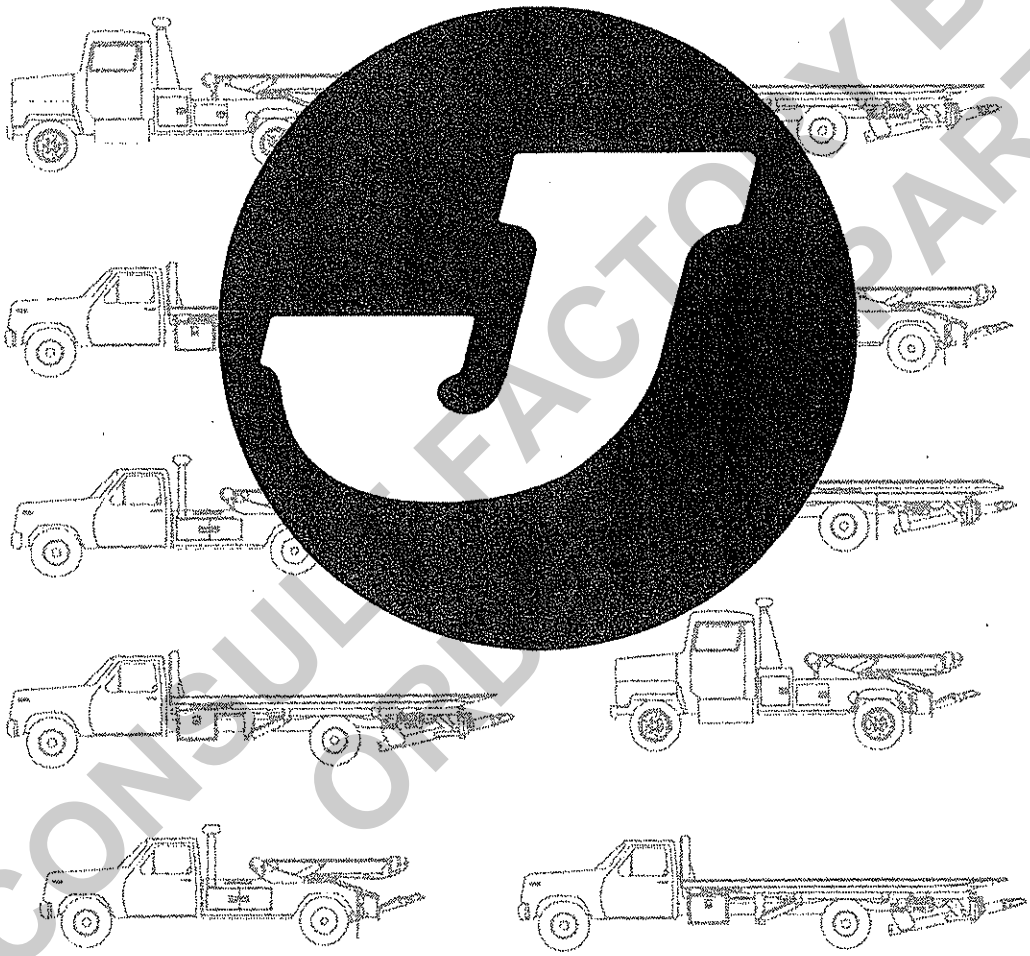
$35.00

HDL500/280

OPERATIONS, MAINTENANCE, AND PARTS MANUAL



JERR-DAN® CORP.

1080 Hykes Road
Greencastle, PA 17225

Phone (717) 597–7111

BA–KG

Part Number 5–376–000030
Rev. 1

FOREWORD

This manual is intended to serve as a guide to the owner and operator in the safe operation and optimum performance of this Jerr-Dan equipment.

Establishment of good operating habits and familiarity with the equipment and its capabilities combined with good judgement are essential.

Before attempting to operate the unit carefully read all sections of this manual.

JERR-DAN
1080 Hykes Road Greencastle, PA 17225
(717) 597-7111

LIMITED WARRANTY
Coverage and Procedures

Like our wheel lift and car carrier products, Jerr-Dan warranty programs are designed for the long haul.

Whether you own a wheel lift or car carrier, you are assured that your equipment is of the highest quality, and is covered under this limited warranty.*

Our one-year unlimited mileage plan is offered for wheel lifts and car carriers. This warranty is designed for the most comprehensive protection of your specific equipment.

WHEEL LIFT:

The Jerr-Dan one-year warranty covers material and workmanship including the following:

I. Body
II. Substructure
III. Wheel lift assembly
IV. Wrecker boom assembly
V. Winch and winch components (excluding cable)
VI. Hydraulics
VII. Electrical wiring assembly

CAR CARRIERS:

The Jerr-Dan one-year warranty covers material and workmanship including the following:

I. Deck
II. Winch and winch components (excluding cable)
III. Substructure
IV. Hydraulics
V. Electrical wiring assembly

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Procedures for warranty coverage:

1. Contact your selling distributor.

2. If necessary, contact Jerr-Dan for the distributor nearest you - Call 1-800-926-9666.

3. If necessary, Jerr-Dan may authorize repair by a qualified equipment service center. Under these arrangements, it will be necessary to obtain an estimate of repairs before any work is performed. Send estimate of repair cost to:

   Jerr-Dan Corporation
   A Subsidiary of Durakon Industries, Inc.
   Warranty Department
   1080 Hykes Road
   Greencastle, PA 17225

   Be sure to include your daytime phone number.

4. Authorization for repairs under this limited warranty will be provided by telephone within 24 hours of receipt of valid warranty claims and confirmed by letter or fax.

*5. This outlines the Jerr-Dan One-Year Warranty Plan. Coverage does not include damages caused by excessive abuse or consequential damages resulting from the lack of proper service, maintenance or need for repairs. All plans begin at original retail purchase date.

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JERR-DAN
Subsidiary of Durakon Industries, Inc
1080 Hykes Road Greencastle, PA 17225
(717) 597-7111

LIMITED WARRANTY

Manufacturer's Warranty. Manufacturer's sole warranty shall be the following, which Distributor shall make on behalf of Manufacturer by conspicuous notice in writing accompanying each contract or memorandum of sale:

1. Warranty. Jerr-Dan Corporation, ("Manufacturer") warrants each new product made by it to be free from defects in material or workmanship for one year from the date of initial sale, lease, rental, or other disposition of such product, and agrees only to repair or replace at its own expense, f.o.b. the place or places of manufacture, at manufacturer's option, any part or parts of the product found to be defective in material or workmanship, provided Manufacturer is notified of such defect or defects within the one year warranty period and given a reasonable time to correct the defect. In no case, shall the warranty extend to defects in materials, components, or services furnished by third parties. Defects caused by chemical action, or the presence of abrasive materials and defects arising following the operation beyond rated capacity or the improper use or application of any Products shall not be considered defects within the scope of the foregoing warranty. If any repairs or alterations are made or any parts are replaced during the period covered by any warranty above mentioned by other than an authorized Manufacturer's Distributor in accordance with authorized Manufacturer's service manuals or with other than parts, accessories, or attachments authorized by Manufacturer for use in its products, customer shall pay for all such repairs or parts without recourse against Manufacturer, and Manufacturer shall be relieved of responsibility for fulfillment of this warranty with respect to parts or components of all repairs, alterations or replacements so made. No claims for labor shall be considered unless authorized by Manufacturer.

2. Disclaimer as to Consequential or Special Damages. Under no circumstances shall Manufacturer be liable for any consequential or special damage which any person, firm, corporation, or other entity may suffer or claim to suffer or incur or claim to incur as a result of any defect in the product or in any correction or alteration thereof made or furnished by Manufacturer or others. "Consequential" or "special damages" as used herein includes but is not limited to costs of transportation, lost sales, lost orders, lost profits, lost income, increased overhead, labor and material costs and cost of manufacturing variances and operational inefficiencies.

3. Maximum Liability. The maximum liability of Manufacturer under the exclusive warranty set forth herein shall be the amount paid to Manufacturer by the vendor of the component with respect to the product to which such vendor warranty applies.

4. Limitation of Liability. The limitation of liability provisions herein shall apply to any and all claims or suits brought against Manufacturer including any claim based upon negligence, breach of contract, breach of warranty, strict liability or any other theories upon which liability may be asserted against Manufacturer.

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5. Exclusive and Entire Warranty. The warranty constitutes Manufacturer's entire warranty as to the product and it is expressly agreed that the remedies of dealer and those claiming under dealer as stated in this warranty are exclusive. Manufacturer does not assume (and has not authorized any other person to assume on its behalf) any other warranty or liability in connection with any product covered by this warranty.

MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND WHATSOEVER AS TO THE PRODUCT FURNISHED HEREUNDER, INCLUDING BUT NOT LIMITED TO EXPRESS OR IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD, DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

6. Notice of Occurrence. This warranty shall be void if, upon the occurrence of any incident involving any product made by Manufacturer, and resulting in any personal injury or property damage, customer shall fail to notify Manufacturer within 24 hours of such occurrence or permit Manufacturer audit representatives to have immediate access to such product and to all records of and within the control of the customer and/or distributor relating to the product and the occurrence.

7. Filing of Warranty Claim. Upon notifying the Manufacturer of a failure, the Manufacturer or its representative will verbally authorize and confirm by letter the repairs to be made. Verbal authorization will require the following information:

A) Owner's name and telephone number.

B) The dealer's name from whom it was purchased.

C) The Manufacturer's unit serial number.

D) Telephone number of the party making the repairs.

E) The part numbers needed to make repairs.

F) Owner to be informed of C.O.D. on parts (if deemed necessary) to assure the return of the defective parts for manufacturer's evaluation.

At this time, the Manufacturer will ship as soon as practical the parts needed to make the repair. Included with the parts will be the invoice for the parts and a Request for Warranty form, with the Warranty Return Tags.

The vehicle owner/dealer will complete the Request for Warranty form and the Warranty Return Tag marked "Return with Shipping Notice." Both documents should be attached to the shipping notice and returned to the Manufacturer by mail. The parts to be returned shall be tagged with the Warranty Return Tag (more than one part pertaining to the same warranty claim shall be identified with the same warranty claim number-see number on Warranty Return Tag). All parts under this claim shall be returned to the Manufacturer pre-paid for warranty evaluation.

Upon receiving the part or parts for warranty evaluation, the part will be inspected and tested. After being inspected and tested, the decision to honor or deny warranty claim shall be based on analysis of all available information.

When warranty is honored, the Manufacturer, will reimburse the owner/dealer in the amount agreed to by both parties.

If warranty is denied, the owner and distributor will be notified in writing of the decision and a full explanation for the decision will be given.

8. Manufacturer may at any time amend the foregoing form of warranty without prior notice.

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HDL500/280 SAFETY (GENERAL)

The safe operation of your HDL500/280 is your responsibility. Read this manual and the truck manufacturer's manual and thoroughly understand them. You can be held legally responsible for injuries or damage resulting from unsafe operating practices.

The manufacturer's recommendations for operating this wrecker can help you avoid unsafe practices and their bad consequences. These recommendations are contained in this manual.

Jerr-Dan Corporation is not responsible for the results of any unsafe practice of wrecker operators or for the failure of the wrecker or its accessories resulting from improper maintenance.

The danger from a vehicle does not cease when it is disabled or wrecked. Recovering or towing vehicles can be dangerous too! The danger threatens wrecker operators and everyone else close by. As a wrecker operator you must develop an awareness of the hazards involved. You must use every safeguard within reason to prevent injuries.

For each step in operating your wrecker develop the habit of asking yourself if it is safe to proceed. Carefully check all rigging before starting a heavy lift or pull.

We cannot warn you of all the possible dangers you will encounter; but, we will tell you of the most common hazards that we know about. We also recommend that you receive specialized and advanced training from a professional Towing and Recovery instructor before operating any recovery equipment.

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WARNING

ONLY AUTHORIZED AND TRAINED PERSONNEL SHOULD BE PERMITTED TO OPERATE THIS WRECKER UNSUPERVISED.

IN ORDER TO BE SUFFICIENTLY TRAINED TO OPERATE THIS WRECKER, A PERSON MUST HAVE, AS A MINIMUM, THE FOLLOWING QUALIFICATIONS:

1. SATISFACTORILY PERFORMED ALL WRECKER MANEUVERS AND FUNCTIONS UNDER THE SUPERVISION OF FULLY TRAINED PERSONNEL.

2. HAVE COMPLETELY READ AND UNDERSTAND THE OPERATIONS, MAINTENANCE, AND PARTS, MANUAL(S) IN THEIR ENTIRETY FOR THIS WRECKER.

3. HAVE COMPLETELY READ ALL WARNINGS AND PRECAUTIONS ON THIS WRECKER.

4. HAVE HAD EXPLAINED TO THEM THE HAZARDS OF MOVING THE PARTICULAR MATERIALS THEY WILL BE LOADING OR UNLOADING.

5. UNDERSTAND THE HAZARDS OF OPERATING AT A PARTICULAR JOB SITE, INCLUDING
   - ... THE IMPORTANCE OF STAYING WELL CLEAR OF ALL ELECTRICAL LINES,
   - ... GIVING CONSIDERATION TO GROUND CONDITIONS SUCH AS IRREGULAR CONTOURS, ICE, WATER, OR MUD,
   - ... ANY OTHER CONDITIONS WHICH MAY INTERFERE WITH ORDINARY CAREFUL OPERATION OF THIS WRECKER.

UNTRAINED OPERATORS SUBJECT THEMSELVES AND OTHERS TO DEATH OR SERIOUS INJURY AND MAY CAUSE SERIOUS DAMAGE TO PROPERTY.

DO NOT EXCEED THE FOLLOWING RATINGS:

BOOM RATING:

TEMA Rating - Boom elevated at 30° Angle

Retracted	50,000 lbs.
Extended	16,000 lbs.

Rating At Minimum Boom Angle 5°

Retracted	30,000 lbs.
Extended	12,000 lbs.

WINCH RATING:

Each Drum	25,000 lbs.

WIRE ROPE:

Working Limit Each Line	11,700 lbs.
Construction	6 x 37 EIP IWRC
Diameter	5/8 inch
Standard Length	225 Feet

Under lift RATING:

Full Retracted	28,000 lbs.*
Full Extended	14,000 lbs.*
Tow Rating	80,000 lbs.

*Rating Using Axle And Spring Lift Tools

NOTE

These ratings apply to the structural design of the HDL500/280 only and may be limited by the axle rating and gross vehicle weight rating of the truck chassis. CHECK TRUCK MANUAL FOR SPECIFIC GVW & AXLE RATINGS. ALSO REFERENCE THE CERTIFICATION DECAL AFFIXED TO DRIVER'S SIDE DOOR JAMB.

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MANUFACTURED BY:

DATE OF MANUFACTURE _____mo. _____yr.

INCOMPLETE VEHICLE MANUFACTURED BY:

DATE INC. VEH. MFD. _____mo. _____yr.

GVWR _____

GAWR FRONT _____with
_____tires,
_____ rims, @ _____ psi cold _____

GAWR INTERMEDIATE (1) _____with
_____tires,
_____ rims, @ _____ psi cold _____

GAWR INTERMEDIATE (2) _____with
_____tires,
_____ rims, @ _____ psi cold _____

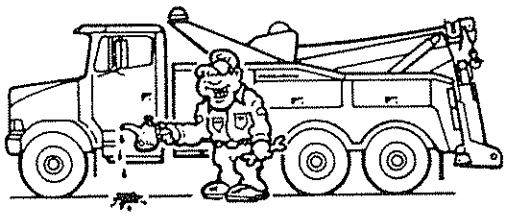
Conformity of the chassis-cab to Federal Motor Vehicle Safety Standards, which have been previously fully certified by the incomplete vehicle manufacturer or intermediate vehicle manufacturer, has not been affected by final-stage manufacture. The vehicle has been completed in accordance with the prior manufacturer's instructions, where applicable. This vehicle conforms to all other applicable Federal Motor Vehicle Safety Standards in effect in:

_____mo. _____yr.

VEHICLE IDENTIFICATION NUMBER:

VEHICLE TYPE: _____

Certification Decal



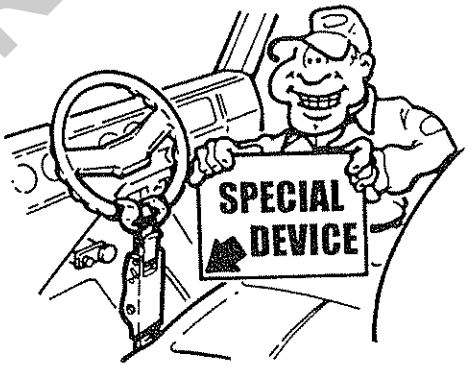
- Don't use a recovery vehicle that has not been properly maintained. Pay special attention to the mounting bolts, and lubrication of moving parts.

- Don't lower the rear hydraulic stabilizers unless the area under them is clear. Pay particular attention to keeping this area clear.

- Don't use rear spades on paved surfaces unless you are willing to accept responsibility for damage to such surfaces.

- Don't move the recovery vehicle while rear hydraulic stabilizers are extended. Damage is very likely to occur.

