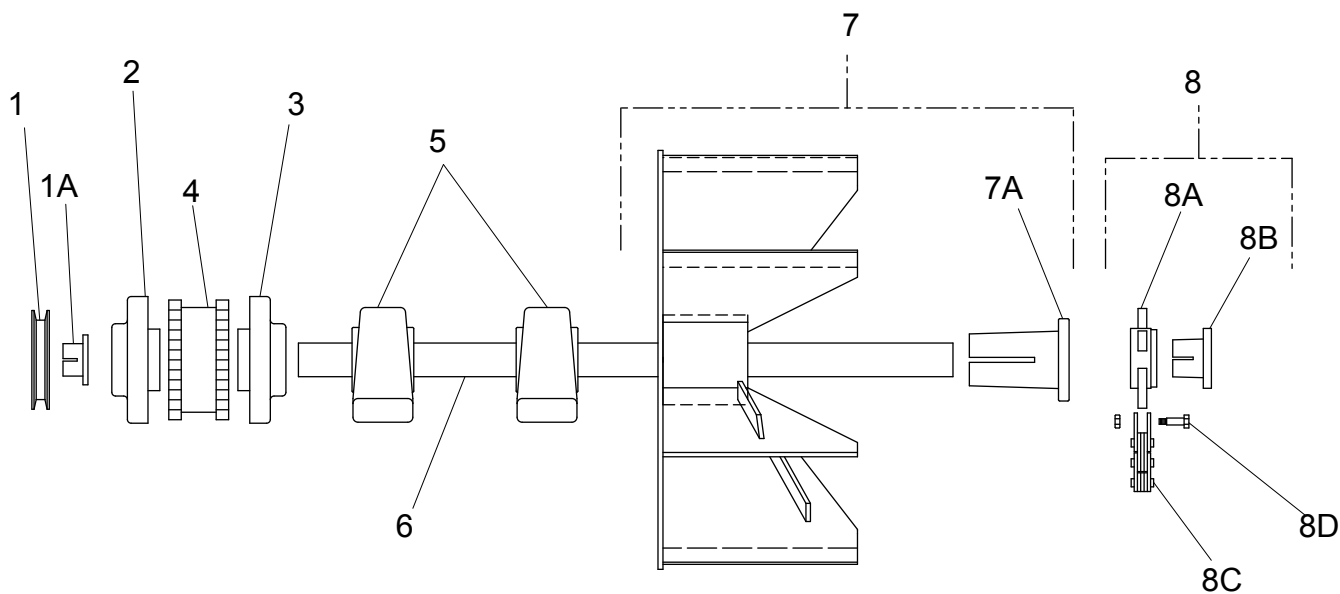
**WHEN ORDERING PARTS, BE SURE TO STATE  
SERIAL NUMBER OF MACHINE**



## 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 Weldment	1
6	031096-04	Hinge Pin	1
	031295-04	Left Leg Weldment	1
	031295-05	Right Leg Weldment	1

