LEACH

REFUSE EQUIPMENT ®

RC-17/23 Recycling Collector

Operation, Service, and Parts Manual

This Book is Printed on Recycled Paper

Part No. 102541

TO ORDER PARTS

Contact your local LEACH Signature Original Factory parts distributor

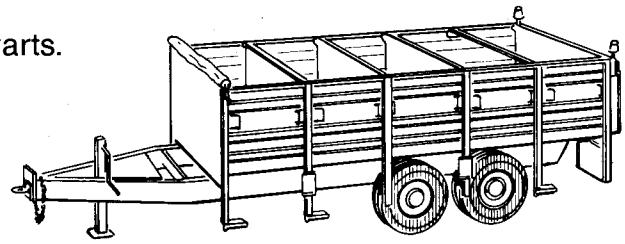
Your Authorized Leach Distributor

provide the following information:

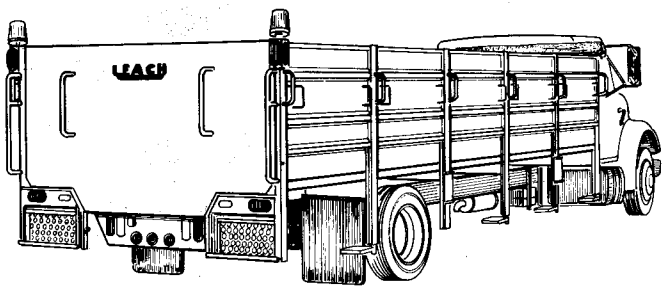
A	Company name
B	Date
C	Your order number
D	Routing instructions
E	Quantity, part number and description
*F	Model and serial number of unit

Accept only LEACH Signature Original Factory Parts.

RC-17



RC-23



For over 100 years the Leach Company has been a leader. The tradition of Leach quality and excellence continues with the RC-17 and RC-23 recycling collection units.

Leach service parts, like our equipment, are quality built of the most current design. We at Leach are proud of the quality materials, engineering, and workmanship that go into each part, backed by the best service and distributor support in the industry.

Leach parts are readily available through authorized Leach distributors. The use of counterfeit, will-fit, or substitute parts may affect the operation or performance of your unit and void the warranty. To insure maximum reliability and to protect your investment — insist on original factory parts.

The Leach Company has an aggressive parts manual update program. This manual was produced with the latest information available at the time of publication; we, however, reserve the right to redesign and/or discontinue the manufacture of parts, components, and assemblies at any time.

All Leach manuals are printed on recycled paper. "Soy ink," a natural based material, is used to replace conventional petroleum based products for printing. This is all done as part of the Leach commitment to the preservation of our environment through recycling.

Danny J. Schloss, C.S.E.
Director of Service

LEACH®

Signature

Original Factory Parts

WARRANTY

Refuse bodies manufactured by Leach Company, ("Company") are supplied and sold under a Limited Warranty that they are and will remain free of defects in workmanship or material for a period of six (6) months from date of original sale under reasonable conditions of use and operation, providing required preventative maintenance services are performed. An additional six (6) month warranty is also available for purchase. If a failure occurs during said period because of such defect in the opinion of the Company, the component or part shall be repaired or replaced by an authorized Leach Distributor at no cost to the customer provided the unit is brought to the distributor's service facility. After 3 months, performance of adjustments or the replacement of wear/expendable components is not covered under warranty. This limited warranty is the sole and exclusive warranty of the Leach Company.

THE COMPANY MAKES NO WARRANTY AS TO MERCHANTABILITY, FITNESS FOR USE, LEGALITY OF OPERATION IN ANY JURISDICTION OR ANY IMPLIED WARRANTY OF ANY KIND OR NATURE. THE COMPANY SHALL NOT BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE, OTHER THAN ITS LIMITED WARRANTY OF REPLACEMENT HEREIN. NO OTHER PERSON, FIRM OR CORPORATION CAN BIND THE COMPANY TO ANY WARRANTY OTHER THAN HEREIN ABOVE STATED.

To validate the new unit warranty, an authorized Leach distributor must have completed a pre-delivery inspection before the unit is placed into service, and the delivery report form signed by both the customer and distributor must be submitted to the Leach Service Department.

Because Company products are engineered to work only with genuine Company parts, this limited warranty will be void and of no effect if: (a) Company products are modified other than as done at its factory or as authorized to be done by the factory in writing; or (b) Parts or assemblies of any other manufacturer are used as substitutes for genuine Company parts.

Genuine Leach replacement parts, components and assemblies are also sold under a Limited Warranty to be free from defects in workmanship or material for a period of six (6) months. This is a replacement only warranty and the item must be returned to the Leach distributor for exchange. The labor to replace or repair the part shall be the responsibility of the customer. There is no warranty on expendable items, wear components or used parts.

Leach Company reserves the right to redesign and/or discontinue the manufacture of parts, components and assemblies at any time.

LEACH REFUSE EQUIPMENT

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Terms you need to know:

RC 17

1. Body
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3. Compartment dividers
4. Body Hoist
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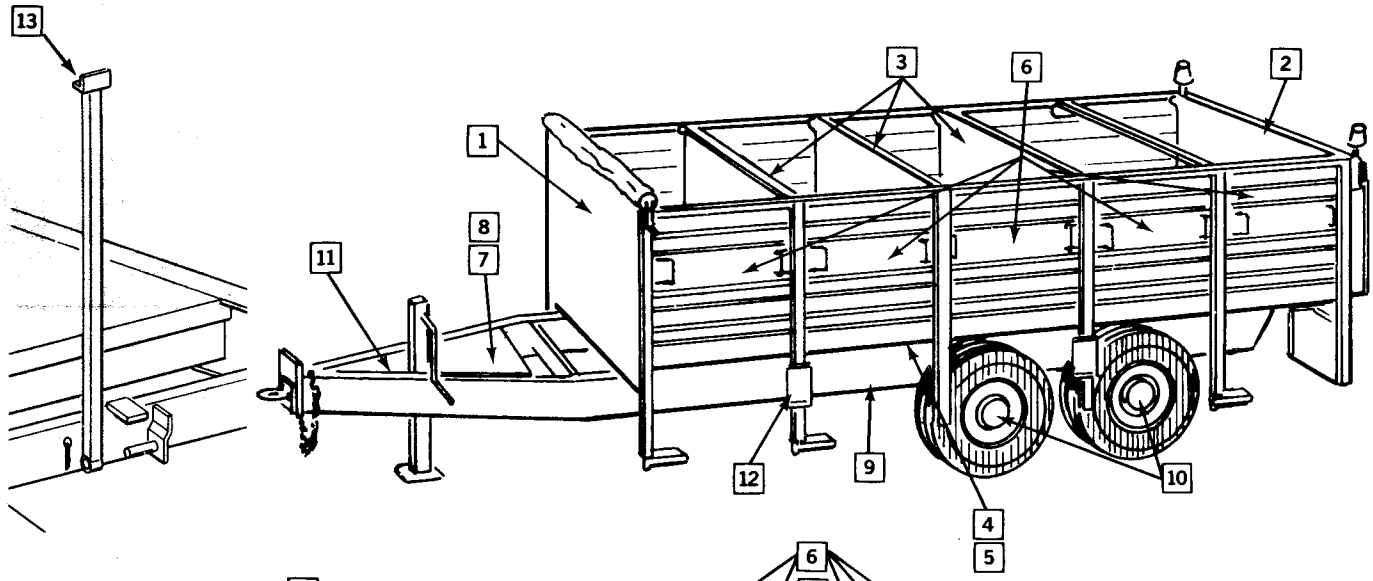
6. Compartment side doors
7. Hydraulic power unit
8. Hydraulic pump
9. Trailer frame
10. Axle
11. Trailer tongue
12. Collection container bracket
13. Body props

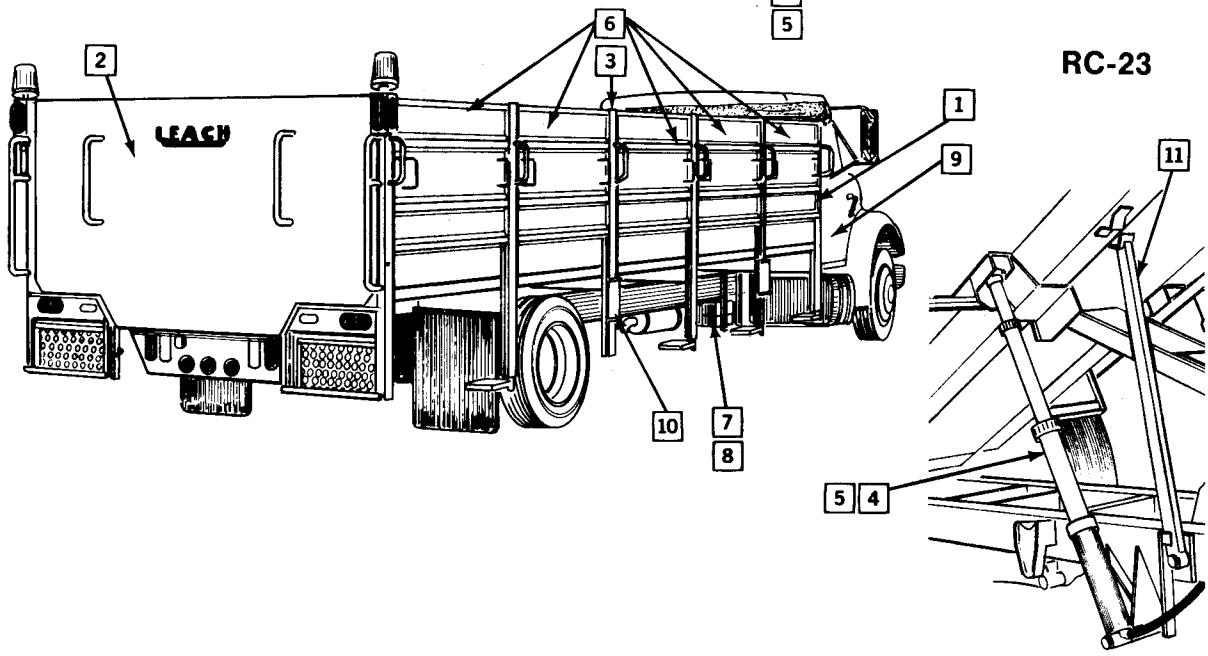
RC 23

1. Body
2. Tailgate
3. Compartment dividers
4. Body cylinder
5. Hoist cylinders
6. Compartment side doors
7. Hydraulic tank
8. Hydraulic pump
9. Chassis
10. Collection container bracket
11. Body props

RC-17

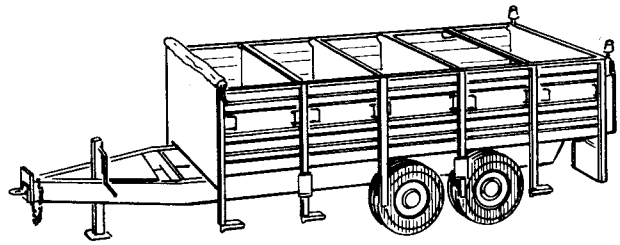


RC-23



INTRODUCTION

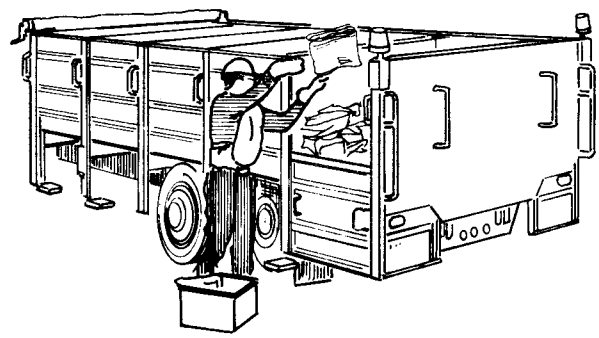
The main purpose of the Leach recycling collector (RC) is to safely and efficiently; load, transport, and unload recyclable materials. The following describes how the unit performs these tasks in the most basic terms. Before going further, look at the accompanying full page illustration of the recycling collector and become familiar with the terms you will need to know.



RECYCLING COLLECTOR

LOADING

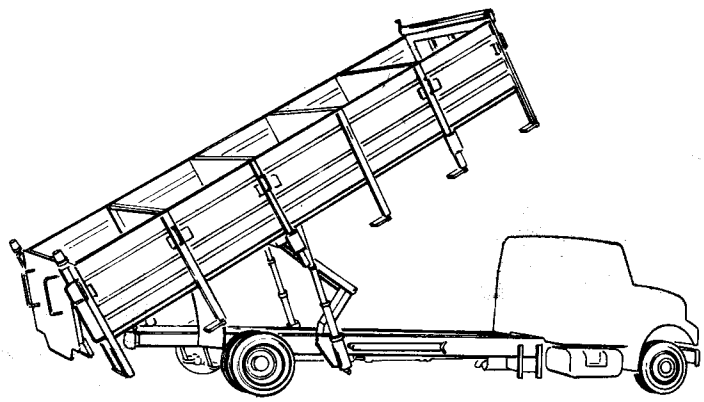
Recyclables are first loaded into the appropriate compartment area of the body. As the compartment fills, the side doors can be raised to increase bin capacity.



LOADING

UNLOADING

At the recycling site, the unit is unloaded in two easy steps: first the tailgate is released, second, the body is raised and the material slides out. The body is then lowered and the unit is moved to the next unloading location where the rear most panel is released and the body raised. This process is repeated until all compartments are empty.



UNLOADING

GENERAL

The recycling collector has been designed with the operator in mind. However as with any industrial machinery the ultimate responsibility for safety rests with you — the user. An alert, conscientious attitude and observance of all known safe operating practices are the best ways to prevent accidents.

Before operating the unit it is the operator's responsibility to be thoroughly familiar with the operator's instructions contained in this manual.

Publication of these precautions does not imply or in any way represent an all inclusive list. It is the operator's responsibility to be familiar with and ensure that operation is in accordance with safety requirements and codes including all applicable Occupational Safety & Health Act (OSHA) and American National Standards Institute (ANSI) regulations.

⚠DANGER **⚠WARNING** **⚠CAUTION**

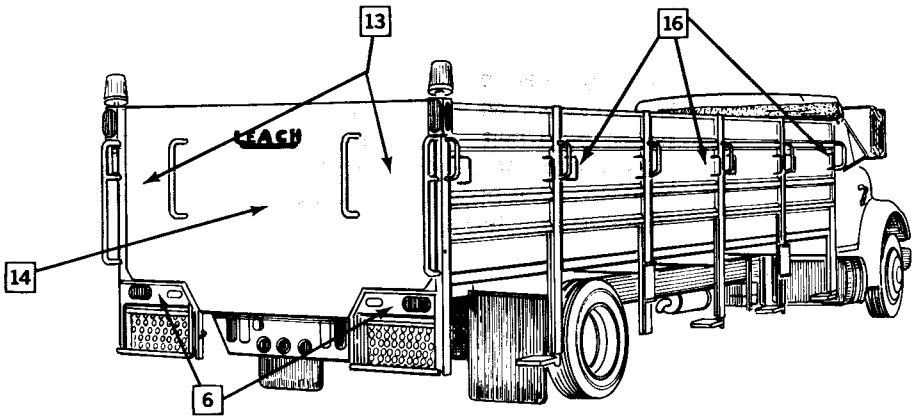
DANGER, WARNING, CAUTION and **NOTE** notations appear throughout this manual.

* The word **DANGER** precedes information pertaining to specific immediate hazards which if disregarded, WILL result in **SEVERE PERSONAL** injury or death of the user or others.
* The word **WARNING** precedes information pertaining to hazards or unsafe practices which **COULD** result in personal injury or death.
* The word **CAUTION** precedes information pertaining to potential hazards or unsafe practices which if disregarded, may result in minor personal injury or damage to the equipment.
* The word **NOTE** precedes information which is vital to the proper operation or maintenance of the equipment.

DANGER, WARNING AND CAUTION DECALS

See the accompanying illustration for the location and label content of all safety decals.

1. These decals must be obeyed at all times.
2. These decals must be in place at all times. Report any damaged or missing decals to the proper authority at once.
3. Replacement decals can be ordered free of charge from your local distributor.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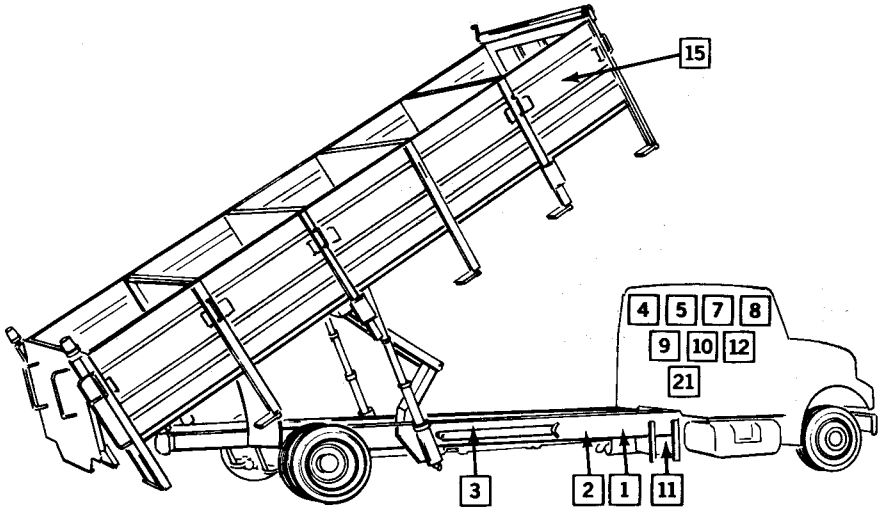
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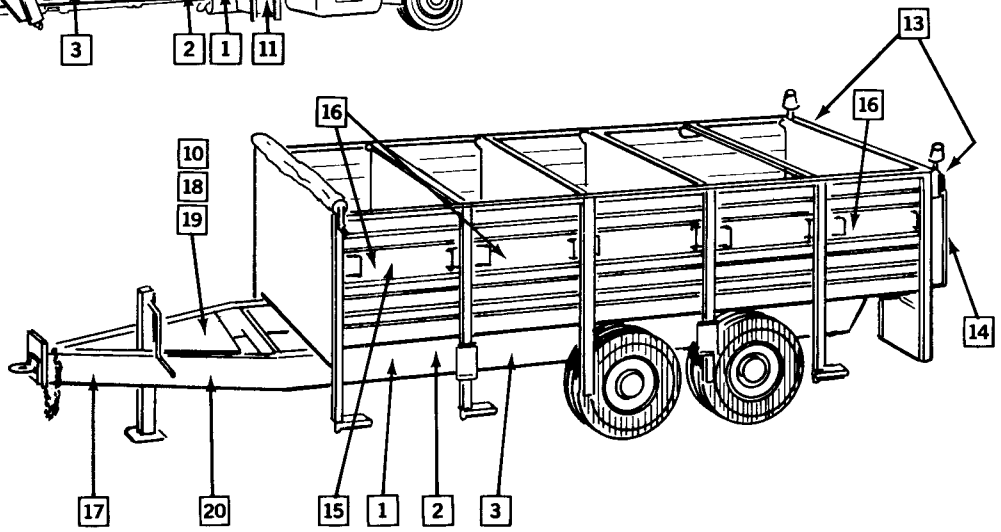
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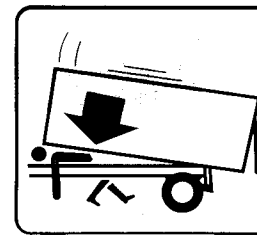
3

DANGER
DO NOT ENTER UNDER CHASSIS UNLESS ENGINE OR POWER UNITS ARE STOPPED AND IGNITION KEYS REMOVED
41894

1



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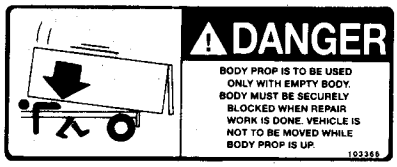

3

IMPORTANT
DISENGAGE POWER TAKE OFF IN TRANSIT

4

BEACON LIGHT
ON OFF

5

DRIVER SIGNAL
100894

6

PTO
ON OFF

7

WARNING
THIS VEHICLE IS NOT TO BE USED FOR TOWING
103364

8

CAUTION
BODY ELEVATED

9

INSPECTED AT LEACH CO.
BY
DATE

10

HYDRAULIC FLUID ONLY
40642

11

CAUTION
DO NOT OPERATE VEHICLE AT SPEED IN EXCESS OF 10 MPH OR FOR DISTANCES OVER 2 TENTHS MILE OR IN REVERSE GEAR WHEN RIDER OR RIDERS ARE ON RIDING STEPS.
36937

12

CAUTION
RIDING STEP SHALL NOT BE USED WHEN SPEEDS ARE EXPECTED TO EXCEED 10 MPH OR WHEN DISTANCE TRAVELED WITHOUT STOPPING WILL EXCEED 2 TENTHS OF ONE MILE.
RIDING STEP SHALL NOT BE USED WHEN VEHICLE IS MOVING BACKWARD.
DO NOT MOUNT OR DISMOUNT RIDING STEP WHEN VEHICLE IS IN MOTION.
36938

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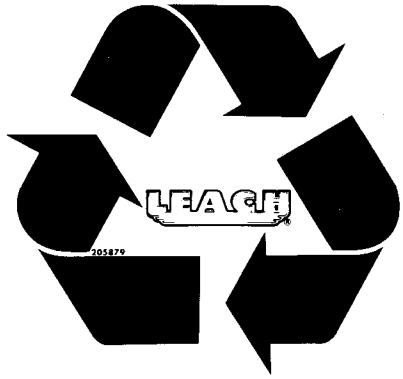


15

CAUTION
LOADING POSITION
DO NOT RIDE

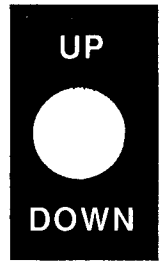
16

WARNING
THIS UNIT IS NOT TO BE TOWED BY A REAR LOADING OR REAR RIDING TYPE REFUSE COLLECTION VEHICLE

17

DEXRON II FLUID ONLY

18



19

DANGER
DO NOT TILT BODY UNLESS TRAILER IS CONNECTED TO TOWING VEHICLE OR BLOCKED TO AVOID TIPPING OVER.

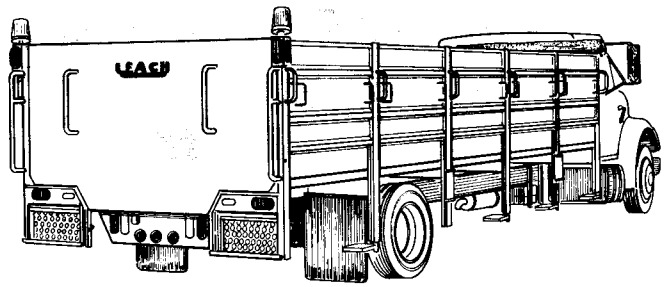
20

CAUTION
WHENEVER THE BODY IS IN ANY ELEVATED OR RAISED POSITION IT MUST BE SECURELY PROPPED OR BLOCKED SO IT CAN NOT FALL ON ANYONE.

21

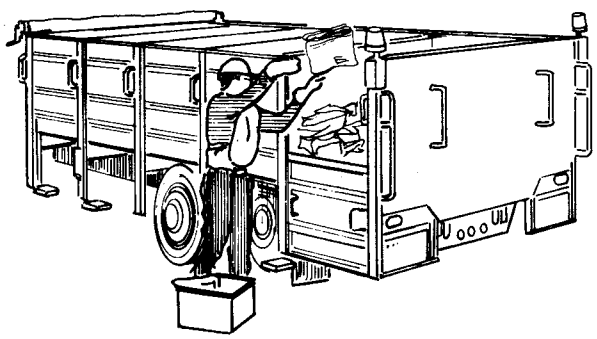
PRIOR TO START UP

1. Never, during the collection process, wear jewelry or loose clothing which may catch on moving parts. Wear proper safety equipment as specified by your employer.
2. Never perform collection while under the influence of intoxicants or narcotics. Workers under the influence of intoxicants or narcotics present a hazard to themselves and others.
3. Perform checks listed under Pre-operation "Walk-around" inspection in Section 3, OPERATION. Never start or operate any malfunctioning equipment.
   a. Be sure to immediately report any malfunctions to the proper authority.
   b. Power must be shut off, ignition key removed, and a sign attached to the steering wheel stating "inoperative" or "malfunctioning equipment".
4. Drivers should not attempt to perform any service procedure on the equipment. Proper servicing requires specialized tools and procedures. Service must be performed by authorized personnel only, following procedures in the Service Manual.
5. Walk completely around the vehicle to make sure all persons are clear of the unit before starting.



OPERATION

1. It is the operator's responsibility to ensure that the unit is used in accordance with the guidelines contained in this manual and in accordance with all applicable codes including the Occupational Safety and Health Act (OSHA) and the American National Standards Institute (ANSI) regulations.
2. Do not attempt to use this equipment without proper training.
3. Do not attempt to dislodge any material above waist level unless wearing eye protection such as "approved" side shielded safety glasses or full face shield.
4. Never enter under the unit unless the truck is turned off, the parking brake set, and the tires blocked.
5. Never allow material to extend outside of the unit.
6. Never place fingers or hands between the body and a compartment divider.
7. Never enter between the tailgate and the body.



WHEN THE VEHICLE IS MOVING

1. Drivers should never move their truck unless visual contact is made with all personnel in the work area.
2. When a provision is made for riding on the outside of the vehicle (riding steps) DO NOT ride when speeds exceed 10 mph or distance to be traveled exceed 2 tenths of a mile.
3. Do not use the riding step when the vehicle is backing.
4. Do not attempt to mount or dismount from the riding step when the vehicle is in motion.
5. Ride only in the cab.
6. Move the vehicle as slowly as possible without stalling when traveling in reverse.
7. Always make sure the roadway is clear before traveling in reverse. Make sure back-up alarm is working properly.
8. Do not travel in reverse for distance greater than those dictated by local ordinances. If reverse travel exceeds ten (10) feet, use a "spotter" or move the vehicle in ten (10) foot increments only, and then check to make sure the roadway is clear between increments.
9. Never use side door locking handles for hand holds. These items are movable and do not provide proper support.

OPERATING FUNCTIONS

10. Ensure that all persons are clear of the unit before raising or lowering the body. It is the operator's responsibility to warn all persons not to stand or cross under or near a raised body.
11. Ensure that the back-up alarm is sounding anytime the body is raised.
12. Do not move the vehicle with the tailgate or body raised except during unloading and then only as necessary to clear the load before lowering.
13. If it is necessary to manually clean material from the body or tailgate area, use a long probe.
14. Never place your head, body, fingers, or any limbs into a scissors or pinch point on the equipment.
15. To avoid possible bodily injury or unit damage, lower the body slowly.
16. Before operating the vehicle the driver must be thoroughly familiar with the employer's safety program concerning traffic rules, warning devices, and hand signals.
17. Be sure to know where to get assistance in the event of an emergency.
18. Know your machine. Know the location and function of all controls, gauges, instruments, and protective devices.
19. Wear your seat belts.
20. Start the engine(s) following the manufacturer's recommended procedure.
21. Always set the parking brake when stopped.
22. Turn on appropriate warning lights, put on safety vests, protective glasses, and protective shoes.
23. Never enter under a raised body unless it is empty and securely propped up.
24. Do not stand under the body when it is in the raised position unless it is empty and the body prop(s) are in position.

HYDRAULICS

1. Hydraulic fluid operates at high temperatures. Avoid contact with piping, hoses, or cylinders to prevent burns.
2. Never use hands to check for hydraulic leaks. Hydraulic fluid escaping under pressure may cause injury.
3. In case of injury seek proper medical treatment immediately.

FIRE PROTECTION

1. Keep a fire extinguisher accessible at all times, as recommended by the Bureau of Motor Carrier Safety.
2. Never use lighted smoking materials, open flame, or sparks when working with flammable materials such as fuel tanks or storage batteries.
3. Never use an open flame as a light source.
4. Never load ashes or other materials which might be smoldering. These items could ignite material in the unit.

HOUSEKEEPING

Good housekeeping habits are a major factor in accident prevention.

1. Keep the unit clean and free of grease or debris.

SHUT DOWN

1. Set parking brake.
2. Put all controls in neutral.
3. Shut off engine.
4. Remove key.
5. Lock vehicle

SAFETY DURING SERVICE AND REPAIR

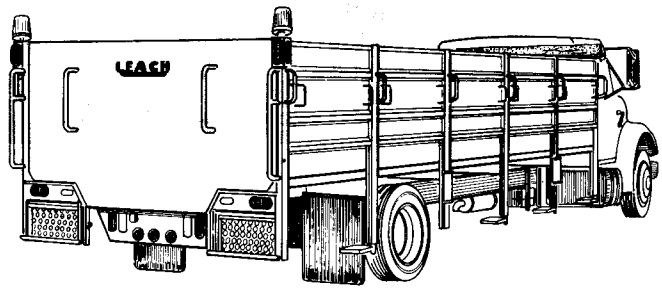
1. Always wear safety glasses.
2. Disengage the PTO, turn off the ignition, and remove the keys before:
   a. Leaving the truck cab.
   b. Examination or lubrication of the PTO, pump, or drive shafts.
3. Always check to make sure the compartment side doors are fully up before raising the body.
4. Pump unit removal; due to the weight and location of the pump unit, it is advisable when possible to place a floor jack beneath it and apply a slight pressure when the supporting bolts are removed.

CAPACITY OF LIFTING DEVICE REQUIRED FOR REMOVAL

Cylinders, RC-23	500 lbs.
Compartment divider	1,000 lbs.
Tailgate	1,600 lbs.
RC-17 Hoist assembly	1,600 lbs.
RC-23 Center stabilizer	2,800 lbs.

GENERAL

This section will provide all of the instructions necessary to operate the recycling collector (RC). However, prior to attempting to operate the unit make sure you are familiar with all of the safety information contained in Section 2, SAFETY PRECAUTIONS.



DESCRIPTION OF OPERATING CONTROLS

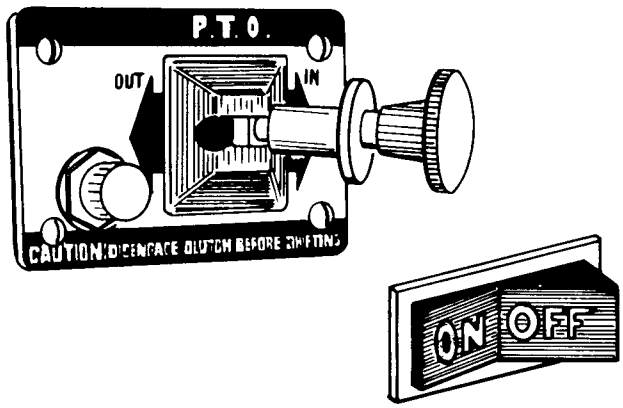
⚠ DANGER

The following information is for descriptive purposes only. It is not to be misconstrued as operating instructions. For operating instructions, refer to OPERATING PROCEDURES later in this section.

There are only a few controls required for the complete and efficient operation of the recycling collector. It is important that you know the location and function of each control before attempting to operate the unit. Refer to the accompanying illustration for their location.