- Don't operate the wrecker's engine faster than recommended. Excessive speeds can damage PTO, hydraulic pumps, and winches.



- Don't rely on anti-theft steering locks to secure the steering wheel. Use a special steering wheel clamping device designed for this purpose.

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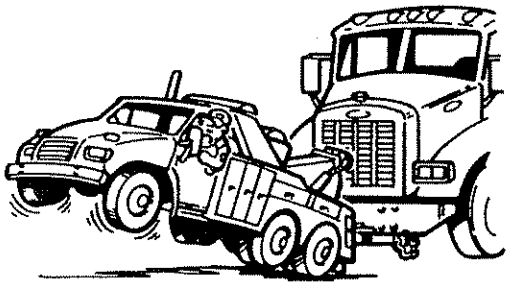
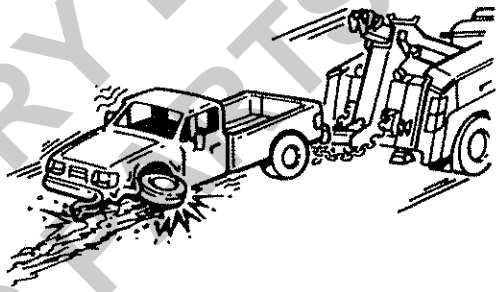


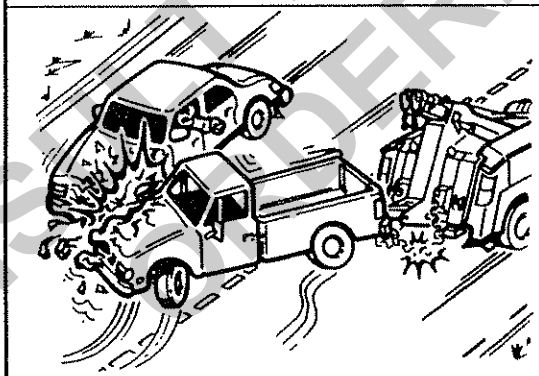
- Don't tow a vehicle that reduces the weight on the front wheels of the wrecker more than 50 percent.

- After you have hooked up a vehicle for towing, don't start the tow until you have double checked the hook-up, installed safety chains, and released the parking brakes of the towed vehicle.

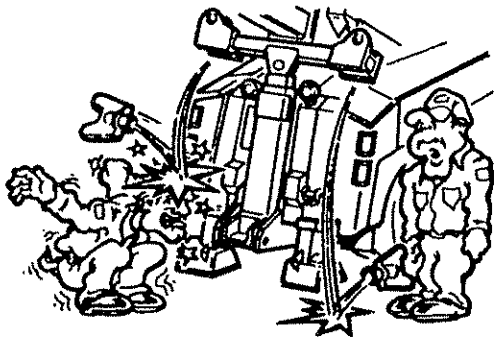
- Don't travel with the PTO engaged. Damage to the hydraulic components will occur. Engage it only while operating the controls.



- Don't tow a vehicle on its front wheels if they are damaged.



- Don't tow a vehicle on its front wheels unless the steering wheel is secured with the front wheels straight ahead.



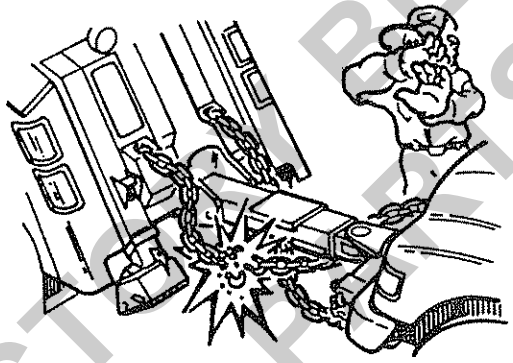
- Never fold the boom up into storage position without removing the towing adapters.

SAFETY CHAINS MUST BE USED WHEN TOWING AND TRANSPORTING

Safety chains are provided for use with your new Jerr-Dan Recovery Vehicle. Periodically inspect all chains for any signs of fatigue or damage. Don't overlook the hooks; be sure they have not been bent or deformed. If chain or hook damage is noted, they must be replaced before being used. **DO NOT USE SAFETY CHAINS FOR RECOVERY OPERATIONS.**

Many states require that the towed vehicle be secured to the wrecker body with safety chains. Check your local regulations and use your safety chains.

- Never attach the chain hooks in such a way as to damage brake lines or other functional parts.



- Check that the chain does not become over tensioned when raising the towed vehicle to the towing position or during the towing operation.

- Keep in mind that driving over bumps and hollows and around corners will tend to tighten or loosen the chains.

- Always use two safety chains when towing all vehicles, regardless of distance.

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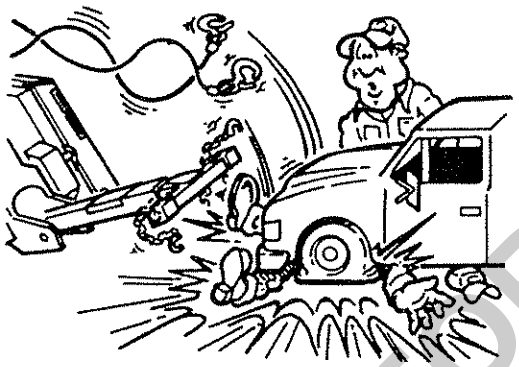
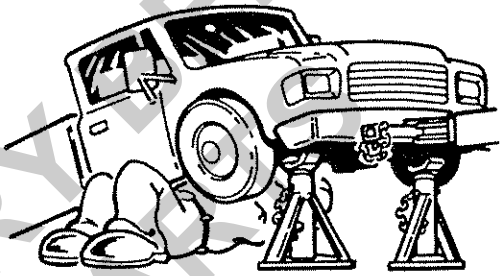
LIFT SAFETY

Careful consideration of the immediate surrounding conditions such as the weather, terrain, type or condition of the vehicle to be recovered and the condition and experience of the operator is foremost to the safety and success of the operation. In addition, the intent of the design of this unit should be taken before the undertaking of its use.

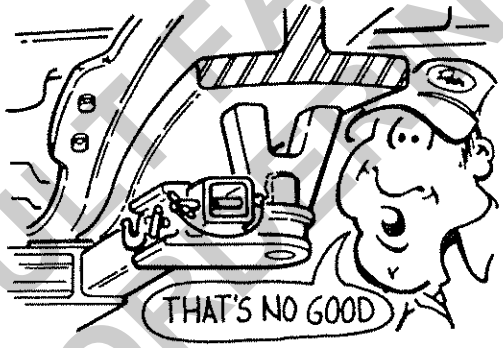
Your HDL500/280 is unique. It not only can make lifts from level surfaces, our boom tilt feature allows pickup of vehicles that are parked on both inclines and declines.



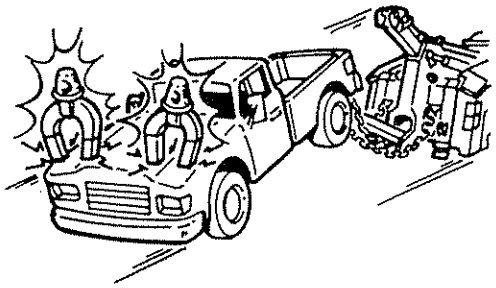
- You should never make a lift or movement while close to or under the vehicle being lifted!



- Always use jack stands to support the vehicle if it is necessary to work under it.



- Don't use towing forks that are not of proper size for the pickup requirements.



- Magnetic towing lights are required in many areas and are always recommended for safe tows.

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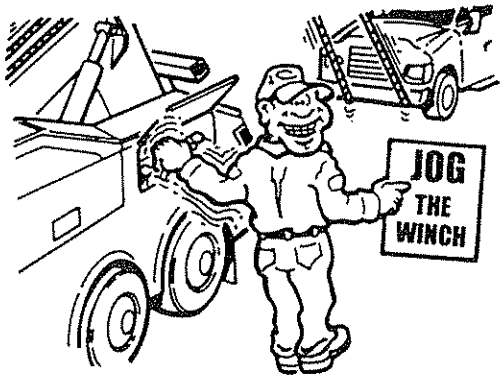
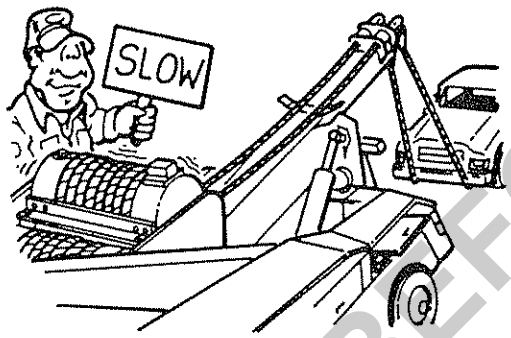
BOOM SAFETY

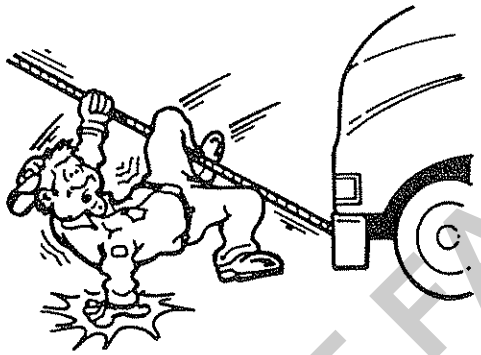
Your HDL500/280 is equipped with a wrecker boom and the following safety procedures must be observed:



- Jog the winch control lever to be sure of complete engagement of the clutch gears before making a lift or pull.



- Take up the wire rope slowly and be sure the hook is securely set.



- Never stand on or straddle a working wire rope.

- Be sure of your lift or pull and do not exceed the working strength of the wire rope or hook. Rig to keep the estimated amount of pull well within equipment ratings. Use wire rope breaking strength ratings only for selecting replacement wire rope.

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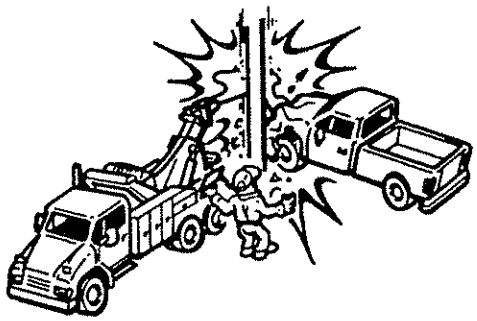
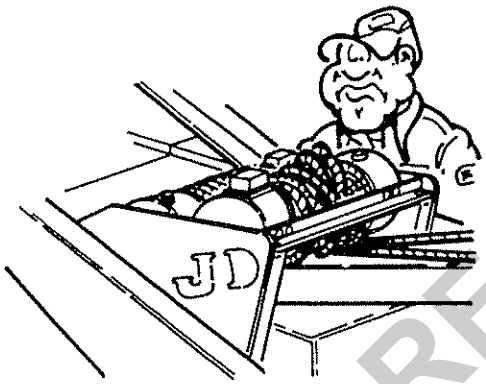
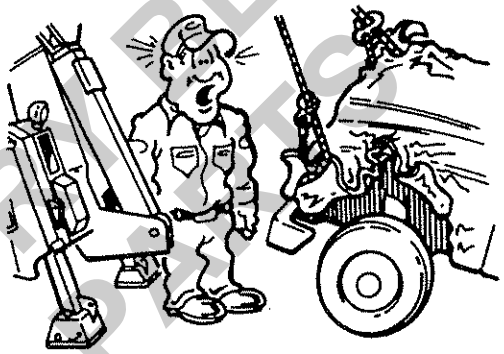


- Never lift or pull over or around a sharp obstacle.



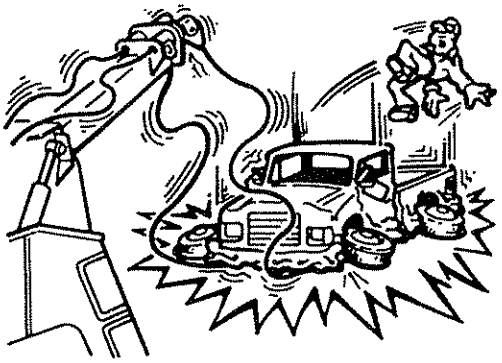
- Never allow the wire rope to cross wrap (criss-cross) on the winch drum. Crushing of the wire rope can cause wire rope failure.

- Never completely unwind all wire rope from a winch while loaded. Always be sure that a minimum of five (5) wraps of wire rope are on the drum at all times.



- Never make a lift or pull with the wire rope attached to light gauge or sheet metal parts; use the frame or major structural members.

- Never tie down the front end of your wrecker for recovery work of heavy lifts. You will likely damage the truck frame if you do.



- Don't disengage the winch drum clutch while the wire rope is loaded.

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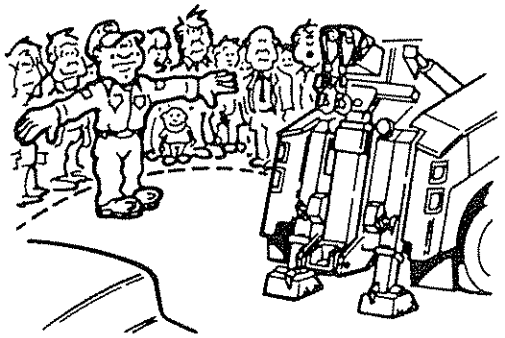
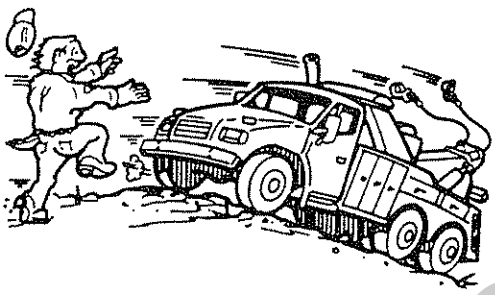
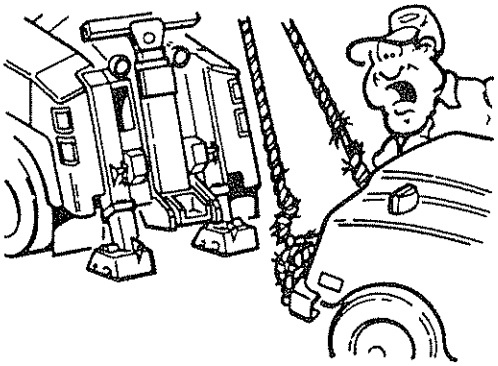


- Don't permit bystanders in the area while performing recovery work.



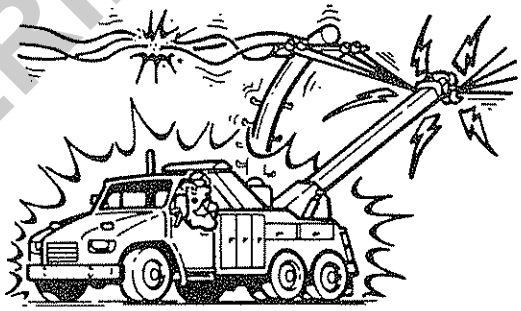
- Be sure all brakes and locks are properly set on the recovery vehicle.



- Never wrap the wire rope around frames or cross members. Use chains and hook the wire rope to the chains.

- Never under any circumstances use the winch or boom to lift people!

- Don't use damaged wire ropes on your wrecker. Become familiar with the various types of wire rope damage and periodically inspect the entire wire rope for wear and corrosion. **Never use wire rope menders.** Replace with similar rated wire rope and hooks.



- Death or Serious Injury can occur when working near power lines. Be sure that exact locations of overhead power lines, and other obstructions or hazards are known.

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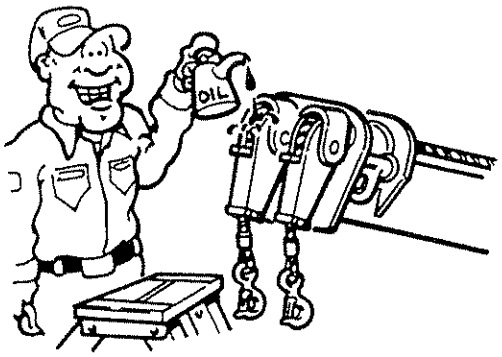
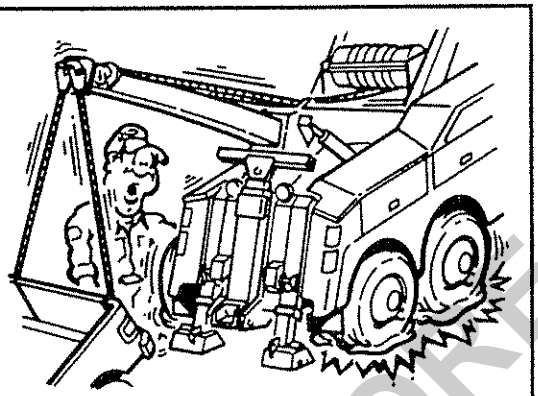
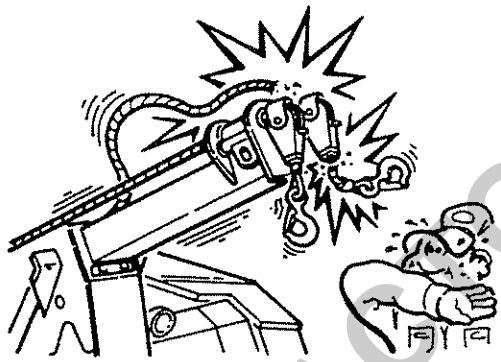


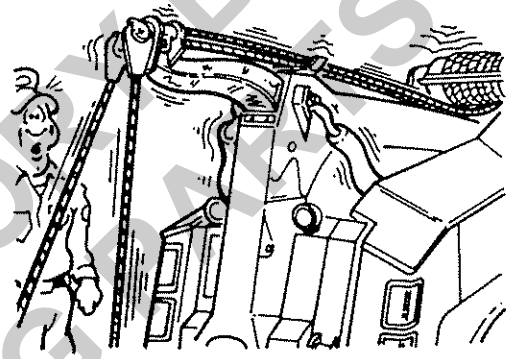
- Lubricate and maintain both the wire rope and winch on regular intervals. (See maintenance charts.)