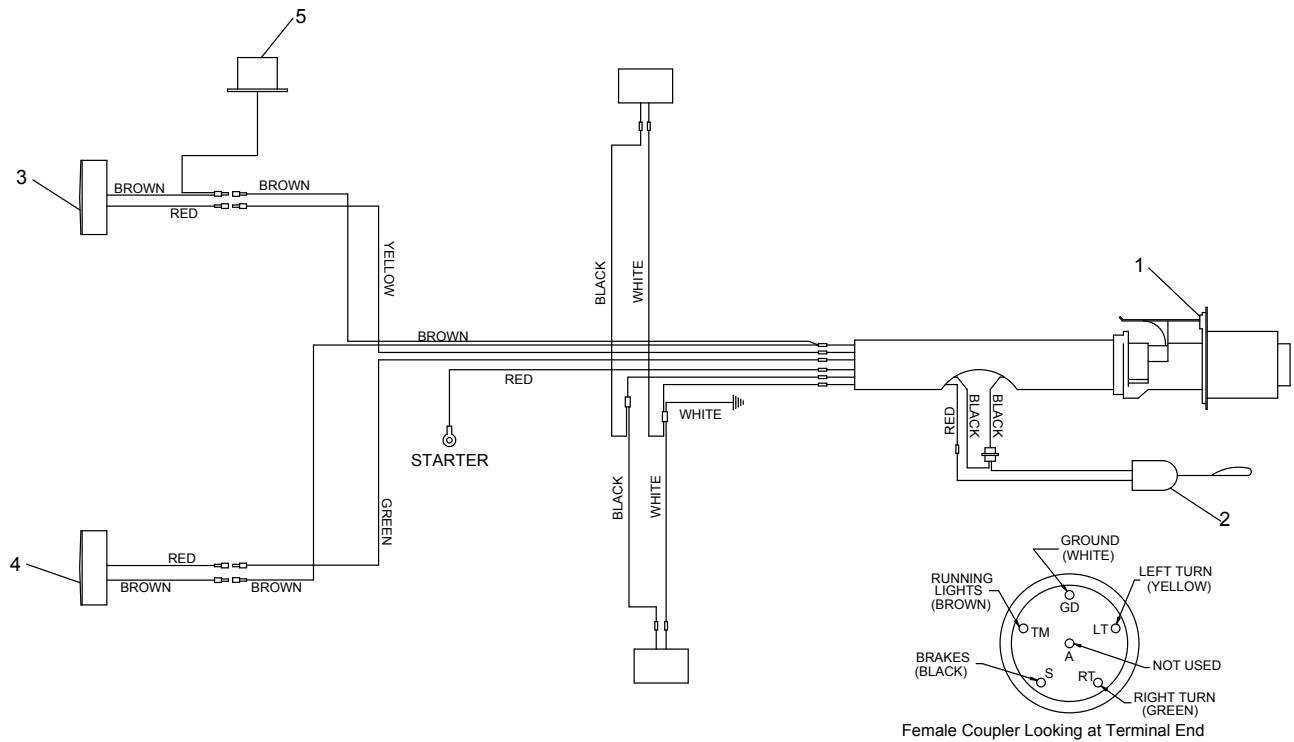
**WHEN ORDERING PARTS, BE SURE TO STATE  
SERIAL NUMBER OF MACHINE**



## BLOWER AND DRIVE

Ref. No.	Part Number	Description	No. Req'd
1	000527	Sheave, Motor	1
1A	020362B	Bushing, Motor	1
2	031273	Coupling Half, Motor	1
3	031272	Coupling Half, Blower	1
4	031274	Coupling Insert	1
5	030712	Bearing	2
6	030904	Blower Shaft	1
7	031029	Blower Blade w/Hub	1
7A	030877	Blower Hub	1
	030874	Key, Bushing to Shaft	1
	030873	Key, Hub to Bushing	1
8	030950	Beater Roll Assembly	1
8A	030872	Beater Roll Hub	1
8B	030876	Beater Roll Bushing	1
8C	020111	Chain	4
8D	020119	Beater Bolt	4
	022487	Flex Nut	4
	031278	Coupling Guard	1
	031389	Tool Box	1