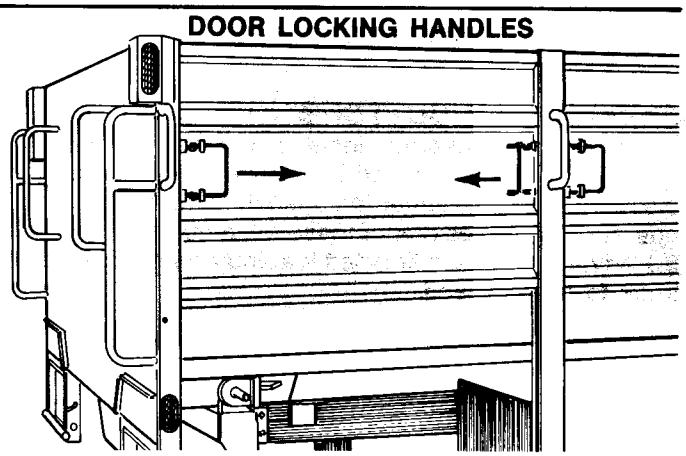
PTO CONTROL, RC-23

The PTO (Power Take Off) is engaged to put the hydraulic pump into operation. The exact location of the PTO control will vary depending upon the type of PTO, truck cab style, and control panel location. The PTO may be engaged by use of a lever, rocker switch, push/pull cable, toggle lever, or positive control button, depending on the style of the PTO. Be sure to read all safety decals associated with the PTO before attempting operation.



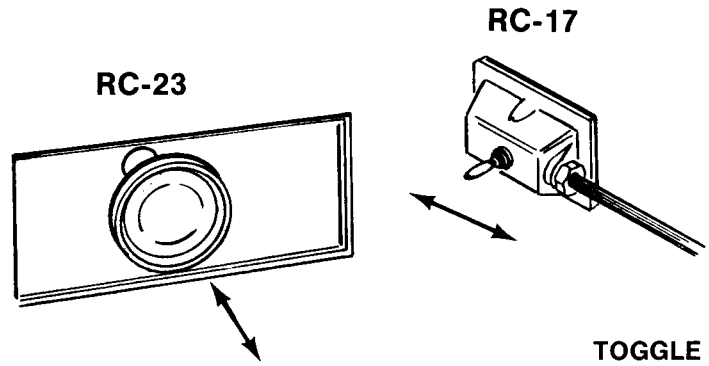
DOOR LOCKING HANDLES

Each compartment door has two spring loaded, dual pin locking handles. The handles are used to hold the door in any of six height positions.



BODY LIFT CONTROL

This lever, mounted inside the chassis cab on the RC-23, is used to control the body lift system. The lever is pulled outward to raise the body. Pushing the lever inward will lower the body. On the RC-17 an electric switch located in the trailer tongue controls the direction of body movement. Moving the switch up, raises the body, moving the switch down lowers the body.

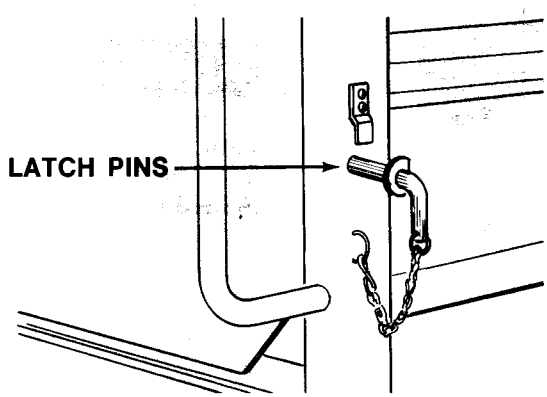


TAILGATE AND COMPARTMENT DIVIDER LATCH PINS

Latch pins are used to hold the tailgate and compartment dividers in position. To open the tailgate, the latch pins must first be removed so that when the body is raised the tailgate will open. The compartment divider latch pins are used to release the divider and allow separated collectibles to unload from the unit.

⚠CAUTION

Do not attempt to remove or install latching pins with the body raised.

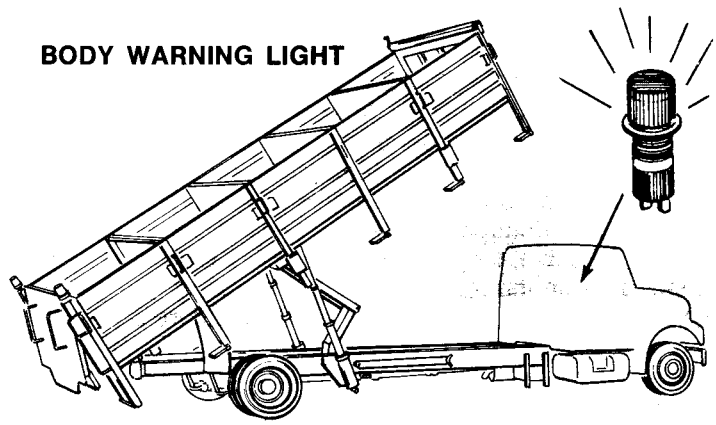


BODY RAISED WARNING LIGHT

This warning light, located in the cab, will illuminate if the body is raised off the frame. This warning system will also sound the back-up alarm and illuminate the back-up lights whenever the body is raised.

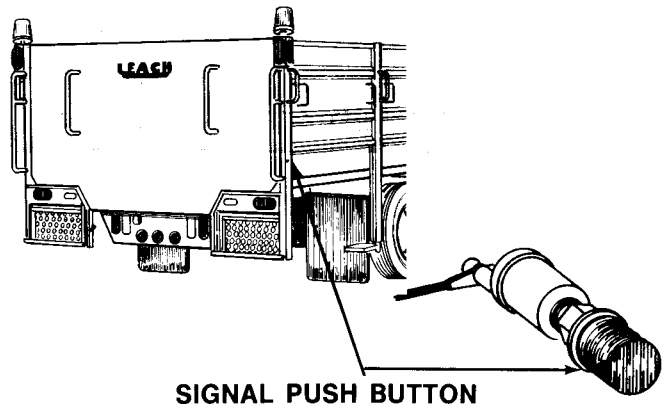
⚠CAUTION

Operation of the unit with an illuminated or defective warning system can result in equipment damage.



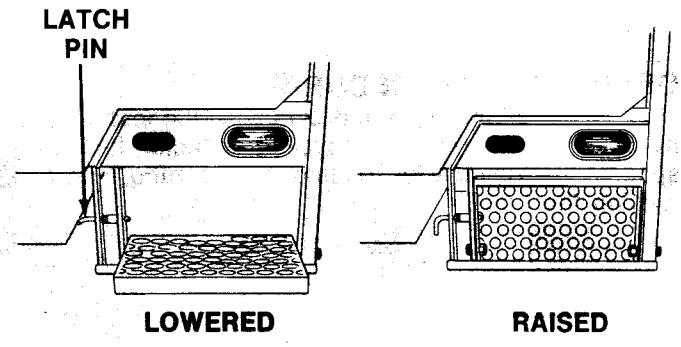
SIGNAL PUSH BUTTONS

These two push buttons, located one on each side of the tailgate, are connected to a buzzer mounted under the driver's seat or under the dash in the truck cab. The operator depresses one of these push buttons to signal the driver when he is finished loading and ready for the truck to move ahead.



RIDING PLATFORM

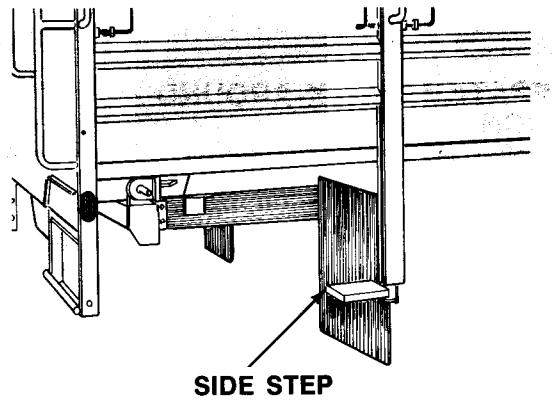
Riding platforms are lowered by pulling out on the latch pin assembly. The platform is used to ride from one location to another.



RIDING PLATFORM

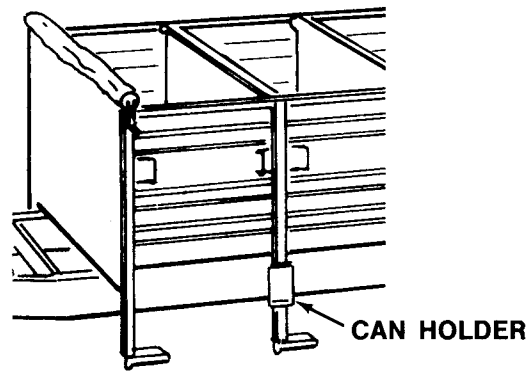
SIDE STEP

Used to load recyclables when the side door is fully raised.



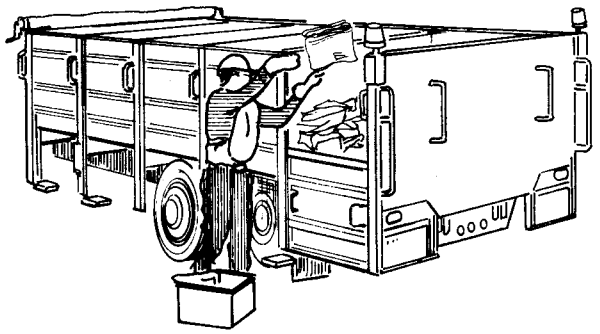
CAN HOLDERS

Used to hold containers while recyclables are sorted into the body.



OPERATING PROCEDURES

This section of the manual provides all the instructions necessary to operate the recycling collector, including specific instructions for loading, transporting, and unloading the body.



PRE-OPERATION WALK-AROUND INSPECTION

Each day, before using the recycling collector, perform the following "walk-around" inspection.

1. Refer to the decal location illustration in Section 2 (SAFETY) of this manual and make sure all decals are in place and readable. Replace any decals that are not.

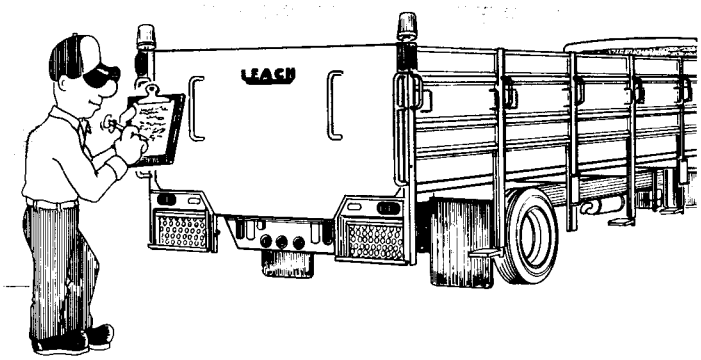
NOTE

A decal kit, free of charge, is available from your local Leach distributor.

2. Make certain all lights and the back-up alarm are working properly. Perform a walk-around inspection and conduct a safety check before starting up:
   a. Check for coolant, fuel, or hydraulic fluid leaks.
   b. Check tire condition.
   c. Check cab windows, mirrors, and head lights for visibility.
   d. Check lighting and back-up alarm.
   e. Check all controls for proper function, brakes.
   f. Check rear body pivot and other mounting hardware.
3. Make sure the tailgate is closed and secured by the latching pins. Also make sure that the compartment dividers are locked in place by their latch pins.
4. Check the hydraulic fluid level to make sure it is in the "safe" range. Add fluid, if necessary. (See Section 5, SPECIFICATIONS, for the correct type of fluid to be used.)

NOTE

To check the fluid level, the body must be lowered and resting on the chassis frame rails. See Section 7, CHECKOUT.



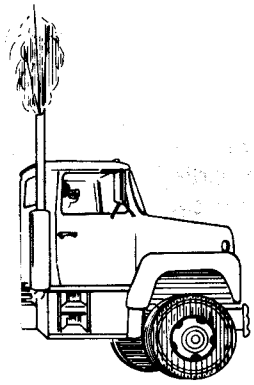
5. Start the truck according to the manufacturer's instructions and while it is warming up continue the walk-around inspection.
6. Depress the two buzzer signal push buttons located on the rear tailgate and make sure that the audible alarm located in the cab is working.
7. Back the unit up a few feet to insure that the back-up alarm is working properly.

⚠WARNING

Do not operate a unit that is in need of service or repair. Death, serious injury, or damage to the equipment could result. Report any problems found during the pre-operational walk-around inspection to the maintenance supervisor for service or repair, then place a tag on the steering wheel (in-operative) and remove the keys.

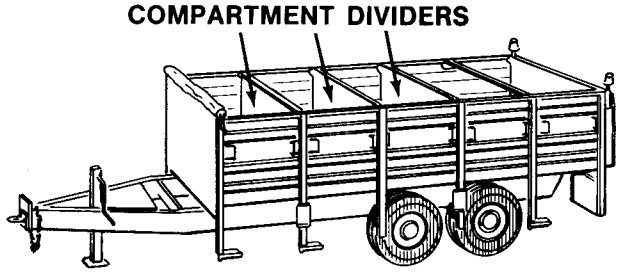
START UP (OPERATING INSTRUCTIONS)

Inspect and start the truck as described under pre-operational walk-around inspection above.



POSITIONING COMPARTMENT DIVIDERS

The standard configuration for the recycling collector has the body divided into four (4) compartments which utilize three (3) compartment divider panels. The unit may be configurated into five (5) compartments by the removal of a compartment spacer and installation of a fourth divider. Before beginning collection, all compartment divider latch pins must be installed.

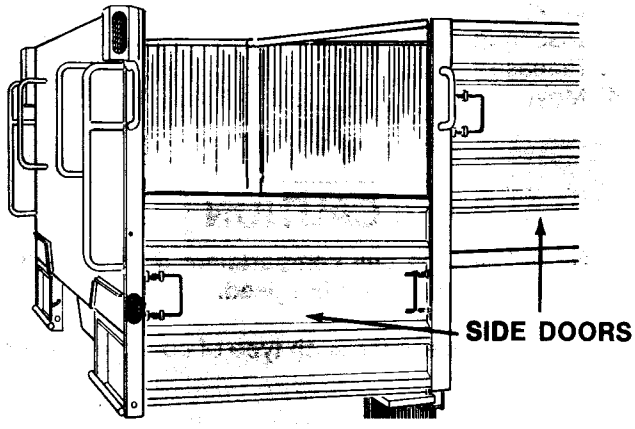


POSITION COMPARTMENT SIDE DOORS

Sliding side doors on each compartment should be placed in the fully raised position while traveling. When loading is to begin, move them to the lowest position to make loading easier.

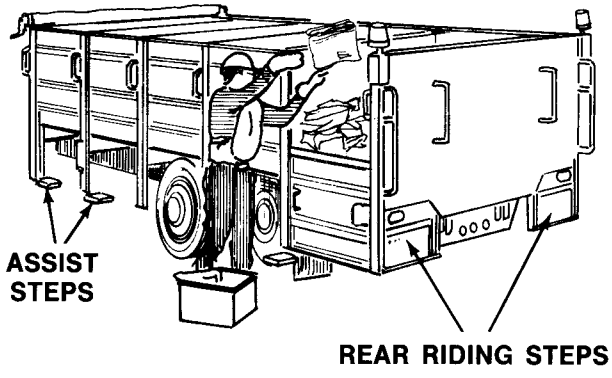
NOTE

If the unit is partially loaded, position the doors to prevent spillage.



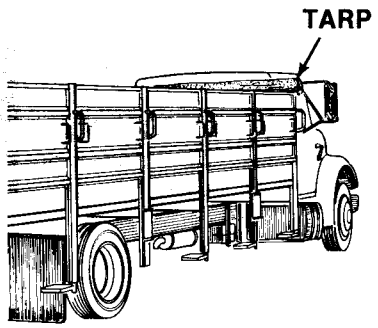
LOADING RECYCLABLES

The standard configuration of the recycling collector allows for collection of four types of materials. The recommended location of these materials is aluminum and tin in the forward compartment, plastics next, glass third, and then paper in the rear dual compartment. As the volume of the collectibles increases, it may be necessary for the loader to use the optional swing out side loading assist steps in order to add further materials to the compartment. The rear riding steps may also be used to assist in loading paper into the rear compartment.



TARP

The recycling collector is equipped with a cover that should be utilized when necessary to prevent collected material from spilling. Before unloading, the cover should be put in the storage position by cranking the handle.



UNLOADING (RC-23)

The truck mounted recycling collector uses a standard transmission PTO and an integrated hydraulic pump unit to power the body lift cylinders. Two multi-stage cylinders are used to raise the body and dump the recyclables.

1. Position the unit at the unloading site.
2. Engage the vehicle park brake.
3. Remove the tailgate latch pins.
4. Engage the PTO as shown on the PTO manufacturer's instruction decal. Raise the body by pulling out on the lift control handle.

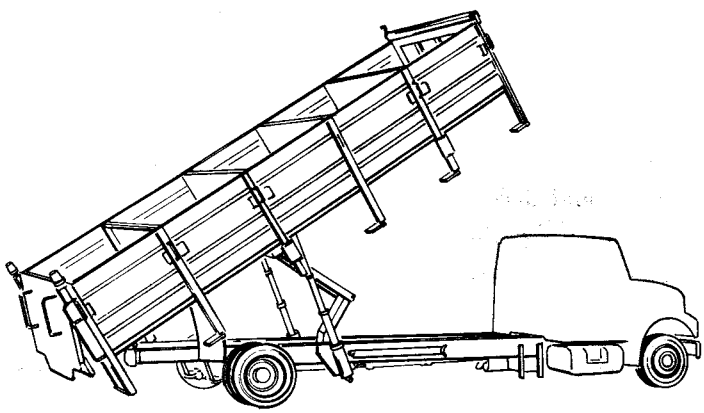
After the rearmost material is unloaded:

1. Lower the body.
2. Disengage the PTO.
3. Release the park brake.
4. Move the unit to the next unloading site.

⚠CAUTION

Do not release any compartment divider latch pins while the body is raised.

Repeat this process for each type of collected material.



UNLOADING (RC-17)

The trailer mounted recycling collector is unloaded in the same manner as the truck mounted unit with the exception of the controls for the lifting mechanism. The trailer unit uses an electrically powered hoist to empty the unit. This hydraulic power unit is located in a compartment in the front of the trailer frame. An electric switch controls the up and down motion of the trailer body. The 12 volt electric power necessary to operate the hoist mechanism is provided either through the chassis wiring harness or by a separate battery located on the trailer.

STORAGE

After unloading is completed the compartment divider and tailgate latch pins should be reinstalled.

NOTE

Before storing the vehicle overnight, weather permitting, the inside of the body should be washed to remove any accumulation of material.

SHUT DOWN

1. Disengage the PTO and put all controls in neutral.
2. Set the parking brake.
3. Shut off the engine.
4. Remove the keys.
5. Report any maintenance problems.
6. Lock the vehicle.

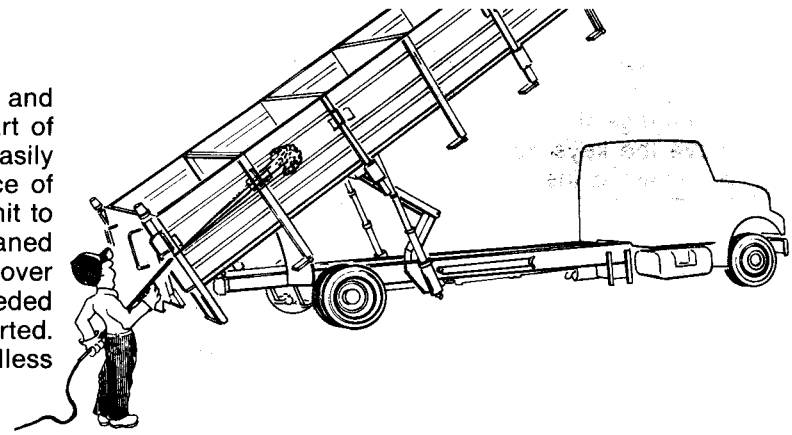
⚠WARNING

Proper service and repair is important for the safe, reliable operation of all mechanical products. The service procedures recommended and described in this service manual are effective methods for performing service operations. Some of these service operations require the use of tools specially designed for the purpose. These special tools should be used when and as recommended.

It is important to note that deviating from these procedures could cause damage to the unit or render it unsafe. However, please remember that these procedures are not all inclusive. Since Leach Company could not possibly know, evaluate and advise the service trade of all possible ways in which service might be done or of the possible hazardous consequences of each way, we have not undertaken any such broad evaluation. Accordingly, anyone who uses a service procedure or tool which is not recommended by Leach must first thoroughly satisfy himself that neither his nor the operator's safety will be jeopardized by the service methods selected.

PREPARATION FOR SERVICE

Proper preparation is very important for efficient and safe service work. A clean work area at the start of each job will allow you to perform the repair as easily and quickly as possible, and reduce the incidence of misplaced tools and parts. If the portion of the unit to be repaired is excessively dirty, it should be cleaned before work starts. Cleaning will occasionally uncover trouble sources. Tools, instruments and parts needed for the job should be gathered before work is started. Interrupting a job to locate tools or parts is a needless delay.

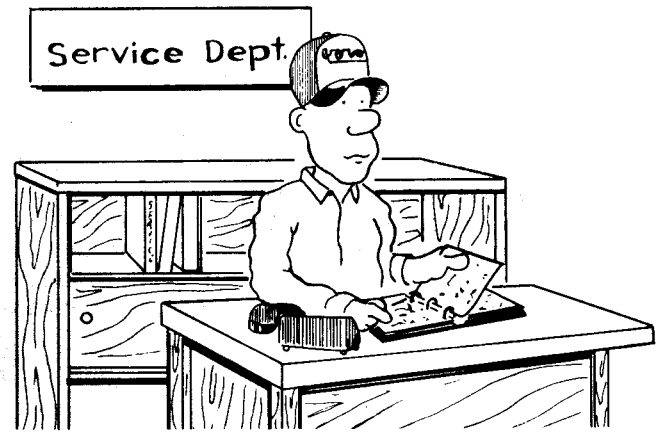


REPLACEMENT PARTS

Of growing concern to the Leach Company is the use of counterfeit, will-fit or substitute parts. The use of non-standard parts may affect the operation and performance, and void the warranty. Insure maximum reliability and protect your investment — insist on LEACH Signature Original Factory Parts.

SERVICE BULLETINS

In addition to the information given in this Service Manual, Service Bulletins are issued from time to time, which cover interim engineering changes and supplementary information. Service Bulletins should be consulted for complete information on the Recycling Collector covered by this manual.



SAFETY PRECAUTIONS

PRIOR TO PERFORMING ANY SERVICE OR REPAIR:

1. Set the parking brake.
2. Put the vehicle in park, or if manual transmission put in gear and remove the ignition key.
3. Place an OSHA standard wheel chock in front of and behind the front tire.
4. When working on the unit always follow the instructions in Section 9, SERVICE AND REPAIR.
5. Whenever dismantling any hydraulic line, valve, or cylinder be sure to turn off the hydraulic fluid flow, relieve the pressure, and slowly crack or loosen the fittings.

SAFETY DURING SERVICE AND REPAIR

1. Always wear safety glasses.
2. Disengage the PTO, turn off the ignition, and remove the keys before:
   a. Leaving the truck cab.
   b. Examination or lubrication of the PTO, pump, or drive shafts.
3. Always check to make sure the compartment side doors are fully up before raising the body.
4. Pump unit removal; due to the weight and location of the pump unit, it is advisable whenever possible to place a floor jack beneath it and apply a slight pressure when the supporting bolts are removed.

WELDING

1. When rewelding an old weld, be sure the old weld is completely cleaned out.
2. When repairing a cracked weld, the old weld should be completely removed before rewelding.
3. When adding a part or attachment be sure; the metal is clean before welding, the part is properly located and the weld will not cause damage to adjacent parts.

WELDING PRECAUTIONS

ELECTRIC WELDERS

1. Electric arc welders should have a separate, fused disconnect circuit.
2. Welders must be used according to the manufacturers specifications.
3. All electric welding should be done in a well-ventilated stall.
4. The radiation given off by the arc will destroy the retina of the eye; so wear an approved welder's helmet or goggles.
5. Welding radiation will produce severe burns on unprotected skin, similar to sunburn, so wear heavy clothing. Use natural fiber or leather — avoid synthetic fiber clothing.

OXY-ACETYLENE TORCHES

1. Acetylene is a highly explosive gas which should be treated with the greatest care. At pressures above 15 psi, acetylene will explode by decomposition without the presence of air. No other industrial gas has such a wide explosive range.
2. Oxygen will spontaneously ignite in the presence of oil and grease. The hoses, torch handles, and the regulators must be kept free of petroleum products.
3. Before using the equipment, inspect it for cleanliness and for leaks.
4. Hoses cannot be safely repaired: when they show signs of deterioration, they should be replaced.
5. Return regulators periodically to the distributor for inspection. Store gas bottles upright and out of the sun. Do not attempt to repair or make internal adjustments on the regulators yourself.
6. If you suspect a leak in the system, make a bubble test with Ivory soap. DO NOT USE ANY OTHER BRAND OF SOAP BECAUSE OF THE DANGER OF OXYGEN COMBINING WITH IT AND EXPLODING.
7. When preparing to use the torch, make certain that the regulator valves are all the way out to the "off" position before the main tank valves are opened to protect the regulators from the sudden impact of tank pressure.
8. When opening the tank valves, stand alongside of the regulators, out of the way, in case they blow out.
9. Backfiring or "machine gunning" at the torch is very dangerous and can lead to a major explosion.
10. Welding should be done in a location well away from flammable materials.

HYDRAULIC COMPONENT
REMOVAL, DISASSEMBLY AND REPAIR

1. Cleanliness is very important; dirt is the number one cause of wear in bearings, bushings and especially in hydraulic components.
2. Inspect hydraulic components for leaks before cleaning. The dirt build up on the component can aid in tracing oil leaks.
3. Clean hydraulic connections before removal to prevent dirt from entering component.
4. Loosen hydraulic fittings slowly to release pressure.
5. Cap hydraulic fittings immediately after removal to prevent dirt from entering component or line and to prevent fluid from leaking.
6. Clean component in non-flammable solvent before disassembly.
7. Inspect component after cleaning for signs of wear or external damage.
8. When disassembling a component, note the position of each part as it is removed to aid in reassembly.
9. During disassembly note the condition of each part as it is removed to aid in diagnosing problems and to help prevent them in the future.
10. Clean and inspect disassembled parts for wear, cracks, dirt, etc.
11. After cleaning and inspection, re-usable hydraulic parts should be immediately coated with clean fresh hydraulic fluid to prevent rust formation. If these parts are not going to be reinstalled immediately, they should be wrapped in a clean lint-free cloth or paper to prevent nicks or scratches.
12. When repacking a cylinder, or resealing a valve, replace all seals and o-rings that are disturbed during the repair. The price of a few seals is very little, compared to a return repair job.

HYDRAULIC COMPONENT
REASSEMBLY AND INSTALLATION

1. Assemble parts in same position as removed.
2. Align parts accurately before mating.
3. Inspect o-ring and seal grooves for sharp edges, nicks or burrs before installing new sealing parts.
4. Lubricate all new sealing parts with clean, fresh hydraulic fluid before installation.
5. Use care not to damage new sealing parts on reassembly.
6. Use correct torque values when reassembling and installing components. See CAPSCREW MARKING AND TORQUE VALUES in this section.
7. Always check hydraulic fluid level in the hydraulic fluid tank after performing any service or repair of the hydraulic system.
8. Always lubricate components with grease fittings after they have been repaired and reinstalled.
9. Use only genuine Leach replacement parts.

NOTE

See Section 9, SERVICE AND REPAIR for specific repair instructions.

ELECTRICAL TESTING

The electrical system used on the Recycling Collector (RC) consists of various lights, switches and wiring. Testing the components and wiring can be accomplished by two simple checks; CHECKING FOR CURRENT and CHECKING CONTINUITY.

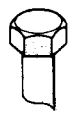
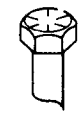
CHECKING FOR CURRENT

A 12 volt test light is used to check for the presence of electricity in a live circuit. Connect the test light clip to a good ground and the probe at the point where the presence of current is to be checked. If current is present, the light will be on...if no current is present, the light will be off.

CHECKING CONTINUITY

A continuity tester is used to check the ability of a conductor to allow current to pass through it. A continuity tester uses a self contained power source, and should never be used on a live circuit. Connect the clip to one side of the component to be tested and touch the probe to the other side. If the component has the potential to pass current, has continuity, the light will be on...if the component is not able to pass current, there is no continuity and the light will be off.

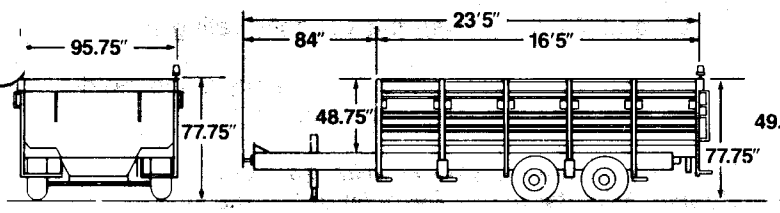
CAPSCREW MARKING AND TORQUE VALUES

Usage	Much Used	Much Used	Used at Times	Used at Times
Capscrew Diameter & Minimum Tensile Strength PSI	To 1/2-69,000 To 3/4-64,000 To 1-55,000	To 3/4-120,000 To 1-115,000	To 5/8-140,000 To 3/4-133,000	150,000
Quality of Mat'l	Indeterminate	Min. Commercial	Med. Commercial	Best Commercial
SAE Grade Number	1 or 2	5	6 or 7	8
CAPSCREW HEAD MARKINGS Manufacturer's marks may vary. These are all SAE Grade 5 (3-line).				

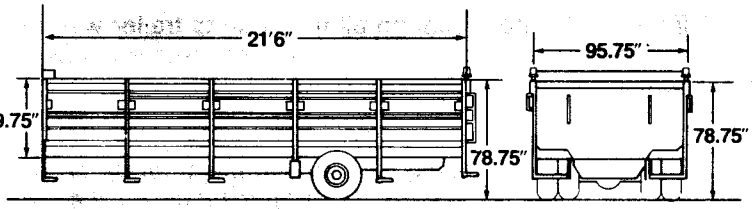
Capscrew Body Size (Inches) - (Thread)	Torque Ft-Lb (kg m)	Torque Ft-Lb (kg m)	Torque Ft-Lb (kg m)	Torque Ft-Lb (kg m)
1/4 - 20	5 (0.69)	8 (1.11)	10 (1.38)	12 (1.66)
- 28	(0.83)	10 (1.38)		14 (1.94)
5/16 - 18	11 (1.52)	17 (2.35)	19 (2.63)	24 (3.32)
- 24	13 (1.80)	19 (2.63)		27 (3.73)
3/8 - 16	18 (2.49)	31 (4.29)	34 (4.70)	44 (6.09)
- 24	20 (2.77)	35 (4.84)		49 (6.78)
7/16 - 14	28 (3.81)	49 (6.78)	55 (7.61)	70 (9.68)
- 20	30 (4.15)	55 (7.61)		78 (10.79)
1/2 - 13	39 (5.39)	75 (10.37)	85 (11.76)	105 (14.52)
- 20	41 (5.67)	85 (11.76)		120 (16.60)
9/16 - 12	51 (7.05)	110 (15.21)	120 (16.60)	155 (21.44)
- 18	55 (7.60)	120 (16.60)		170 (23.51)
5/8 - 11	83 (11.48)	150 (20.75)	167 (23.10)	210 (29.04)
- 18	95 (13.14)	170 (23.51)		240 (33.19)
3/4 - 10	105 (14.52)	270 (37.34)	280 (38.72)	375 (51.86)
- 16	115 (15.90)	295 (40.80)		420 (58.09)
7/8 - 9	160 (22.13)	395 (54.63)	440 (60.85)	605 (83.67)
- 14	175 (24.20)	435 (60.16)		675 (93.35)
1 - 8	235 (32.50)	590 (81.60)	660 (91.28)	910 (125.85)
- 14	250 (34.58)	660 (91.28)		990 (136.92)

NOTES:

1. Always use the torque values listed above when specific torque values are not available.
2. The above is based on use of clean, dry threads.
3. Reduce torque by 10% when engine oil is used as a lubricant.
4. Reduce torque by 20% if new plated capscrews are used.
5. General Formula for calculating Torques is as follows: Torque in Inch Lbs. = .2 x Nominal Diameter of Screw x Loads in Ls., where Load = 80% of Yield Strength, expressed in Lbs., not pounds per square inch.