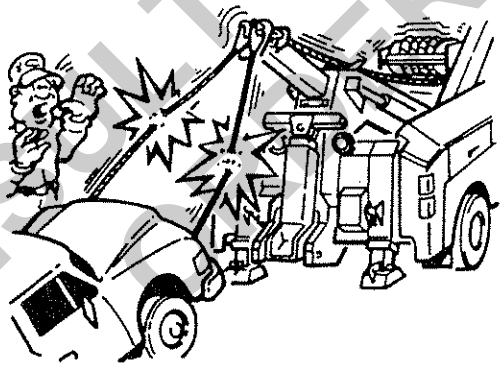
- Avoid using the boom raise or boom up control to lift a load. This causes undue stress and weight loading on the rear axle. Use the winch to lift the load.



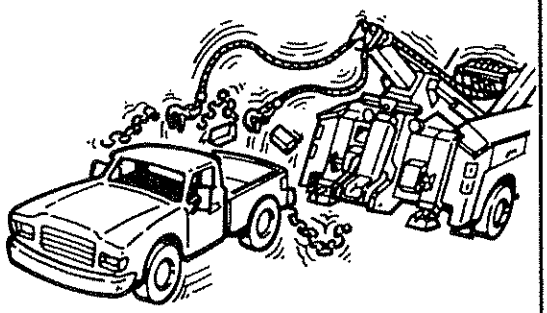
- Don't continue to wind in wire rope after the hook is against the boom end.



- Care should be taken when retracting the boom extension while under load.



- All boom placement functions should be made with the winch wire ropes set in "free spool" to avoid over tensioning or breaking the winch wire ropes.



- After rigging wire ropes, don't begin pulling without rechecking connections. Make sure that all wire ropes and snatch blocks are securely attached and cannot accidently pull loose.

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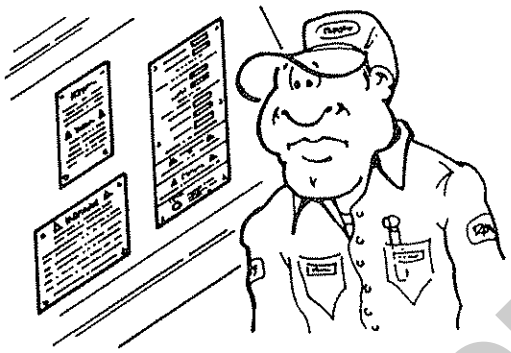
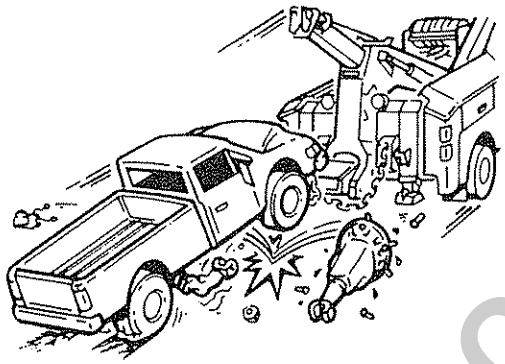
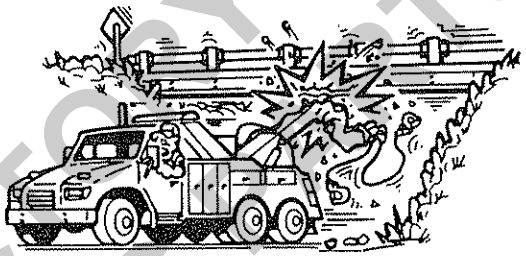
- Don't expect your wrecker to tow loads equal to the wrecker ratings. Wrecker ratings apply to loads imposed during recovery with the wrecker properly stabilized.



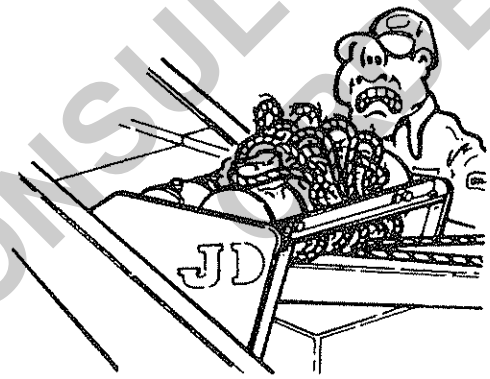
- Don't exceed ratings of booms, wire ropes, snatch blocks, or winches. Stay within nameplate ratings. Note that boom ratings decrease significantly as the boom is extended.



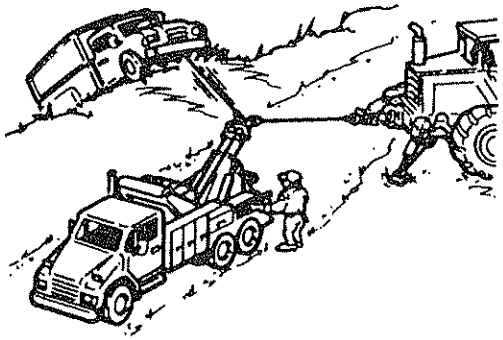
- Don't tow a vehicle on its drive wheels unless steps have been taken to protect its transmission and differential. Follow the recommendations of the vehicle manufacturer. As an alternative, use a towing dolly.



- Don't drive with the wrecker boom extended.



- To avoid birdnesting and premature failure of the wire rope, always keep tension on the wire rope when unwinding.



- When making a pull, always apply an equal load in the opposite direction of the pull to stabilize the load.

SAFETY WARNING DECALS

As an extra safety precaution, your HDL500/280 has specific safety and warning decals affixed to prominent locations. These decals must not be obliterated, removed or painted over. They are there to remind and protect the operator.

SERIAL NO. _____
MODEL NO. _____

UNDER LIFT
UNDER LIFT RATINGS (MAXIMUM)
EXTENDED _____ LBS.
RETRACTED _____ LBS.

WRECKER BOOM
BOOM RATINGS (MAXIMUM)
TEMA RATING - BOOM AT 30° ANGLE
EXTENDED _____ LBS.
RETRACTED _____ LBS.
TEMA RATING - BOOM AT 5° ANGLE
EXTENDED _____ LBS.
RETRACTED _____ LBS.

WINCH RATING
EACH DRUM _____ LBS.

WIRE ROPE
SIZE _____ FT.
TYPE _____
WORKING LIMIT _____ LBS.

⚠ WARNING ⚠
READ OPERATOR'S MANUAL AND FAMILIARIZE YOURSELF WITH THE OPERATION PRIOR TO USING THIS EQUIPMENT.
KNOW THE LOADS BEING MOVED.
DO NOT EXCEED RATED CAPACITIES.

⚠ WARNING ⚠
ALL RATINGS ARE BASED ON THE STRUCTURAL CAPACITY OF ABOVE MODEL. ACTUAL TOWING AND RECOVERY CAPACITY MAY BE LIMITED BY THE THE CAPACITY OF THE CHASSIS AND EQUIPMENT SELECTED.

MANUFACTURED BY:
JERR-DAN CORPORATION
1080 HYKES ROAD
GREENCASTLE, PA 17225
1-800-926-9666
189

⚠ WARNING ⚠
MOVING PARTS
KEEP HANDS AND FEET CLEAR OF THIS AREA
037

⚠ WARNING ⚠
KEEP AREA UNDER SPADES CLEAR WHILE OPERATING
193

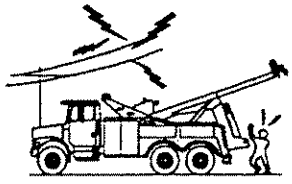
⚠ WARNING ⚠
TOWED VEHICLE MUST BE CONNECTED TO TOW TRUCK BODY WITH SAFETY CHAINS
122

⚠ CAUTION ⚠
*CHECK HYDRAULIC FLUID LEVEL
FILL ONLY WITH APPROVED FLUID
(SEE OPERATOR'S MANUAL)
034

⚠ WARNING ⚠
A MINIMUM OF 5 WRAPS OF CABLE MUST BE LEFT ON DRUM TO ACHIEVE RATED LOAD.
NOT TO BE USED IN THE MOVING OR LIFTING OF PERSONS.
201

⚠ WARNING ⚠
ELECTRICAL HAZARD
POWER DISTRIBUTION PANEL
202

⚠ DANGER



Hazardous voltage.
Will cause severe injury or death.
Do not raise, lower or move boom near power lines.
203

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Date _____

OPERATOR'S PRE–TRANSPORT CHECKLIST

⚠ CAUTION ⚠

REVIEW THIS CHECKLIST BEFORE EACH TOW. FAILURE TO FOLLOW CHECKLIST COULD CREATE A DANGEROUS CONDITION FOR YOU, OTHER MOTORISTS AND PEDESTRIANS, AND MIGHT RESULT IN SERIOUS INJURY OR DEATH.

VEHICLE ON UNDER LIFT – CHECKLIST:

- HEED ALL WARNINGS ON EQUIPMENT AND CONTROLS.
- DO YOU HAVE TURNING CLEARANCE FOR TOWED VEHICLE?
- ARE BOTH SAFETY CHAINS ATTACHED FROM TOWING TRUCK TO TOWED VEHICLE?
- IS THERE SUFFICIENT GROUND CLEARANCE FOR TOWED VEHICLE?
- IS THE UNDER LIFT RETRACTED AS CLOSE AS POSSIBLE TO OBTAIN MAXIMUM WEIGHT DISTRIBUTION?
- ARE CHAINS SECURED FIRMLY AROUND THE AXLE OR THE FRAME OF THE TOWED VEHICLE?
- ARE AUXILIARY TOWING LIGHTS ATTACHED TO TOWED VEHICLE?
- DO NOT OVERLOAD. STOP VEHICLE AT ONCE AND REARRANGE LOAD IF YOU NOTICE FRONT END OF TRUCK FEELS LIGHT OR BOUNCES EXCESSIVELY OR IF STEERING FEELS EXCESSIVELY LIGHT. LOSS OF VEHICLE CONTROL CAN RESULT FROM AN OVERLOAD AND CAN CAUSE A SERIOUS ACCIDENT.

 200

⚠ WARNING ⚠

ONLY AUTHORIZED AND TRAINED PERSONNEL SHOULD BE PERMITTED TO OPERATE THIS WRECKER UNSUPERVISED.

IN ORDER TO BE SUFFICIENTLY TRAINED TO OPERATE THIS WRECKER, A PERSON MUST HAVE, AS A MINIMUM, THE FOLLOWING QUALIFICATIONS:

1. SATISFACTORILY PERFORMED ALL WRECKER MANEUVERS AND FUNCTIONS UNDER THE SUPERVISION OF FULLY TRAINED PERSONNEL.
2. HAVE COMPLETELY READ AND UNDERSTAND THE OPERATIONS, MAINTENANCE, AND PARTS MANUAL(S) IN THEIR ENTIRETY FOR THIS WRECKER.
3. HAVE COMPLETELY READ ALL WARNINGS AND PRECAUTIONS ON THIS WRECKER.
4. HAVE HAD EXPLAINED TO THEM THE HAZARDS OF MOVING THE PARTICULAR MATERIALS THEY WILL BE LOADING OR UNLOADING.
5. UNDERSTAND THE HAZARDS OF OPERATING AT A PARTICULAR JOB SITE, INCLUDING:
   - ...THE IMPORTANCE OF STAYING WELL CLEAR OF ALL ELECTRICAL LINES,
   - ...GIVING CONSIDERATION TO GROUND CONDITIONS SUCH AS IRREGULAR CONTOURS, ICE, WATER, OR MUD,
   - ...ANY OTHER CONDITIONS WHICH MAY INTERFERE WITH ORDINARY CAREFUL OPERATION OF THIS WRECKER.

UNTRAINED OPERATORS SUBJECT THEMSELVES AND OTHERS TO DEATH OR SERIOUS INJURY AND MAY CAUSE SERIOUS DAMAGE TO PROPERTY 199

⚠ WARNING ⚠

TOWED VEHICLE MUST BE SECURED TO CROSSBAR WHEN USING FRAME FORKS AND SPRING HANGERS

211

⚠ CAUTION ⚠

DO NOT USE FOLD FUNCTION TO LIFT OR RAISE LOAD 204

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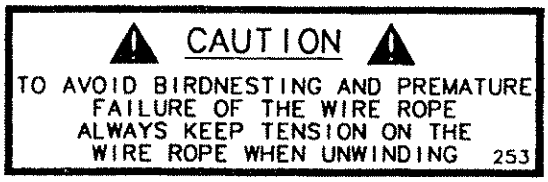
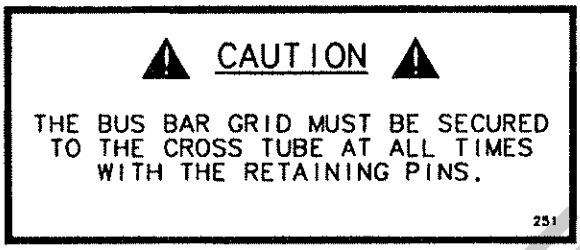
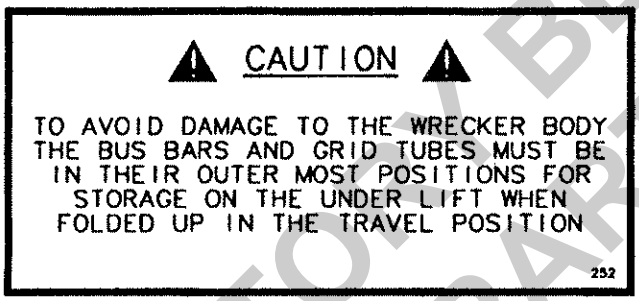
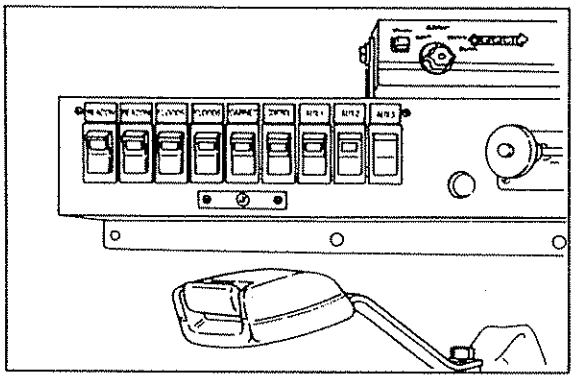






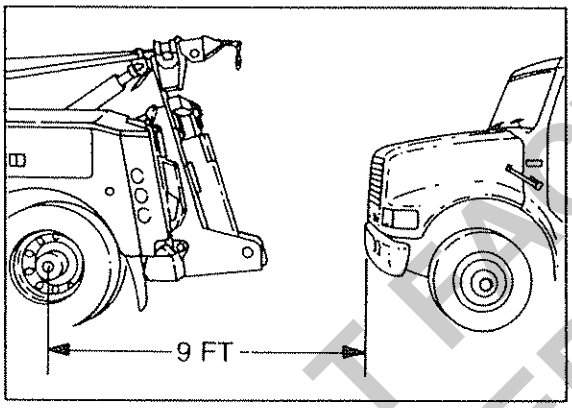
UNDER LIFT OPERATION

Your HDL500/280 is one of the most useful and efficient towing and recovery vehicles available. It is hydraulically powered and careful consideration should be given to the selection of commands. You can afford to work smart, the vehicle will do most of the work for you.



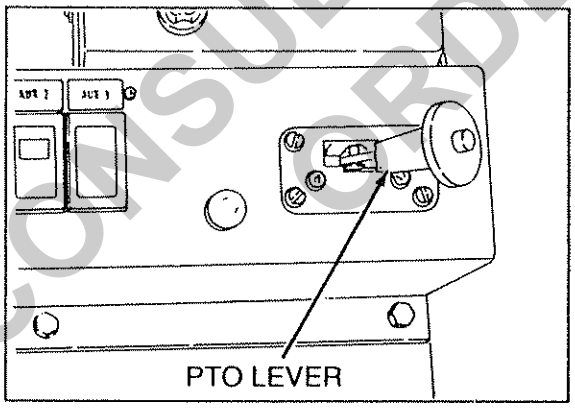
Follow these simple steps:

1. Turn on the safety and work lights. (Switches located on panel on the floor beside the driver's seat.) If the wired remote hand controller is going to be used the CONTROL switch must be turned "ON".