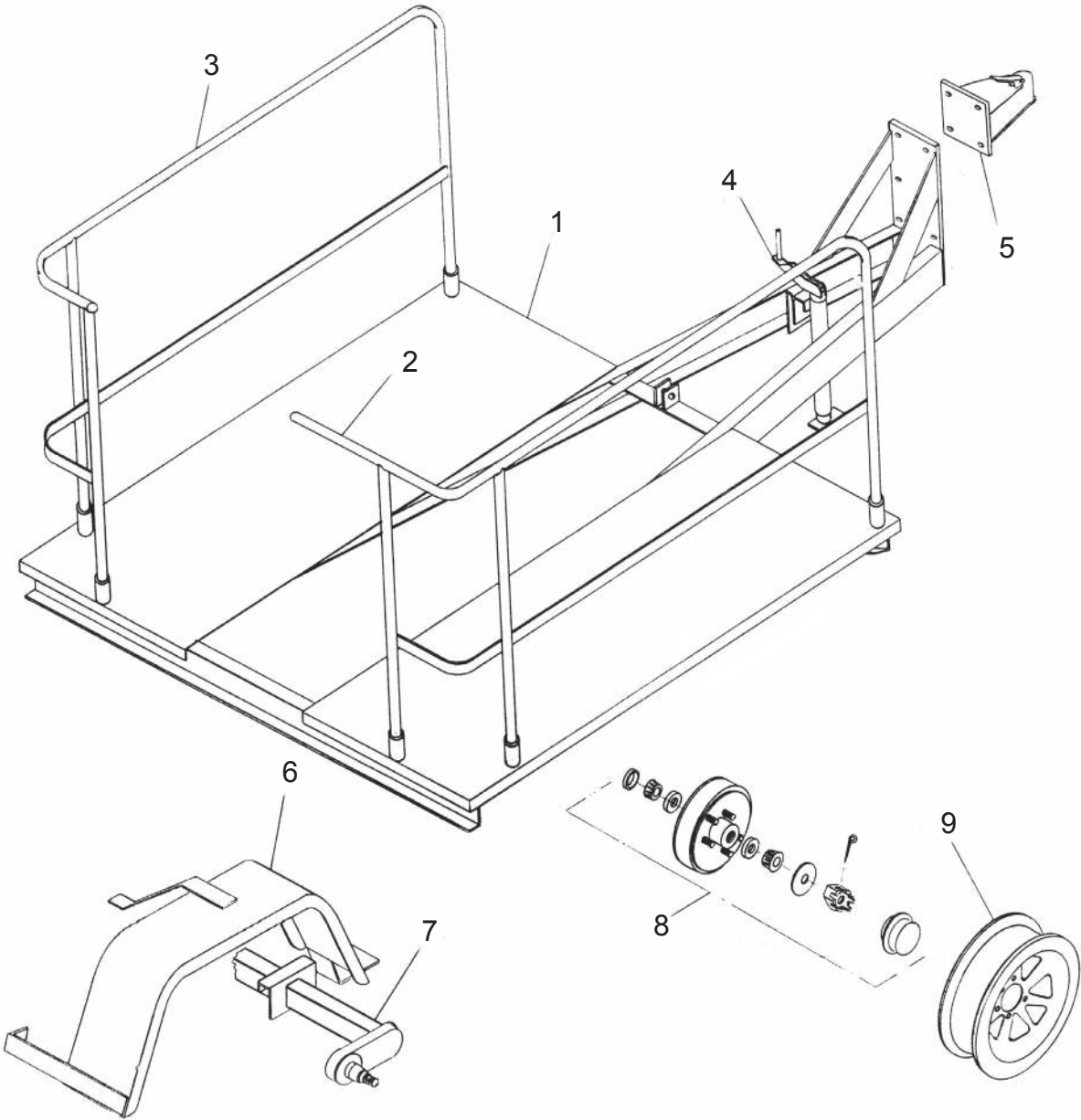
**WHEN ORDERING PARTS, BE SURE TO STATE  
SERIAL NUMBER OF MACHINE**



## TRAILER WIRING

Ref. No.	Part No.	Description	No. Req'd
	031210	Trailer Wiring Harness	1
1	060069	Trailer Plug	1
2	023424	Breakaway Switch	1
3	005138	Right Tail Light	1
4	005137	Left Tail Light	1
5	005236	License Light	1
	004720	License Plate Bracket	1

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



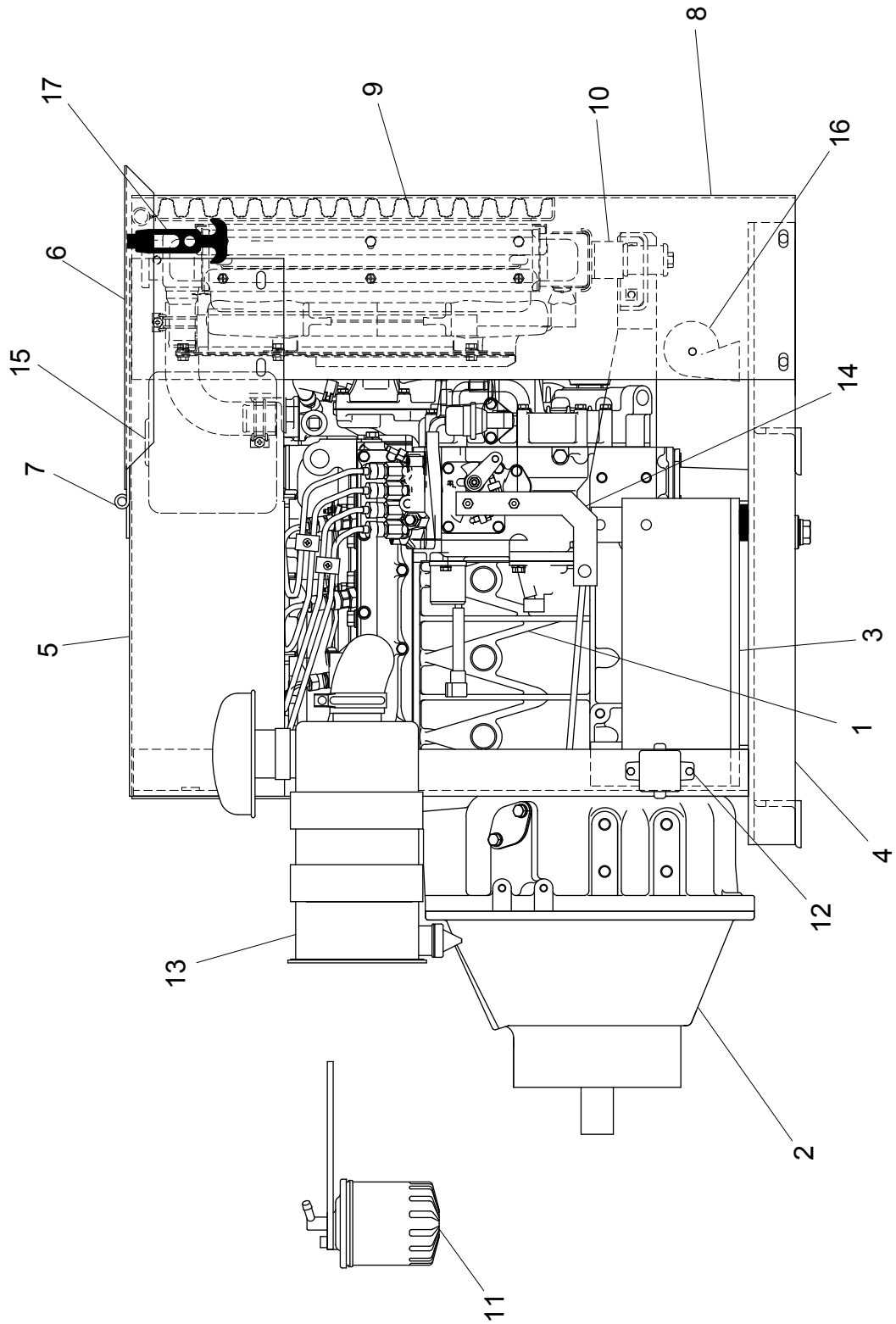
**WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE**