RC-17



RC-23

Body Dimensions:	RC-17	RC-23
Overall Length:	16'5"	21'6"
Overall Width:	95.75"	95.75"
Overall Heigth:	48.75"	49.75"
Total Usable Capacity:	17.2 Cubic Yards	23.5 Cubic Yards
Number of Compartments:	4 (four) standard 3 @ 3.44 cu. yd 1 @ 6.88 cu. yd.	4 (four) standard 3 @ 4.7 cu. yd 1 @ 9.4 cu. yd

Body Loading Height:	RC-17	RC-23
Maximum:	77.75"	78.75"
Minimum:	47.00"	47.75"
Body Dump Hoist:	Single-cylinder scissor type. 15,500 lb. capacity. Electric-hydraulic operated. Body safety prop. Body raised indicator standard.	Twin telescopic hydraulic cylinders, with built-in scissor-style stabilizer unit. 38,000 lbs. capacity. Cable-actuated PTO. Body safety props. 6.5 gallon hydraulic oil tank. Body raised indicator standard.

Body:	Low-silhouette compartmented body.
Compartment Dividers:	Three (3) standard. 11-gauge steel construction. Top hinged. Bottom pin locked. Exterior pin access.
Sliding Side Doors:	Ten (10); 5 on each side of body. .125 light weight aluminum construction. Dual pin lock handles. Six (6) load height adjustments.
Body Tailgate:	11-gauge steel construction. Top hinged. Bottom pin locked. Exterior pin access.
Body Lights:	FMVSS 108 standard. Amber beacon each rear corner post. 4-way flasher lights. Stop, tail and directional lights.
Backup Alarm:	Electronic alarm standard.
Paint:	Body to be Leach White standard baked-on enamel. Doors to be natural aluminum.
Special Features:	Leach exclusive "Z" to trough floor design to minimize weight and maximize strength and payload capacity. Rear riding steps, two (240 sq. in.), slip-resistant, fold-away type steps, 12" x 20" each.
Options:	Side loading steps, 56 sq. in. (7" x 8") mounted on side body posts. Steps are slip-resistant fold-away type. Load tarp. Of vinyl-coated polyester screen fabric. White standard. Baked enamel painted side sliding doors.

Suggested Chassis Specifications for LEACH RC-23

Cab Chassis:	4 x 2 conventional low profile.
Frame:	50,000 PSI high strength low alloy steel, single channel.
Suspension:	
Front:	8,000 lb. I-beam axle: 8,000 lb. leaf springs; shock absorbers.
Rear:	15,500 lb. single reduction axle; 17,500 lb. air suspension.
Brakes:	Hydro-Max hydraulic, Bendix automatic adjustment. 9" x 3" parking brake. 8.5CFM air compressor.
Exhaust System:	Single horizontal muffler. Single horizontal tailpipe. Left side mounted.
Electrical System:	12 volt electrical system; circuit breaker; auto-reset; low engine down; 12 volt 62 amp. alternator.
Front End:	Fiberglass tilt hood and fenders.
Engine:	International 7.3 L diesel 50 state 170 HP at 3,000 RPM. Hand throttle control, locking type. Engine block heater 110 volt/1000 watt. Viscous fan drive.
Transmission:	Allison AT-545 automatic 4-speed; transmission filter; PTO gear.
Fuel Tank:	Steel rectangular, 50 U.S. gallon capacity, includes center step.
Cab:	Steel construction. 16" x 7" painted West Coast mirrors. Electronic speedometer. Electronic tachometer. Electronic hour meter. Full-width bench seat. Sewn vinyl interior trim.
Wheels:	
Front:	Disc type painted steel; 19.5 x 6.75 DC rims; International oil seals.
Rear:	Dual Rear wheel, disc type painted steel; 19.5 x 6.75 DC rims.
Tires:	245/70 R 19.5 G 14-ply Unisteel G-291 Goodyear front and rear.
Paint:	Acrylic Enamel, White

Trailer Features for LEACH RC-17

Frame:	10" wide flange beam construction.
Axles:	Tandem axle–7,000 lb. each axle.
Suspension:	Multi-leaf.
Wheel Rims:	Four (4) 6.75 x 16.5, 8-bolt.
Tires:	Four (4) 9.50 x 16.5, 10-ply.
Brakes:	12" x 2" electric, each wheel.
Tongue Jack:	12,000 lb. capacity with sand plate.
GVWR:	14,000 lbs.
Tow Ring:	Holland 1250-15, adjustable height.

Note: Due to continuing engineering research in new technology, specifications are subject to change without notice.

TIRES, RC-17

If the load is not equal on all tires due to trailer weight distribution, use the tire rated for the heaviest wheel position.

NOTE

The capacity rating molded into the sidewall of the tire is not always the proper rating for the tire if used in a trailer application. Use the following guideline:

1. LT and ST tires. Use the capacity rating molded into the tire.
2. Passenger Car tires. Use the capacity rating molded into the tire sidewall divided by 1.10.

Use tire mounting procedures as outlined by the Rubber Manufacturers Association or the tire manufacturers.

LUBRICANTS

Oil	SAE #10 or equivalent
Grease	Multiservice (quantity grade)

HYDRAULIC SYSTEM

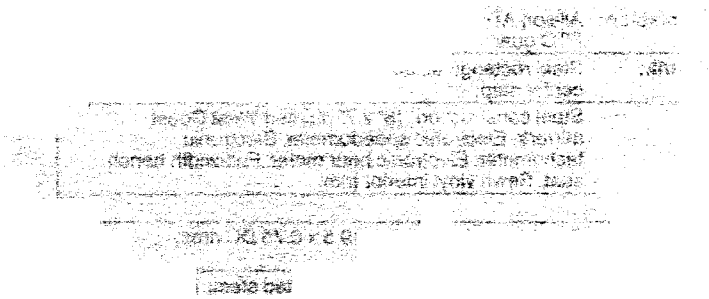
CAPACITY (approximately)	RC-23	RC-17
Fluid tank	35 qt. total	15 qt. total
	27 qt. operating	12 qt. operating
Total system	32 qt.	30 qt.
System pressure setting	1500 psi	3600 psi
Filtration	Suction strainer	Air breather
Pump type	axial piston	gear
Capacity	15 GPM @ 1000 RPM	8 GPM @ 2000 psi

HYDRAULIC FLUID:

To serve its purpose and give long and satisfactory service, hydraulic fluid must possess desirable physical and chemical characteristics. Stability over a wide range of temperatures and under agitation are very important.

Premium hydraulic fluids should be used in Leach hydraulic systems. In addition to the above characteristics selected additives should be added to provide additional resistance to wear, corrosion, oxidation, decomposition, and foaming. All additive blending should be done by the lubricant supplier so that they are compatible with each other.

A reputable lubricant supplier backed up by a reputable oil company is great assurance of obtaining high quality products, and generally speaking, higher quality is worth the higher initial cost.



LEACH HYDRAULIC FLUID RECOMMENDATION

All Leach hydraulic systems are factory filled with a high quality anti-wear hydraulic fluid meeting an ISO 32 specification. On units put into service where there are high ambient temperatures or sustained high duty cycles, it may be desirable to change the fluid to an ISO 46 specification (higher viscosity). In colder climates or light duty, an ISO 22 might be more appropriate. The International Standards Organization assigns specification numbers so that a consumer receives the same product from various suppliers.

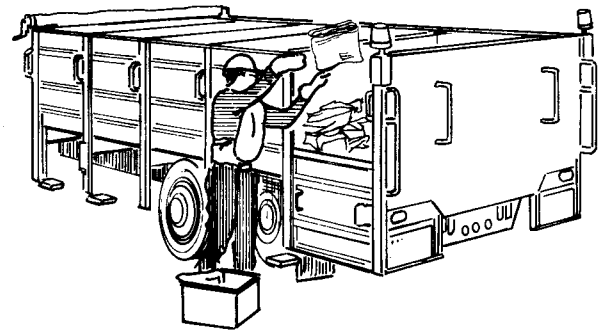
GRADE ISO/VISCOSITY	22	32	46
AGMA NO			1
Gravity, API	33	31	31
Flash, °F	375	380	390
Pour Point, °F	-20	-20	-20
Viscosity:			
SSU @ 100° F	112	158	228
SSU @ 210° F	40	44	48
cSt @ 40° C	21	30.5	44
cSt @ 100° C	4.1	5.2	6.5
Viscosity Index	98	99	99
ASTM Oxidation Test (Hours to 2.0 Neut. No.)	2500	2500	2500
ASTM Rust Test, A & B	Pass	Pass	Pass
Foam Test	Pass	Pass	Pass
Vickers Vane Pump Test	Pass	Pass	Pass
Dielectric Strength (ASTM 877) EC # @ 180° F	25Kv	25Kv	25Kv
	40-37-3(10)	40-37-3(15)	40-37-3(15)

⚠CAUTION

Do not use engine oil, automatic transmission fluid (ATF) or, add diesel fuel or kerosene to the hydraulic fluid. Service life of all hydraulic system components may be adversely affected.

GENERAL

The Leach Recycling Collector has been designed for long periods of efficient, uninterrupted operation. Careful attention to proper preventative maintenance, as described in this section, will insure and extend trouble-free operation of the unit. Particular attention to correct lubrication of the unit is probably the most vital area of preventative maintenance. The objective of preventative maintenance is to anticipate and prevent operational difficulties before they require extended shut down for costly repairs.



OPERATING AND MAINTENANCE RECORDS

Prepare and adhere to a maintenance schedule. Keep detailed records of all maintenance performed. Regularly inspect operating and maintenance records for deviations from normal operating conditions. Analyze the records for indications of potential trouble.

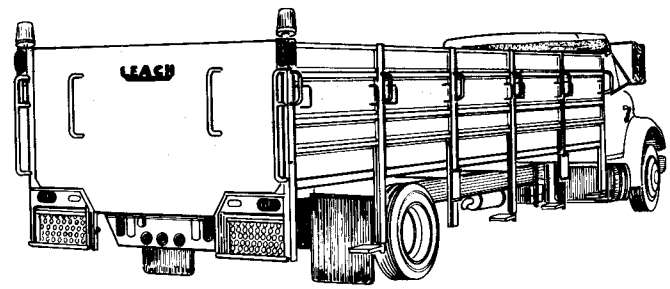
NOTE

Occasionally distributors will receive service bulletins from LEACH concerning updated maintenance information. Keep those bulletins with this manual and make notes at the appropriate places in the manual referencing the updated information.

DAILY PREVENTATIVE MAINTENANCE

Each day perform the following maintenance:

1. INSPECTION
   Perform the PRE-OPERATIONAL INSPECTION described in Section 3, OPERATION.



⚠WARNING

Never go under the vehicle with the engine running. Death or serious injury could result.

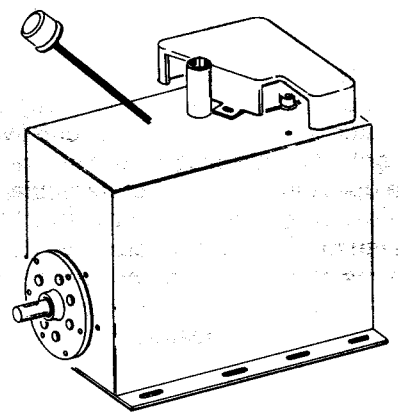
a. Check all major moving parts for smoothness and ease of operation.
b. When checking for hydraulic leaks pay particular attention to hose fittings and connections. A build up of hydraulic fluid and dirt indicates a small leak that can probably be corrected by tightening the fitting or connection.

2. CLEANING
   Hose entire unit inside and out with clean water. Make sure no collectibles are lodged in the body trough or behind the compartment dividers.
3. LUBRICATION
   Frequent inspection of grease points will indicate when lubrication is needed.

CHECKING FLUID LEVEL (DAILY), RC-23

Place the body hoist in the "down" position and check the fluid level. When checking the fluid level in the hydraulic tank, also note any frequent or sudden loss of fluid. This would indicate leakage, which must be traced and corrected to avert equipment failure and possible damage to components.

If low, fill the hydraulic tank to the "NORMAL FILL LEVEL" with hydraulic fluid as specified in Sec. 5, SPECIFICATIONS, according to operating and weather conditions.



CHECKING FLUID LEVEL (DAILY), RC-17

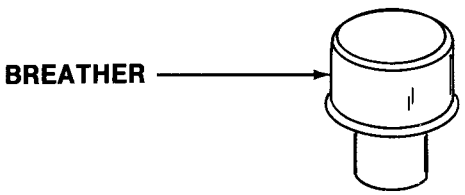
Place the body hoist in the "down" position and check the fluid level. When checking the fluid level, note any frequent or sudden loss of fluid. This would indicate leakage, which must be traced and corrected to avert equipment failure and possible damage to components.

Fill the reservoir as specified on the label next to the fill hole. See section 5, SPECIFICATIONS, for proper hydraulic fluid according to operating and weather conditions.

Clean the filter/breather element weekly to prevent damage to the pump or reservoir.

CLEAN TANK BREATHER (WEEKLY), RC-23

Clean the air breather (1) every week. Replace a breather that can not be cleaned adequately.



LUBRICATION POINTS (WEEKLY), RC-23, RC-17

Every week (every 40 hours of operation) lubricate the unit as shown on the LUBRICATION CHART in this section.

FLUSHING HYDRAULIC SYSTEM (YEARLY)

1. Drain all fluid from hydraulic tank into a suitable container.
2. Clean and wipe out bottom of tank.
3. Fill the hydraulic tank with fresh fluid as specified in Sec. 5, SPECIFICATIONS, according to operating and weather conditions.
4. Start truck and operate all control levers as described in Sec. 3, OPERATIONS.
5. Recheck fluid level and add fluid as necessary.

NOTE

Refer to Sec. 9, SERVICE & REPAIR for detailed instructions pertaining to those items requiring repair or replacement.

HYDRAULIC SYSTEM SERVICE
(See accompanying hydraulic system illustration)

CONTAMINATION

It is estimated that as much as 90% of all hydraulic problems may be traced directly to the fluid. It is of utmost importance that all foreign matter be kept from the hydraulic fluid. Invisible quantities of abrasive type contamination may cause serious pump wear, malfunctioning of pumps and valves, and sludge accumulations within the system in relatively short periods of time. It is also essential that moisture and water be kept from the hydraulic fluids and system.

COMMERCIAL HYDRAULIC FLUID TESTING

Hydraulic fluid samples should be taken periodically for laboratory analysis. The actual sampling method is critical. It should be done based on ANSI Standard B93.19M(R1980). This standard is available from the National Fluid Power Association, 3333 N. Mayfair Rd., Milwaukee, WI 53222.

Samples should be taken from the center of the reservoir when the fluid is at operating temperature and placed in a clean, dry, glass bottle with a non-shedding, screw-on cap. The bottle should be labeled with the date, type of fluid, and model and serial number of the machine.

Two identical samples should be taken. One for laboratory analysis and one for your own preliminary analysis while you are waiting for the lab report.

We recommend the use of commercial laboratory services for analysis of routine oil samples taken on a regularly scheduled basis. The cost is about $20 to $30 per sample. The most important analyses are particle count, Spectro-chemical analysis, water content, and viscosity.

IN HOUSE HYDRAULIC FLUID TESTING

After your sample has been allowed to stand for 20 to 30 minutes to eliminate all air bubbles, hold the bottle up to the light to check for debris in the oil and for whether the oil is clear or cloudy.

Any visible debris is an indication of a severe solid contamination problem, the source of which must be located and corrected immediately. Common sources of this kind of contamination may be component wear, unsealed reservoir covers, or dirty air breather filters.

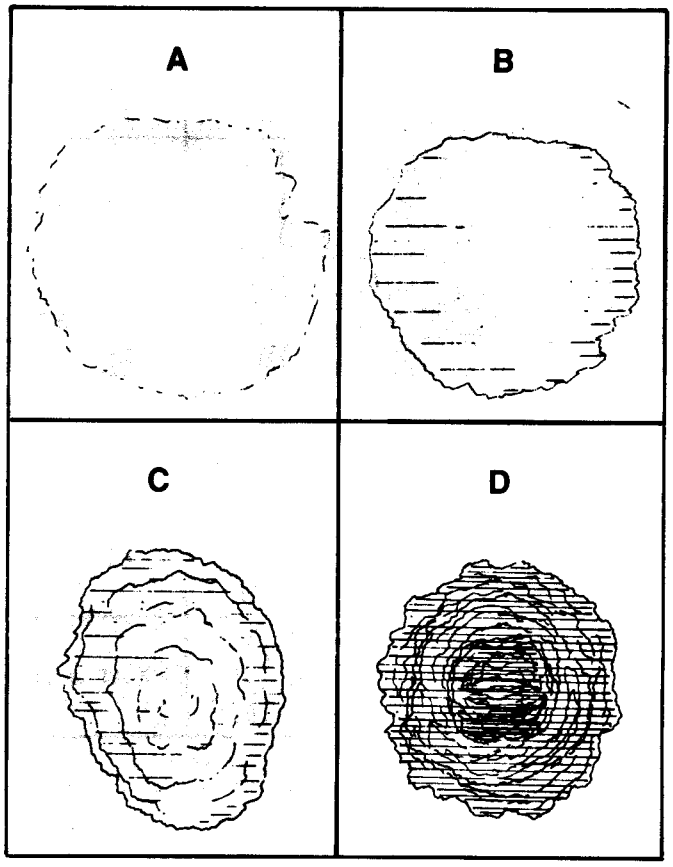
If the sample is the least bit "cloudy" it is an indication of water contamination, the source of which must be found and eliminated immediately. Common sources are inadequate outdoor storage, unsealed reservoir covers, or condensation.

A "BLOTTER SPOT TEST" may also be performed to test for OXIDATION. Place a DROP of oil on a piece of white blotter paper. Order Leach part number 102480 for 20 sheets.

NOTE

The Blotter Test will provide an indication that a more complete test may be necessary.

A. If the blotter remains colorless or develops only a light yellow ring, oxidation is under control.
B. If color developes but is uniform throughout, the oil is still serviceable but should be checked for correct additive content.
C. If the sample shows distinct rings the fluid should be changed.
D. If a distinct dark spot remains in the middle, but a lighter colored oil migrates outward in the blotter paper the oil is about to dump (or already has) sludge or other by-products into the system. The time for replacement of this fluid has already passed.



Kits are available from your fluid supplier to test for acid content in much the same way you would test condition of swimming pool water. A shift in acid content may indicate a breakdown in the fluid.

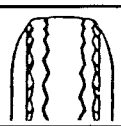
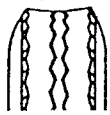
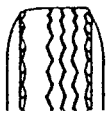
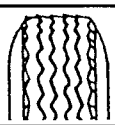
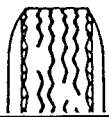
KEEP ACCURATE, DATED RECORDS OF ALL PERTINENT INFORMATION GAINED FROM THESE TESTS.

Tire inflation pressure is the most important factor in tire life. Inflation pressure should be as recommended for the load but in no case should exceed the tire or rim maximum pressure rating. Inflation pressure should be checked cold before operation. Do not bleed air from tires when they are hot. Check inflation pressure weekly during use to insure the maximum tire life and tread wear. The following tire wear diagnostic chart will help you pinpoint the causes and solutions of tire wear problems.

NOTE

Tire wear should be checked frequently because once a wear pattern becomes firmly established in a tire it is difficult to stop, even if the underlying cause is corrected.

TIRE WEAR DIAGNOSTIC CHART, RC-17

WEAR PATTERN		CAUSE	ACTION
	CENTER WEAR	Over inflation	Adjust pressure to particular load per tire catalog
	EDGE WEAR	Under inflation	Adjust pressure to particular load per tire catalog
	SIDE WEAR	Loss of camber or overloading	Make sure load does not exceed axle rating. Align at alignment shop
	TOE WEAR	Incorrect toe-in	Align at alignment shop.
	CUPPING	Out-of-balance	Check bearing adjustment and balance tires
	FLAT SPOTS	Wheel lockup and tire skidding	Avoid sudden stops when possible and adjust brakes

GENERAL

The Leach Recycling Collector has been designed to provide long periods of trouble-free operation. Performing the check-out procedures below, at regular weekly intervals, will help to prevent unscheduled downtime.

NOTE

Because of the location of various controls some checks will require two people.

⚠WARNING

Make sure you know and observe all safety precautions listed in Section 2 before performing any of the following check-out procedures. Use extreme caution to avoid coming near any moving parts. Make sure the unit is in the correct operational mode as indicated by the OPERATIONAL STATUS block presented at the beginning of each check.

RC-17 TRAILER AXLE AND BRAKES

The electric brakes are actuated by an electromagnet. When electric current is fed into the system by the controller it flows to the electromagnets in the brakes. Increasing the current flow to the electromagnet causes increasing pressure against the shoes and brake drums.

⚠DANGER

Never use the tow vehicle or trailer brakes alone to stop the combined load.

MAINTENANCE SCHEDULE
RC-17 TRAILER AXLE

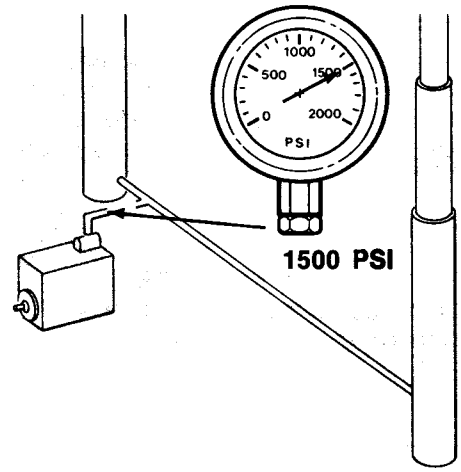
Item	Function Required	Weekly	3 Months or 3000 Miles	6 Months or 6000 Miles	12 Months or 12,000 Miles
Brakes	Test That They Are Operational	At Every Use			
Brake Adjustment	Adjust to Proper Operating Clearance		●		
Brake Magnets	Inspect for Wear and Current Draw			●	
Brake Linings	Inspect for Wear or Contamination				●
Brake Controller	Check for Correct Amperage & Modulation			●	
Trailer Brake Wiring	Inspect Wiring for Bare Spots, Fraying, Etc.				●
Breakaway System	Check Battery Charge and Switch Operation	At Every Use			
Hub/Drum	Inspect for Abnormal Wear or Scoring				●
Wheel Bearings and Cups	Inspect for Corrosion or Wear. Clean & Repack				●
Seals	Inspect for Leakage Replace if Removed				●
Springs	Inspect for Breakage, Wear, Loss of Arch				●
Suspension Parts	Inspect for Bending, Loose Fasteners, Wear				●
Hangers	Inspect Welds				●
Wheel Nuts Hold Bolts	Tighten to Specified Torque Values		●		
Wheels	Inspect for Cracks, Dents, or Distortion			●	
Tire Inflation Pressure	Inflate Tires to Mfg's Specifications	●			
Tire Condition	Inspect for Cuts, Wear, Bulging, Etc.		●		

CHECK PRESSURES, RC-23

The pressure check provided below will indicate the operating condition of the hydraulic system. Detailed adjustment procedures are provided later in this section and are referenced at the appropriate check-out procedures. Prior to performing pressure checks:

Operational Status			
Truck	Off	Keys	Removed

1. Install a 0-2000 psi gauge as shown.
2. Start truck, engage PTO.
3. Perform the following checks in order.



CHECK MAIN RELIEF PRESSURE, RC-23

Operational Status			
Truck	Running	PTO	Engaged

1. Depress foot throttle.
2. Move the control lever to fully extend hoist cylinder.
3. Hold lever and read gauge. Pressure should be 1500 psi.

⚠CAUTION

Do not operate faster than 800 - 1000 RPM.

Operational Status					
Truck	Running	PTO	Engaged	Sol. Sw.	ON

IF NOT:

4. Increase pressure by adjusting the main relief valve as described in Sec. 9, SERVICE AND REPAIR.
5. Repeat steps 2 and 3 and check gauge for 1500 psi.

IF NOT:

6. Replace defective HYDRAULIC PUMP as described in Sec. 9, SERVICE AND REPAIR.

CHECK PRESSURES, RC-17

The pressure check provided below will indicate the operating condition of the hydraulic system. Detailed adjustment procedures are provided later in this section and are referenced at the appropriate check-out procedures. Prior to performing pressure checks:

1. Install a 0-4000 psi gauge as shown.
2. Perform the following checks in order.

CHECK MAIN RELIEF PRESSURE, RC-17

Operational Status					
Truck	Running	PTO	Engaged	Sol. Sw.	ON

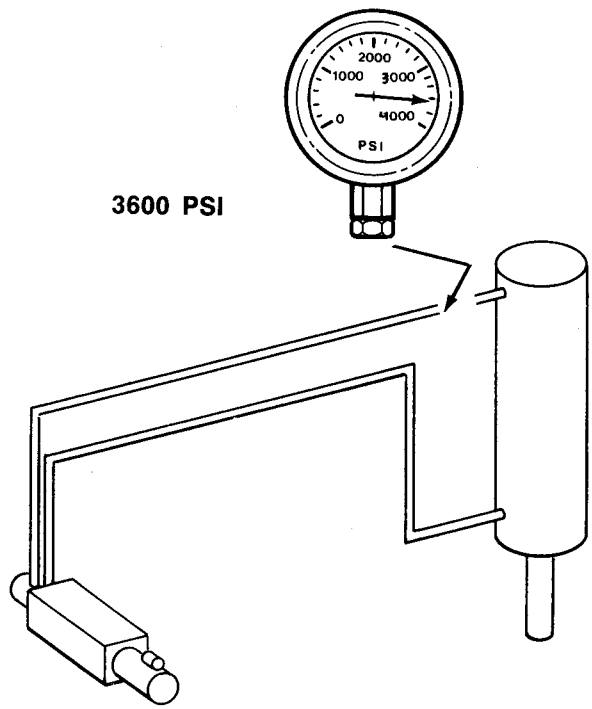
1. Move toggle switch to "up" position and hold to fully extend the cylinder.
2. Hold switch and read gauge. Pressure should be 3600 psi.

IF NOT:

3. Increase pressure by adjusting the main relief valve as described in Sec. 9, SERVICE AND REPAIR.
4. Repeat steps 2 and 3 and check gauge for 3600 psi.

IF NOT:

5. Replace defective HYDRAULIC PUMP as described in Sec. 9, SERVICE AND REPAIR.



GENERAL

Troubleshooting is a matter of quickly and logically isloating the cause of a problem and taking corrective action. Factory trained mechanics, experienced operators, a thorough understanding of the information in this manual, and accurate maintenance records are the best troubleshooting tools available. Occasionally it may be best for a service person who is trying to isolate a problem to go "on the route" or consult with operators to determine how the unit is acting under actual working conditions.

For the most part, problems will be limited to hydraulic and electrical system components.

Hydraulic flow diagrams are provided in this section. These diagrams can be helpful in determining which parts are associated with a particular function.

An electrical wiring diagram is included in Section 9, SERVICE AND REPAIR under ELECTRICAL SYSTEM.

Problems in the hydraulic system may be found by performing the PRESSURE CHECKS found in Section 7, CHECK-OUT PROCEDURES.

POSSIBLE CAUSE	REMEDY
PUMP NOISE IS EXCESSIVE, RC-23	
NOTE *ALL PUMPS MAKE A CERTAIN AMOUNT OF NOISE.*	
1. Pump starving for fluid.	1. Check fluid level. 1a. Check for obstruction in suction lines, kinked or collapsed hoses.
2. Hydraulic fluid too cold.	2. Bring fluid to normal operating temperature. 2a. Change hydraulic fluid to proper grade for operating conditions, see Sec. 5, SPECIFICATIONS.
3. PTO drive shaft and/or U-joints badly worn or out of balance.	3. Repair, replace, and/or balance all parts.
4. Pump gears, end plates, bearings, etc., badly worn.	4. Replace pump.
5. Improper grade of hydraulic fluid (fluid foaming).	5. Replace with proper grade of hydraulic fluid. See Sec. 5, SPECIFICATIONS.
HOIST WILL NOT RAISE, RC-23	
1. Insufficient hydraulic pressure.	1. Check main pressure, see Sec. 7, CHECK-OUT PROCEDURES.
2. Hydraulic pump is defective.	2. Repair or replace pump. See Sec. 9, SERVICE AND REPAIR.
3. Main relief valve out of adjustment.	3. Adjust as necessary. See Sec. 9, SERVICE AND REPAIR.
4. Restriction in cylinder hose.	4. Remove and clean hose.
5. Cylinder by-passing.	5. Repair cylinder.
6. Low on hydraulic fluid.	6. Fill with fluid, See Section 6.
HOIST WILL NOT RAISE, RC-17	
1. Motor fails to start.	1a. Check solenoid switch. 1b. Check toggle switch. 1c. Check wiring. 1d. Check motor.
2. Cylinder by-passing.	2. Repair cylinder.
3. Worn pump.	3. Rebuild or replace pump.
4. Suction filter plugged.	4. Clean filter or replace. See Section 6.
5. Relief valve out of adjustment.	5. Adjust valve, See Section 9.
6. Low on hydraulic fluid.	6. Fill with fluid, See Section 6.

POSSIBLE CAUSE	REMEDY

HOIST WILL NOT HOLD, RC-17

1. Check valve not seating.	1. Clean check valve or replace.

HOIST WILL NOT LOWER, RC-17

1. Check valve stuck.	1. Clean check valve or replace.
2. Filter plugged.	2. Clean filter.
3. Electrical switch not functioning.	3a. Check for continuity, See Section 6. 3b. Check wiring.

NO BRAKES, RC-17

1. Open Circuits.	1. Find and correct.
2. Severe underadjustment.	2. Adjust brakes.
3. Faulty controller.	3. Test and correct.
4. Short circuits.	4. Find and correct.

WEAK BRAKES, RC-17

1. Grease or oil on magnets or linings.	1. Clean or replace.
2. Corroded connections.	2. Clean and correct cause of corrosion.
3. Worn linings or magnets.	3. Replace.
4. Scored or grooved brake drums.	4. Machine or replace.
5. Improper synchronization.	5. Correct.
6. Underadjustment.	6. Adjust brakes.
7. Glazed linings.	7. Reburnish or replace.
8. Overloaded trailer.	8. Correct.

LOCKING BRAKES, RC-17

1. Underadjustment.	1. Adjust.
2. Improper synchronization.	2. Correct.
3. Faulty controller.	3. Test and correct.
4. Loose, bent, or broken brake components.	4. Replace components.
5. Out of round brake drums.	5. Machine or replace.
6. Insufficient wheel load.	6. Adjust system resistor and synchronize.

INTERMITTENT BRAKES, RC-17

1. Faulty controller.	1. Test and correct.
2. Broken wires.	2. Repair or replace.
3. Loose connections.	3. Find and repair.

BRAKES PULL TO ONE SIDE, RC-17

1. Incorrect adjustment.	1. Adjust.
2. Grease or oil on linings or magnet.	2. Clean or replace.
3. Broken wires.	3. Find and repair.
4. Bad connections.	4. Find and repair.

POSSIBLE CAUSE	REMEDY
HARSH BRAKES, RC-17	
1. Underadjustment.	1. Adjust.
2. Improper synchronization.	2. Correct.
3. Improper controller.	3. Change.
4. Faulty controller.	4. Test and correct.
NOISY BRAKES, RC-17	
1. Under adjustment.	1. Adjust brakes.
2. Lack of lubrication.	2. Lubricate.
3. Broken brake components.	3. Replace component.
4. Incorrect brake components.	4. Correct.
SURGING BRAKES, RC-17	
1. Grease or oil on linings or magnet.	1. Clean or replace.
2. Out of round or cracked brake drums.	2. Machine or replace.
3. Faulty controller.	3. Test and correct.
DRAGGING BRAKES, RC-17	
1. Overadjustment.	1. Readjust.
2. Out of round brake drums.	2. Machine or replace.
3. Incorrect brake components.	3. Replace.
4. Loose, bent, or broken brake components.	4. Replace.
5. Faulty breakaway switch.	5. Repair or replace.
6. Loose wheel bearing adjustment.	6. Adjust.
7. Bend spindle.	7. Replace axle.