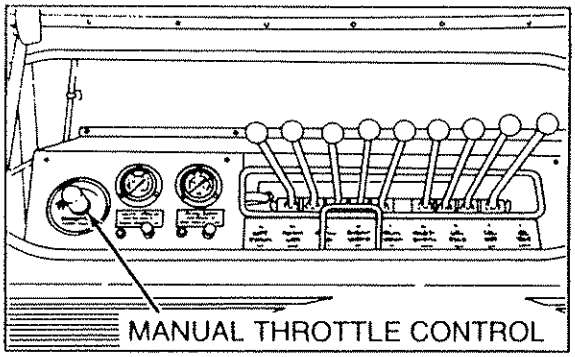


2. Using the rear axle as a guide, position the recovery vehicle within nine (9) ft. of the subject casualty vehicle and as close to the direction of the pull as possible.

3. Place the recovery vehicle's transmission gear selector into neutral and set the parking brakes.

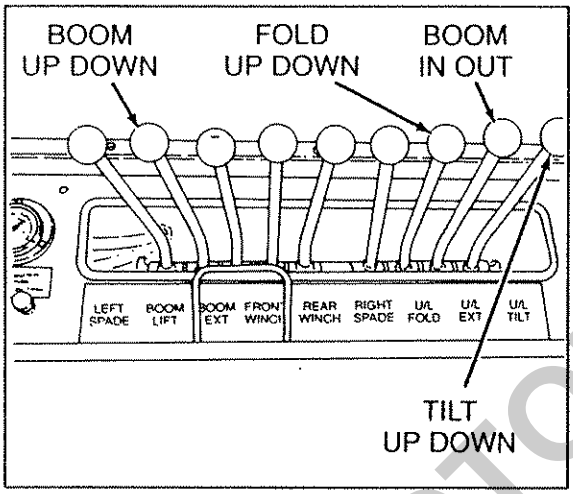


4. Engage the power take-off (PTO) by moving the control lever. See PTO operator's manual. **NEVER TRAVEL WITH THE POWER TAKE-OFF CONTROL ENGAGED.** This could result in damage to the PTO unit and the recovery vehicle's transmission.

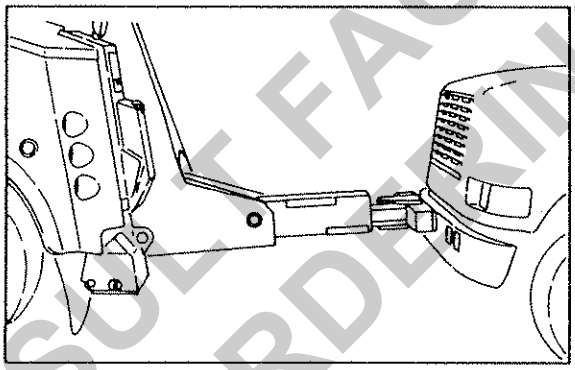


5. Adjust the electronic or manual throttle control to elevate the engine speed to approximately 1200-1400 R.P.M. for optimum performance.

> ***CAUTION:***
> Never exceed 1,500 R.P.M. When your hook up is complete, reset the engine idle to normal.



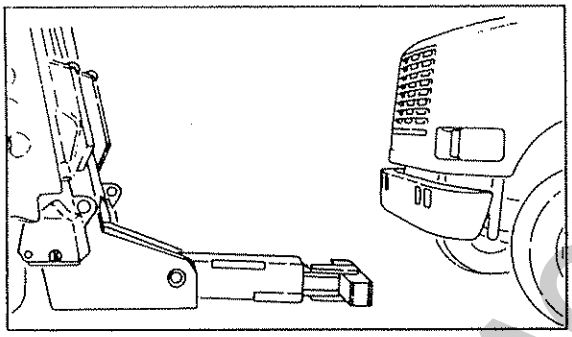
6. Confirm the recovery vehicle's position in relation to the casualty vehicle to be towed. Nine (9) ft. is recommended. Reposition the HDL500/280 if necessary. **Be sure the casualty vehicle is not in gear or park. Keep the brake set.**



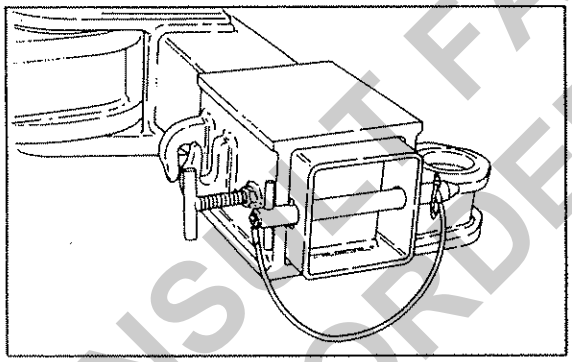
7. Unfold and tilt the under lift boom down until it is in the horizontal position.

CAUTION:
Make sure the fold cylinder is fully retracted prior to any lifting operation.

CAUTION:
Always keep clear of the unsupported folding boom.

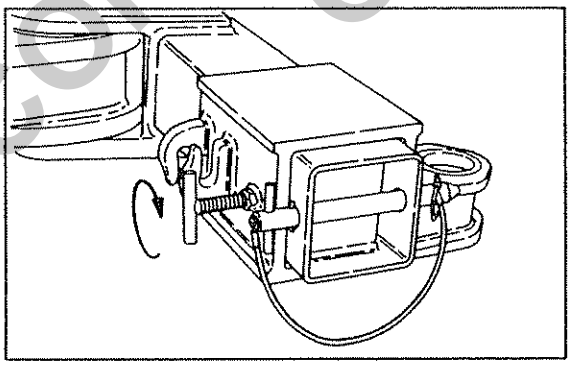


8. Lower the under lift boom to about one (1) in. from the ground and swing the crossbar parallel to the casualty vehicle.

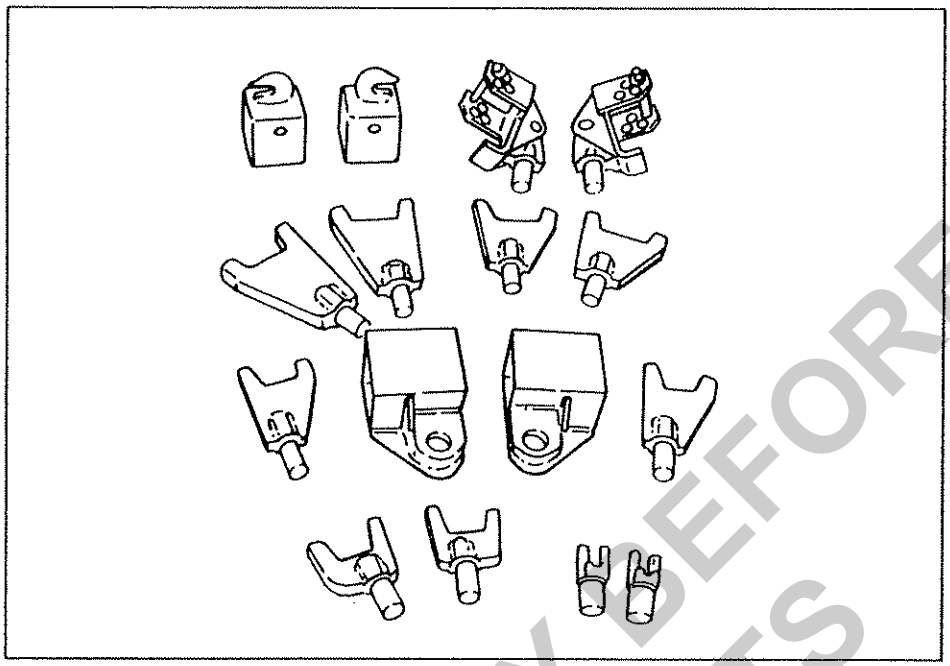


9. Attach the lift receivers to the crossbar by sliding them over the ends of the crossbar. Install the retaining pin into the end of the crossbar and secure with the safety pin.

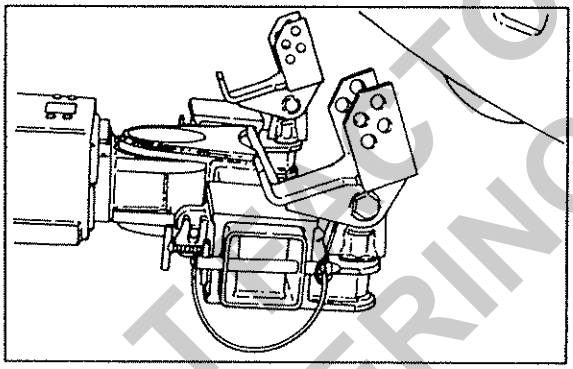
CAUTION:
The retaining pins must be in place during all towing applications.

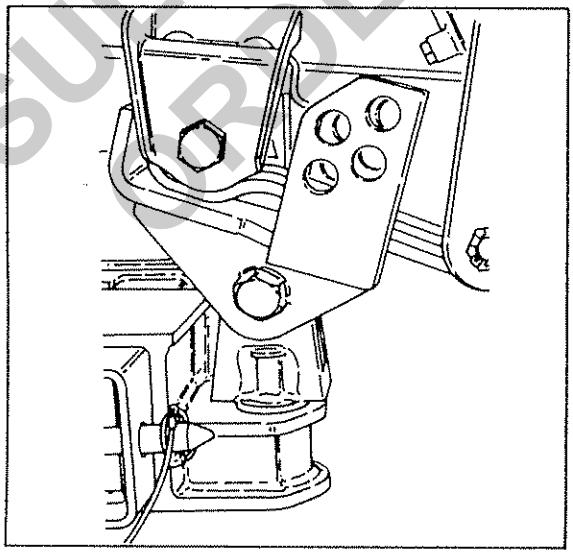


10. Adjust the lift receivers on the crossbar to the desired position and tighten the "T" handles to secure the receivers on the crossbar.



SPRING BRACKETS

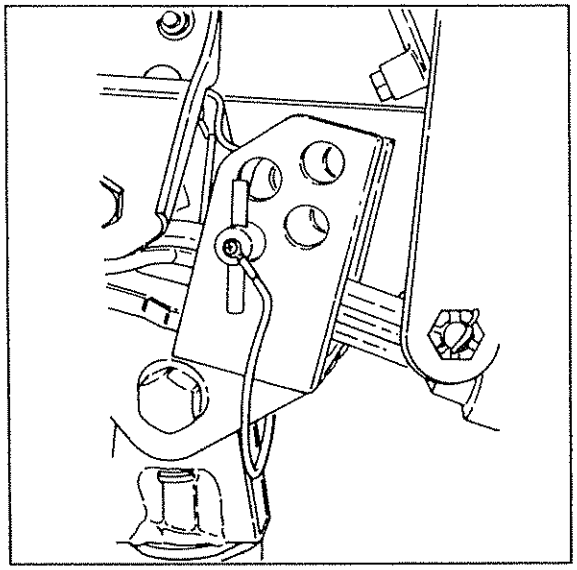




1. Insert the spring brackets into the receivers that you put onto the crossbar.

2. Extend the under lift boom under the casualty vehicle so that the spring brackets are in the proper position for lifting. **At the same time make sure you are not attaching the spring brackets to any steering components.**

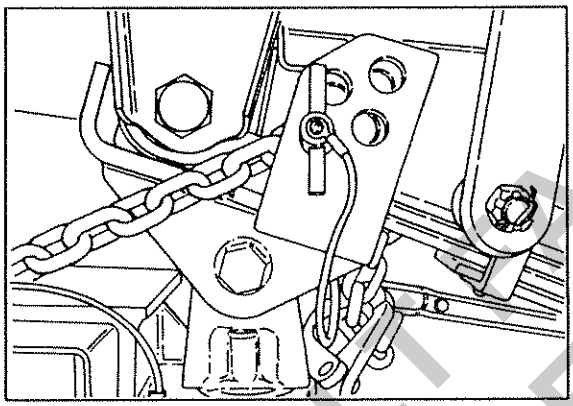
3. Raise the boom to lift the casualty vehicle slightly.



NOTE:
Do not use the under lift fold function to lift a load.

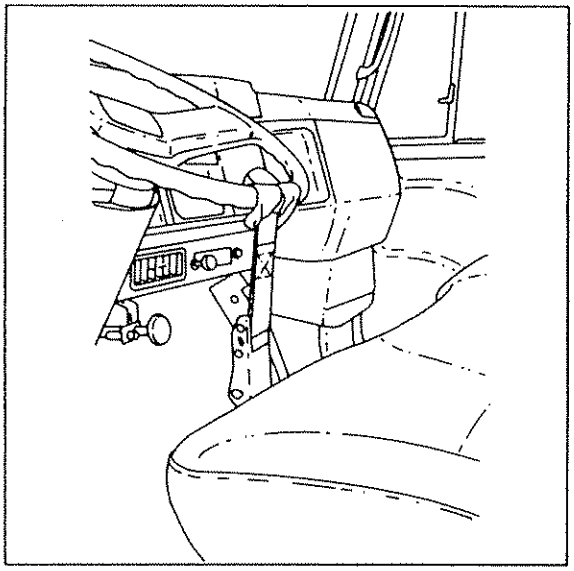
4. Secure the casualty vehicle to the spring brackets with the retaining pins and safety pins.

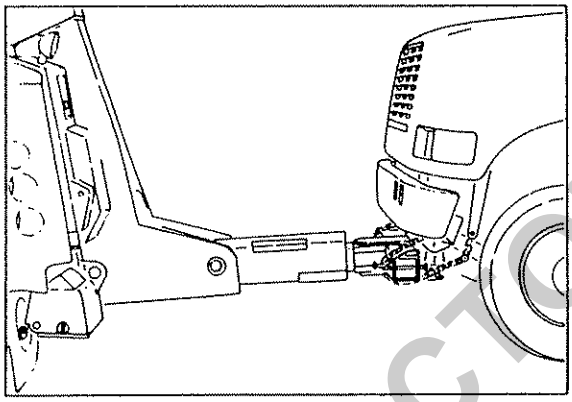
5. Secure the casualty vehicle to the crossbar with chains and a chain binder.



6. After securing the casualty vehicle and before making the final lift, check to be sure that the casualty's parking brake is released, the transmission is in neutral, and the wheels are straight.

CAUTION:
If vehicle to be towed is on a slope, do not release the brake until the load is secured.





7. It is recommended that the steering wheel be secured by a steering wheel strap for any front or rear tow.

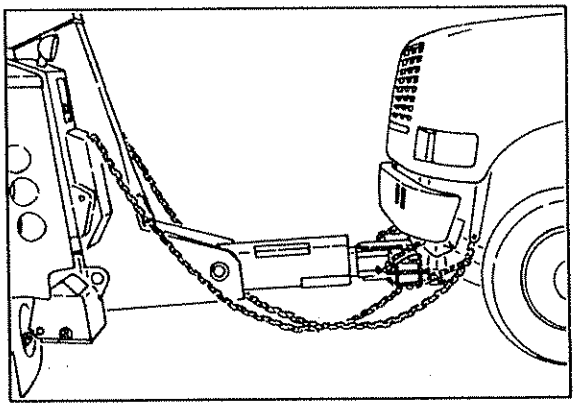
8. With the vehicle in neutral and the parking brake released, you can move the vehicle safely up, down, in or out. All of these movements are hydraulically controlled.

9. Power retract the under lift until the casualty vehicle is about three (3) to four (4) feet from the back of the recovery vehicle. Leave enough room to maneuver around corners without corner binding or causing contact between the two (2) vehicles. **Be sure that the fly boom is extended at least four (4) in. from the middle boom section to ensure unobstructed crossbar pivoting.**

10. Raise the casualty vehicle into the final towing position observing the far end for sufficient ground clearance. It is possible to set the rear of a front lifted vehicle completely onto the ground, causing damage. Take irregular road surfaces into consideration. Observe the lift function from

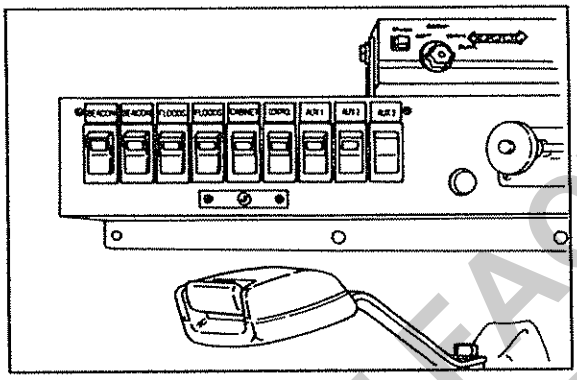
the side and away from both vehicles if possible.

NOTE:
Boom should be as close to horizontal as possible.