## 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)	
6	031196-01	Fender Assembly - Right	1
	031196-02	Fender Assembly - Left	1
7	031167	Axle Assembly	1
	031220	Axle Shim Plate	2
8	031221	Complete Hub Assembly	2
	WL9103305	Grease Seal	2
	WLLM68149	Bearing, Inner Cone	2
	WLL68111	Inner Cup	2
	WL9080607	Hub/Drum	2
	WLL44610	Outer Cup	2
	WLL44649	Bearing, Outer Cup	2
	WL90509	Spindle Washer	2
	WL90601	Spindle Nut	2
	WL91901	Cotter Pin	2
	WL92102	Grease Cap	2
	WL9251510	Wheel Stud	2
	WL90608	Wheel Nut	2
	031222	Right Brake Assembly	1
	031223	Left Brake Assembly	1
9	031187	Wheel	2
	031188	Tire	2
	031179	Safety Chain	2
	031180	Clevis Grab Hook	2
	031181	Chain Connecting Link	2
10	031269	Bumper (Not Shown)	1

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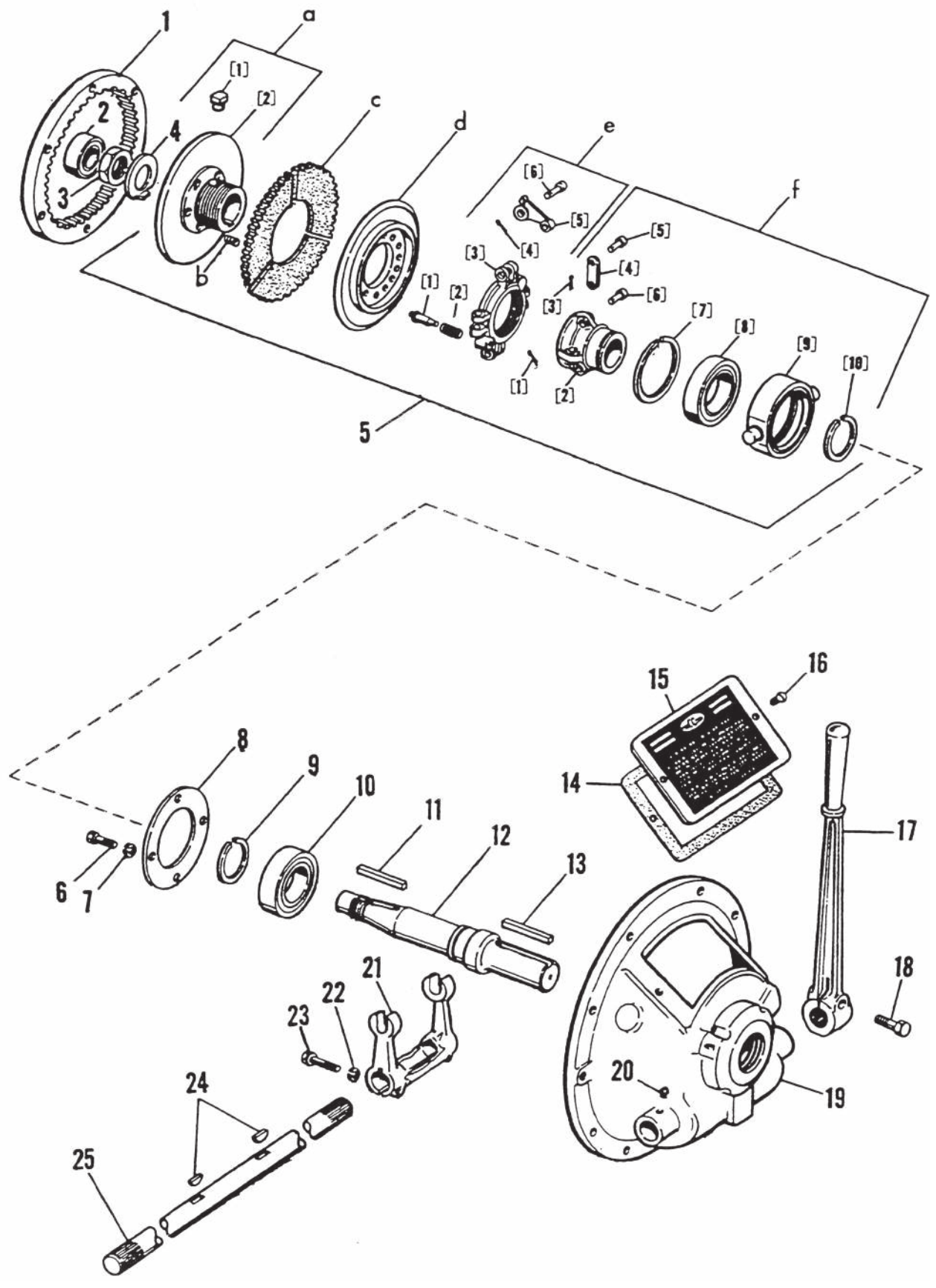


**WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE**

## ENGINE PARTS

Ref. No.	Part Number	Description	No. Req'd
1	031390	Kubota V1505B-86 Engine	1
2	031452	Clutch Assembly	1
	031219	Clutch Arm	1
	031444	Clutch Handle	1
3	031424	Engine Mount	1
	031376	Center Bushing Mount	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	KU16665-72061	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
	031376	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 & Bracket	1
17	023758	Soft Latch	2
	KU37410-88518	Muffler	1
	055568	Temperature Switch	1
	KU16271-32090	Oil Filter	1
	031197	Fuel Tank	1
	007914	Fuel Cap	1
	031215	Fuel Level Gauge	1
	031197-06	Fuel Suction Tube	1

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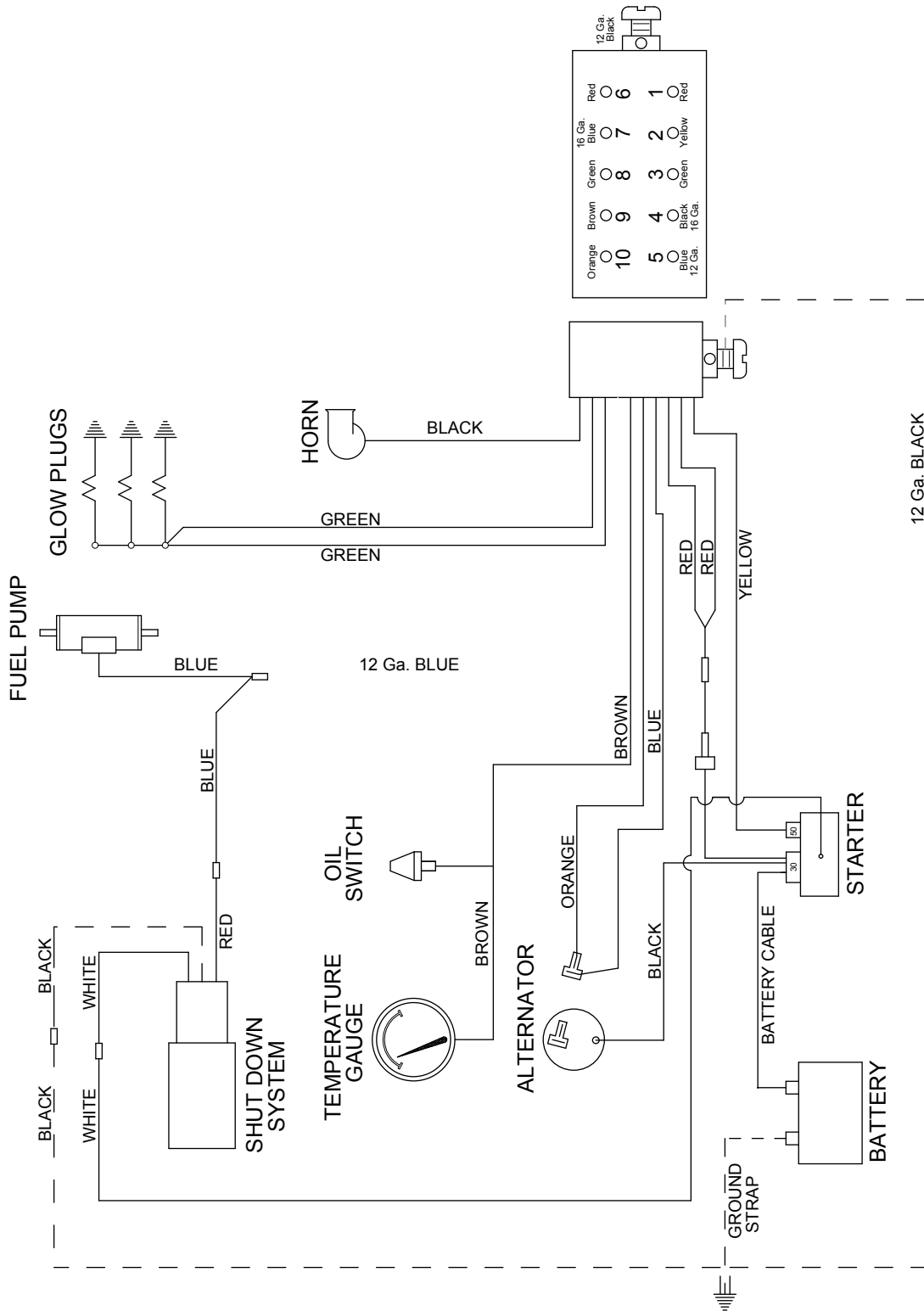