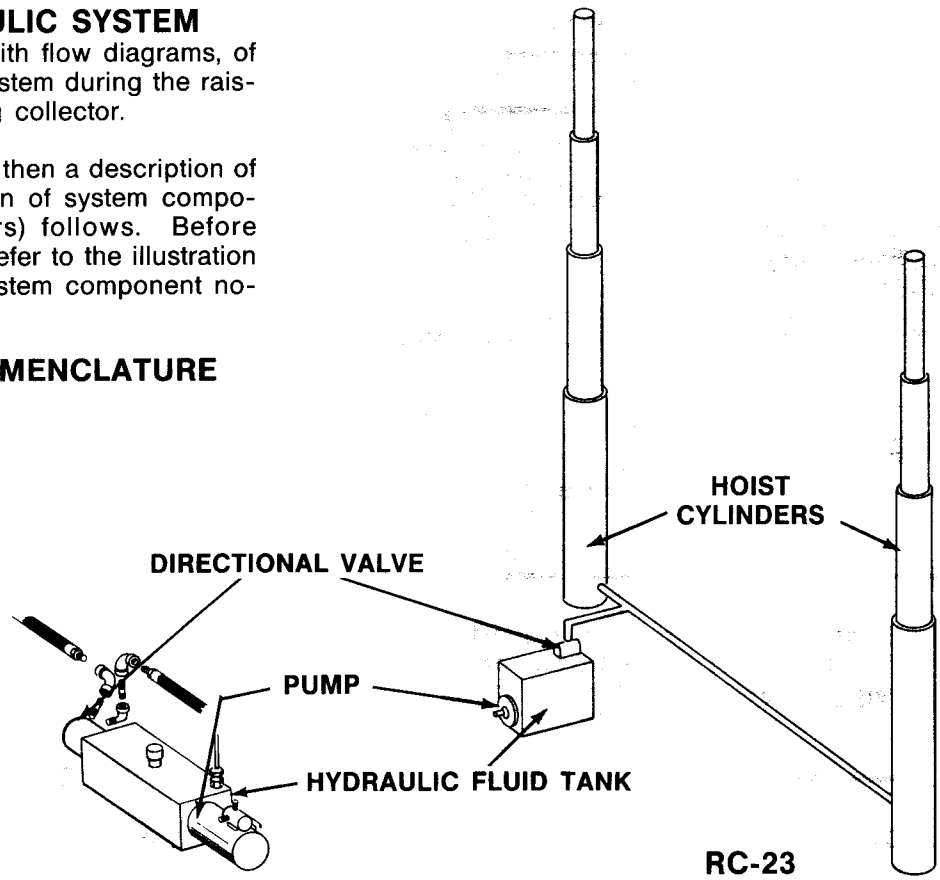
DESCRIPTION OF HYDRAULIC SYSTEM

The following is a description, with flow diagrams, of what happens in the hydraulic system during the raising and lowering of the recycling collector.

Operator action is presented and then a description of hydraulic flow and the interaction of system components (i.e. valves and cylinders) follows. Before proceeding to the flow diagram refer to the illustration and become familiar with the system component nomenclature.

SYSTEM COMPONENT NOMENCLATURE

Hydraulic fluid tank
Pump
Directional valve
Hoist cylinder



RC-17 RC-23

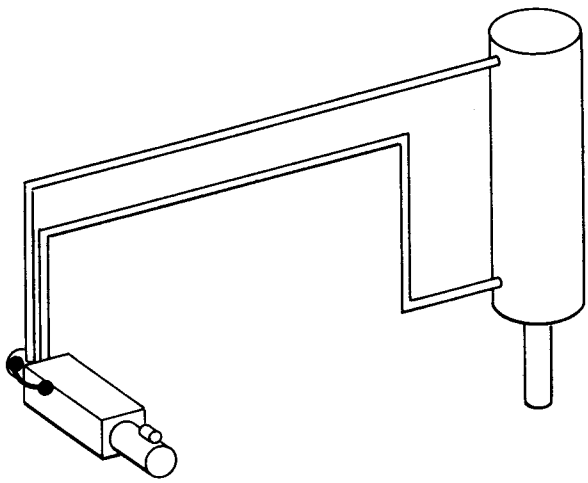
NEUTRAL (WITH HOIST DOWN)

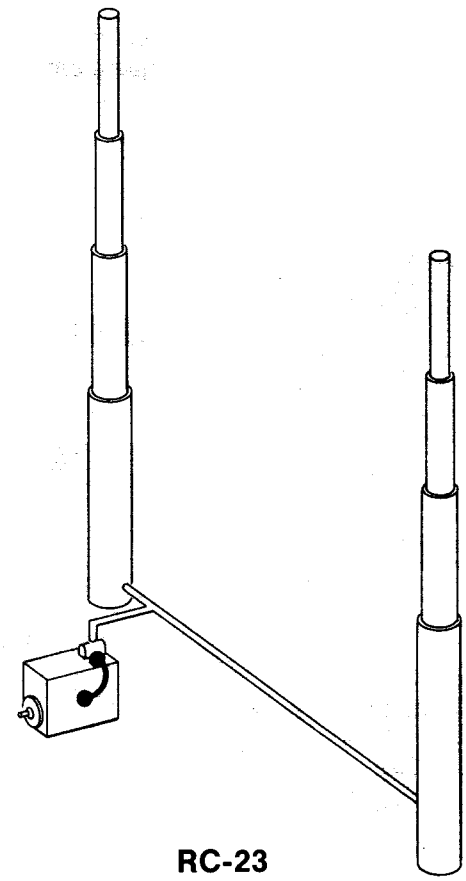
OPERATOR ACTION

The operator starts the truck and engages the PTO.

HYDRAULIC SYSTEM

Hydraulic fluid flows from the tank, by gravity, to the pump, from there it is pumped to the directional valve. Flow continues through the valve and then back to the tank. During operation, if pressure increases to the main relief setting, excess flow will be diverted from the valve back to the tank.





RC-17 PRESSURE —— RC-23

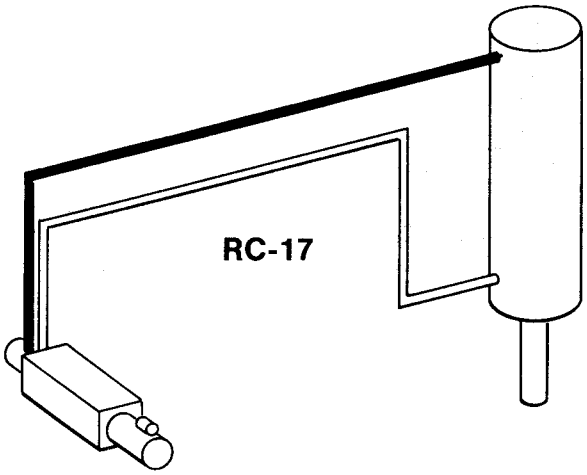
RAISING OF HOIST RC-23

OPERATOR ACTION

The operator pulls out on the lift control handle to start the hoist cycle.

HYDRAULIC SYSTEM

The operator action causes the directional valve to shift, diverting flow to the case end of the hoist cylinder(s), causing the hoist to raise. The hoist cylinder(s) extends. Return fluid flow from the cylinder is back to the tank.

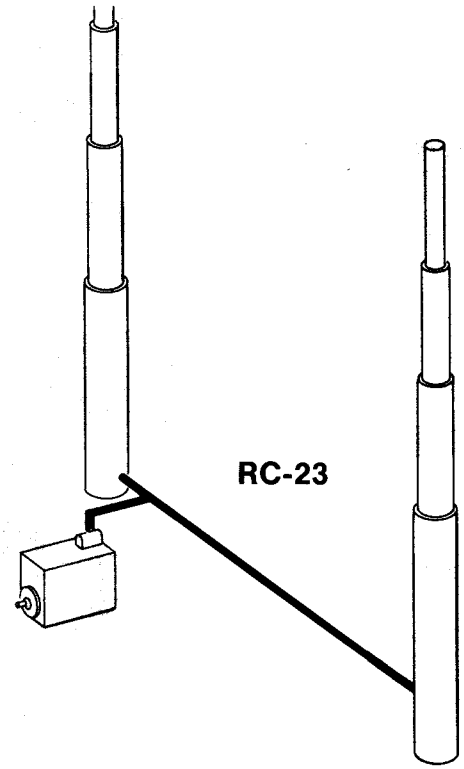


PRESSURE ————

RAISING OF HOIST RC-17

OPERATOR ACTION

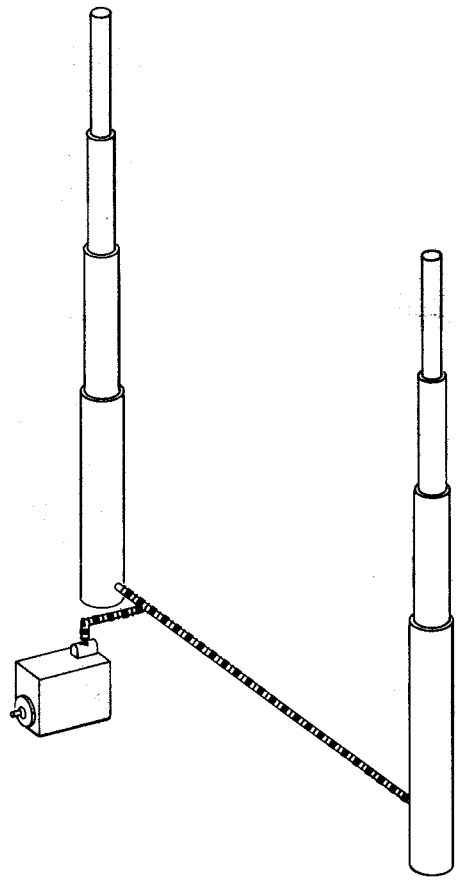
The operator holds the toggle switch in the "UP" position



HOIST COMPLETELY EXTENDED RC-23

OPERATOR ACTION

The operator pushes in the lift control lever to the neutral detent position to hold the hoist in the fully up and extended position.



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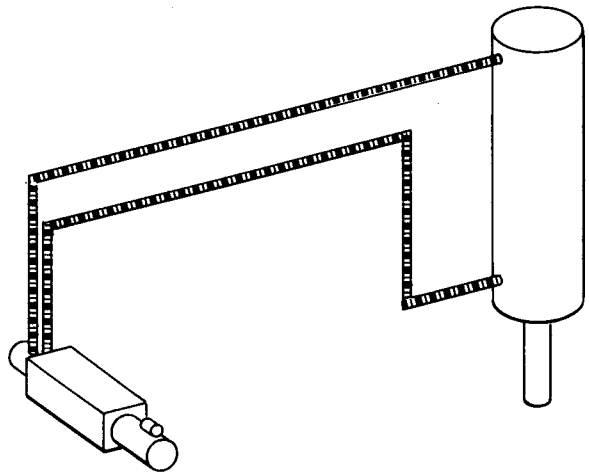
HOIST COMPLETELY EXTENDED RC-17

OPERATOR ACTION

The operator lets go of the toggle switch and the switch moves to the center "neutral" position to hold the hoist in the fully up and extended position.



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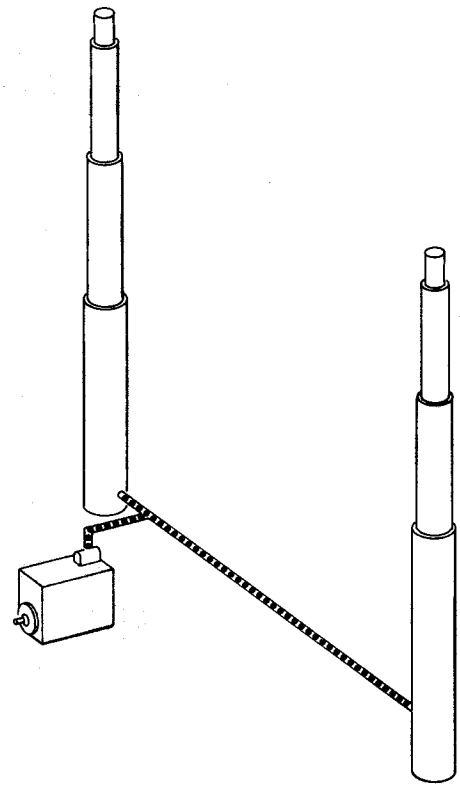
LOWERING HOIST RC-23

OPERATOR ACTION

The operator pushes the lift control lever in. The case end of the cylinder is open to the tank. The weight of the body forces the fluid out of the cylinder and the body lowers.

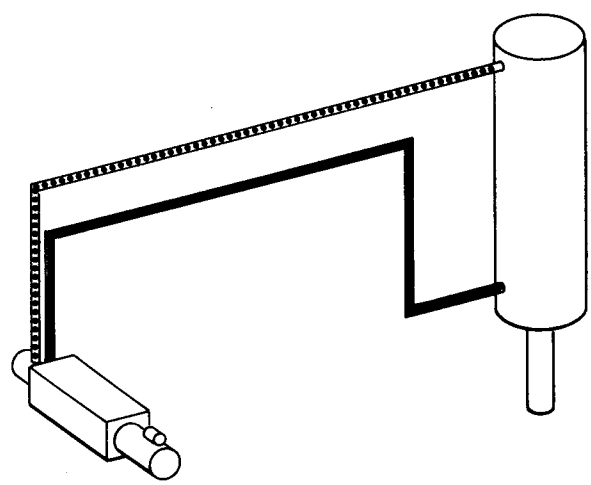


RETURN ••••••••••••••••

LOWERING HOIST RC-17

OPERATOR ACTION

The operator pushes down on the toggle switch which shifts the spool in the directional valve and diverts the fluid flow from the case end of the cylinder to the tank. Fluid flow from the pump is diverted to the rod end of the cylinder.



PRESSURE ━━━━━━━━
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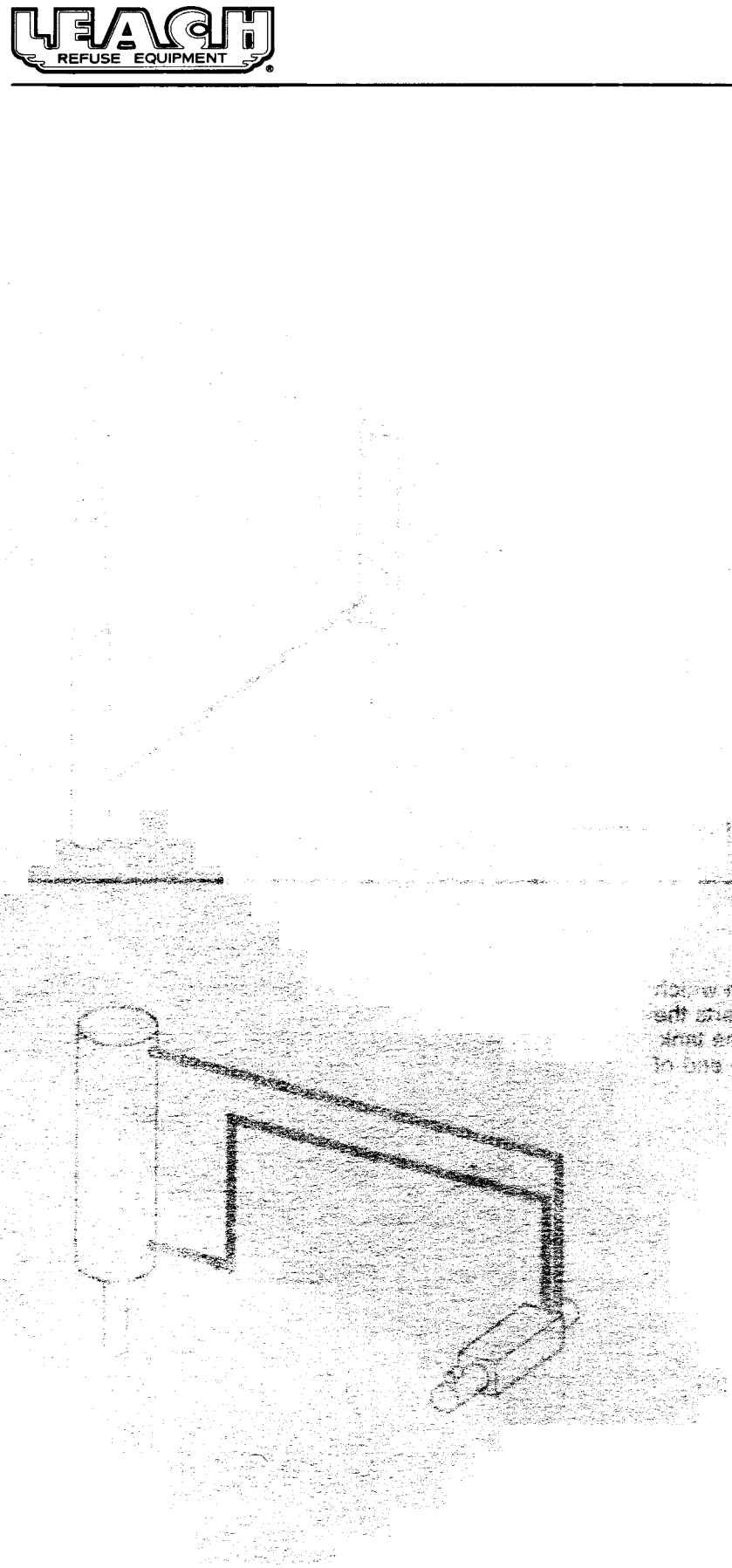
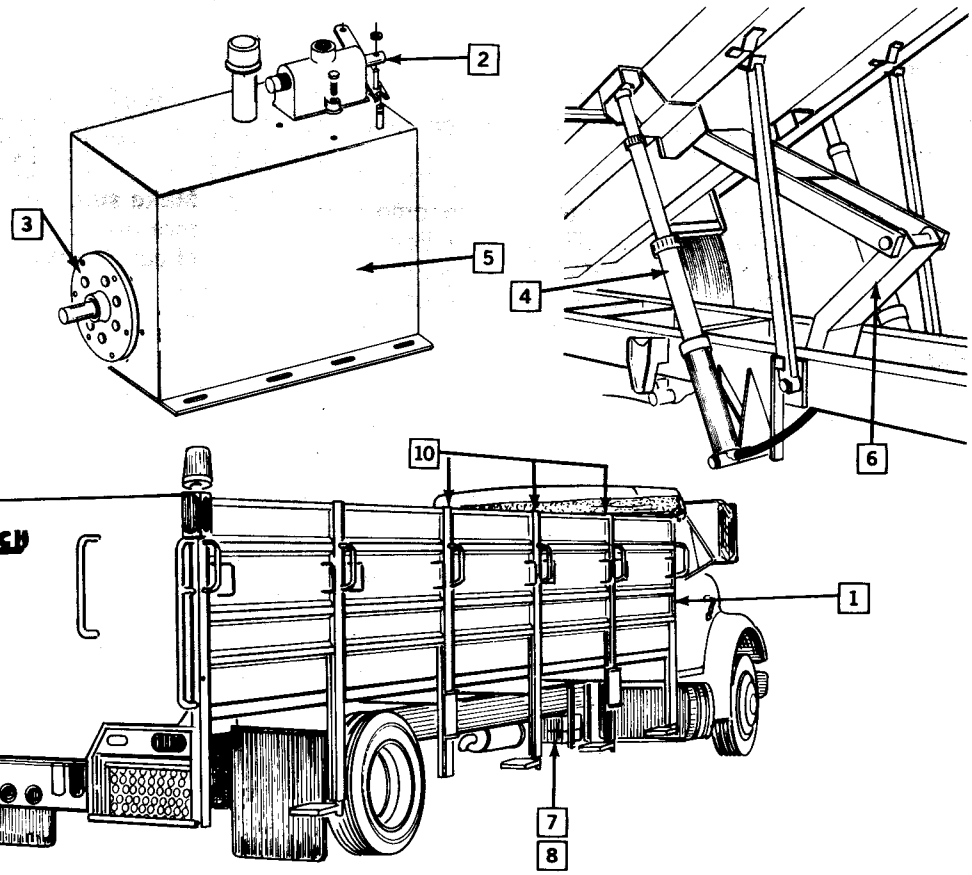


Main component location

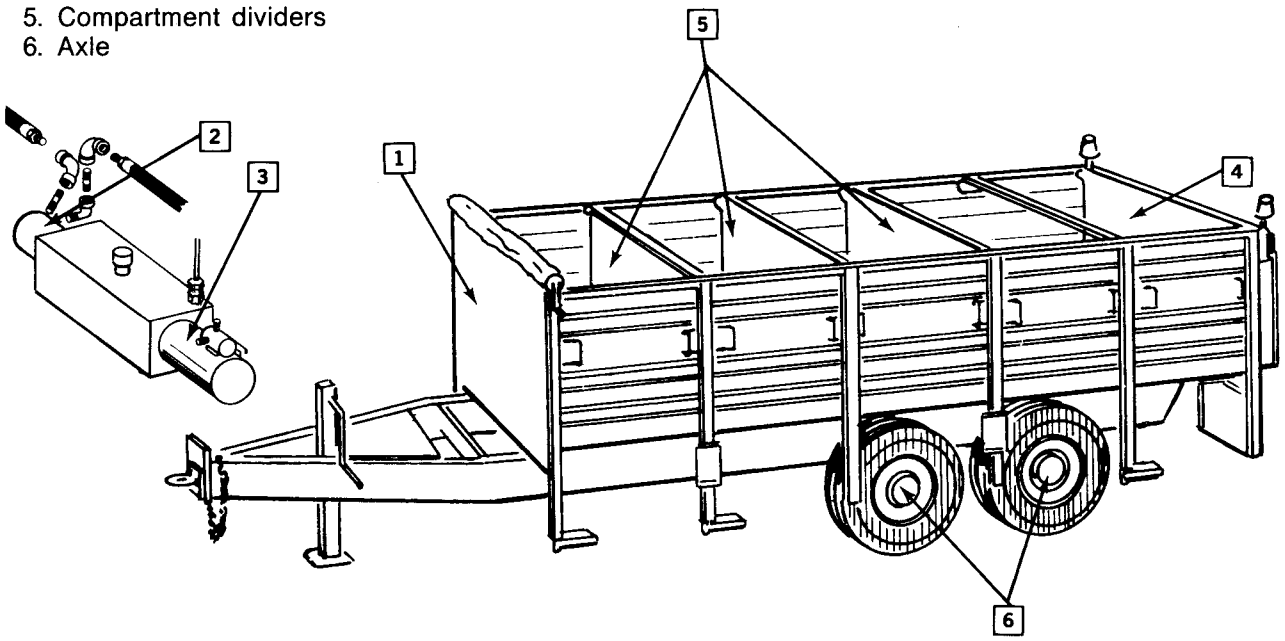
RC-23

1. Body
2. Directional valve
3. Pump
4. Hoist cylinder(s)
5. Hydraulic fluid reservoir
6. Hoist
7. Drive shaft
8. PTO
9. Rear door
10. Compartment divider.



RC-17

1. Body
2. Directional valve
3. Pump
4. Rear door
5. Compartment dividers
6. Axle



GENERAL

This section contains all of the instructions necessary for the repair and replacement of the main components of the Recycling Collector.

Before attempting any repair of the unit become thoroughly familiar with the OPERATION instructions (Sec. 3) and GENERAL REPAIR PRACTICES (Sec. 4). Also, before performing any work on the unit know and observe all SAFETY PRECAUTIONS listed in Section 2 and Section 4.

⚠CAUTION

Make sure the vehicle is securely blocked before operating the hoist. Use OSHA approved chock blocks.

⚠WARNING

Some procedures in this section will require that the truck is running. In these instances the operational status will be indicated. Otherwise, make sure that the truck is shut off and the keys are removed. If the body is raised, the safety props must be engaged and supporting the body.

⚠DANGER

Never leave the vehicle while raising. Remain at the controls.

SERVICE AND REPAIR

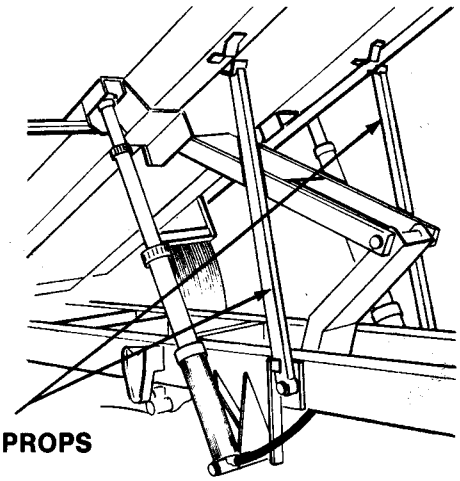
Removal of the telescopic cylinder.

Operational Status			
Truck	Off	PTO	Disengaged

1. Pull the hoist raise lever to raise the body on the RC-23 or push up the toggle switch on the RC-17.
2. Lower body props.
3. Gently lower the body onto the props.
4. Block hoist securely or support with an overhead lifting device.

⚠WARNING

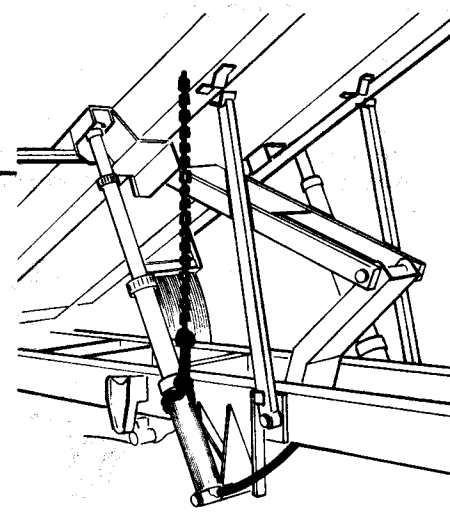
Never attempt to service or repair a loaded unit. Always empty the unit before starting repairs or maintenance.



BODY PROPS

Operational Status			
Truck	Off	Keys	Removed

5. Support the cylinder with a nylon strap and overhead lifting device.
6. Remove upper cylinder pin.



Operational Status			
Truck	On	PTO	Engaged

7. Retract cylinder while supporting.

⚠CAUTION

Crack hydraulic lines slowly to gently release trapped pressure.

Operational Status			
Truck	Off	Keys	Removed

8. Disconnect hose.
9. Remove lower cylinder pin.
10. Lift cylinder from unit.

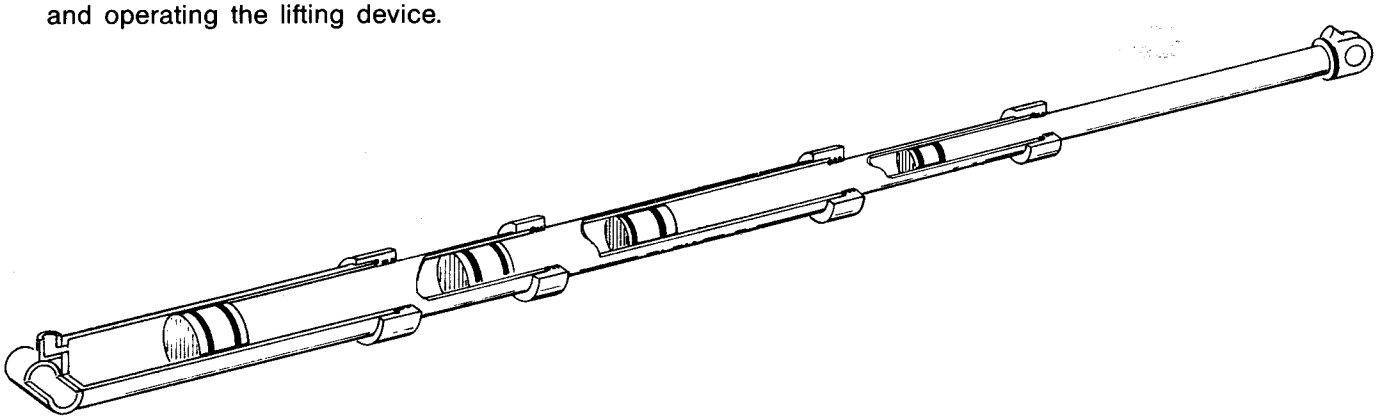
DISASSEMBLY AND REPAIR

NOTE

Check with your local Leach distributor before disassembly of a telescopic cylinder.

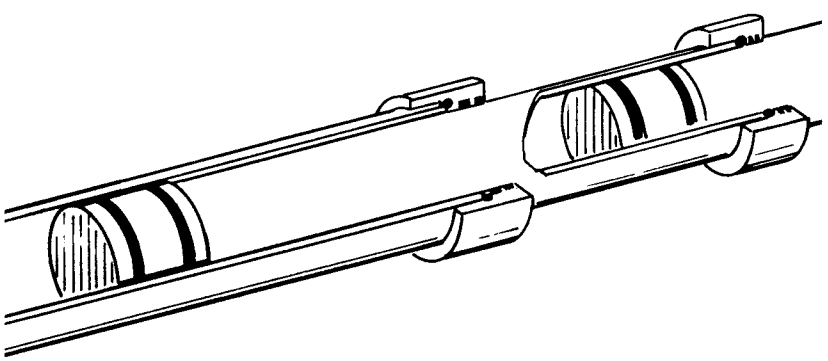
(See Sec. 4 for information about GENERAL REPAIR PRACTICES).

1. Secure the cylinder end to a floor stand or work bench.
2. Attach a sling or chain to the rod end of the cylinder.
3. Refer to the accompanying view and disassemble cylinder one stage at a time by loosening the set-screw, removing packing nuts and retainer ring, and operating the lifting device.



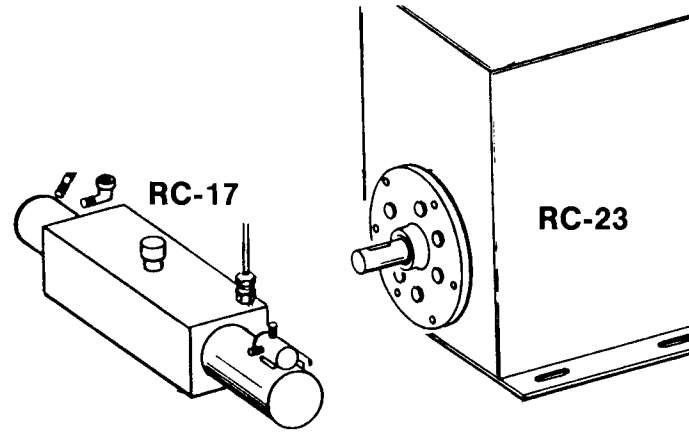
REASSEMBLY AND INSTALLATION OF TELESCOPIC CYLINDER

1. Replace packing kits for each stage and reassemble cylinder in reverse order of disassembly.
2. Re-install cylinder in reverse order of removal.



DESCRIPTION OF HYDRAULIC PUMP

The pump, which serves the complete hydraulic system, is usually coupled to a shaft through a yoke arrangement. On the RC-23 it is mounted under the body and connected to a power take off (PTO) on the transmission. On the RC-17 the pump is an electric over hydraulic package located on the front of the trailer.