11. Be sure to maintain sufficient ground clearances with the bottom of the casualty vehicle.

12. Attach the safety chains and magnetic towing lights.

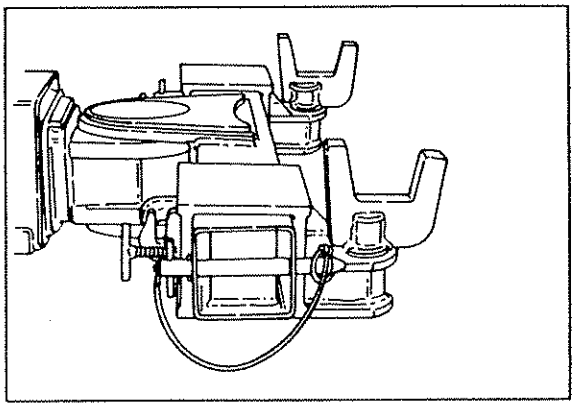


13. If the wired remote hand controller was used, turn the CONTROL switch "OFF". (Switch is located on panel on the floor.)

WARNING:

Never fold the boom up into the storage position without removing the towing adapters from the crossbar receivers.

FRAME FORKS

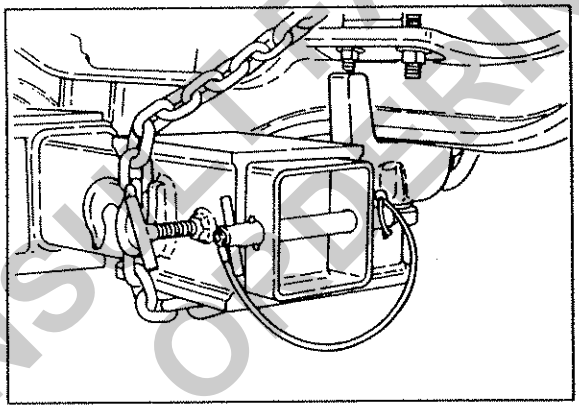


1. Choose the frame forks that are best suited to your needs and insert them into the receivers on the crossbar.

2. Extend the under lift boom under the vehicle so that the frame forks are in the proper position for lifting. **At the same time make sure you are not attaching the frame forks to any steering components.**

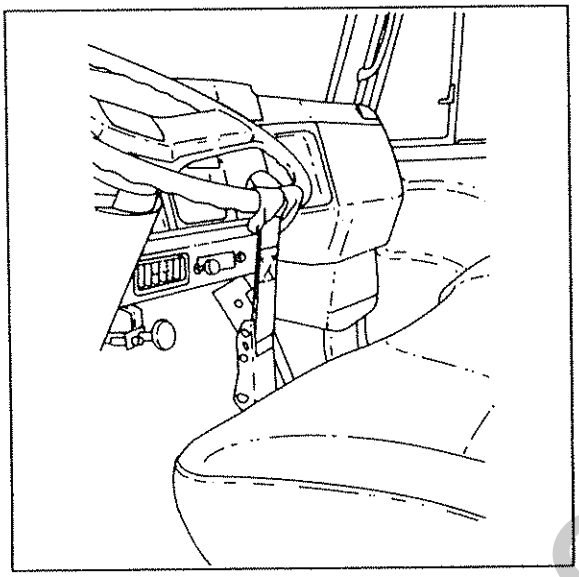
3. Raise the boom to lift the casualty slightly.

> **NOTE:**
> Do not use the under lift fold function to lift a load.



4. Secure the casualty vehicle to the crossbar with chains and a chain binder.

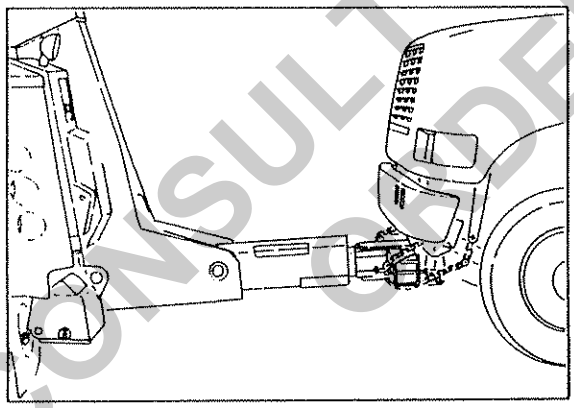
5. After securing the casualty vehicle and before making the final lift, check to be sure that the casualty's parking brake is released, the transmission is in neutral, and the wheels are straight.



CAUTION:
If vehicle to be towed is on a slope, do not release the brake until the load is secured.

6. It is recommended that the steering wheel be secured by a steering wheel strap for any front or rear tow.

7. With the vehicle in neutral and the parking brake released, you can move the vehicle safely up, down, in or out. All of these movements are hydraulically controlled.

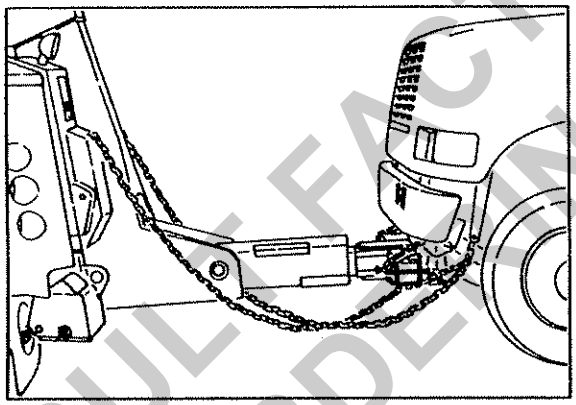


8. Power retract the under lift until the casualty vehicle is about three (3) to four (4) feet from the back of the recovery vehicle. Leave enough room to maneuver around corners without corner binding or causing contact between the two (2) vehicles. **Be sure that the fly boom is extended at least four (4) in. from the middle boom section to ensure unobstructed crossbar pivoting.**

9. Raise the casualty vehicle into towing position observing the far end for sufficient ground clearance. It is possible to set the rear of a front lifted vehicle completely onto the ground, causing damage. Take irregular road surfaces into consideration. Observe the lift function from the side and away from both vehicles if possible.

NOTE:
Boom should be as close to horizontal as possible.

10. Be sure to maintain sufficient ground clearances with the bottom of the casualty vehicle.



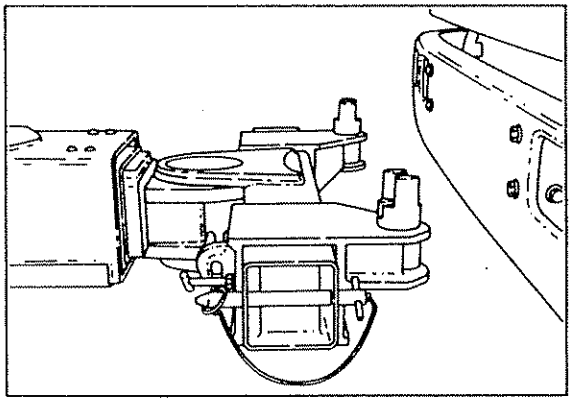
11. Attach the safety chains and magnetic towing lights.

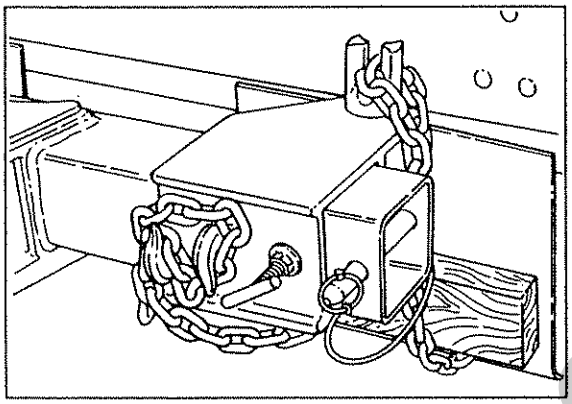
12. If the wired remote hand controller was used, turn the CONTROL switch "OFF". (Switch is located on panel on the floor.)

WARNING:

Never fold the boom up into the storage position without removing the towing adapters from the crossbar receivers.

CHAIN FORKS (OPTIONAL)





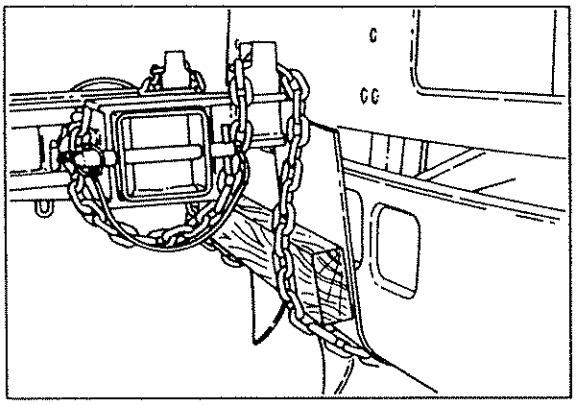
1. Insert the chain forks into the receivers on the crossbar.

2. Extend the under lift boom up to the casualty vehicle so that the chain forks are in the proper position for lifting.

3. Attach the hook-up chains to the casualty vehicle. Hook the chains through the chain forks and secure any extra chain to the hooks on the lift receivers. The use of wood blocks and rubber mats may be required to protect the casualty vehicle.

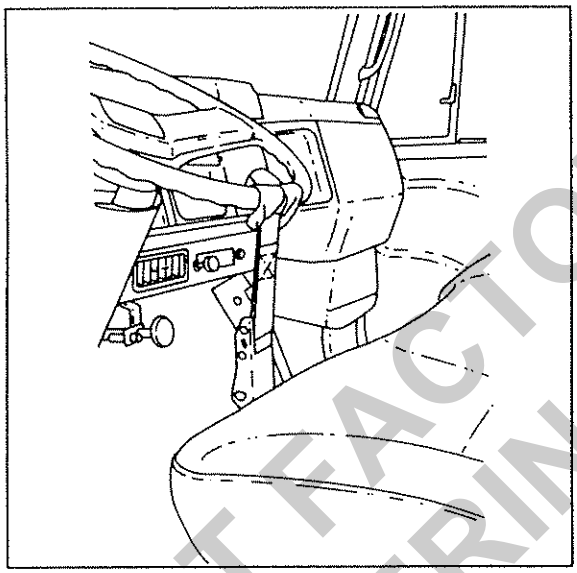
4. Raise the boom to lift the casualty vehicle slightly. At the same time make sure that you are not going to damage any components.

NOTE:
Do not use the under lift fold function to lift a load.



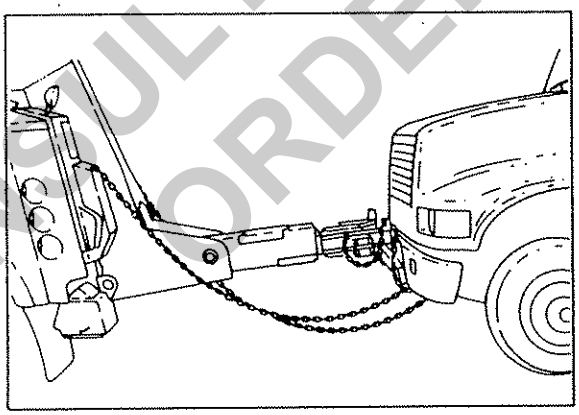
5. Before making the final lift, check to be sure that the casualty's parking brake is released, the transmission is in neutral, and the wheels are straight.

> ***CAUTION:***
> If vehicle to be towed is on a slope, do not release the brake until the load is secured.

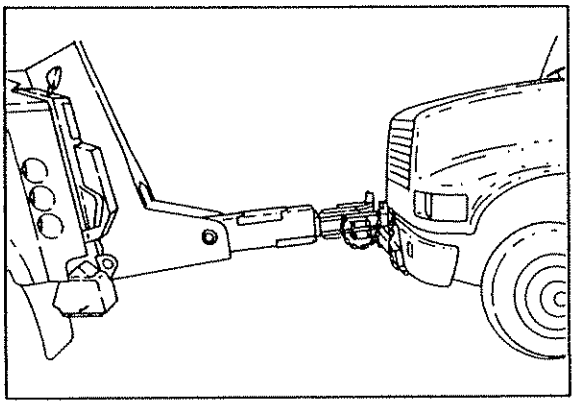


6. It is recommended that the steering wheel be secured by a steering wheel strap for any front or rear tow.

7. With the vehicle in neutral and the parking brake released, you can move the vehicle safely up, down, in or out. All of these movements are hydraulically controlled.



8. Power retract the under lift until the casualty vehicle is about three (3) to four (4) feet from the back of the recovery vehicle. Leave enough room to maneuver around corners without corner binding or causing contact between the two (2) vehicles. **Be sure that the fly boom is extended at least four (4) in. from the middle boom section to ensure unobstructed crossbar pivoting.**

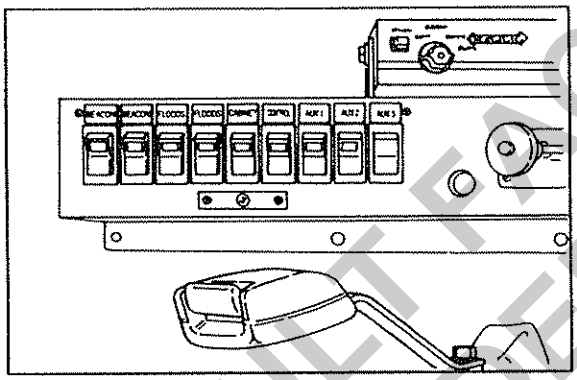


9. Raise the casualty vehicle into towing position observing the far end for sufficient ground clearance. It is possible to set the rear of a front lifted vehicle completely onto the ground, causing damage. Take irregular road surfaces into consideration.

NOTE:
Boom should be as close to horizontal as possible.

10. Be sure to maintain sufficient ground clearances with the bottom of the casualty vehicle.

11. Attach the safety chains and magnetic towing lights.

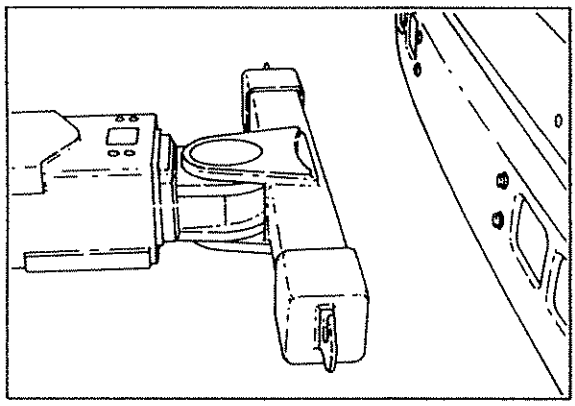


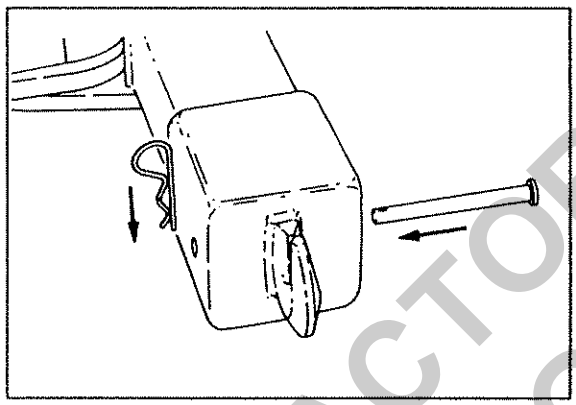
12. If the wired remote hand controller was used, turn the CONTROL switch "OFF". (Switch is located on panel on the floor.)

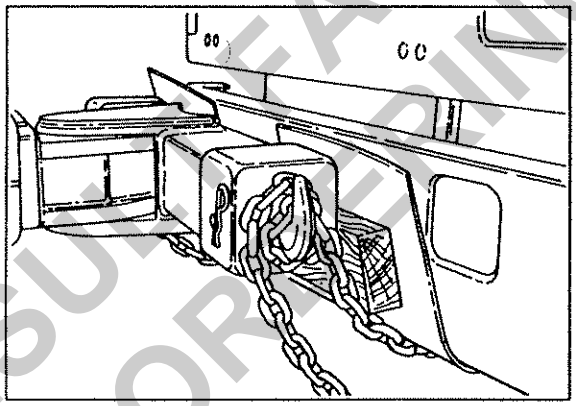
WARNING:

Never fold the boom up into the storage position without removing the towing adapters from the crossbar receivers.