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## POWER TAKE OFF ASSEMBLY

Ref. No.	Part No.	Description	No Req'd
1	TD6939	Ring, Driving	1
2	TDM141A	Piolt Bearing	1
3	TD2727	Nut	1
4	TDA1587	Lock washer	1
5		Clutch Assembly (includes: a thur f)	1
a		Hub and Back Plate Assembly	1
a-1	TD110 D3	Pin, Plate	1
a-2	TDA3024	Hub Plate	1
b	TDA2286	Clutch Release Spring	6
c	TDA3507E	Clutch Plate	1
d	TD3951	Flotaing Plate	1
e		Adjusting Yoke Assembly	1
e-1	TD2042	Adjusting Lock Pin	1
e-2	TD1382	Adjusting Lock Pin Spring	1
e-3	TD3206	Adjusting Yoke	1
e-4	TDB1535B	Cotter Pin	4
e-5	TD2411	Finger Lever	4
e-6	TD110 D-3	Finger Lever Pin	4
f		Sliding Sleeve Assembly	1
f-1	TDB1535B	Cotter Pln	7
f-2	TDB1390	Slinding Sleeve	1
f-3	TDB1535B	Cottor Pin	4
f-4	TD2968	Finger Lever Link	8
f-5	TDB1537B	Finger Lever Link Pin	4
f-6	TDB1537C	Link Pin	4
f-7	TDB1048D	Internal Retaining Snap Ring	1
f-8	TDM1921	Ball Bearing	1
f-9	TDA4173A	Collar	1
f-10	TDA2915L	External Retaining Snap Ring	1
6	TDM2001E	5/16-18 x 5/8 Bolt	4
7	TDM2046L	5/16 Flat Washer	4
8	TDA1181	Bearing Retainer	1
9	TDA1002	Snap Ring, External	1
10	TDM177A	Ball Bearing	1
11	TDM2032X	Hub Key	1
12	TDA3026AK	Shaft	1
13	TDM2032BE	Shaft Key	1
14		Name Plate Gasket	1
15	TD1965D	Name Plate	1
16	TDM2023F	Screw	2
17	031219	Clutch Handle	1