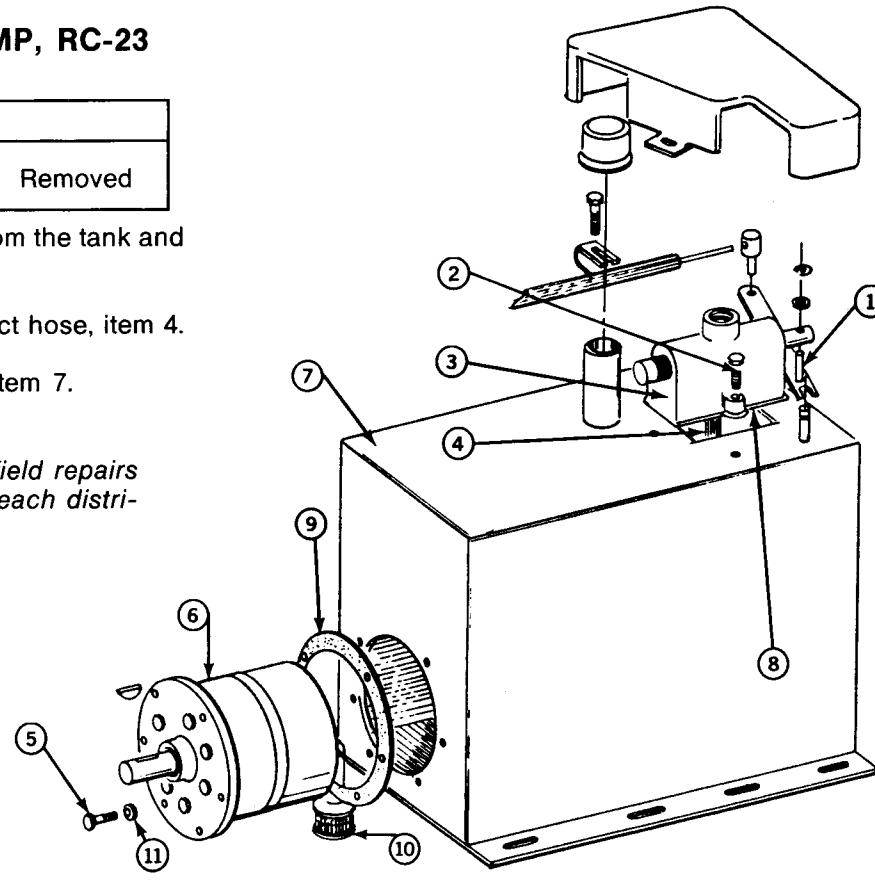
REMOVAL OF HYDRAULIC PUMP, RC-23

Operational Status			
Truck	Off	Keys	Removed

1. Disconnect the valve control arm from the tank and valve, item 1.
2. Remove capscrews, item 2.
3. Pull valve up, item 3, and disconnect hose, item 4.
4. Remove six (6) capscrews, item 5.
5. Pull pump, item 6, from reservoir, item 7.

NOTE

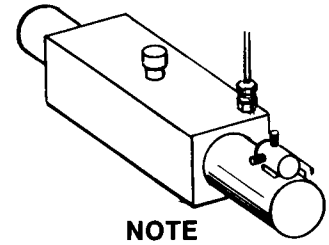
It is not recommended to attempt field repairs of the pump. Contact your local Leach distributor.



REASSEMBLY AND INSTALLATION OF PUMP, RC-23

1. Clean reservoir, See Section 6, PREVENTATIVE MAINTENANCE.
2. Install new gaskets, items 8 and 9.
3. Clean pump intake screen, item 10.
4. Re-install capscrews, item 5, and aluminum washers, item 11, and tighten evenly.
5. Reconnect the pressure hose, item 4, and bolt the valve, item 2, to the reservoir, item 7, with capscrews, item 2 and tighten evenly.

DISASSEMBLY AND REPAIR OF PUMP, RC-17



NOTE

Field repair of the electric/hydraulic pump is not recommended. Contact your local Leach distributor. Also See Section 8, Troubleshooting.

GENERAL MAINTENANCE

BRAKE ADJUSTMENT, RC-17

Brakes should be adjusted (1) after the first 200 miles of operation when the brake shoes and drums have "seated", (2) at 3000 mile intervals, (3) or as use and performance requires. The brakes should be adjusted in the following manner:

1. Jack up the trailer and secure on adequate capacity jack stands. Follow the trailer manufacturers recommendations for lifting and supporting the unit. Check that the wheel and drum rotates freely.
2. Remove the adjusting hole cover from the adjusting slot on the bottom of the brake backing plate.
3. With a screwdriver or standard adjusting tool rotate the starwheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn.
4. Then rotate the starwheel in the opposite direction until the wheel turns freely with a slight lining drag.
5. Replace the adjusting hole cover and lower the wheel to the ground.
6. Repeat the above procedure on all brakes.

⚠CAUTION

Do not enter under the trailer unless it is resting on properly placed jack stands.

Follow the recommendations for lifting and supporting the unit. Do not lift or place support on any part of the suspension system.

TO SYNCHRONIZE, RC-17

Start by making sure the trailer brakes are properly adjusted. Set the System Resistor in the middle of the coil and the Controller adjustment near the center of its setting.

⚠CAUTION

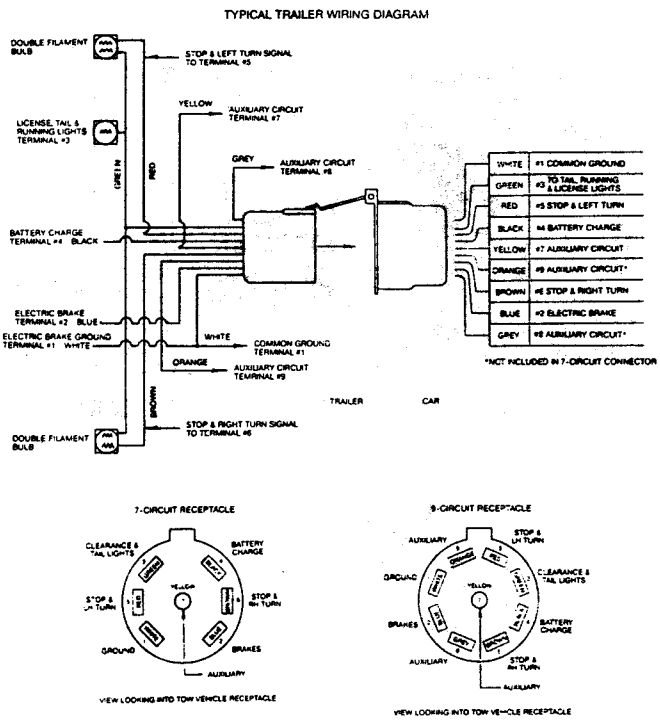
Before making road tests, make sure the area is clear of vehicular and pedestrian traffic.

Make hard stops from 20 mph on a dry paved road free of sand and gravel. If the trailer brakes lock and slide, add more resistance to the circuit with the System Resistor. If they do not slide, take resistance out of the circuit. Adjust the resistor just to the point of brake lockup and wheel skid.

Make a number of 30 mph hard stops to check braking at this speed. If the trailer brakes lag behind the tow vehicle, turn the Controller adjustment in the direction for more braking. If the trailer brakes come in ahead of the tow vehicle brakes, turn the Controller adjustment in the opposite direction. For best braking performance, it is recommended that the Controller be adjusted to allow the trailer brakes to come in just slightly ahead of the tow vehicle brakes. When proper synchronization is achieved there will be no sensation of the trailer "jerking" or "pushing" the tow vehicle during braking.

When this adjustment is complete, make a hard stop or two from 20 mph to check for wheel lockup and whether further fine tuning of the System Resistor is required.

TYPICAL CONNECTOR WIRING



TRAILER WIRE SIZE CHART		
NUMBER OF BRAKES	HITCH-TO-AXLE DISTANCE IN FEET	RECOMMENDED MINIMUM HOOKUP WIRE SIZE (COPPER)
2		12 AWG
4	UNDER 30	12 AWG
4	30-50	10 AWG
6	UNDER 30	10 AWG
6	30-50	8 AWG

SYNCHRONIZE BRAKES PROPERLY

The trailer and tow vehicle will seldom have the right amperage flow to the brake magnets to give you comfortable, safe braking unless you make proper brake system adjustments. Changing trailer load and driving conditions as well as uneven alternator and battery output can mean unstable current flow to your brake magnets. It is therefore imperative to maintain and adjust the brakes as set forth in this manual, use a properly modulated brake controller, and perform the synchronization procedure noted.

In addition to the synchronization adjustment electric brake controllers provide a modulation function that varies the current to the electric brakes with the pressure on the brake pedal. It is important that the brake controller provide approximately 2 volts to the braking system when the brake pedal is first depressed and gradually increase the voltage to 12 volts as brake pedal pressure is increased. If the controller "jumps" immediately to a high voltage output, even during a gradual stop, then the electric brakes will always be fully energized and will result in harsh brakes and potential brake lockup.

Proper synchronization of tow vehicle to trailer braking can only be accomplished by road testing. Brake "lockup, grabbiness, or harshness" is quite often lack of synchronization between the tow vehicle and the trailer being towed, too high of a threshold voltage (over 2 volts), or underadjusted brakes.

There are two synchronization adjustments available:

1. **System Resistor** - regulates the maximum braking power of the trailer brakes.
2. **Brake Controller** - controls the tow vehicle brake line pressure at which the controller will begin to pass current to the trailer brakes.

Before any synchronization adjustments are made, the trailer brakes should be burnished-in by making 10-12 full stops from approximately 20 mph. This allows the brake shoes and magnets to slightly "wear-in" to the drum surfaces.

All electrical troubleshooting procedures should start at the controller. Most complaints regarding brake harshness or malfunction are traceable to improperly adjusted or functioning controllers. See your controller manufacturer's data for proper adjustment and testing procedures. If the voltage and amperage is not satisfactory, proceed on to the connector and then to the individual magnets to isolate the problem source. 12 volts output at the controller should equate to 10.5 volts minimum at each magnet. Nominal system amperage at 12 volts with cold magnets, system resistor at zero and controller at maximum gain should be as detailed in the following chart:

BRAKE SIZE	AMPS/ MAGNET	TWO BRAKES	FOUR BRAKES	SIX BRAKES
7 x 1¼	2.5	5.0	10.0	15.0
10 x 1½	2.5 (3.0)	5.0 (6.0)	10.0 (12.0)	15.0 (18.0)
10 x 2¼	3.0	6.0	12.0	18.0
12 x 2	3.0	6.0	12.0	18.0

NOTE

These amperage levels will drop as the magnets heat up.

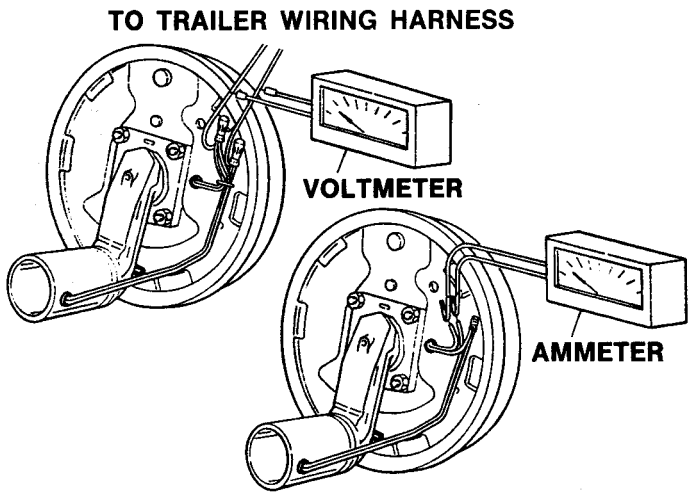
(xx) 10 x 1½ Brakes with Oval Magnets

HOW TO MEASURE VOLTAGE

System voltage is measured at the magnets by connecting the voltmeter to the two magnet lead wires at any brake. This may be accomplished by using a pin probe inserted through the insulation of the wires dropping down from the chassis or by cutting the wires. The engine of the towing vehicle should be running when checking the voltage so that a low battery will not affect the readings.

Voltage in the system should begin at 0 volts and, as the controller bar is slowly actuated, should gradually increase to about 12 volts. This is referred to as modulation. No modulation means that when the controller begins to apply voltage to the brakes it applies an immediate high voltage which causes the brakes to apply instantaneous maximum power.

The threshold voltage of a controller is the voltage applied to the brakes when the controller first turns on. The lower the threshold voltage the smoother the brakes will operate. Too high of a threshold voltage (in excess of 2 volts as quite often found in heavy duty controllers) can cause grabby, harsh brakes.



HOW TO MEASURE AMPERAGE

System amperage is the amperage being drawn by all brakes on the trailer. The engine of the towing vehicle should be running when checking amperage. One place to measure system amperage is at the BLUE wire of the controller which is the output to the brakes. The BLUE wire must be disconnected and the ammeter put into the line. System amperage draw should be as noted in the table following. Make sure your ammeter has sufficient capacity and note polarity to prevent damaging your ammeter. If a resistor is used in the brake system, it must be set at zero or by-passed completely to obtain the maximum amperage reading.

Individual amperage draw can be measured by inserting the ammeter in the line at the magnet you want to check. Disconnect one of the magnet lead wire connectors and attach the ammeter between the two wires. Make sure that the wires are properly reconnected and sealed after testing is completed.

By far, the most common electrical problem is low or no voltage and amperage at the brakes. Common causes of this condition are:

1. Poor electrical connections
2. Open circuits
3. Insufficient wire size
4. Broken wires
5. Blown fuses (Fusing of brakes is not recommended.)
6. Improperly functioning controllers or resistors

Another common electrical problem is shorted or partially shorted circuits (indicated by abnormally high system amperage). These are ocassionally the most difficult to find. Possible causes are:

1. Shorted magnet coils
2. Defective controllers
3. Bare wires contacting a grounded object

Finding the system short is a matter isolation. If the high amperage reading drops to zero by unplugging the trailer, then the short is in the trailer. If the amperage reading remains high with all the brake magents disconnected, the short is in the trailer wiring.

BRAKE CLEANING, INSPECTION AND LUBRICATION

The trailer brakes must be inspected and serviced at yearly intervals or more often as use and performance requires. Magnets and shoes must be changed when they become worn or scored thereby preventing adequate vehicle braking.

Cleaning and inspection

Clean the backing plate, magnet arm, magnet, and brake shoes. Make certain that all the parts removed are replaced in the same brake and drum assembly. Inspect the magnet armature for any loose or worn parts. Check shoe return springs, hold down springs, and adjuster springs for stretch or deformation and replace if required.

⚠CAUTION

ASBESTOS DUST HAZARD. Since most brake shoe friction materials normally contain asbestos, certain precautions need to be taken when servicing brakes.

1. **Avoid creating or breathing dust.**
2. **Avoid machining, filing, or grinding the brake linings.**
3. **Do not use compressed air or dry brushing for cleaning. (Dust can be removed with a damp brush.)**

Brake Lubrication

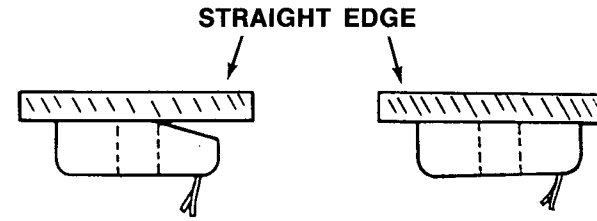
Before reassembling apply a light film of Lubriplate or similar grease on the brake anchor pin, the actuating arm bushing and pin, and the areas on the backing plate that are in contact with the brake shoes and magnet lever arm. Apply a light film of oil on the actuating block mounted on the actuating arm.

⚠CAUTION

Do not get grease or oil on the brake linings or drums.

MAGNETS

Electric brakes are equipped with high quality electromagnets that are designed to provide the proper input force and friction characteristics. The magnets should be inspected and replaced if worn unevenly or abnormally. As indicated a straight edge should be used to check wear.



ABNORMAL WEAR (REPLACE MAGNET) **NORMAL WEAR**

Even if wear is normal as indicated by the straight edge the magnets should be replaced if any part of the magnet coil has become visible through the friction material facing of the magnet. It is also recommended that the drum armature surface be re-faced when replacing magnets. Magnets should also be replaced in pairs (both sides of an axle).

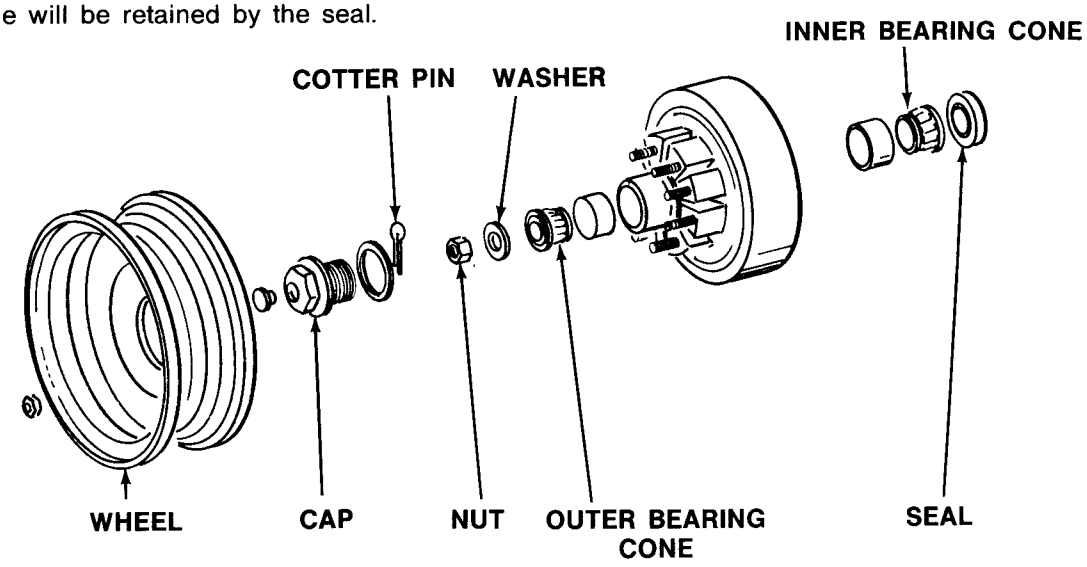
SHOES AND LININGS

A simple visual inspection of your brake linings will tell if they are usable. Replacement is necessary if the lining is worn thin (1/16" or less), contaminated with grease or oil, or abnormally scored or gouged. It is important to replace both shoes on each brake and both brakes of the same axle. This is necessary to retain the "balance" of your brakes.

HUB REMOVAL

Whenever the hub equipment on your axle must be removed for inspection or maintenance the following procedure should be utilized.

1. Elevate and support the trailer, refer to SECTION 2, SAFETY.
2. Remove the wheel.
3. Remove the grease cap by carefully prying progressively around the flange of the cap. If the hub is an oil lube type then the cap can be removed by unscrewing it counter-clockwise while holding the hub stationary.
4. Remove the cotter pin from the spindle nut.
5. Unscrew the spindle nut (counter-clockwise) and remove the spindle washer.
6. Remove the hub from the spindle, being careful not to allow the outer bearing cone to fall out. The inner bearing cone will be retained by the seal.

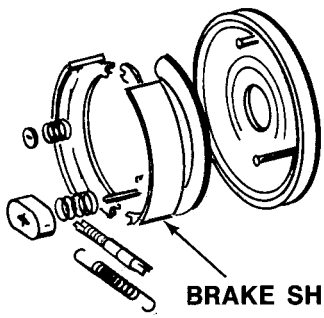


BRAKE DRUM INSPECTION

There are two areas of the brake drum that are subject to wear and require periodic inspection. These two areas are the drum surface where the brake shoes make contact during stopping and the armature surface where the magnet contacts.

The drum surface should be inspected for excessive wear or heavy scoring. If worn more than .020" oversized, or the drum has worn out of round by more than .015", then the drum surface should be turned. If scoring or other wear is greater than .090", the drum must be replaced. When turning the drum surface the maximum rebore diameter is as follows:

7" Brake Drum — 7.090"
10" Brake Drum — 10.090"
12" Brake Drum — 12.090"



The machined inner surface of the brake drum that contacts the brake magnet is called the armature surface. If the armature surface is scored or worn unevenly, it should be refaced to a 120 microinch finish by removing not more than .030" of material. To insure proper contact between the armature face and the magnet face, the magnets should be replaced whenever the armature surface is refaced and the armature surface should be refaced whenever the magnets are replaced.

NOTE

It is important to protct the wheel bearing bores from metallic chips and contamination which result from drum turning or armature refacing operations. Make certain that the wheel bearing cavities are clean and free of contamination before re-installing bearings and seals. The presence of these contaminants will cause premature wheel bearing failure.

BEARING INSPECTION

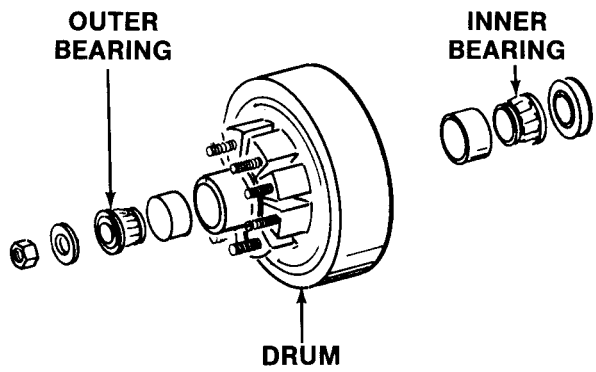
Wash all grease and oil from the bearing cone using a suitable solvent. Dry the bearing with a clean, lint-free cloth and inspect each roller completely. If any pitting, spalling, or corrosion is present then the bearing should be replaced. The bearing cup inside the hub should likewise be inspected.

IMPORTANT

Bearings must always be replaced in sets of a cone and a cup.

When replacing the bearing cup proceed as follows.

1. Place the hub on a flat work surface with the cup to be replaced on the bottom side.
2. Using a brass drift punch, carefully tap around the small diameter end of the cup to drive out.
3. After cleaning the hub bore area, replace the cup by tapping in with the brass drift punch. BE SURE THE CUP IS SEATED ALL THE WAY UP AGAINST THE RETAINING SHOULDER IN THE HUB.

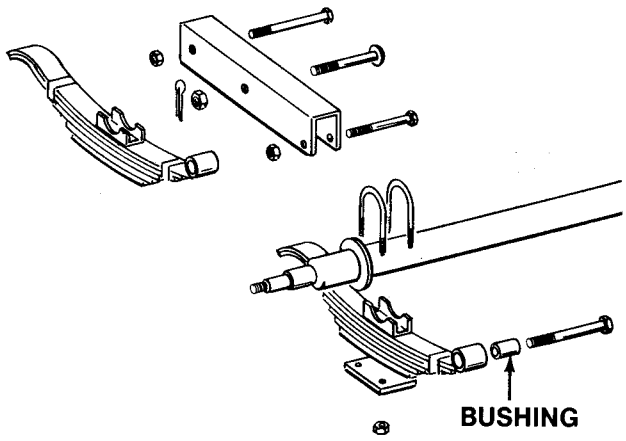


⚠CAUTION

Be sure to wear safety glasses when removing or installing force fitted parts. Failure to comply may result in serious eye injury.

If the equalizer or equalizer bushings must be replaced, follow the instructions in Section 2, SAFETY, lifting and supporting the trailer unit and then proceed as follows:

1. With both axles blocked up, remove the spring eye bolt, shackle bolt, and equalizer bolt from the equalizer to be repaired or replaced.
2. Take the equalizer to a suitable work surface and remove the worn bushings using a suitable drift punch.
3. Drive the new bushings into place using a piloted drift punch or a close fitting bolt through the bushing.



⚠CAUTION

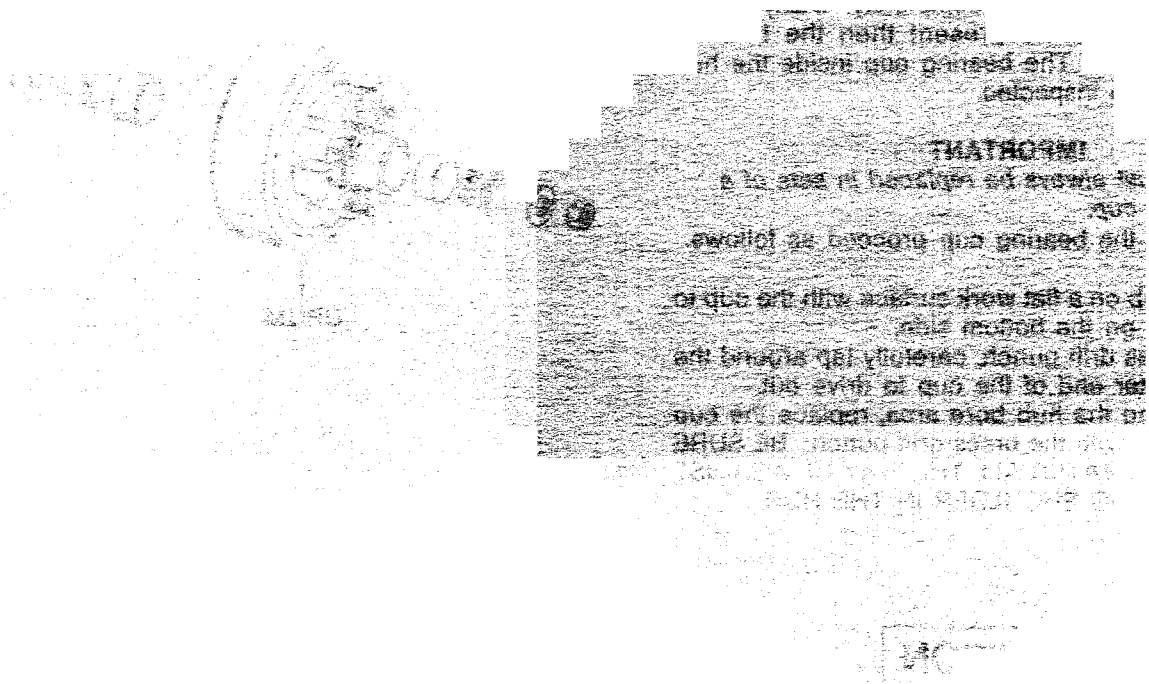
Be sure to wear safety glasses when removing or installing force fitted parts. Failure to comply may result in serious eye injury.

4. Reassemble in reverse order.

All of the pivot points of your suspension system have been fitted with anti-friction bearing materials which do not require routine lubrications. However, when otherwise servicing the unit, these pivot points may be lubricated if you so desire.

⚠WARNING

Do not attempt to repair or modify a wheel. Even minor modifications can have a great effect. Do not install a tube to correct a leak through the rim. If the rim is cracked, the air pressure in the tube may cause the pieces of the rim to explode with great force and can cause serious injury or death.



TORQUE REQUIREMENTS

It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is a measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length times force. A force of 90 pounds applied at the end of wrench one foot long will yield 90 ft. lb. of torque. Torque wrenches are the best method to assure that the proper amount of torque is being applied to a fastener.

NOTE

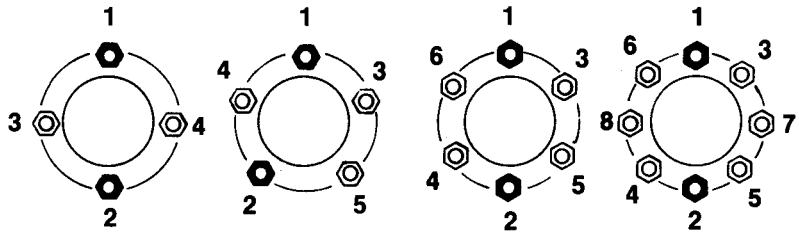
Wheel nuts or bolts must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

Be sure to use only the fasteners matched to the cone angle of your wheel. (usually 60 or 90 degrees)

The proper procedure for attaching your wheels is as follows:

1. Start all bolts or nuts by hand to prevent cross threading.
2. Tighten bolts or nuts in the sequence detailed below.
3. The tightening of the fasteners should be done in stages. Following the recommended seuqence, first tighten all the fasteners to 20-25 lb-ft, then to 50-60 ft. lb., and finally to 85-95 ft. lb.
4. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and retorque after the first 25 miles and again at 75 miles. Check periodically thereafter.

TORQUE SEQUENCE

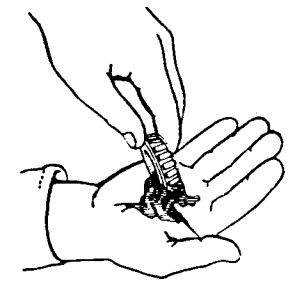


TIRES

Before mounting tires onto wheels make certain that the rim size and contour is approved for the tire as shown in the Tire and Rim Association Yearbook or the tire manufacturers catalog. Also make sure the tire will carry the rated load.

BEARING LUBRICATION

Along with bearing adjustment, proper lubrication is essential to the proper functioning and reliability of your trailer axle. Bearings should be lubricated every 12 months or 12,000 miles. The method to repack bearing cones is as follows:



1. Place a quantity of grease into the palm of your hand.
2. Press a section of the widest end of the bearing into the outer edge of the grease pile closest to the thumb forcing grease into the interior of the bearing.
3. Repeat this while rotating the bearing from roller to roller.
4. Continue this process until you have the entire bearing completely filled with grease.
5. Before re-installing, apply a light coat of grease on the bearing cup.

The procedure is as follows:

NOTE

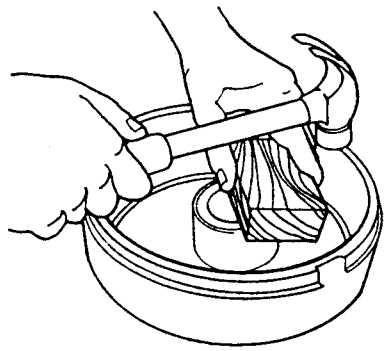
If your axles are equipped with oil lubricated hubs then your lubrication procedure is to periodically fill the hub with a high quality hypoid gear oil to the level indicated on the clear plastic oil cap. The oil can be filled through either the oil fill hole in the hub or through the rubber plug hole in the cap itself.

RECOMMENDED WHEEL BEARING LUBRICATION SPECIFICATIONS	APPROVED SOURCES
GREASE: THICKENER TYPE . . . . . Lithium Complex DROPPING POINT . . . . . 230° C (446° F) Minimum CONSISTENCY . . . . . NLGI No. 2 ADDITIVES . . . . . EP, Corrosion and Oxidation Inhibitors BASE OIL . . . . . Solvent Refined Petroleum Oil BASE OIL VISCOSITY . . . @ 40° C (104° F) 150 cSt (695) SUS) Min. VISCOSITY INDEX . . . . . 80 Minimum POUR POINT . . . . . —10° C (14° F) Minimum	MOBIL OIL Mobilgrease HP EXXON/STANDARD Ronex MP KENDALL REFINING CO. Kendall L-427 ASHLAND OIL CO. Valvoline Val-plex EP Grease PENNZOIL PROD. CO. Premium Wheel Bearing Grease 707L
OIL: SAE 90 Hypoid Gear (Hypoid Rear Axle Oil) (Use only with hubs equipped with oil option)	UNION OIL CO. Union MP Gearlube - LS EXXON COMPANY, USA Gear Oil GX 80W-90 MOBIL OIL CORP. Mobilube SHC 75W-90 PENNZOIL PROD. CO. Multi-Purpose Gear Lubricant 4092 Multi-Purpose Gear Lubricant 4096

SEAL INSPECTION AND REPLACEMENT

Whenever the hub is removed, inspect the seal to assure that it is not nicked or torn and is still capable of properly sealing the bearing cavity. If there is any question of condition, replace the seal.