CHAIN HOOK ADAPTERS

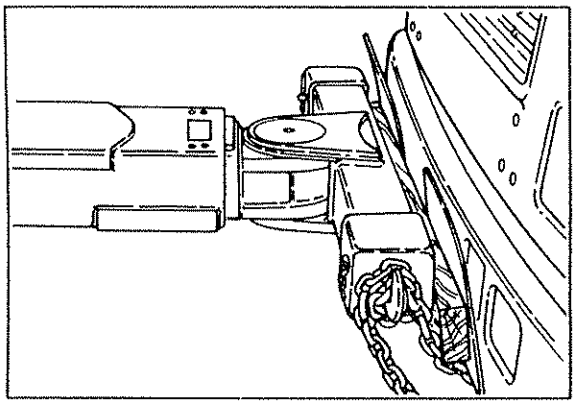






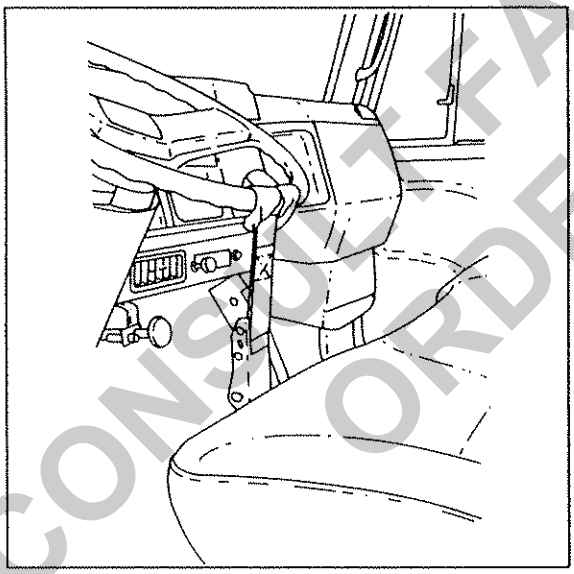
1. Slide the chain hook adapters onto the crossbar.
2. Install the retaining pin from the back side of the crossbar through the adapter and crossbar and install the hair pin.
3. Extend the under lift boom up to the casualty vehicle so that the chain hook adapters are in the proper position for lifting.
4. Attach hook-up chains to the casualty vehicle. Fasten the chains in the hooks on the end of the adapters and wrap the chain around the bottom of the hook. Secure the remaining chain.
5. Raise the boom to lift the casualty vehicle slightly. At the same time make sure that you are not going to damage any components.

NOTE:
Do not use the under lift fold function to lift a load.



6. Before making the final lift, check to be sure that the casualty's parking brake is released, the transmission is in neutral, and the wheels are straight.

CAUTION:
If vehicle to be towed is on a slope, do not release the brake until the load is secured.

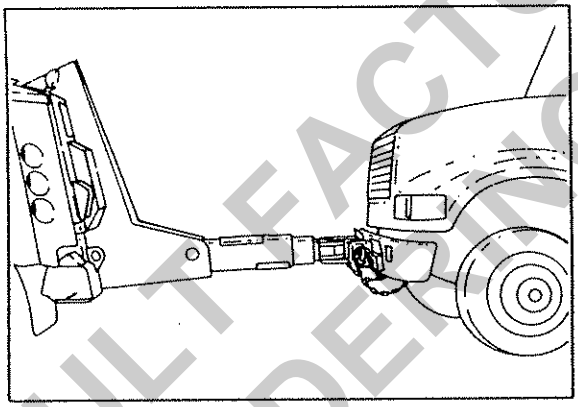


7. It is recommended that the steering wheel be secured by a steering wheel strap for any front or rear tow.

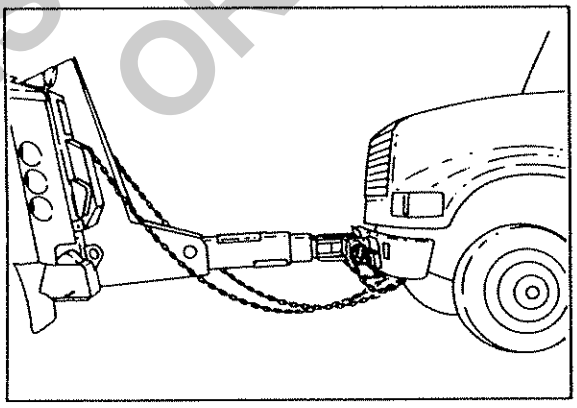
8. With the vehicle in neutral and the parking brake released, you can move the vehicle safely up, down, in or out. All of these movements are hydraulically controlled.

9. Power retract the under lift until the casualty vehicle is about three (3) to four (4) feet from the back of the recovery vehicle. Leave enough room to maneuver around corners without corner binding or causing contact between the two (2) vehicles. **Be sure that the fly boom is extended at least four (4) in. from the middle boom section to ensure unobstructed crossbar pivoting.**

10. Raise the casualty vehicle into towing position observing the far end for sufficient ground clearance. It is possible to set the rear of a front lifted vehicle completely onto the ground, causing damage. Take irregular road surfaces into consideration.

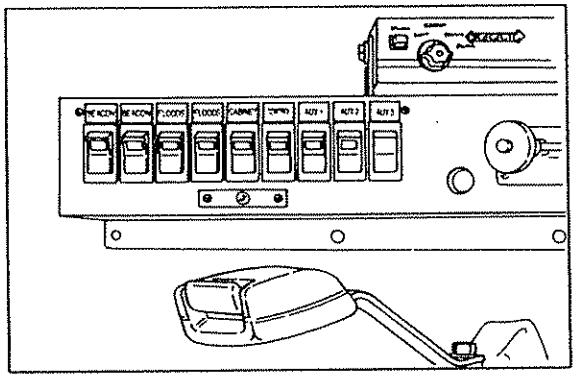


NOTE:
Boom should be as close to horizontal as possible.



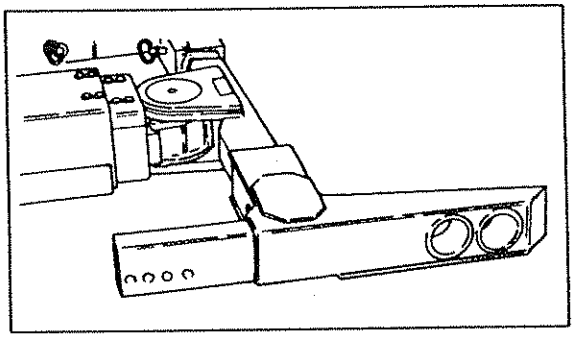
11. Be sure to maintain sufficient ground clearances with the bottom of the casualty vehicle.

12. Attach the safety chains and magnetic towing lights.

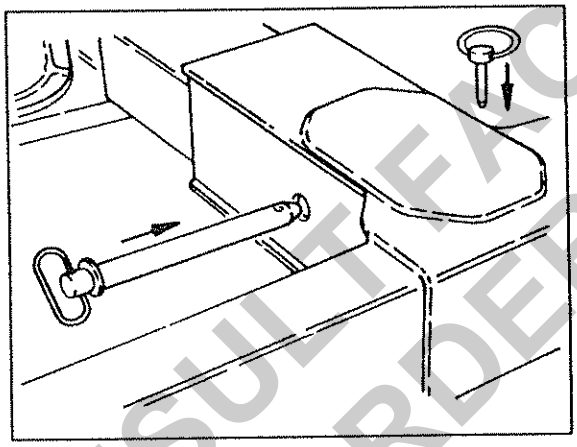


13. If the wired remote hand controller was used, turn the CONTROL switch "OFF". (Switch is located on panel on the floor.)

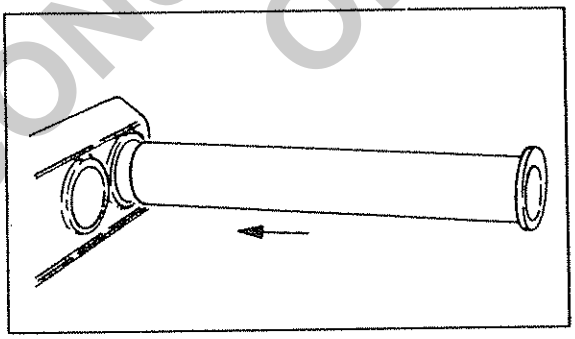
BUS BARS (OPTIONAL)



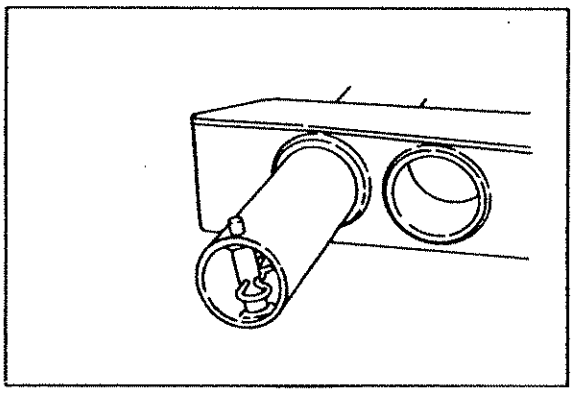
1. Slide the bus bar grid onto the crossbar.



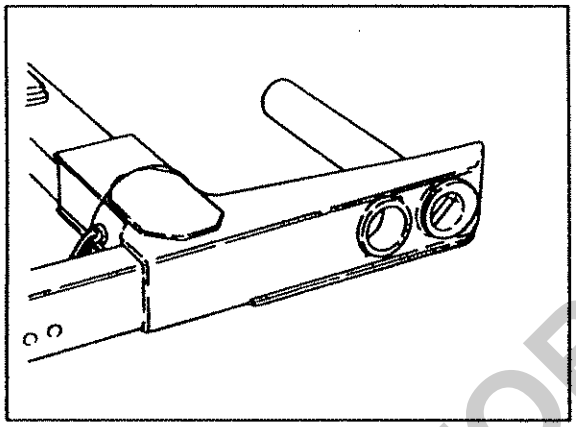
2. Install the retaining pin from the back side of the crossbar through the grid and crossbar and secure with the pin.



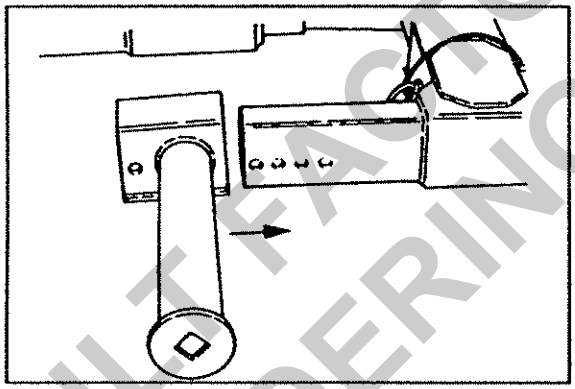
3. Insert the round tube into the desired position in the grid.



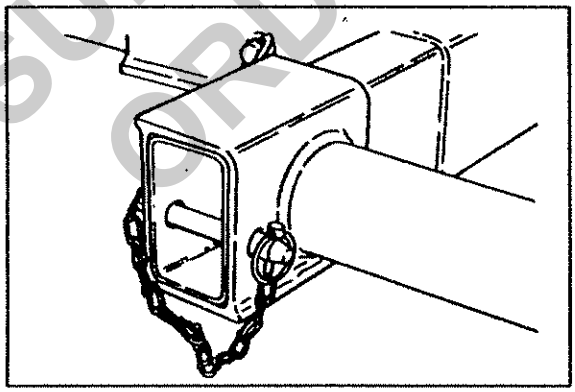
4. Install the retaining pin and hairpin.



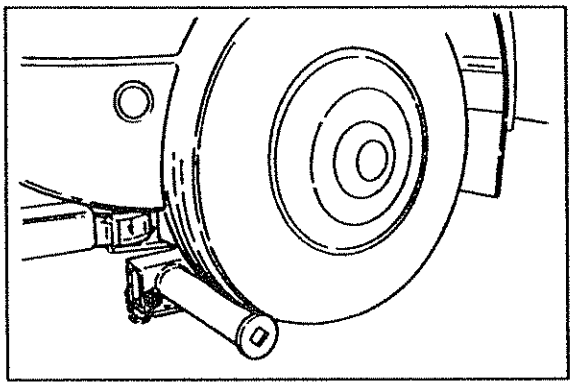
5. Retract the tube inward to the loading position.



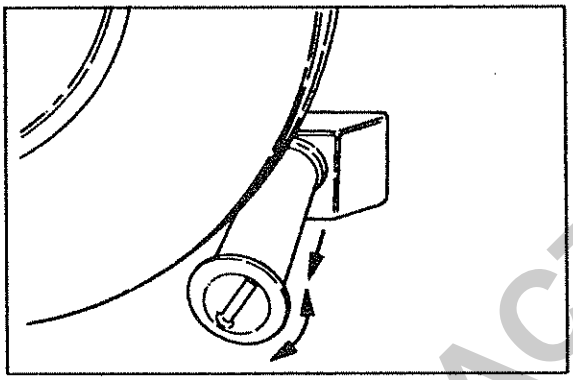
6. Slide the arm weldment over the end of the grid and adjust to the desired position for loading.



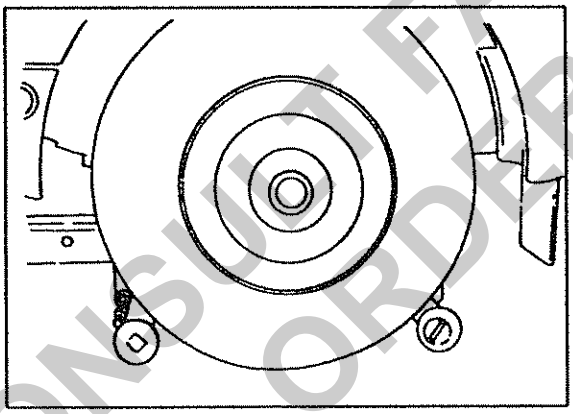
7. Install the retaining pin through the grid and arm weldment and secure with the pin.



8. Extend the under lift under the casualty vehicle so that the arm makes contact with the front of the tires. **At the same time make sure that you are not going to damage any under body components.**

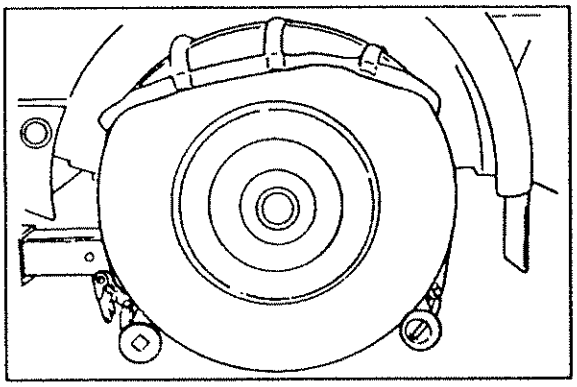


9. Using the pulling tool, extend the round tube to capture the back of the tire. After extending the tube, make sure that the flanged edge of the tube is turned up to prevent the tire from sliding off the end of the tube.

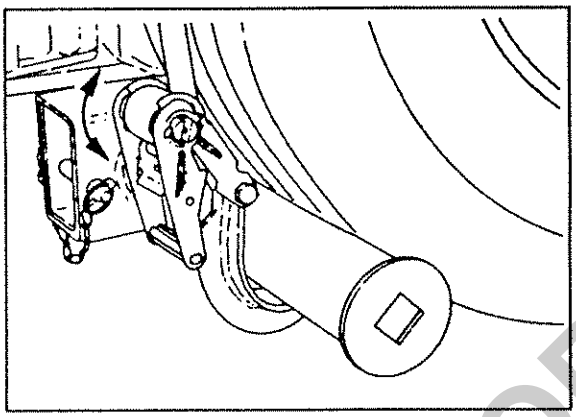


10. Raise the boom to lift the casualty vehicle slightly. At the same time make sure that you are not going to damage any components.

NOTE:
Do not use the under lift fold function to lift a load.



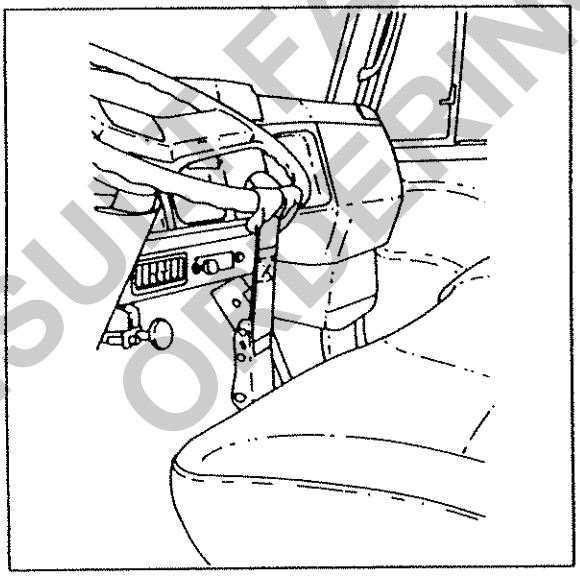
11. Attach the hook end of the tie-down strap to the round tube behind the tire. Pull the strap up and cover the tire and attach the hook on the ratchet end of the strap to the arm in front of the tire.



12. Take up the slack in the strap by racheting the takeup spool arm. Continue until the tires show some compression.

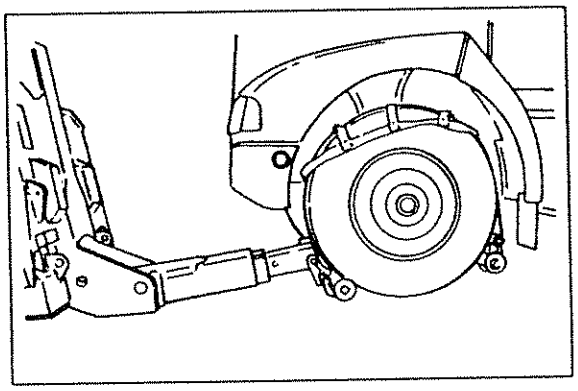
CAUTION:

If vehicle to be towed is on a slope, do not release the brake until the load is secured.