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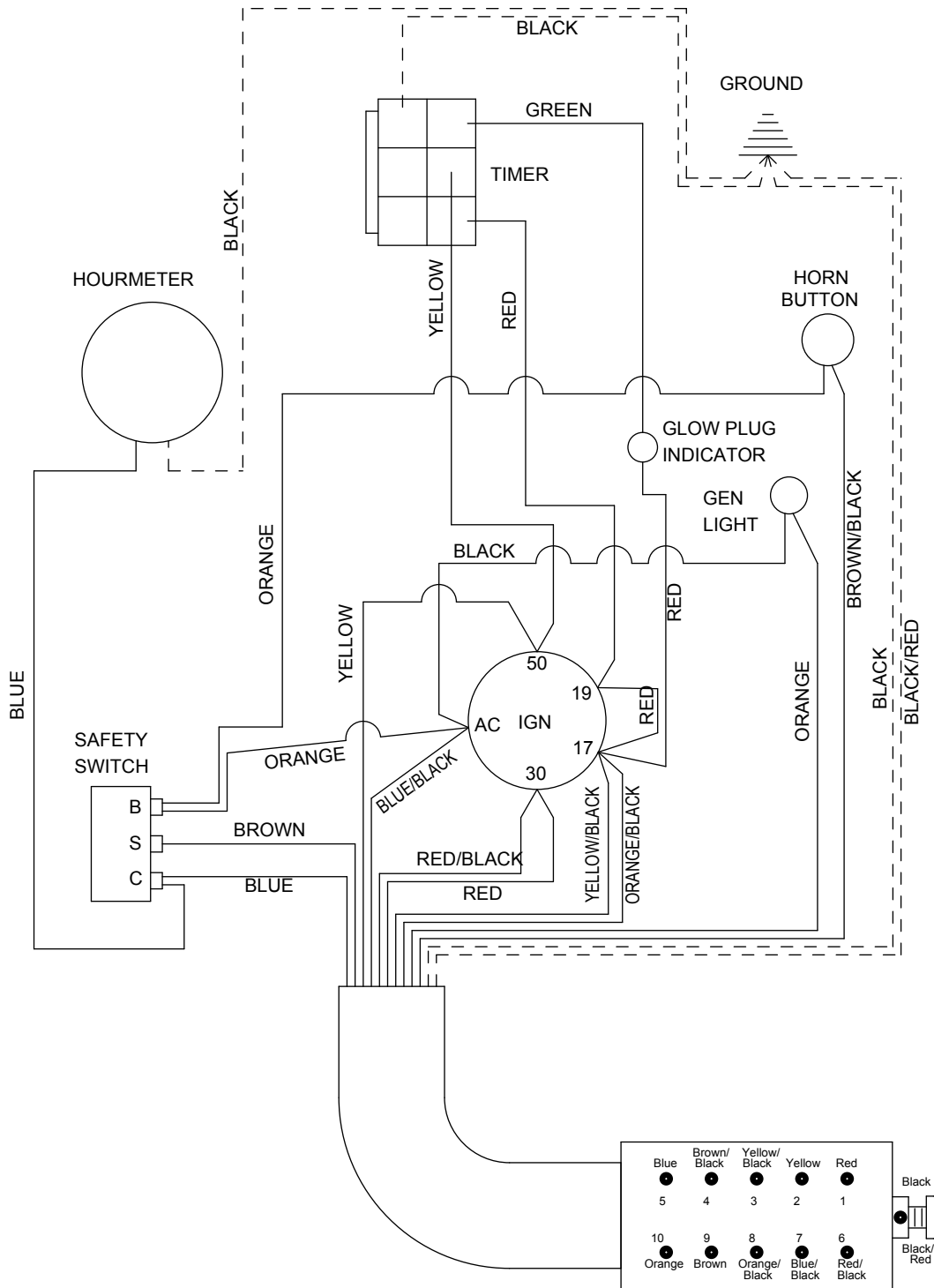


**WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE**

## ENGINE WIRING HARNESS

Part No.	Description	No. Req'd.
005687	Wiring Harness	1
002256-12	Battery	1
080096	Battery Cable	1
031350	Ground Strap	1
006499	Horn Assembly	1
007274	Hourmeter	1
020886	Horn Button	1
055568	Temperature Switch	1
022119	Safety Switch	1
KU66706-55120	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