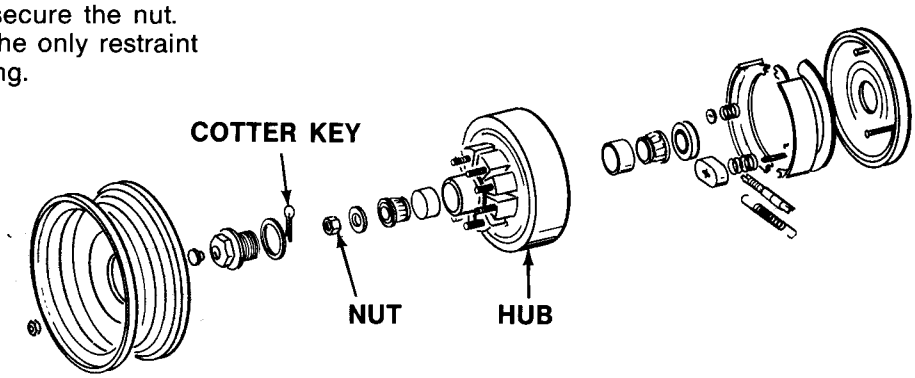
1. Pry the seal out of the hub with a screwdriver. Never drive the seal out with the inner bearing as you may damage the bearing.
2. Apply a sealant to the outside of the seal.
3. Tap the new seal into place using a clean wood block.



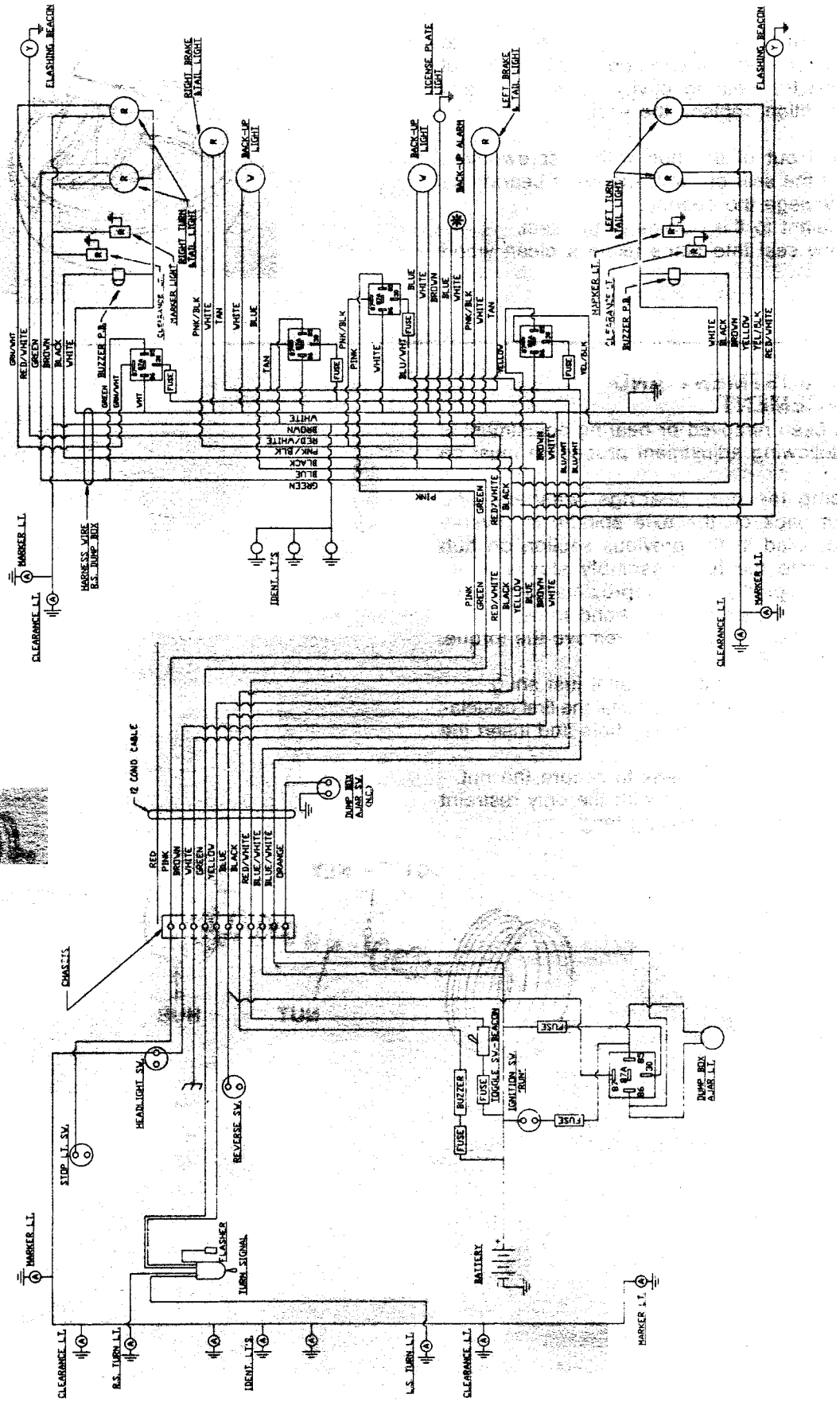
BEARING ADJUSTMENT AND HUB REPLACEMENT

If the hub has been removed or bearing adjustment is required, the following adjustment procedure must be followed:

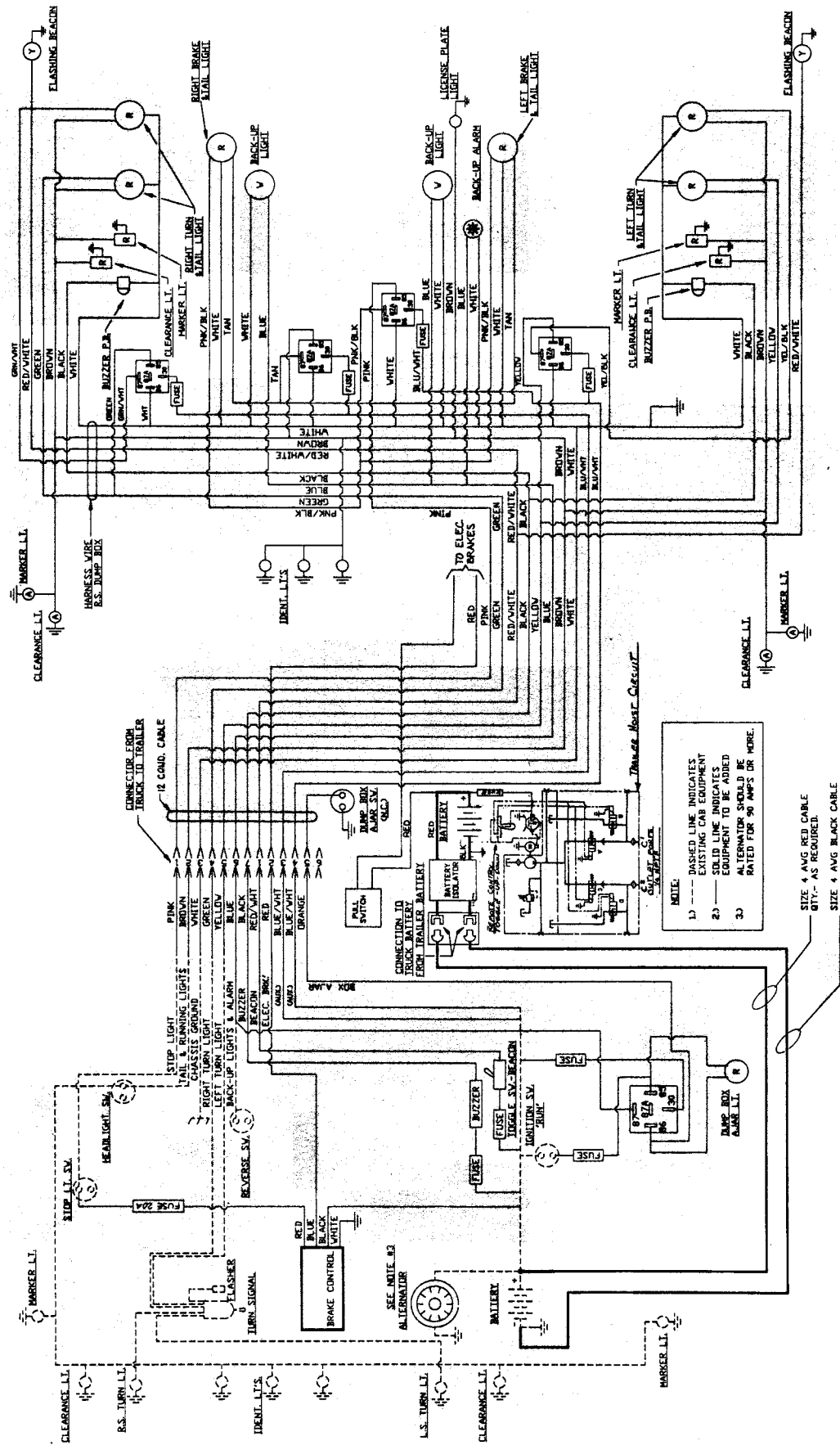
1. After placing the hub, bearings, washers, and spindle nut back on the axle spindle in reverse order as detailed in the previous section on hub removal, rotate the hub assembly slowly while tightening the spindle nut to approximately 50 ft. lb. (12" wrench or pliers with full hand force)
2. Then loosen the spindle nut to remove the torque. DO NOT ROTATE THE HUB.
3. Finger tighten the spindle nut until just snug.
4. Back the spindle nut out slightly until the first castelation lines up with the cotter key hole and insert the cotter pin.
5. Bend over the cotter pin legs to secure the nut.
6. Nut should be free to move with the only restraint being the cotter pin or locking tang.

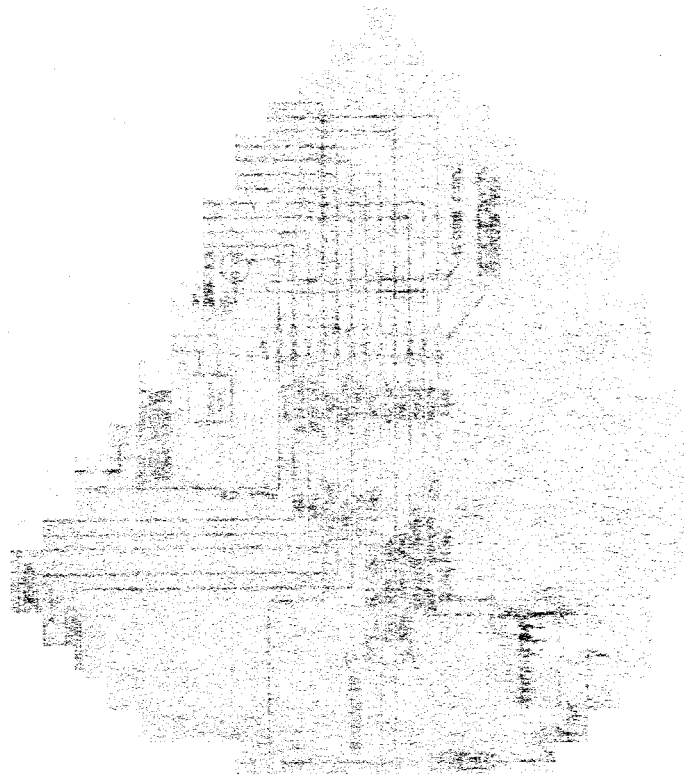


RC-23 ELECTRICAL SCHEMATIC
RC-17, TRUCK MOUNTED ELECTRICAL SCHEMATIC



RC-17 ELECTRICAL SCHEMATIC

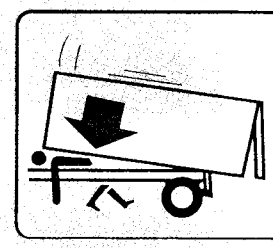




DECALS, RC-17 & RC-23

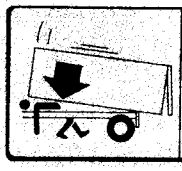
DANGER
DO NOT ENTER UNDER CHASSIS UNLESS ENGINE OR POWER UNITS ARE STOPPED AND IGNITION KEYS REMOVED
41894

1



DANGER
STAND CLEAR WHEN BODY IS IN MOTION AND DURING UNLOADING CYCLE. DO NOT STAND UNDER OR CROSS UNDER AN UNPROPPED BODY.

2



DANGER
BODY PROP IS TO BE USED ONLY WITH EMPTY BODY. BODY MUST BE SECURELY BLOCKED WHEN REPAIR WORK IS DONE. VEHICLE IS NOT TO BE MOVED WHILE BODY PROP IS UP.
103365

3

PTO ON OFF

7

BEACON LIGHT ON OFF

5

IMPORTANT
DISENGAGE POWER TAKE OFF IN TRANSIT

4

CAUTION
DO NOT OPERATE VEHICLE AT SPEED IN EXCESS OF 10 MPH OR FOR DISTANCES OVER 2 TENTHS MILE OR IN REVERSE GEAR WHEN RIDER OR RIDERS ARE ON RIDING STEPS.

12

DRIVER SIGNAL
100894

6

INSPECTED AT LEACH CO.
BY _____
DATE _____

10

CAUTION
RIDING STEP SHALL NOT BE USED WHEN SPEEDS ARE EXPECTED TO EXCEED 10 MPH OR WHEN DISTANCE TRAVELED WITHOUT STOPPING WILL EXCEED 2 TENTHS OF ONE MILE.
RIDING STEP SHALL NOT BE USED WHEN VEHICLE IS MOVING BACKWARD.
DO NOT MOUNT OR DISMOUNT RIDING STEP WHEN VEHICLE IS IN MOTION.
36938

13

WARNING
THIS VEHICLE IS NOT TO BE USED FOR TOWING
102264

8

CAUTION
BODY ELEVATED

9

COMMITTED TO RECYCLING
LEACH
303737

14

15

CAUTION
LOADING POSITION
DO NOT RIDE

16

HYDRAULIC FLUID ONLY
40642

WARNING
THIS UNIT IS NOT TO BE TOWED BY A REAR LOADING OR REAR RIDING TYPE REFUSE COLLECTION VEHICLE

17

DEXRON II FLUID ONLY

18

UP
DOWN

19

20

DANGER
DO NOT TILT BODY UNLESS TRAILER IS CONNECTED TO TOWING VEHICLE OR BLOCKED TO AVOID TIPPING OVER.

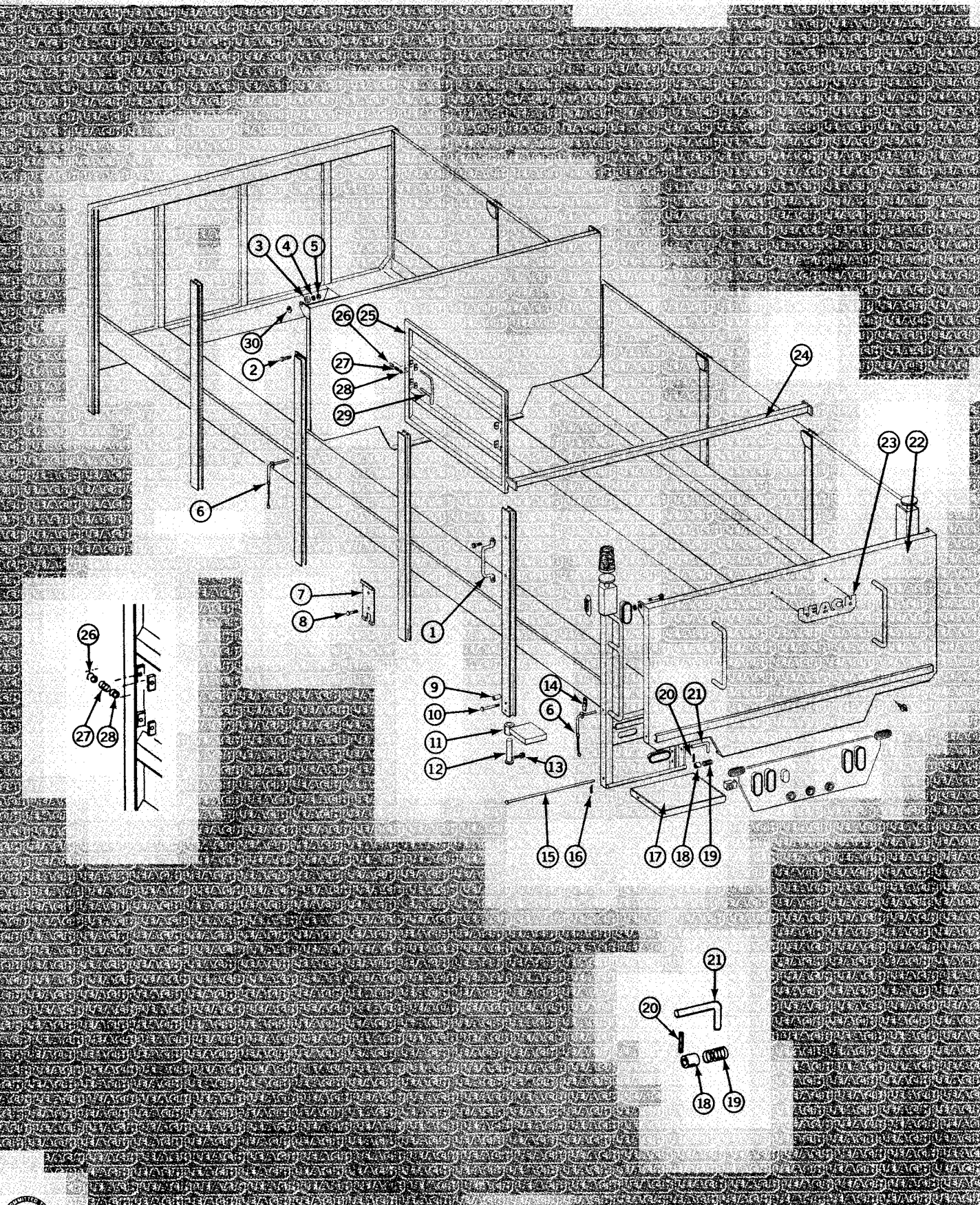
CAUTION
WHENEVER THE BODY IS IN ANY ELEVATED OR RAISED POSITION IT MUST BE SECURELY PROPPED OR BLOCKED SO IT CAN NOT FALL ON ANYONE.

21

DECALS, RC-17 & RC-23

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	41894	DANGER, Chassis	2
2	204692	DANGER, Falling body	2
3	103366	WARNING, Body Prop	2
4	20588	PTO (Truck Mount Only)	1
5	100351	BEACON Light (Truck Mount Only)	1
6	100894	DRIVER Signal	2
7	102960	PTO On/Off (Truck Mount Only)	1
8	103364	WARNING, Towing (Truck Mount Only)	2
9	104369	BODY Elevated (Truck Mount Only)	1
10	102625	FINAL Inspection	1
11	40642	FLUID Reservoir (Truck Mount Only)	1
12	36937	CAUTION, Riders (Truck Mount Only)	1
13	36938	CAUTION, Riding Step	2
14	303737	COMMITTED To Recycling — Black	1
	303738	COMMITTED To Recycling — White	1
15	205879	RECYCLING — Black	1
	205880	RECYCLING — White	1
16	103365	LOADING Position (Optional)	10
17	103363	WARNING, Towing (Trailer Only)	2
18	104336	FLUID Reservoir (Trailer Only)	1
19	104335	TOGGLE, Switch (Trailer Only)	1
20	103378	TRAILER Tipping (Trailer Only)	2
21	103367	Elevated Body Decal (Truck Mount Only)	2

BODY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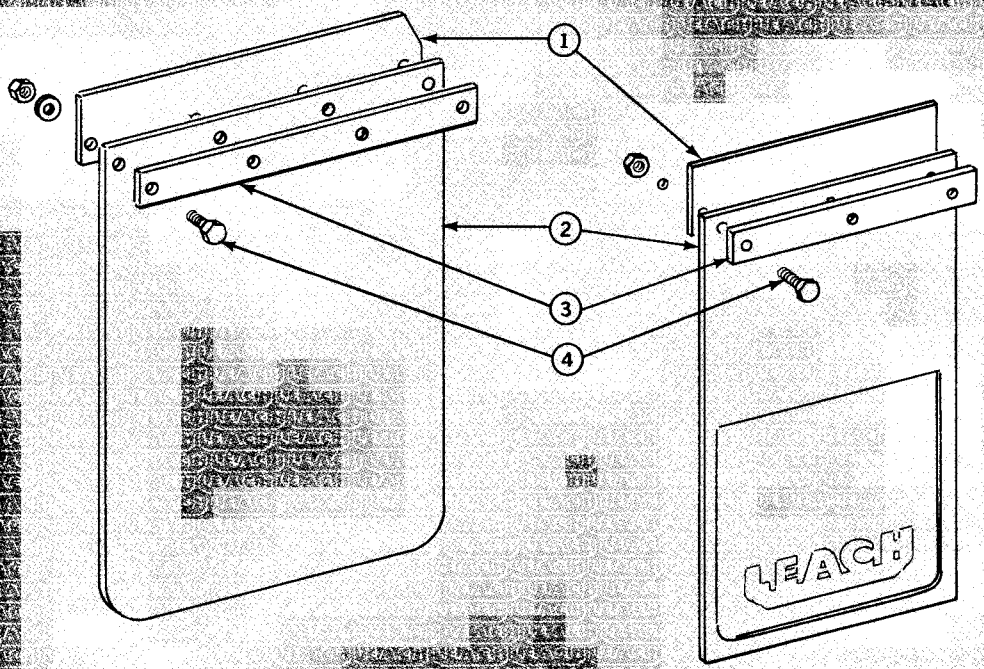
BODY

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	302850	HANDLE, Grab (Optional Use With Item 11)	As Req.
2		SCREW, Cap, 5/8" x 1-1/2" UNC, Includes Fastener	8
3	103340	SPACER	4
4		WASHER, Flat, 5/8"	2
5		NUT, Lock, 5/8" UNC	2
6	302899	ASSEMBLY, Locking Pin	8
	303631	KIT, Update Pin Assembly	As Req.
7	302889	HANGER, Optional	As Req.
8		SCREW, Cap, 3/8" x 3-1/2" UNC	As Req.
		WASHER, Flat, 3/8"	As Req.
		NUT, Elastic Stop, 3/8" UNC	9
	204440	SPACER	6
10		SCREW, Cap, 3/8" x 4-1/2" UNC	20
		NUT, Lock, 3/8" UNC	20
11	302867	STEP, Left Hand, Optional	As Req.
	302868	STEP, Right Hand, Optional	As Req.
12	204429	PIVOT, Optional Use With Item 11	As Req.
13	103387	BOLT, Shoulder, Optional Use With Item 12	As Req.
14	104501	TAB, Locking	8
15	204291	WELDMENT, Bar, Riding Platform	2
16		PIN, Cotter, 3/16" x 1-1/2"	2
17	204290	STEP, Rear	2
18	204276	HOUSING, Spring	2
19	103341	SPRING	2
20	103352	PIN, Spring	2
21	204299	LATCH, Spring, Riding Platform	2
22	500241	WELDMENT, Door, Rear	1
23	NR-645-1	LEACH LOGO, White	1
	NR-645-2	LEACH LOGO, Red	1
24	302861	SPACER, Bulkhead	1
25	402987	DOOR, Side, RC-23	10
	402985	DOOR, Side, RC-17	10
26	10336	COLLAR	20
27	103337	SPRING	20
28	204282	STOP, Spring	20
29	303410	HANDLE	20
30	103338	WASHER, Teflon	8
	204215	KIT, Stiffener, Tailgate	1

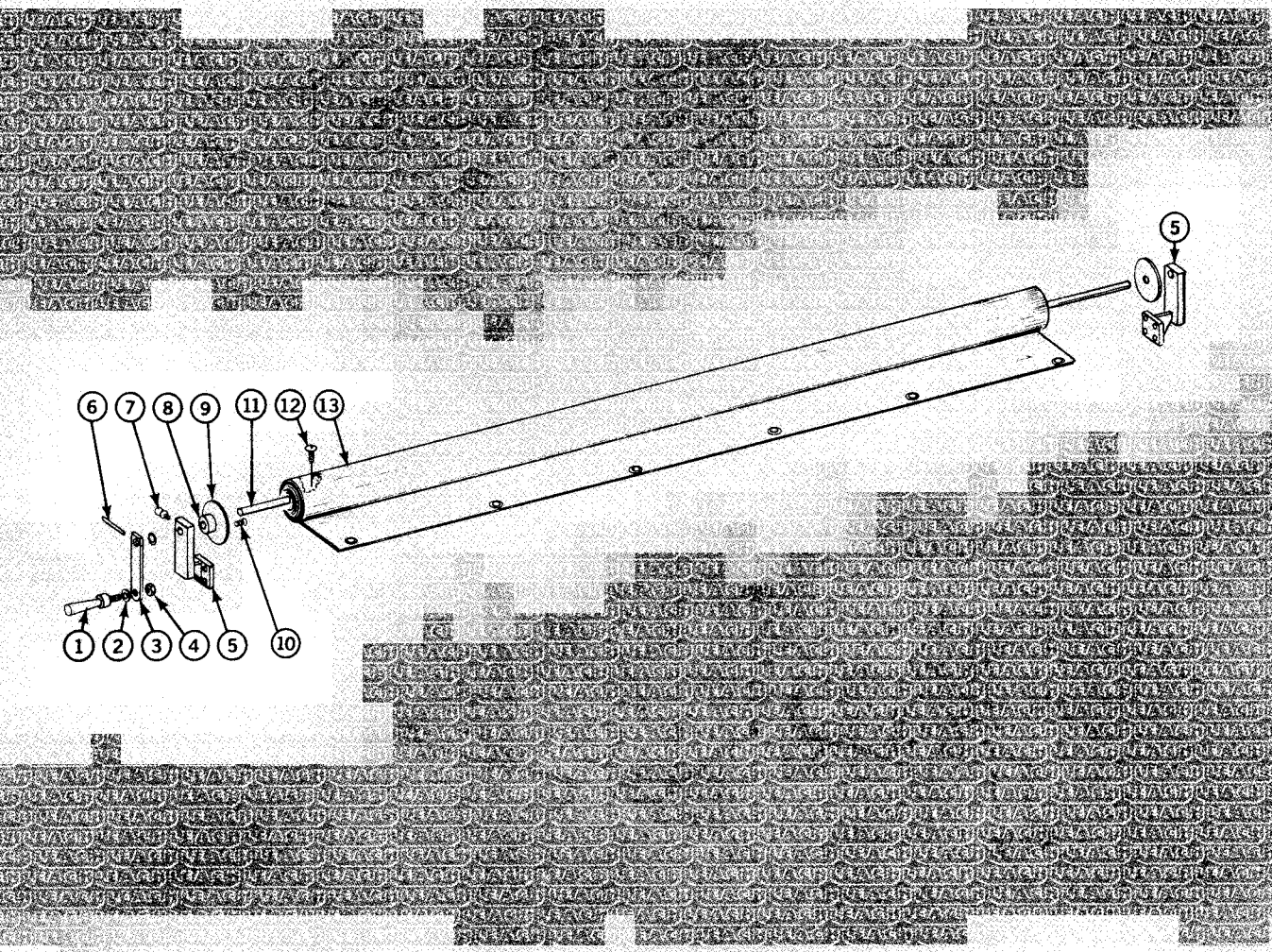
MUD GUARD



RC-23 RC-17

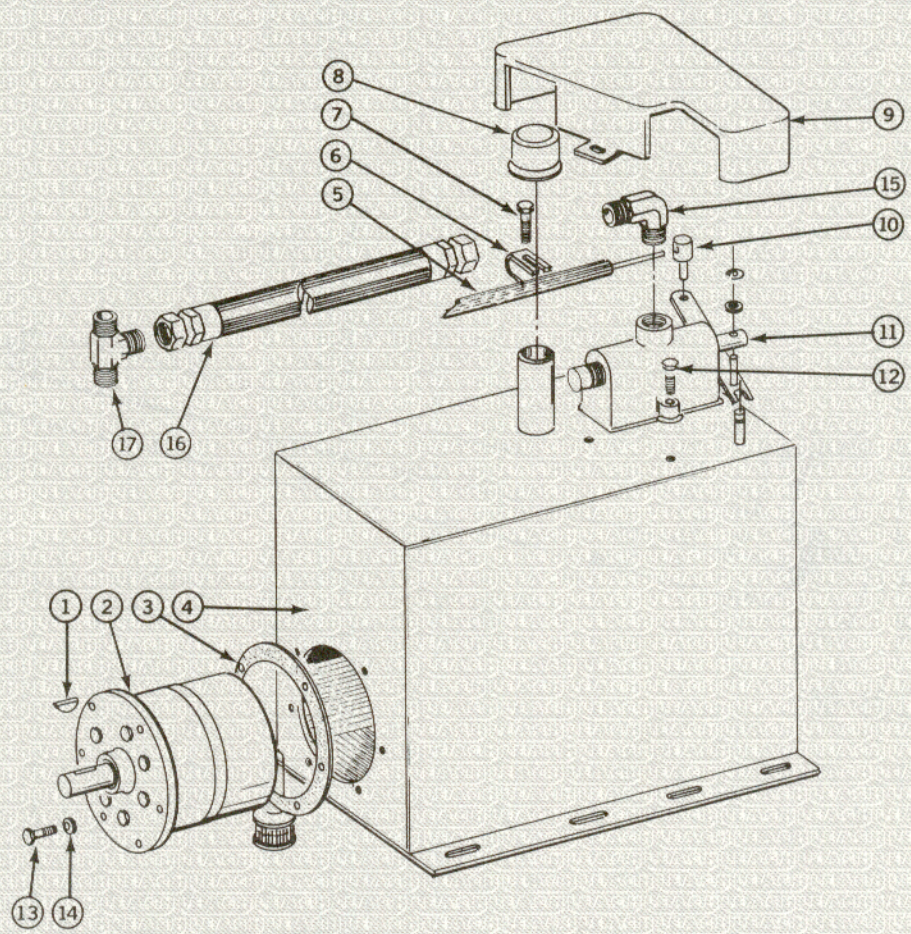
REF. NO.	PART NO.	DESCRIPTION	QTY.
1		BRACKET, RC-23	1
		BRACKET, RC-17	1
2	402988	MUD FLAP, RC-23	2
	302870	MUD FLAP, RC-17	2
3	204304	MOUNTING PLATE, RC-23	2
	204302	MOUNTING PLATE, RC-17	2
4		SCREW, Cap 1/2" x 1-1/4" UNC	8
		WASHER, Lock, 1/2"	8
		NUT, Lock, 1/2" UNC	8
	403076	ASSEMBLY, Mud Flap, RC-23, Includes items 2, 3, 4	1
	403044	ASSEMBLY, Mud Flap, RC-17, Includes items 2, 3, 4	1