13. It is recommended that the steering wheel be secured by a steering wheel strap for any front or rear tow.

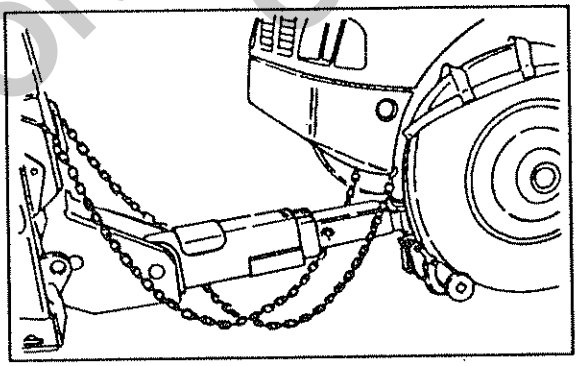
14. With the vehicle in neutral and the parking brake released, you can move the vehicle safely up, down, in or out. All of these movements are hydraulically controlled.



15. Power retract the under lift until the casualty vehicle is about three (3) to four (4) feet from the back of the recovery vehicle. Leave enough room to maneuver around corners without corner binding or causing contact between the two (2) vehicles. **Be sure that the fly boom is extended at least four (4) in. from the middle boom section to ensure unobstructed crossbar pivoting.**

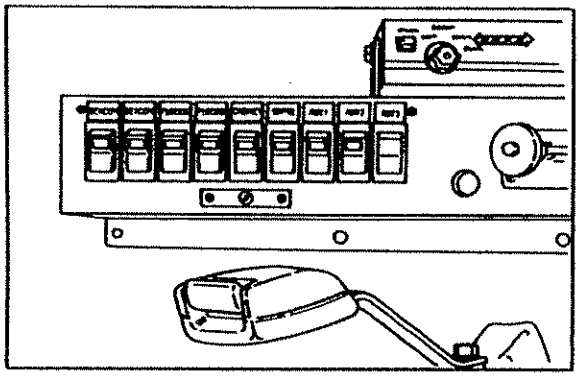
16. Raise the casualty vehicle into towing position observing the far end for sufficient ground clearance. It is possible to set the rear of a front lifted vehicle completely onto the ground, causing damage. Take irregular road surfaces into consideration.

NOTE:
Boom should be as close to horizontal as possible.



17. Be sure to maintain sufficient ground clearances with the bottom of the casualty vehicle.

18. Attach the safety chains and magnetic towing lights.



19. If the wired remote hand controller was used, turn the CONTROL switch "OFF". (Switch is located on panel on the floor.)

CAUTION:

The bus bars and grid tubes must be in their outermost positions for storage on the under lift when folded up in the travel position to avoid damage to the body.

CAUTION:

Retighten the tie-down straps periodically during a tow as the tires settle into the grid from towing.

TRAILER 5TH WHEEL PLATE AND PINTLE HOOK BALL HITCH ADAPTER (OPTIONAL)

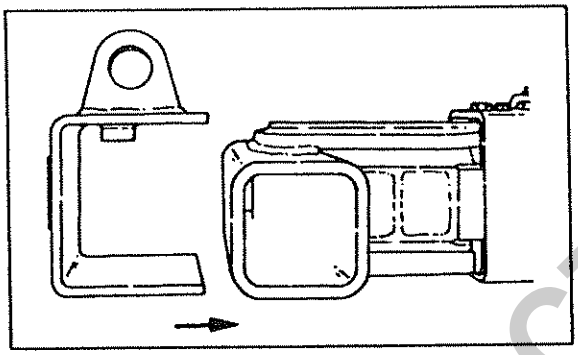
DO NOT EXCEED THE FOLLOWING RATINGS:

5TH WHEEL PLATE
- LIFTING CAPACITY . . . . . 15,000 lbs.
- TOWING CAPACITY . . . . . 25,000 lbs.

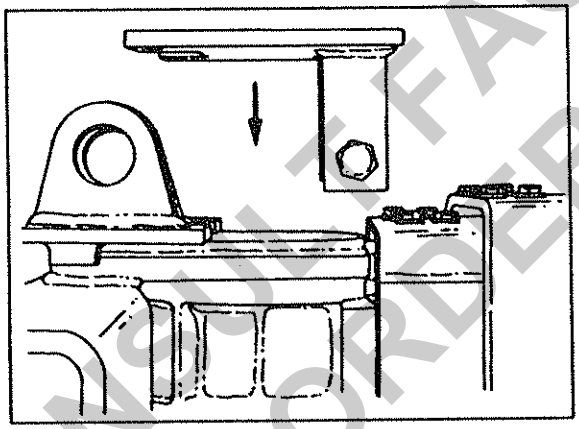
PINTLE HOOK BALL HITCH
- 2" BALL HITCH . . . . . 10,000 lbs.
- PINTLE HOOK . . . . . 16,000 lbs.

GROSS TRAILER WEIGHT

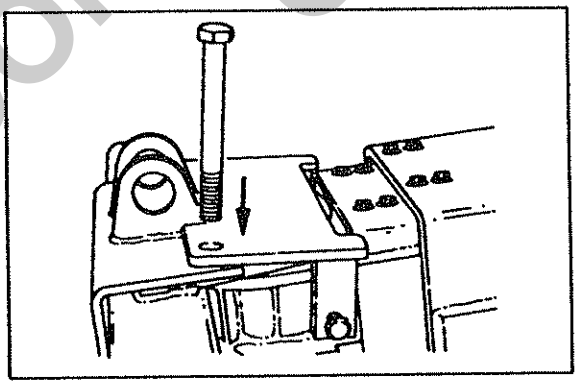
3,000 lbs. MAXIMUM VERTICAL LOAD



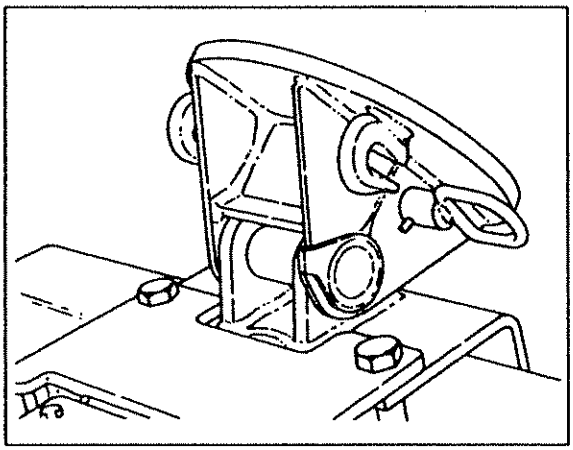
1. Slide the 5th wheel plate adapter onto the crossbar pivot.



2. Install the keeper bracket down onto the crossbar pivot adapter.

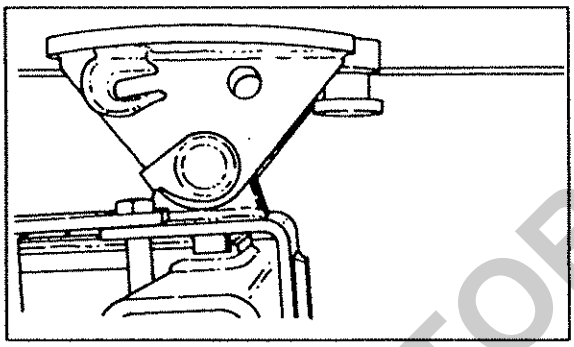


3. Install the retaining bolts thru the keeper bracket and into the adapter. Tighten the retaining bolts.



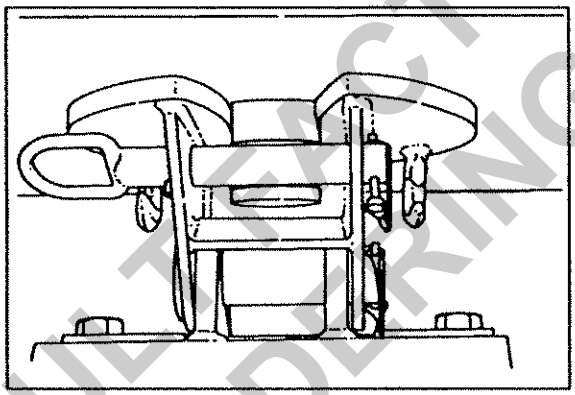
4. Install the 5th wheel plate onto the adapter with the attaching pin. Secure the attaching pin with the linchpin.

5. Remove the king pin locking pin from the 5th wheel plate and position the recovery vehicle in front of the casualty and in-line with the king pin.



6. Extend the under lift up to the king pin.

7. Engage the 5th wheel plate with the king pin. Install the king pin locking pin and linchpin.



8. Connect the air lines from the recovery vehicle to the casualty trailer to release the trailer brakes.

9. Raise the trailer jack stands.

10. Attach the safety chains.

CAUTION:

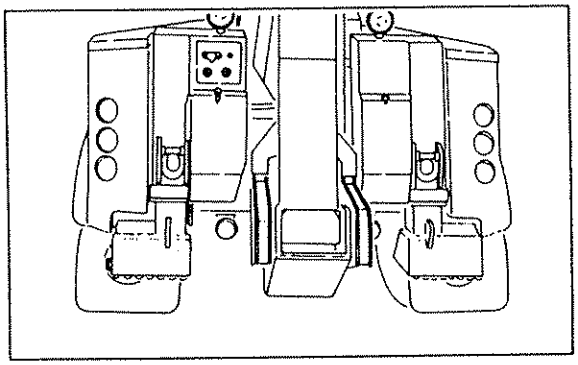
If the trailer to be towed is on a slope, do not release the brake until the load is secured.

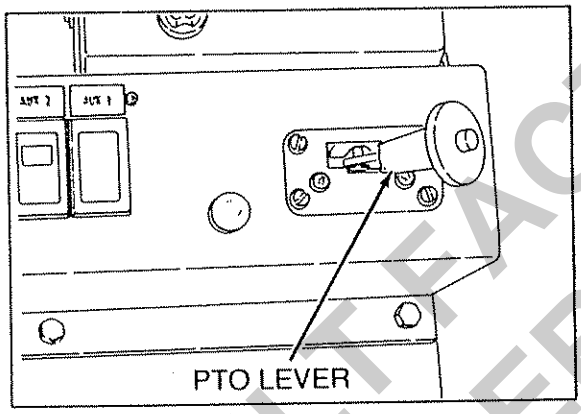
NOTE:

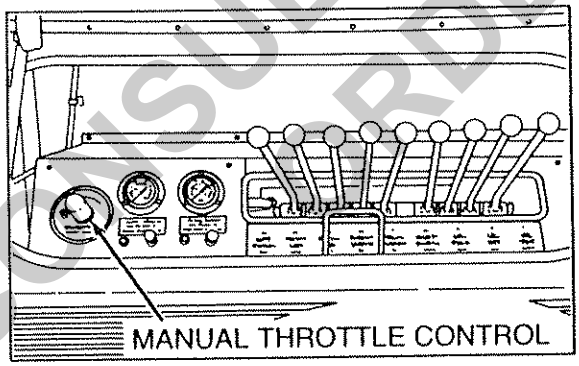
Do not use the under lift fold function to lift the load.

REAR HYDRAULIC STABILIZERS

Your HDL500\280 is equipped with rear hydraulic stabilizers. The stabilizers serve two purposes. First, they may be used as a chassis support when lifting heavy loads which would otherwise cause the front axle of the vehicle to lift off the ground. Second, they can be used to provide a resistance to winching forces. USE CAUTION AND GOOD JUDGEMENT!







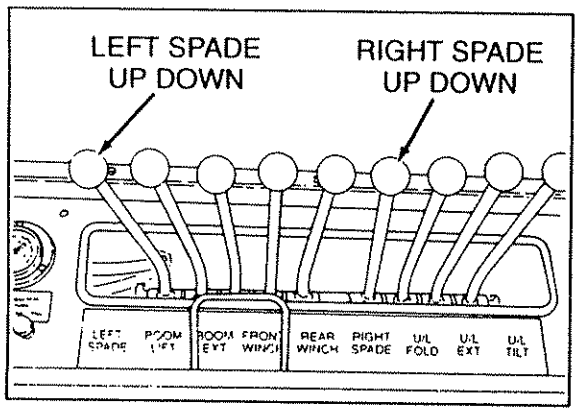
Follow these simple steps:

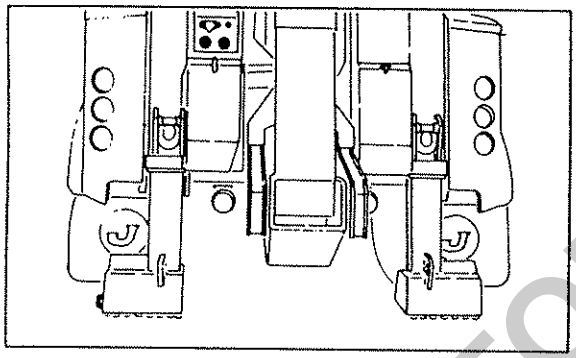
1. Position the recovery vehicle as close as possible to the work and set the parking brakes and place the transmission in neutral.

2. Engage the power take-off (PTO). See PTO operator's instruction manual.

3. Adjust the electronic or manual throttle control to elevate the engine speed to approximately 1200-1400 R.P.M. for optimum performance.

CAUTION:
Never exceed 1500 R.P.M. When your hook up is complete, reset the engine idle to normal.





4. Using the control levers, lower the stabilizers to the ground. The stabilizers work independently from each so that they can be used on uneven ground.

CAUTION:

Do not attempt to use the stabilizers to level the recovery vehicle chassis or raise the rear of the recovery vehicle off of the ground. Damage to the chassis can occur.

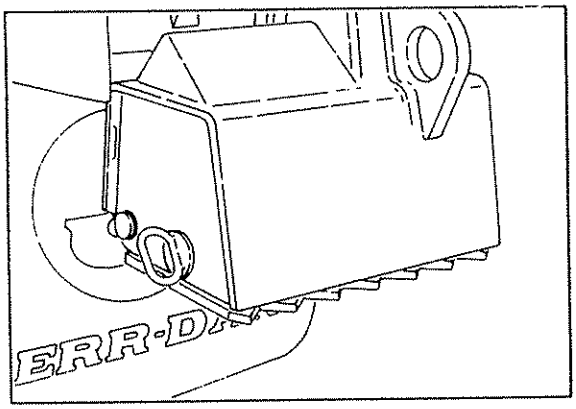
WARNING:

Area should be clear of feet when lowering the rear stabilizers.

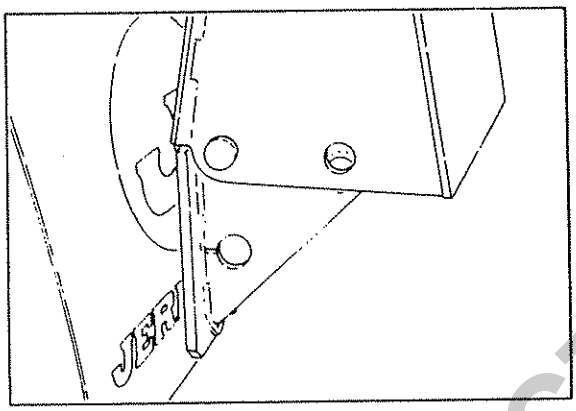
CAUTION:

Do not move the recovery vehicle with the stabilizers on the ground or damage to the chassis can occur.

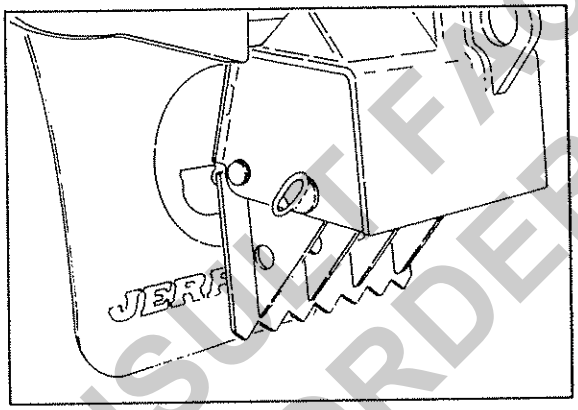
INTEGRAL SPADES



1. Remove the safety pin and spade retaining pin.



2. Allow the integral spade to swing down exposing the spade blades.



3. Line up holes and insert spade retaining pin and safety pin.

CAUTION:

Do not attempt to use the stabilizers to level the recovery vehicle chassis or raise the rear of the recovery vehicle off of the ground. Damage to the chassis can occur.

NOTE:

The eye plate on the back side of the stabilizers can be used for the attachment of snatch blocks

WARNING:

Area should be clear of feet when lowering the rear stabilizers.

CAUTION:

Do not move the recovery vehicle with the stabilizers on the ground or damage to the chassis can occur.

CAUTION:

Do not use spades on pavement or concrete. Damage to the pavement or concrete may result.

WRECKER BOOM OPERATION

The wrecker boom is probably one of the most useful accessories on your HDL500/280. It allows the operator to perform lifting and retrieval tasks that cannot be performed in any other way. Safe operation of the wrecker boom demands knowledge of the controls and the boom functions. Review the boom safety section of this manual and USE CAUTION AND GOOD JUDGEMENT!

Position the recovery vehicle to best take advantage of the leverage the boom affords. A vertical lift is the best and most efficient, so attempt to place the boom over the work. This reduces the chance of the work breaking free and swinging during the lift. Place the recovery vehicle as close as possible to the work. A shorter boom extension will result in less rear axle loading. When pulling, align the recovery vehicle with the work so that the direction of pull is in line with the length of the truck. If the front wheels of the recovery vehicle raise completely from the ground,

Stop! And Re-Rig.