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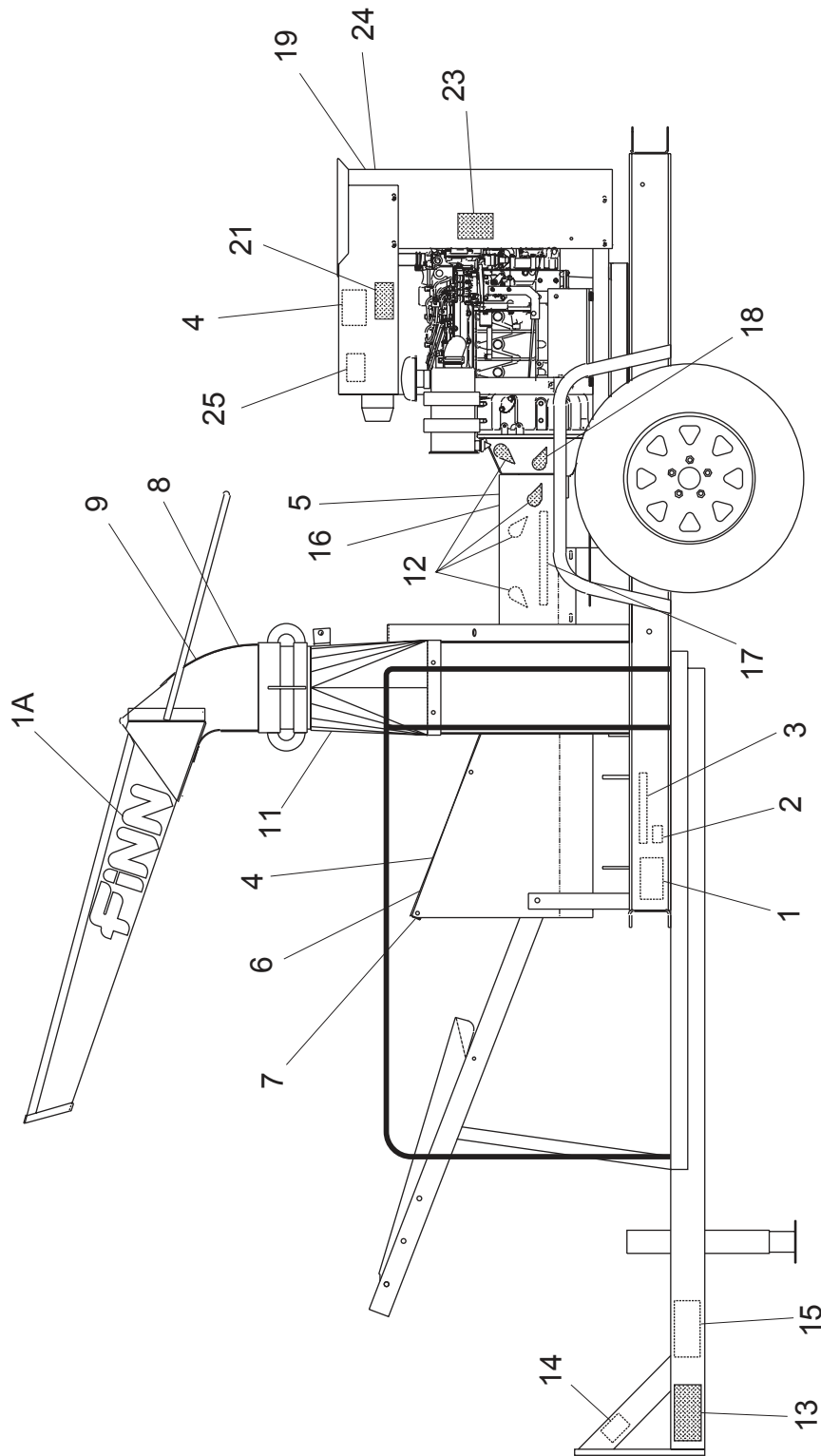
**WHEN ORDERING PARTS, BE SURE TO STATE SERIAL NUMBER OF MACHINE**



## 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
005589	Control Box Wiring Harness	1

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## B70 DECALS

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

\*: Not Shown Located On control Box Face.

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

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## TOOL KIT

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

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## WARRANTY

Finn warrants to the original Purchaser for use (or rental to others for use) all new construction machinery and attachments therefore manufactured by Finn to be free from defects in material and workmanship for a period of 12 months from date of purchase or 1200 hours of use, whichever comes first. Replacement parts provided under the terms of this warranty are warranted for the remainder of the warranty period applicable to the product in which installed, as if such parts were original components of that product. Finn makes no warranty with respect to (a) allied equipment or trade accessories not manufactured by it (such as, but not limited to tires, ignitions, starters, hose, batteries, magnetos, carburetors, engines or like or unlike equipment or accessories), such being subject to the warranty, if any, provided by their respective manufactures; or (b) secondhand, used, altered, or rebuilt machines. Further, the warranty herein expressed shall be rendered null and void to the extent any defect or failure of the products warranted hereby arises out of or is caused by accessories or component parts not manufactured or supplied by Finn, whether same are supplied by Purchaser, dealers or any other party. THE WARRANTY DESCRIBED IN THIS PARAGRAPH 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.

Upon notification of Finn during the above-stated warranty period of any failure to conform to this warranty, and upon inspection by Finn to verify said nonconformity and verify the continuing existence of the warranty period, Finn will provide a new part or a repaired part, whichever Finn elects, to replace the part found to be defective. Such parts will be provided without charge to the Purchaser during normal working hours at a place of business of a Finn dealer or other establishment authorized by Finn to effect said repairs or replacements, but Purchaser shall bear all costs of transporting the product to and from such place of business or establishment. Correction of nonconformities, in the manner and for the period time provided above, shall constitute fulfillment of all liabilities of Finn under this contract.

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.

The essential purpose of this exclusive remedy shall be to provide the 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.

Effective December 8, 1995

#### **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.