TARP



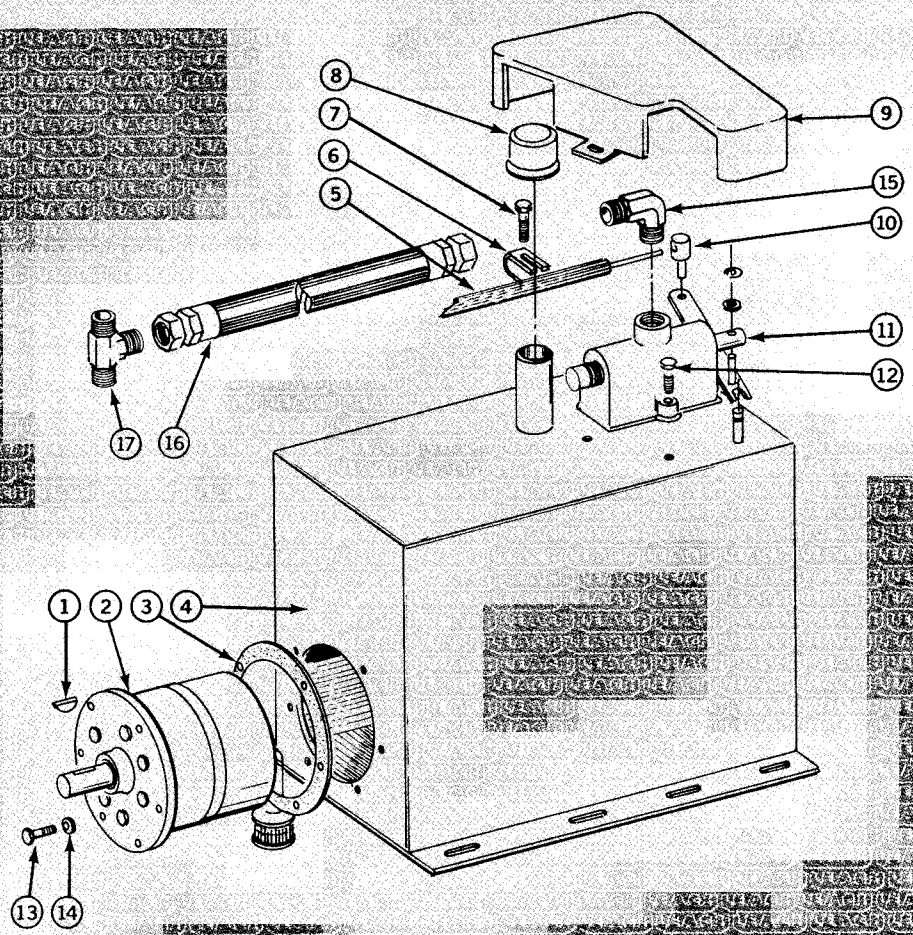
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103358	HANDLE	1
2		WASHER, Flat, 3/8"	1
3	302859	ARM, Crank	1
4		NUT, 5/16" UNC Self Locking	1
5	302895	WELDMENT, Block	2
6		PIN, Roll, 1/8" x 1-1/4"	1
7	16170	FITTING, Grease	2
8	103368	COLLAR, Clamp	2
9	204239	GUIDE PLATE	2
10		SCREW, #10-32 x 1/2"	4
11	302890	SHAFT	1
12		SCREW, Cap, Buttonhead, 1/4" x 1/2"	6
		WASHER, Flat, 1/4"	6
13	403056	TARP, RC-23	1
	403738	TARP, RC-23, Waterproof	1
	403061	TARP, RC-17	1
	403737	TARP, RC-17, Waterproof	1
	403055	TARP ASSEMBLY, RC-17, Includes items 1-13	1
	403063	TARP ASSEMBLY, RC-23, Includes items 1-13	1

PUMP AND RESERVOIR, RC-23



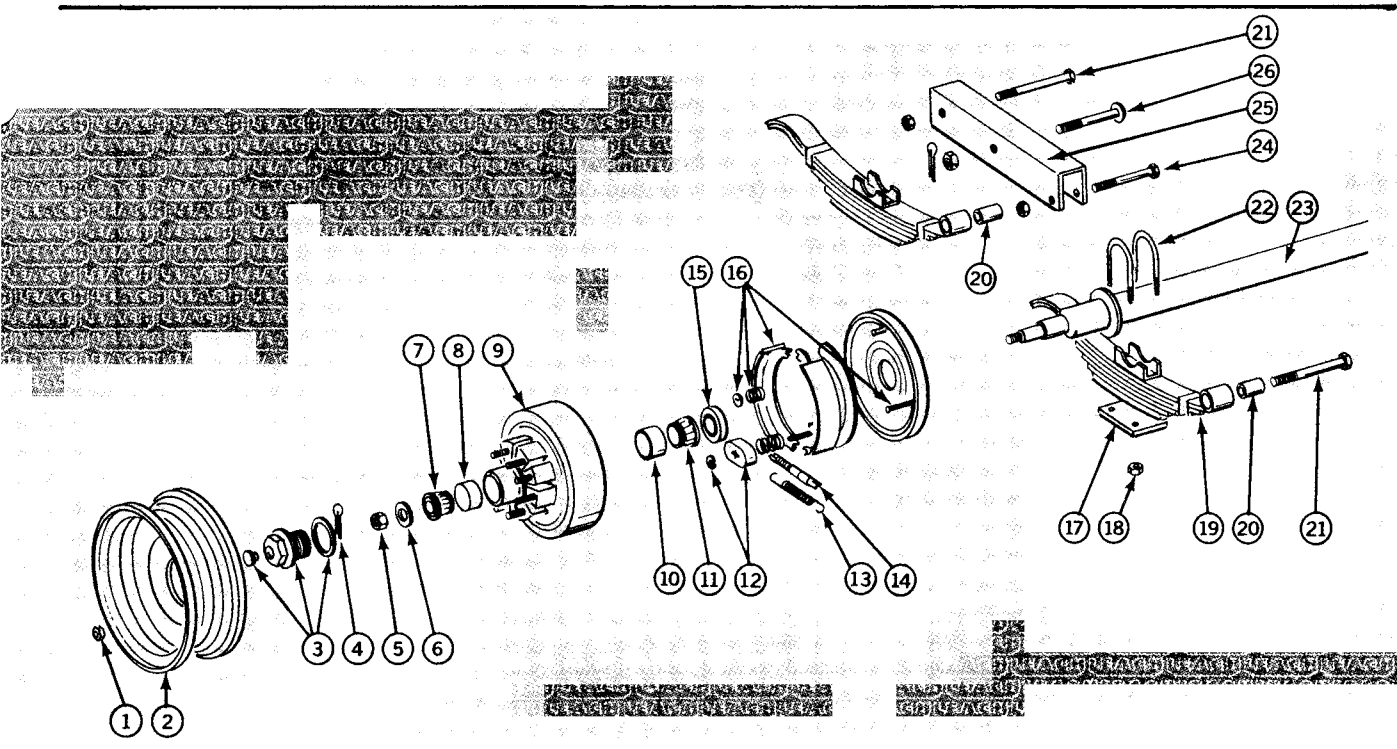
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103995	KEY, Pump	1
2	103996	PUMP	1
3	103997	GASKET, Pump	1
4	103998	RESERVOIR	1
5	103999	CABLE, Control	1
6	104000	CLIP, Cable	1
7	104001	SCREW, Cap	1
8	104002	CAP, Reservoir	1
9	104003	COVER, Control	1
10		CLAMP, Cable	1
11	104004	VALVE, Directional	1
12	104005	SCREW, Cap	2
	104006	WASHER, Lock	2
13	104007	SCREW, Cap	6
	104008	WASHER, Aluminum	6
14	103435	GASKET, Valve	1
	104009	RESERVOIR, Assembly	1
15	101313	ELBOW	1
16	103979	HOSE	1
17	5618-0008	TEE	1

PUMP AND RESERVOIR, RC-23



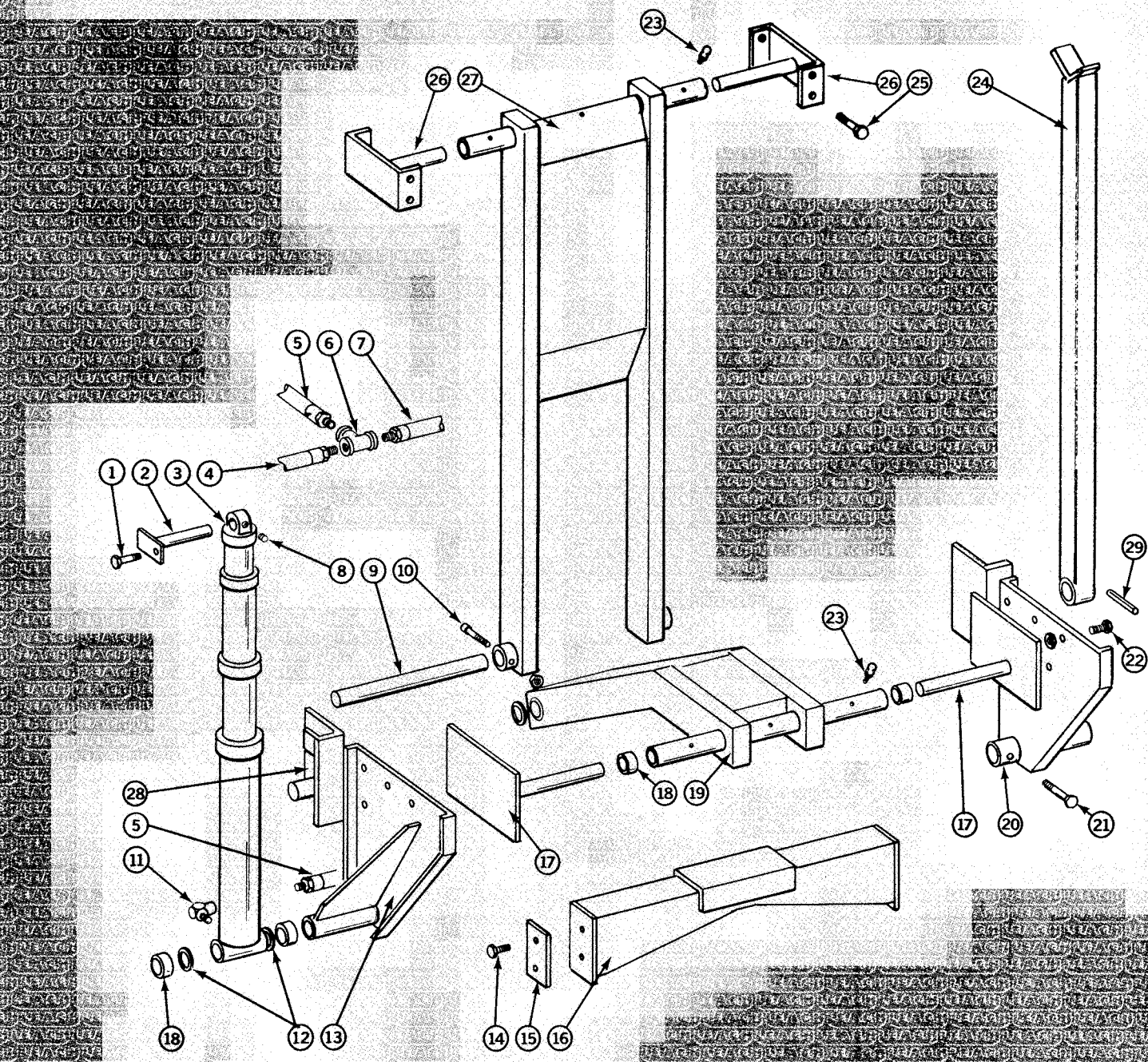
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103995	KEY, Pump	1
2	103996	PUMP	1
3	103997	GASKET, Pump	1
4	103998	RESERVOIR	1
5	103999	CABLE, Control	1
6	104000	CLIP, Cable	1
7	104001	SCREW, Cap	1
8	104002	CAP, Reservoir	1
9	104003	COVER, Control	1
10		CLAMP, Cable	1
11	104004	VALVE, Directional	1
12	104005	SCREW, Cap	2
	104006	WASHER, Lock	2
13	104007	SCREW, Cap	6
	104008	WASHER, Aluminum	6
14	103435	GASKET, Valve	1
	104009	RESERVOIR, Assembly	1
15	101313	ELBOW	1
16	103979	HOSE	1
17	5618-0008	TEE	1

AXLE, RC-17



REF. NO.	PART NO.	DESCRIPTION	QTY.
1	104080	NUT, Wheel Lug	32
2	104081	WHEEL	4
3	104082	KIT, Oil Cap	4
4	104083	PIN, Cotter	4
5	104084	NUT, Spindle	4
6	104085	WASHER, Spindle	4
7	104086	BEARING, Outer	4
8	104087	CUP, Bearing, Outer	4
9	104088	HUB, 8-bolt	4
10	104089	CUP, Bearing, Inner	4
11	104090	BEARING, Inner	4
12	104093	KIT, Magnet	4
13	104094	SPRING, Screw, Adjusting	4
14	104095	SCREW, Adjusting	4
15	104091	SEAL, Oil, Inner	4
16	104104	KIT, Shoes and Lining, Brake	4
	104092	SHOES, Brake (Only)	4
	104107	ASSEMBLY, Brake, Right Hand (Includes Items 13, 14, 15, 16)	4
	104108	ASSEMBLY, Brake, Left Hand (Includes Items 13, 14, 15, 16)	4
17	104096	PLATE, Spring Tie	4
18	104097	NUT, U-bolt	8
19	104098	SLIPPER, Spring	4
20	104099	BUSHING, Spring Eye	4
21	104100	SCREW, Cap, Spring Eye w/Nut	4
22	104102	U-BOLT	8
23	104101	BEAM, Axle	2
24	104103	SCREW, Cap, Spring Slipper w/Nut	4
25	104105	EQUALIZER	2
26	104106	SCREW, Cap, Equalizer w/Nut	2

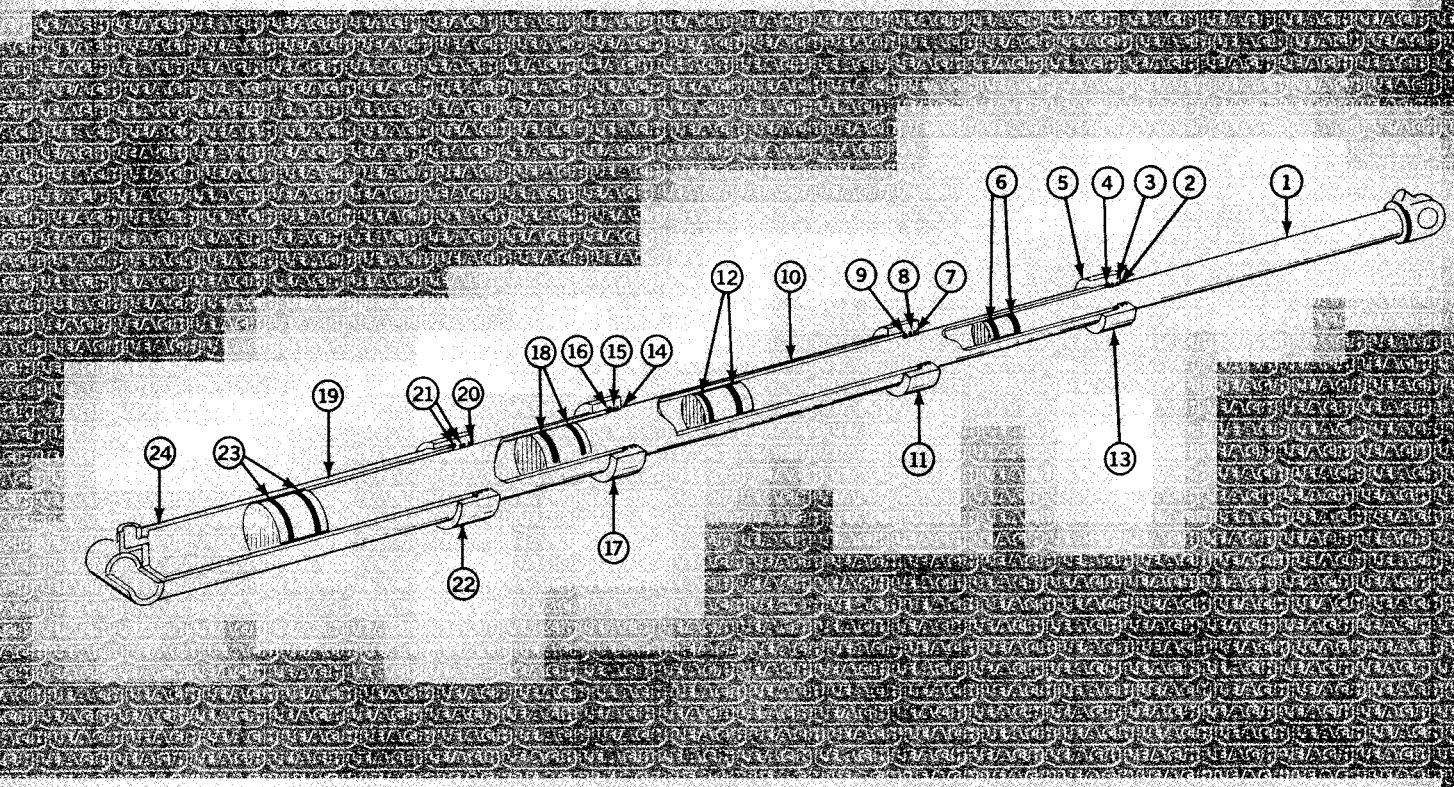
HOIST, BODY, RC-23



HOIST, BODY, RC-23

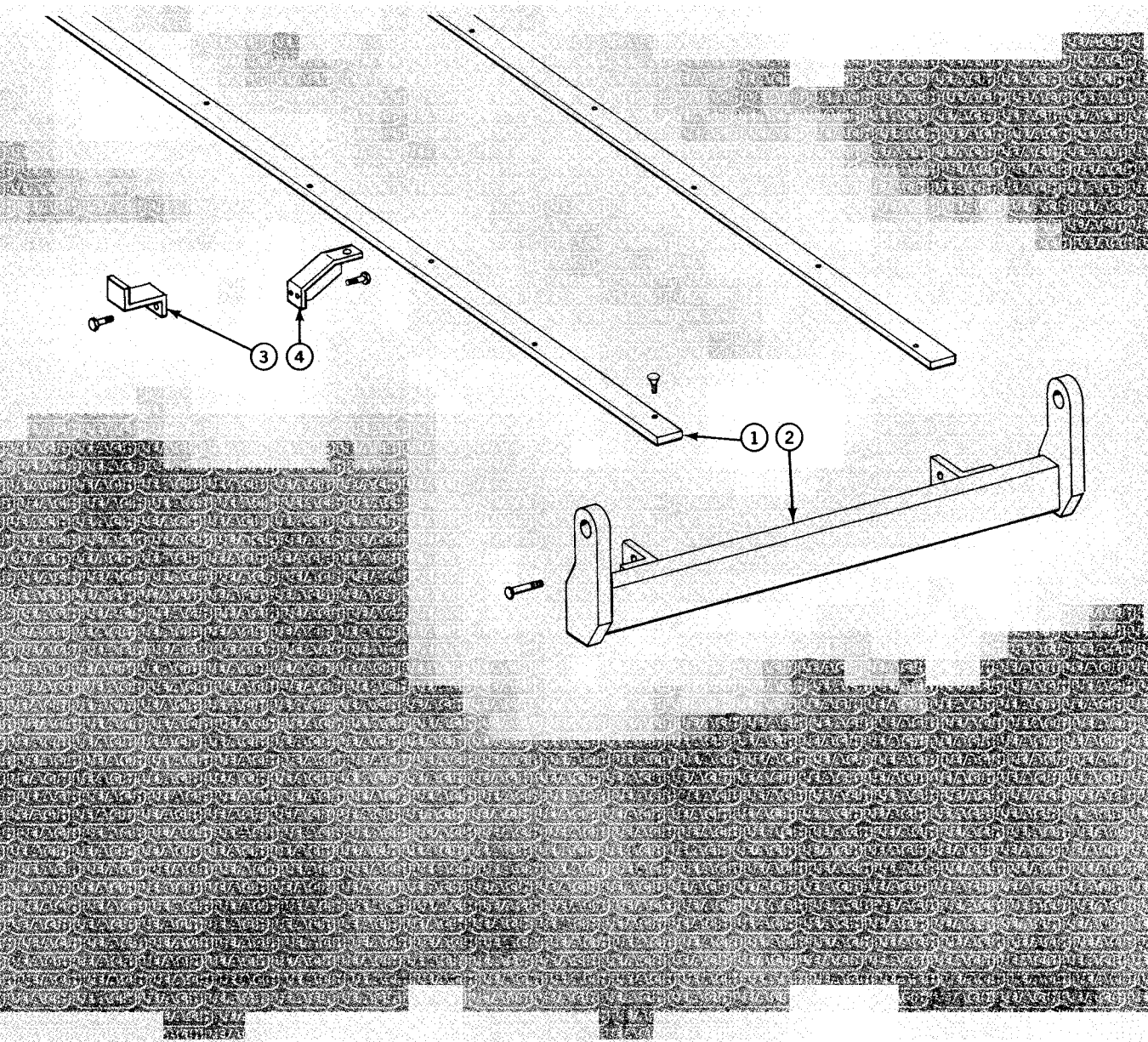
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103970	SCREW, Cap	2
	103971	WASHER, Lock	2
2	103969	PIN, Rod	2
3	103968	CYLINDER, Hoist, Telescopic	2
4	103974	HOSE	2
5	103979	HOSE, Pressure	1
6	103980	TEE	1
7	103993	HOSE	1
8	103978	VENT, Air	2
9	103981	PIN, Pivot	1
10	103982	SCREW, Cap	1
11	5614-0808	ELBOW	2
12	103973	SPACER	4
13	103975	WELDMENT, Cylinder Support, L.H.	1
		SCREW, Cap, 5/8" x 1-1/2" UNC	4
14		CAPSCREW, Hex. HD. .62 x 1.50 Lg.	2
15	104695	SPACER, Cylinder Pivot Brace	3
16	104694	CROSS, Tie	1
17	103976	PLATE, Pivot	2
18	103983	COLLAR, Lock	6
19	103984	WELDMENT, Lower, Hoist	1
20	103986	WELDMENT, Cylinder Support, R.H.	1
21	103987	SCREW, Cap	2
	103988	WASHER, Lock	2
22		SCREW, Cap, 5/8" x 1-3/4" UNC	10
		NUT, Lock, 5/8" UNC	14
23	103985	FITTING, Grease	6
24	103994	PROP, Hoist	1
25	103990	SCREW, Cap	2
	103991	WASHER, Lock	2
26	103992	PIVOT, Upper	2
27	103989	WELDMENT, Hoist	1
	204949	ASSEMBLY, Hoist, Complete	1
28	302878	WELDMENT, Prop Arm Pivot	1
		SCREW, Cap, Socket Head Flat, 3/4" x 2", UNC	4
		NUT, Stop, 3/4" UNC	4
29		PIN, Roll, 1/4" x 3"	1

CYLINDER, HOIST, RC-23, 103968



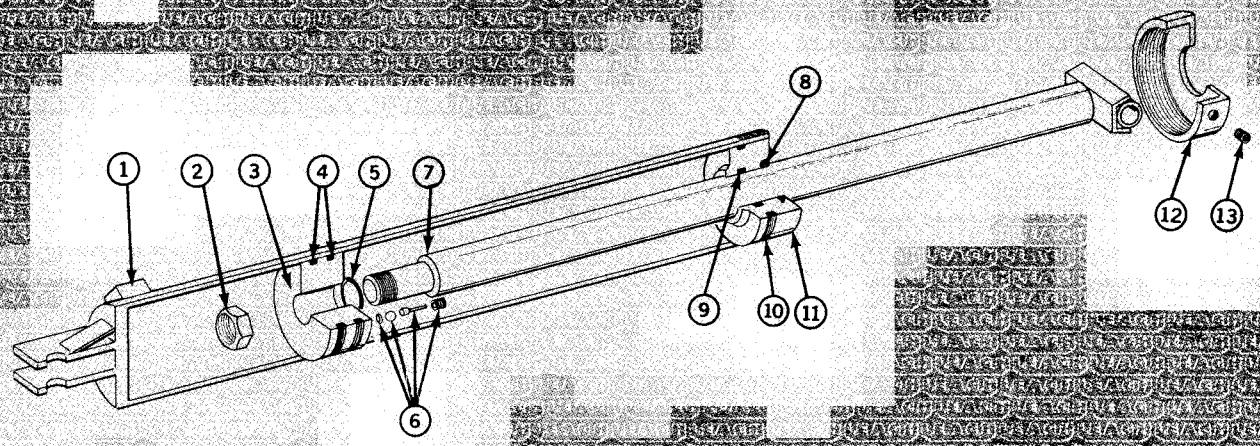
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103944	PLUNGER, 1st Stage	1
2	103945	SEAL, Wiper	1
3	103946	RING, Packing	1
4	103947	O-RING	1
5	103948	PLUNGER, 2nd Stage	1
6	103949	BEARING	2
7	103950	SEAL, Wiper	1
8	103951	RING, Packing	1
9	103952	O-RING	1
10	103953	PLUNGER, 3rd Stage	1
11	103954	CAP	1
12	103955	BEARING	2
13	103956	CAP	1
14	103957	SEAL, Wiper	1
15	103958	RING, Packing	1
16	103959	O-RING	1
17	103960	CAP	1
18	103961	BEARING	2
19	103962	PLUNGER, 4th Stage	1
20	103963	SEAL, Wiper	1
21	103964	RING, Packing	1
22	103965	O-RING	1
23	103966	BEARING	2
24	103967	CASE WELDMENT	1
	103968	CYLINDER ASSEMBLE	2
		REPAIR KIT, Includes items 2, 3, 4, 7, 8, 9, 14, 15, 16, 20, 21, 22	

TRUCK CHASSIS PREMOUNT ASSEMBLY, RC-23, 500245



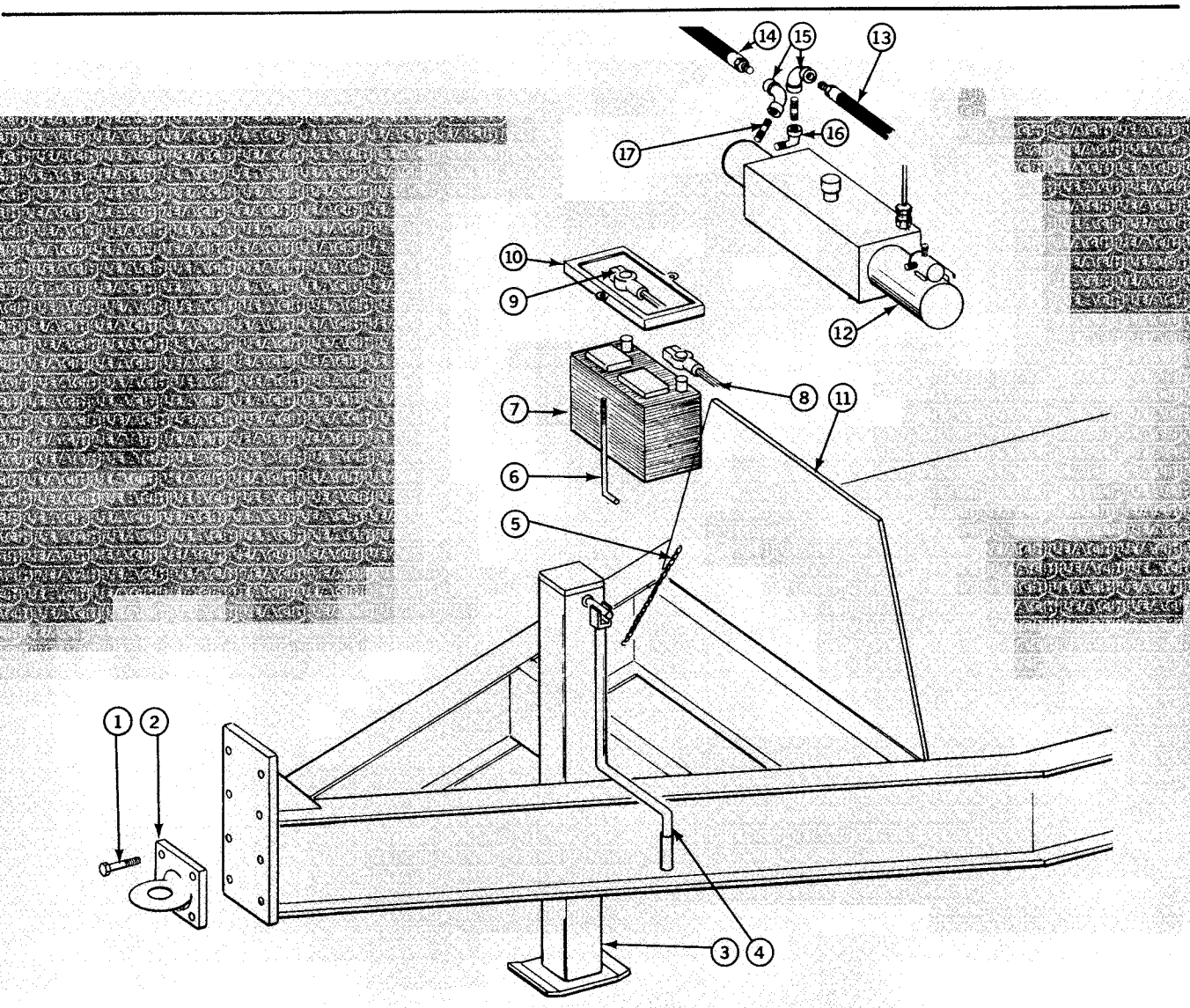
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	204420	SILL, W/Holes (Rear)	2
	204422	SILL, w/Holes (Front)	2
		SCREW, Flat Head, 1/4" x 1-1/2" UNC	26
		NUT, Lock, 1/4" UNC	28
2	302866	WELDMENT, Pivot	1
		SCREW, Cap, 1/2" x 1-1/2"	12
		NUT, Lock, 1/2" UNC	12
3	302871	SADDLE, Prop Arm	1
		SCREW, Cap, 3/8" x 1-1/4" UNC	4
		NUT, Lock 3/8" UNC	2
4	204704	BRACKET, Ajar Switch	1
		SCREW, Cap, 1/4" x 3/4" UNC	2

CYLINDER, RC-17, 103419



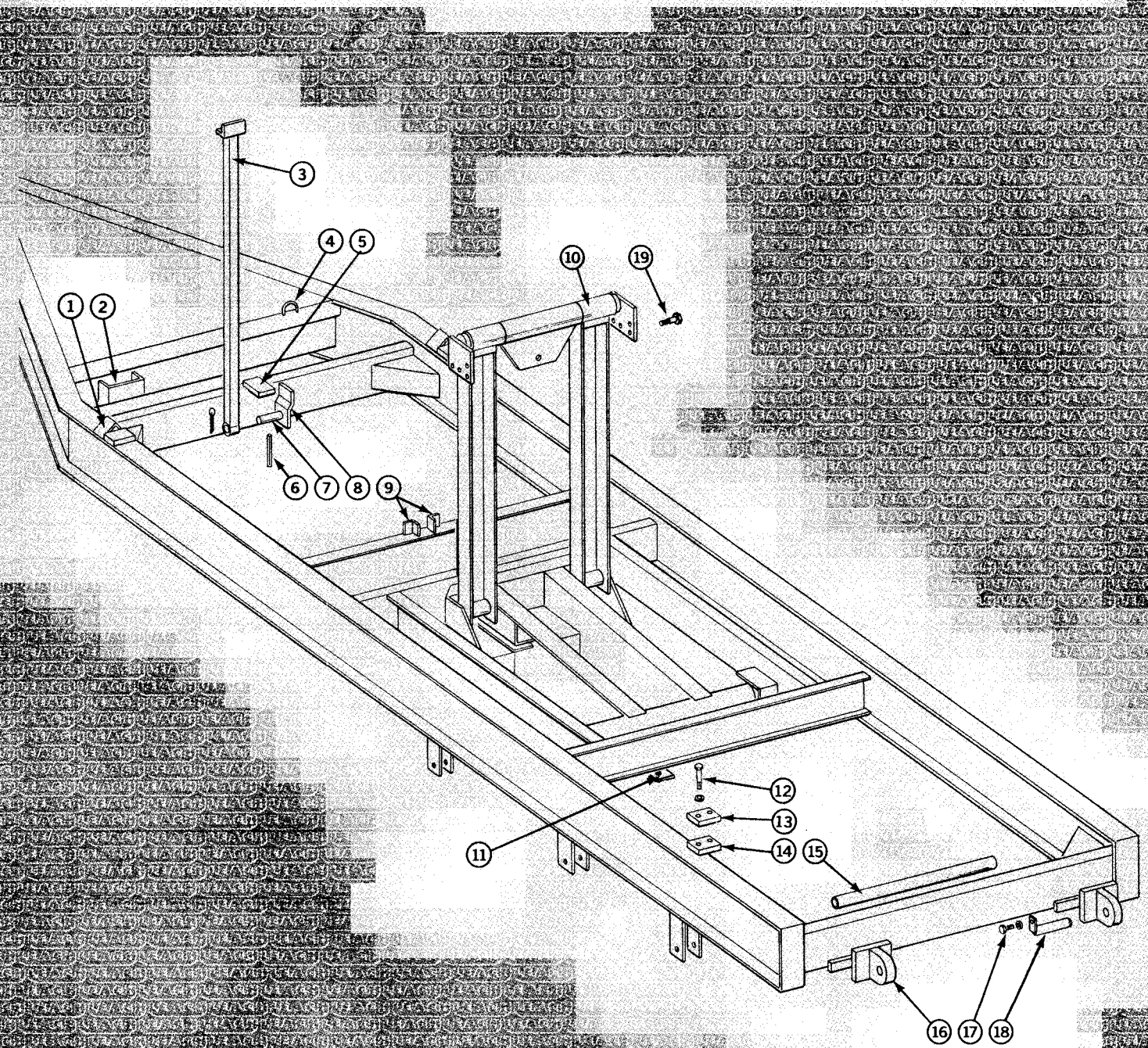
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	104126	WELDMENT, Case	1
2	104127	NUT, Piston	1
3	104128	PISTON, Cylinder	1
4	104129	SEAL, Piston	2
5	104140	O-RING, Rod	1
6	103426	KIT, Repair, Valve	1
7	104134	ROD, Piston	1
8	103421	SEAL, Wiper	1
9	104135	SEAL, Rod	1
10	104136	O-RING, Head Gland, OD	1
11	104137	GLAND, Head	1
12	104138	CAP, Cylinder	1
13	104139	SCREW, Set	1
	104141	KIT, Repair, (Includes Items 4, 5, 8, 9, 10)	1
	103968	ASSEMBLY, Cylinder, Hoist	1

TRAILER, FRONT, RC-17



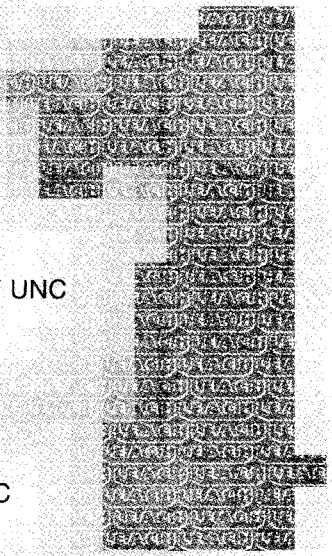
REF. NO.	PART NO.	DESCRIPTION	QTY.
1		SCREW, Cap	4
		WASHER, Lock	4
		NUT, UNC	4
2	103431	PINTAL	1
3	103432	JACK, Trailer	1
4	102957	HANDLE, Jack, Trailer	1
5	103838	CHAIN, Pump Cover	1
6	103417	BOLT, Hold Down, Battery	2
7	103353	BATTERY	1
8	103414	CABLE, Battery, Short	1
9	103415	CABLE, Battery, Long	1
10	103418	HOLD DOWN, Battery	1
11	302910	COVER, Pump	1
12	303303	POWER UNIT, Hydraulic Pump	1
13	103396	HOSE	1
14	103395	HOSE	1
	102775	CLIPS, Hose	10
15		ELBOW, Reducing, 1/4" x 3/8" NPT	2
16		ELBOW, Street, 1/4" NPT	1
17		NIPPLE, 1/4" x 1-1/2" NPT	2

TRAILER FRAME, RC-17

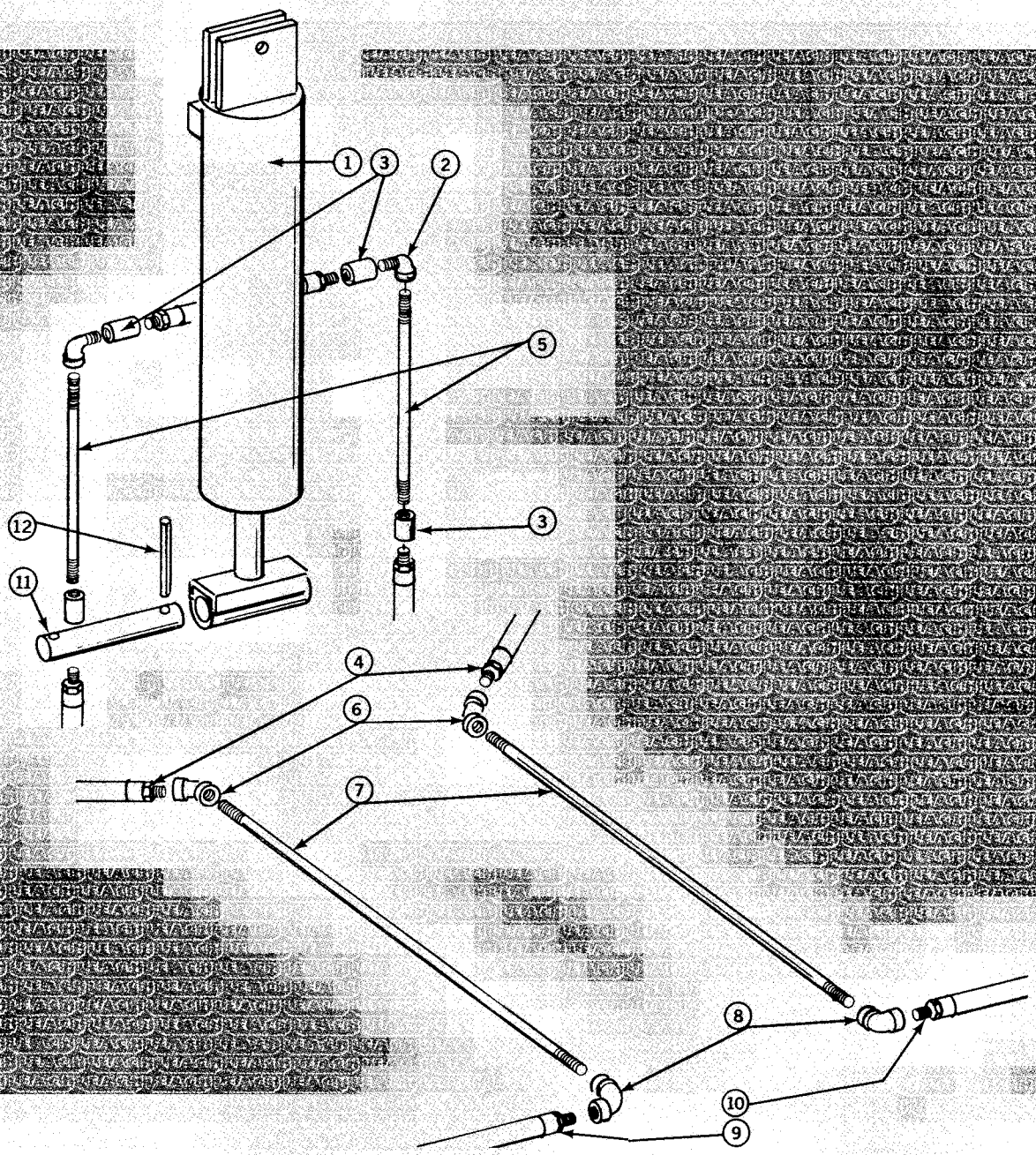


TRAILER FRAME, RC-17

REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103401	BRACKET, Trailer Centering	2
2	103411	HOLSTER, Hoist Switch	1
3	302905	ARM, Prop	1
4	16204	U-BOLT	1
5	103400	STOP, Prop, Arm	2
6		PIN, Roll, 1/8" x 2"	1
7	103406	SHAFT, Prop, Pivot	1
8	204800	WELDMENT, Prop Shaft	1
9	204991	SUPPORT, Prop	1
10	303302	HOIST, Trailer, Assembly	1
11	103392	BRACKET, Ajar	1
12		SCREW, Cap, 1/4" x 1-1/2" UNC	20
		WASHER, Flat, 1/4"	20
		NUT, 1/4" UNC	20
13	302874	SILL	10
14	205480	SPACER, Sill	10
15	205824	CONDUIT, 1"	1
16	204790	PIVOT, Hinge	2
17		SCREW, Cap, 1/2" x 2" UNC	2
		WASHER, Lock, 1/2"	2
18	204446	PIN, Hinge, Pivot	2
		SCREW, Cap, 5/8" x 1" UNC	8
		WASHER, Flat, 5/8"	8
		NUT, Lock, 5/8" UNC	8

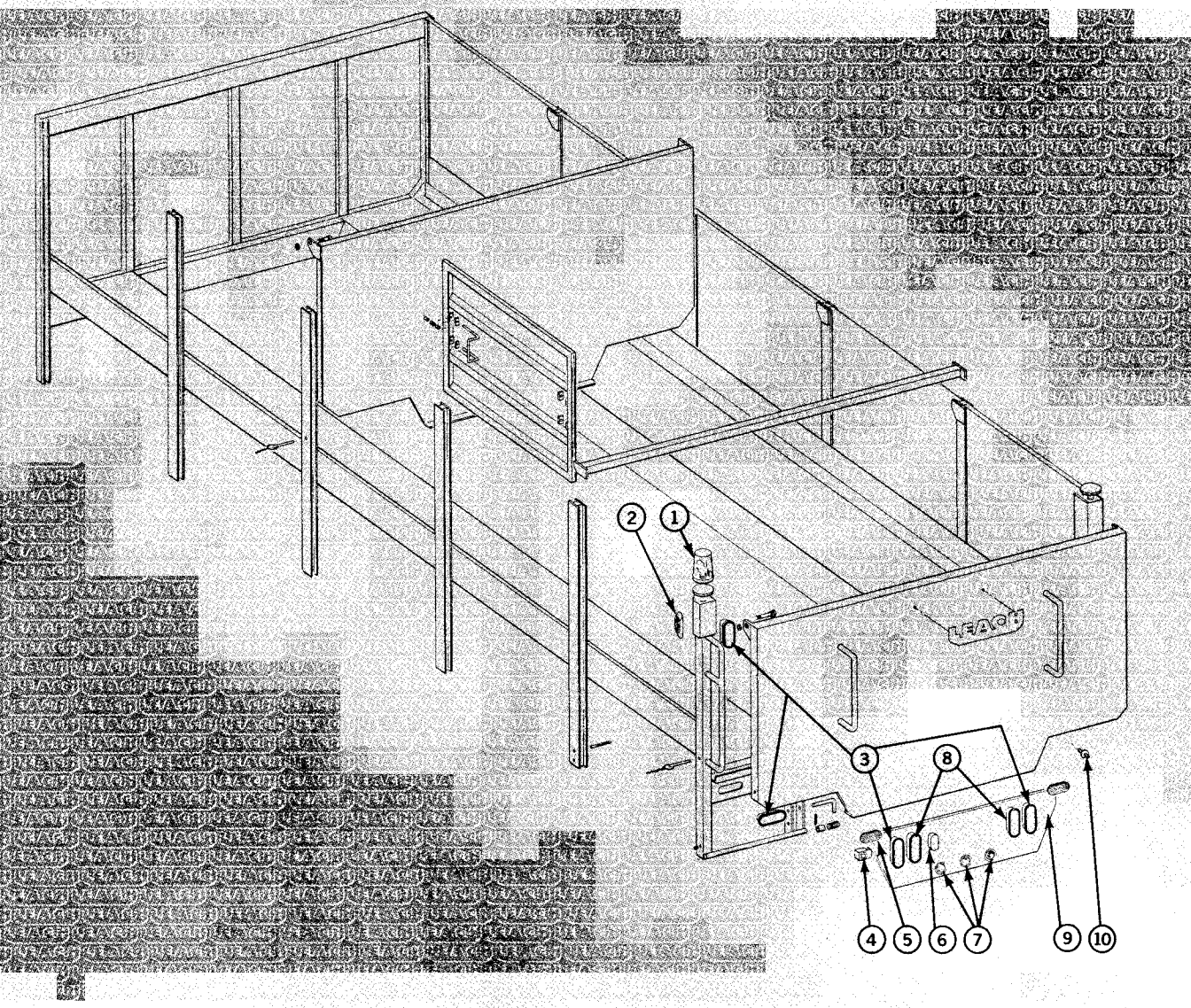


HOIST CYLINDER HYDRAULICS, RC-17



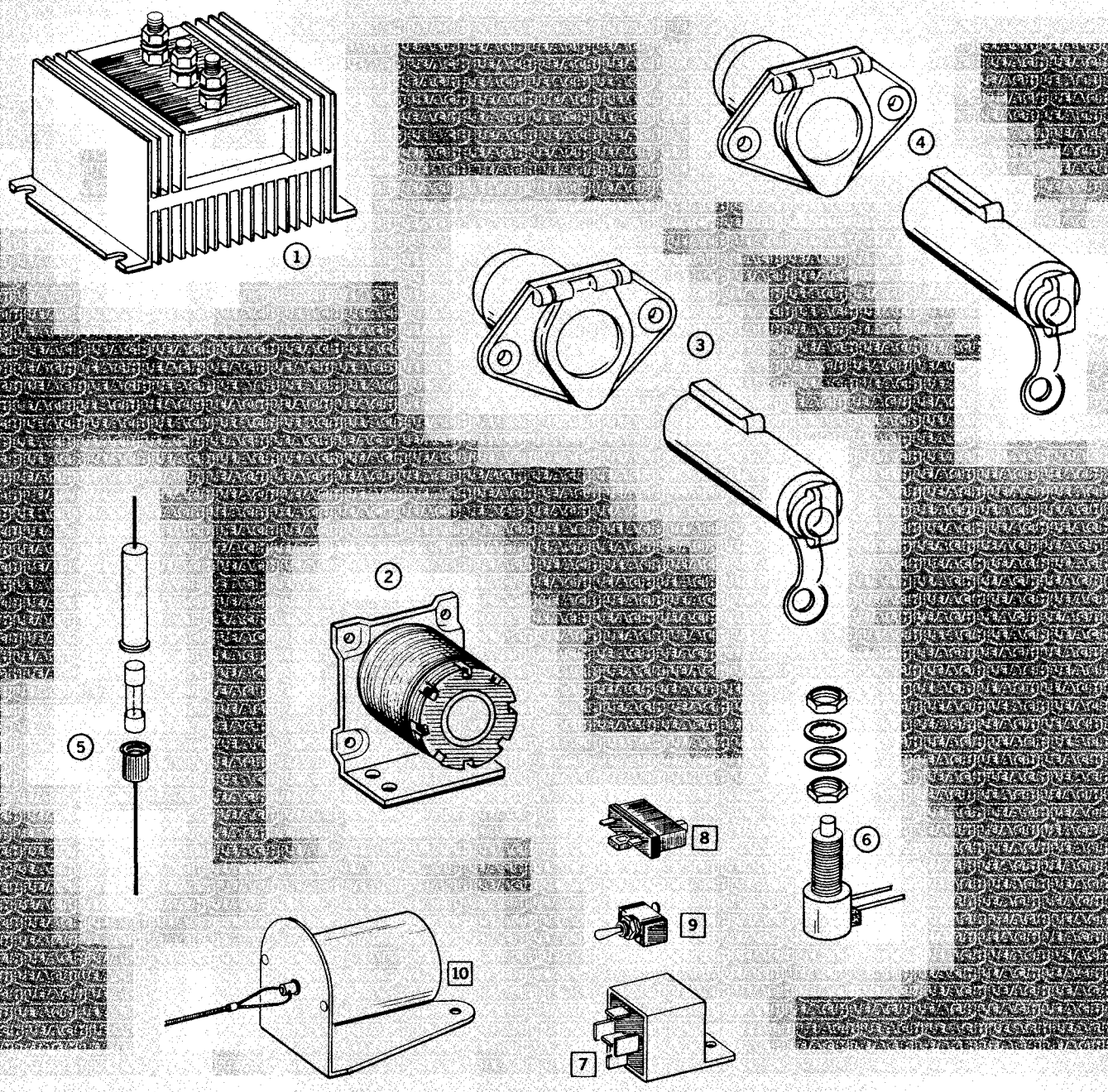
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103419	CYLINDER, Hoist	1
2	5103-0006	ELBOW	4
3	5108-0006	COUPLING	4
4	103422	HOSE	4
5	103423	PIPE	2
6	103424	ELBOW	2
7	103425	PIPE	2
8	5102-0006	ELBOW	2
9	103396	HOSE	1
10	103395	HOSE	1
11	103429	PIN, Cylinder	1
12	103430	PIN, Roll	1

BODY, ELECTRICAL



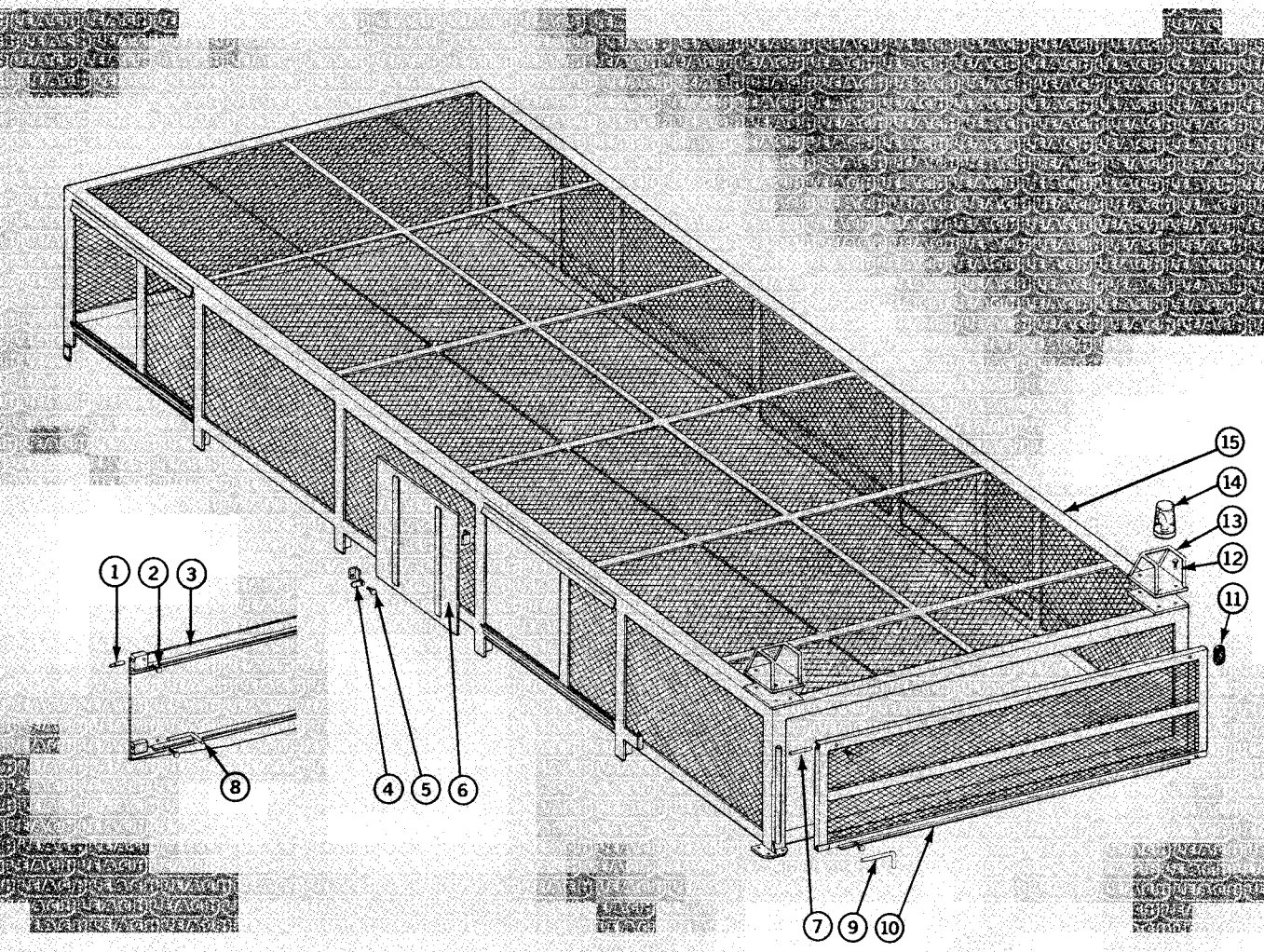
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	38759	BEACON, Rotating	2
2	103349	SIDE MARKER, Red	2
	103348	SIDE MARKER, Amber	2
3	103347	STOP, TAIL, TURN, LIGHT, Complete w/Grommet and Plug	6
4	38176	ALARM, Back-up	1
5	103344	REFLECTOR, Red	4
	103345	REFLECTOR, Amber	2
6	103085	LICENSE PLATE, Light	1
7	40624	MARKER, Light	3
	103351	KIT, Mounting, Marker Light	1
8	103346	LIGHT, Back-up	2
9	403068	PANEL, Light	2
10	33179	PUSH BUTTON, Signal	2
	102118	RELAY	2

ELECTRICAL COMPONENTS



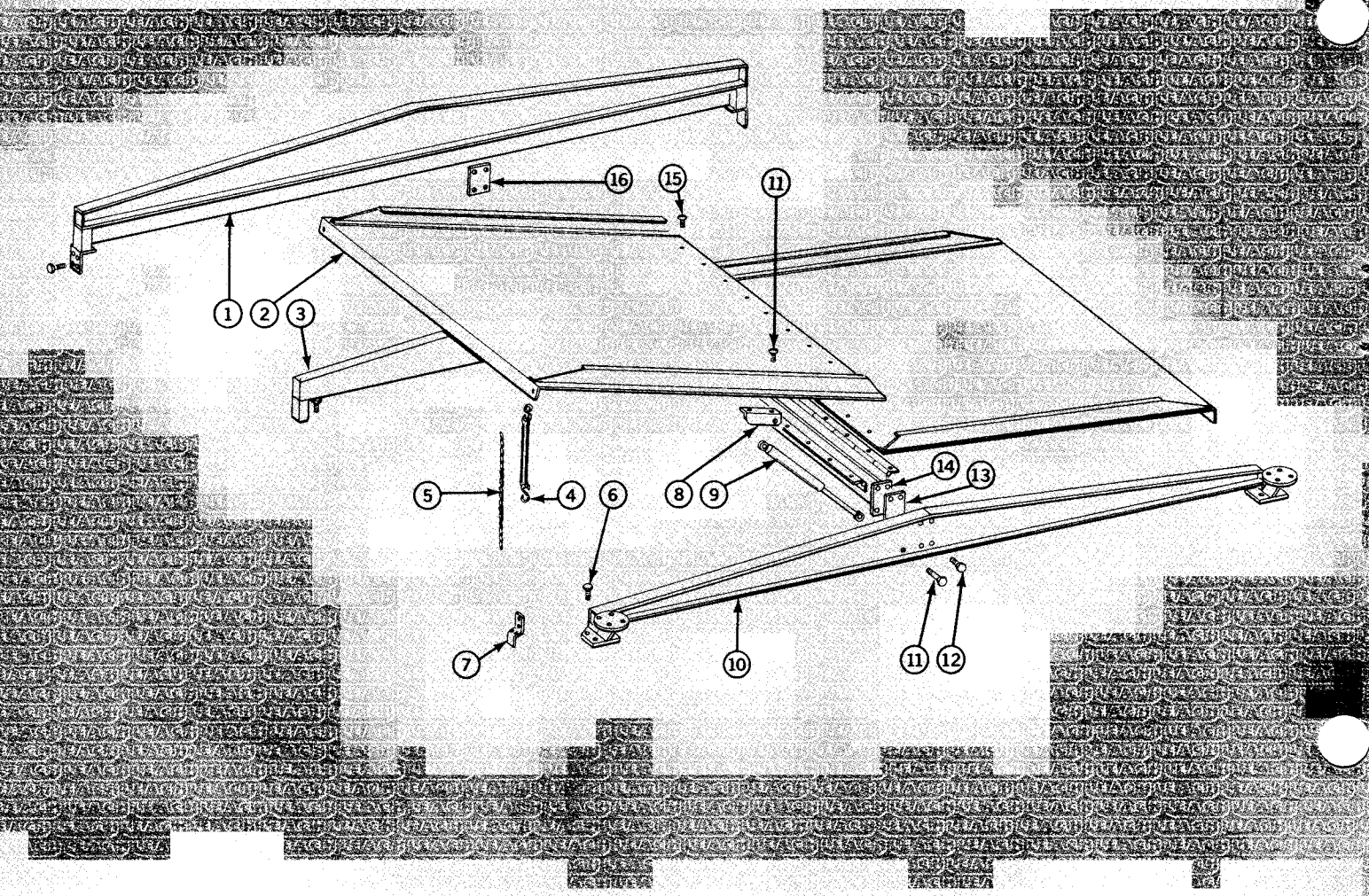
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	103409	ISOLATOR, Battery	1
2	38176	ALARM, Backup	1
3	103355	PLUG, Trailer - (7 Terminal)	1
4	103407	PLUG, Trailer - (6 Terminal)	1
5	35865	HOLDER, Fuse	4
6	100811	SWITCH, Ajar	1
7	102118	RELAY	4
8	SK-2093	BUZZER	1
9	SK-2092	SWITCH, Toggle	1
10	103385	BREAKAWAY, Switch	1

"P" CAGE ASSEMBLY



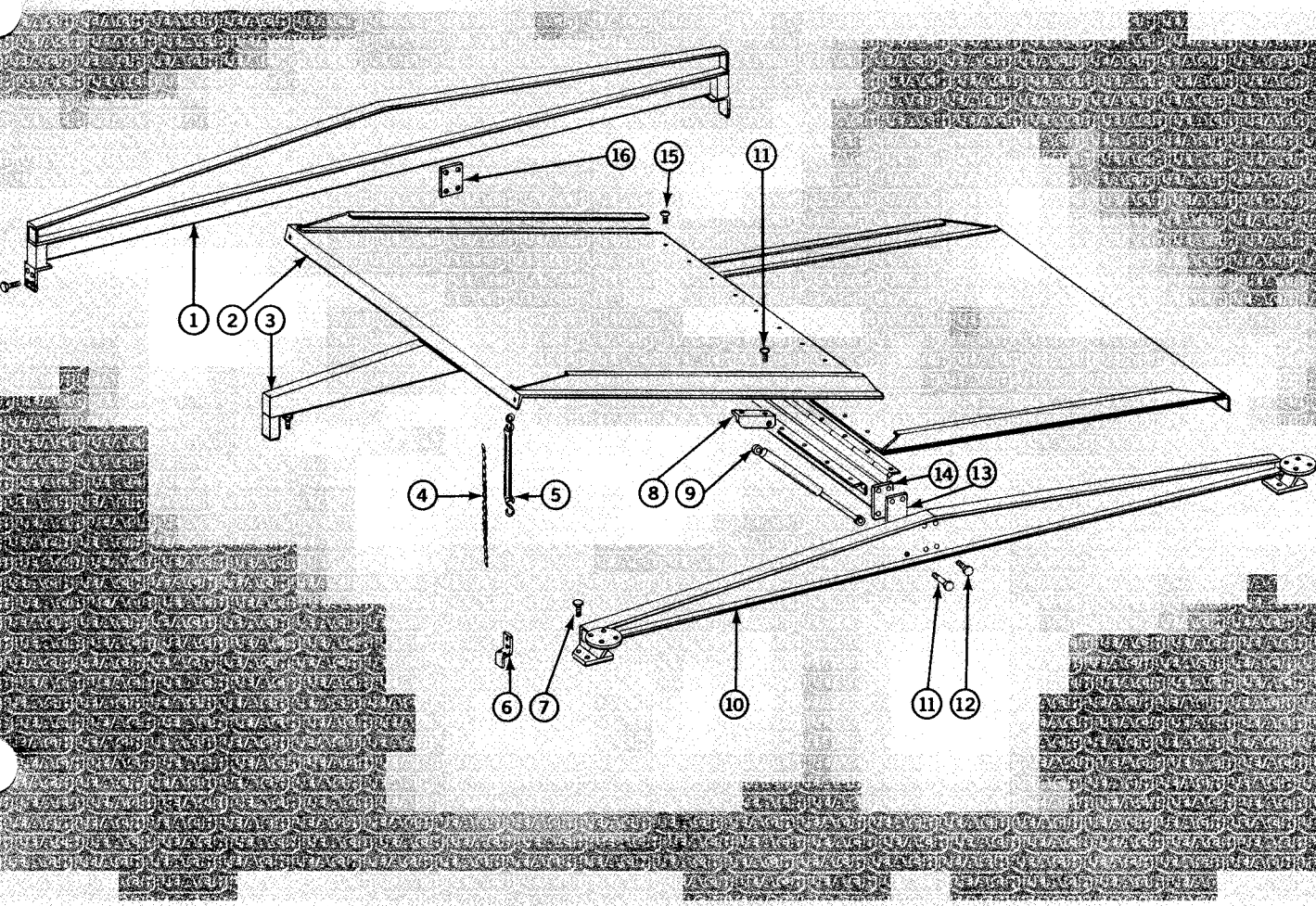
REF. NO.	PART NO.	DESCRIPTION	QTY.
1	104161	PIN, Pivot	2
2		PIN, Roll, 1/4" x 1-1/4"	2
3	303855	DOOR, Bulkhead, Weldment	1
4	104637	STOP, Door	4
5		SCREW, Cap, 5/16" x 3/4", UNC	8
6	303614	DOOR, Sliding, Right Hand	2
	303615	DOOR, Sliding, Left Hand	2
7	205237	PIN, Pivot	2
8		PIN, Door Latch	2
9	104168	PIN, Door Latch	2
10	205333	DOOR, Rear Assembly	1
11	103349	LIGHT, Red Clearance	2
12		SCREW, Cap, 3/8" x 1"	8
		WASHER, Flat 3/8"	2
13	303646	BRACKET	2
14	32758	BEACON	2
15	500319	WELDMENT, "P" Cage RC-23	1
		WELDMENT, "P" Cage RC-17	1

HARD TOP ASSEMBLY RC-23



REF. NO.	PART NO.	DESCRIPTION	QTY.
1	403508	WELDMENT, Front Bulkhead	1
2	403715	DOOR	10
3	403507	WELDMENT, Mid Bulkhead	1
4	104211	STRAP, Rubber Tarp	20
5	104212	ROPE, Nylon Twisted, 3 Ft.	10
6		SCREW, Cap, Whizlock, 1/2" x 1" UNC	6
		NUT, Whiz Lock, 1/2"	6
7	104891	HOLDDOWN	10
8	205284	BRACKET, Spring	20
9	104201	SPRING, Gas	20
10	403506	WELDMENT, Rear Bulkhead	1
11		SCREW, Cap, Whizlock, 3/8" x 3/4" UNC	40
		NUT, Whizlock, 3/8" UNC	64
12		SCREW, Cap, Whizlock, 1/2" x 1" UNC	24
13	205282	SHIM Beam	10
14	303395	WELDMENT, Beam	5
15		SCREW, Round Head, 1/4" x 1/2" UNC	100
		NUT, 1/2" UNC	100
16	104207	SHIM, Bulkhead, Front	4

HARD TOP ASSEMBLY RC-17



REF. NO.	PART NO.	DESCRIPTION	QTY.
1	403508	WELDMENT, Front Bulkhead	1
2	403719	DOOR	10
3	403507	WELDMENT, Mid Bulkhead	1
4	104211	STRAP, Rubber Tarp	20
5	104212	ROPE	10
6		SCREW, Cap, Whizlock, 1/2" x 1" UNC	6
		NUT, Whizlock, 1/2"	6
7	104891	HOLDDOWN	10
8	205284	BRACKET, Spring	20
9	104201	SPRING, Gas	20
10	403506	WELDMENT, Rear Bulkhead	1
11		SCREW, Cap, Whizlock, 3/8" x 3/4" UNC	40
		NUT, Whizlock, 3/8" UNC	64
12		SCREW, Cap, Whizlock, 1/2" x 1"	24
13	205282	SHIM, Beam	10
14	303395	WELDMENT, Beam	5
15		SCREW, Round Head, 1/2" x 1/2" UNC	70
		NUT, 1/4" UNC	70
16	104207	SHIM, Bulkhead, Front	4

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