DUAL WINCH OPERATION

Your HDL500/280 is equipped with a dual winch wrecker boom and it has the following ratings:

BOOM RATING:

TEMA Rating - Boom elevated at 30° Angle

Retracted	50,000 lbs.
Extended	16,000 lbs.

Rating At Minimum Boom Angle 5°

Retracted	30,000 lbs.
Extended	12,000 lbs.

WINCH RATING:

Each Drum	25,000 lbs.

WIRE ROPE:

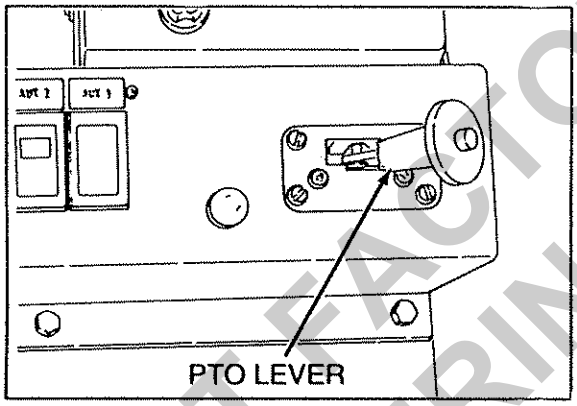
Working Limit Each Line	11,700 lbs.
Construction	6 x 37 EIP IWRC
Diameter	5/8 inch
Standard Length	225 Feet

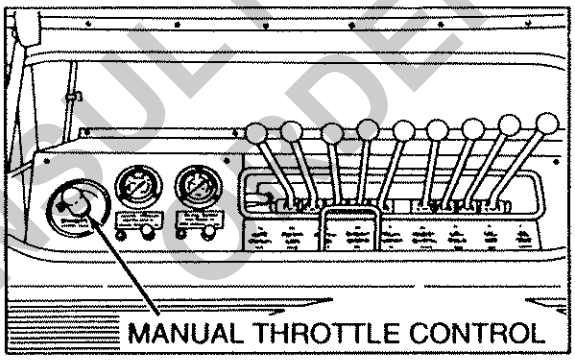
WARNING:

Do not exceed the working limit of the wire rope. Use snatch blocks and multiple lines to reduce the load on the wire rope. Always apply an equal load in the opposite direction of the pull to stabilize the load.

These ratings are supplied for day to day reference. See rating placard affixed to the under lift boom tower for the ratings of your particular wrecker boom. The operator must be sure he knows and understands this information before placing the boom into service.

When making a heavy lift or pull with the wrecker boom, the following steps should be taken:

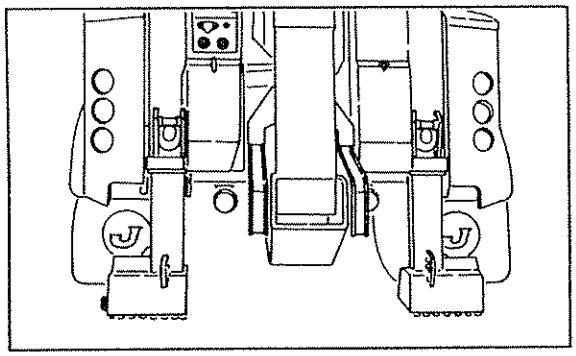




1. Position the recovery vehicle as close as possible to the work and set the parking brakes and place the transmission in neutral.
2. Turn "ON" the CONTROL switch to power the winch cable free-spool device.
3. Engage the power take-off (PTO). See PTO operator's instruction manual. Adjust the electronic or manual throttle control to elevate the engine speed to approximately 1200-1400 rpm for optimim performance.

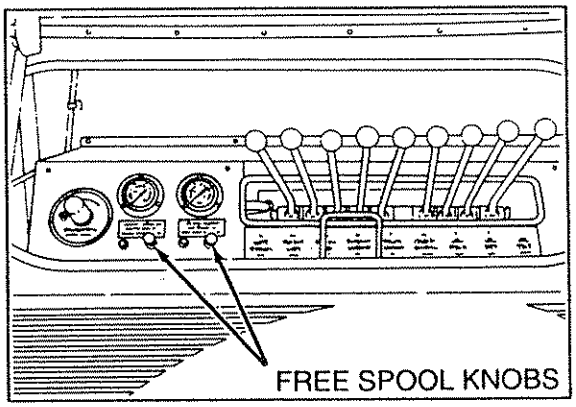
CAUTION:

Never exceed 1500 R.P.M. When your hook up is complete, reset the engine idle to normal.

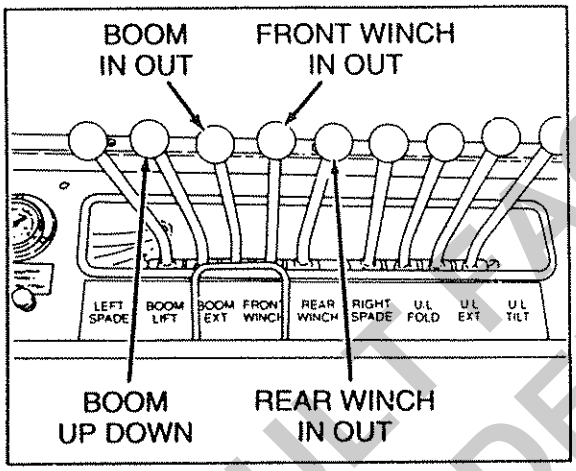


4. Confirm that the recovery vehicle is positioned properly and rests on firm ground. The stabilizers or spades can be lowered to provide additional support if necessary.

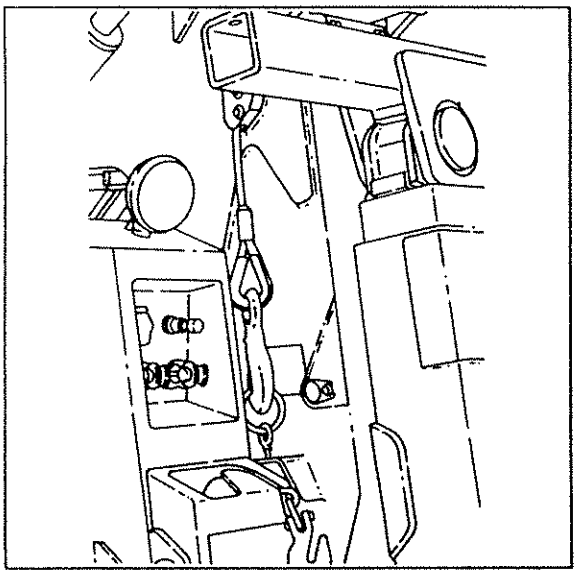
5. If a heavy lift or pull is to be made additional cable lines may be necessary. Always use more stabilizing lines than pull lines. RIG FOR SAFETY.



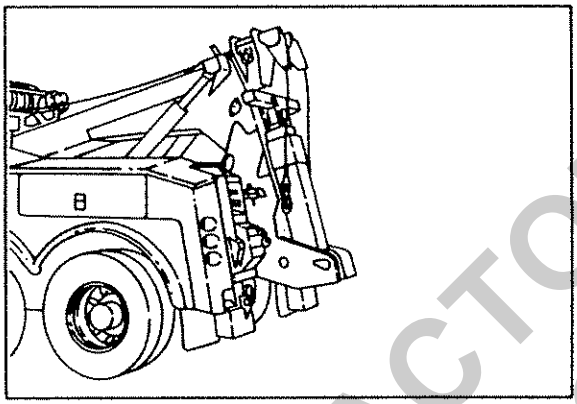
6. Using the winch control levers, unwind some wire rope from the winches to relieve the pressure on the winch free-spool device.



7. Pull the winch free-spool knobs to the "out" position to set both boom winches into the "free spool" mode. The indicator lights will illuminate.

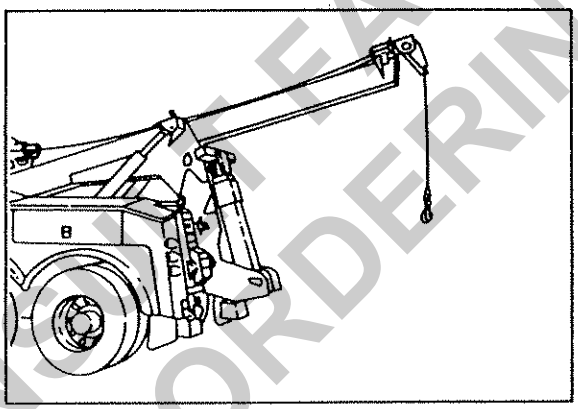


8. Wearing gloves, unhook the wire ropes from their stored position. Moving the boom head with the wire rope locked can result in damage to both the wire ropes and the boom. Carefully observe the winch drums when beginning to extend the boom to be sure both winches are free-spooling.



9. Position the boom head by using the boom up and down lever and the boom in and out lever.

10. Manually, "free-spool" enough wire rope to make the hook-up being sure that a minimum of five (5) wraps remains on the cable drums.

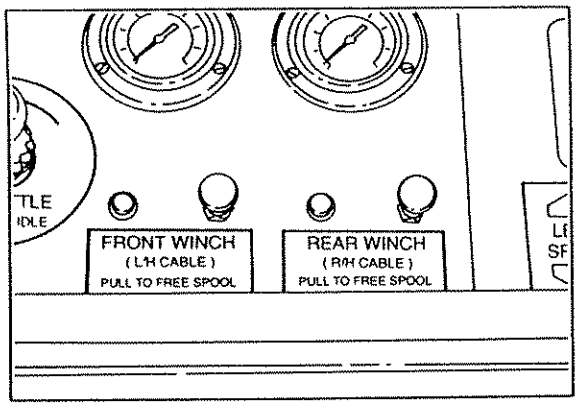


WARNING:

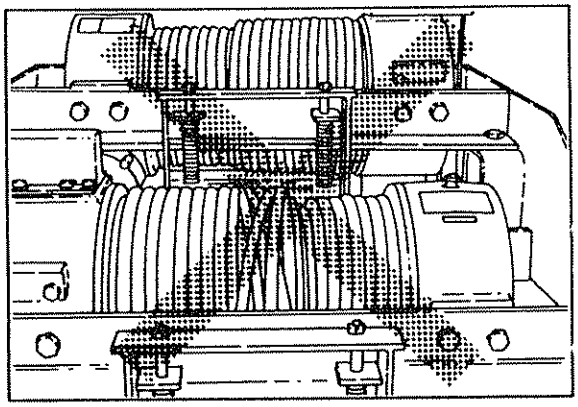
Wear gloves to protect hands from wire ropes.

CAUTION:

To avoid birdnesting and premature failure of the wire rope, always keep tension on the wire rope when unwinding.

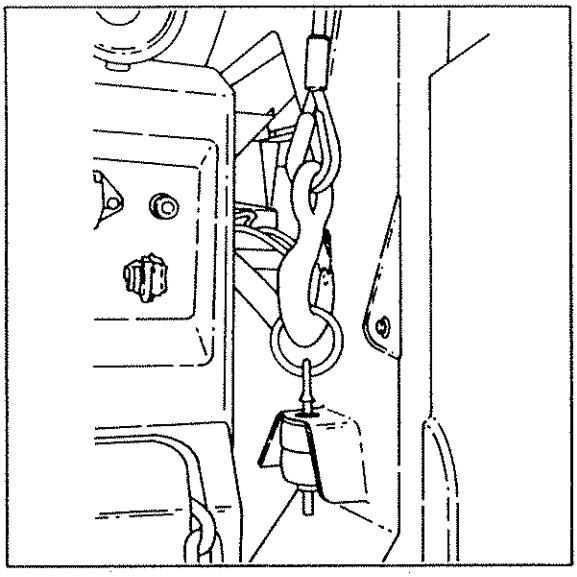


11. Make the hook-up in such a way as to afford an even pull on both wire ropes. Over stressing one wire rope can happen if care isn't taken in hook placement.



12. Push the winch free-spool knobs to the in position to re-engage the winch. Slowly take up the slack in the wire ropes. Inspect the hook-up points for slippage before continuing the lift or pull. Manually control each winch to ensure wire ropes are stressed evenly. As the wire rope is retrieved, be sure it doesn't criss-cross on the spool.

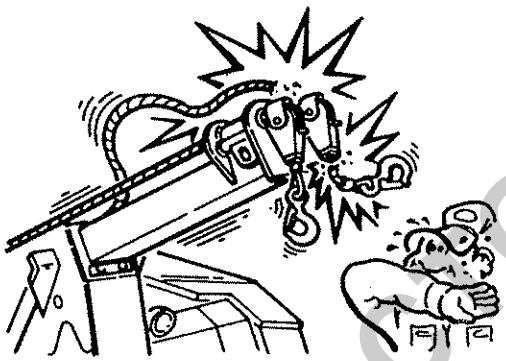
13. Complete the lift or pull being sure the work is placed in a stable location where it won't slip or roll. If there is any question about stability, use blocks or tie the work down before removing wire rope and chains.



14. Using the winch controls, unwind enough wire rope to remove the hooks or chains and remove them carefully. Avoid straddling the wire rope.

15. Respool both wire ropes and take this opportunity to inspect them for damage.

16. Retract and lower the boom to normal horizontal position and carefully snug up any loose wire rope.



CAUTION:

Don't stress the wire rope by over retrieving or tightening and exceeding the working limit.

MAINTENANCE AND LUBRICATION

Your HDL500/280 has been designed to give you excellent service and long life but like all equipment, it requires proper and periodic maintenance. The truck chassis itself is on a maintenance schedule recommended by the manufacturer. Follow these guidelines and protect your vehicle warranty. There are a number of different lubricants used on your HDL500/280 and the following chart details the proper lubricant and the most common brands and specification which meet the requirements.

Use only safe practices when maintaining this equipment. Always shut off the engine before reaching into pinch areas.

Inspect the vehicle and under lift system periodically for damage or evidence of pending failure. Damaged or broken parts should be replaced immediately. Never operate a machine which is known to be defective or operating improperly. The cause of any binding or leakage should be determined immediately and the problem promptly fixed.

Critical wear points on your HDL500/280 must be lubricated at regular intervals. Sliding surfaces are to be cleaned and coated with a heavy grease periodically. Cleaning every month is recommended for normal highway operations, but this frequency will vary appreciably with the type of service. Sliding on dirty wear surfaces will cause rapid wear. Fittings on linkage pivots should be greased every two (2) months, again depending upon usage. The following chart and diagram shows the location of these points, and when and what type of lubricant to use.

Check the hydraulic oil level bi-monthly or after any leakage. A sight glass has been provided on the hydraulic tank. The proper oil level is best checked with all cylinders fully retracted. Use 5W20 Dual Range hydraulic oil. (Automatic transmission fluid may be used in the hydraulic system if necessary.)

The hydraulic filters located on the return side of the hydraulic tank come equipped with restriction indicator gauges. The gauges show the operator the condition of the filter elements. When the needle reaches the red band (25 psi), the filter is starting to bypass and the element needs to be changed. Failure to change the element will result in premature wear and/or failure of any or all of the hydraulic components. **Only check gauges with hydraulic fluid at operating temperatures. Cold oil is more dense and will give a false indicator gauge reading.**

If a cylinder seal leaks, disassemble the cylinder and ascertain the cause of the leak. Small scores caused by chips or contaminated fluid can usually be worked out with fine emery cloth to avoid repetition of the trouble. Whenever any seal replacement is necessary, it is always advisable to replace all seals in that component. These seals are available in kits. Also, thoroughly clean all components before reassembly.

The body of your Jerr-Dan has been built from high strength aluminum and composite material which has been carefully assembled in our factory. To keep it clean and free of dirt use any non-abrasive soap or detergent recommended for automotive finishes. Use a soft cloth or sponge and finish with a thorough rinsing. Drying with a soft cloth or chamois will prevent spotting or streaking. A coat of automotive wax is recommended.

The HDL500/280 is mounted to the truck chassis by 24 bolts. These bolts are torqued at the factory to 300 ft. lbs. We recommend periodic inspection and retorquing of these bolts. Replace any broken or damaged bolts immediately.

OILS AND GREASES

The following oils and greases are suitable for use with your Jerr-Dan.

Company	Product
HYDRAULIC OILS	
1. Drydene Dual Range	Hydraulic Fluid 5w20
2. Sun Refining & Marketing	2105 Hydraulic
3. D.A. Lubricants	5w20 HiVi
4. Texaco	Rando HD AZ
5. Mobil Oil Corp.	DTE 15
6. Amoco Oil Co.	Rykon MV
7. Citgo	A/W All Temp
GREASES	
1. Drydene	HD Lithium EP2
2. Gulf	Crown EP2
3. Amoco	Amolith EP2
4. Shell	Alvania EP2
5. Texaco	Marfax EP2
6. Mobil	Mobilux EP2
7. Sunoco	Prestige Ep2
WINCH AND GEAR LUBE	
1. Phillips	140 wt. EP Gear Lube 93301 (or approved equivalent)

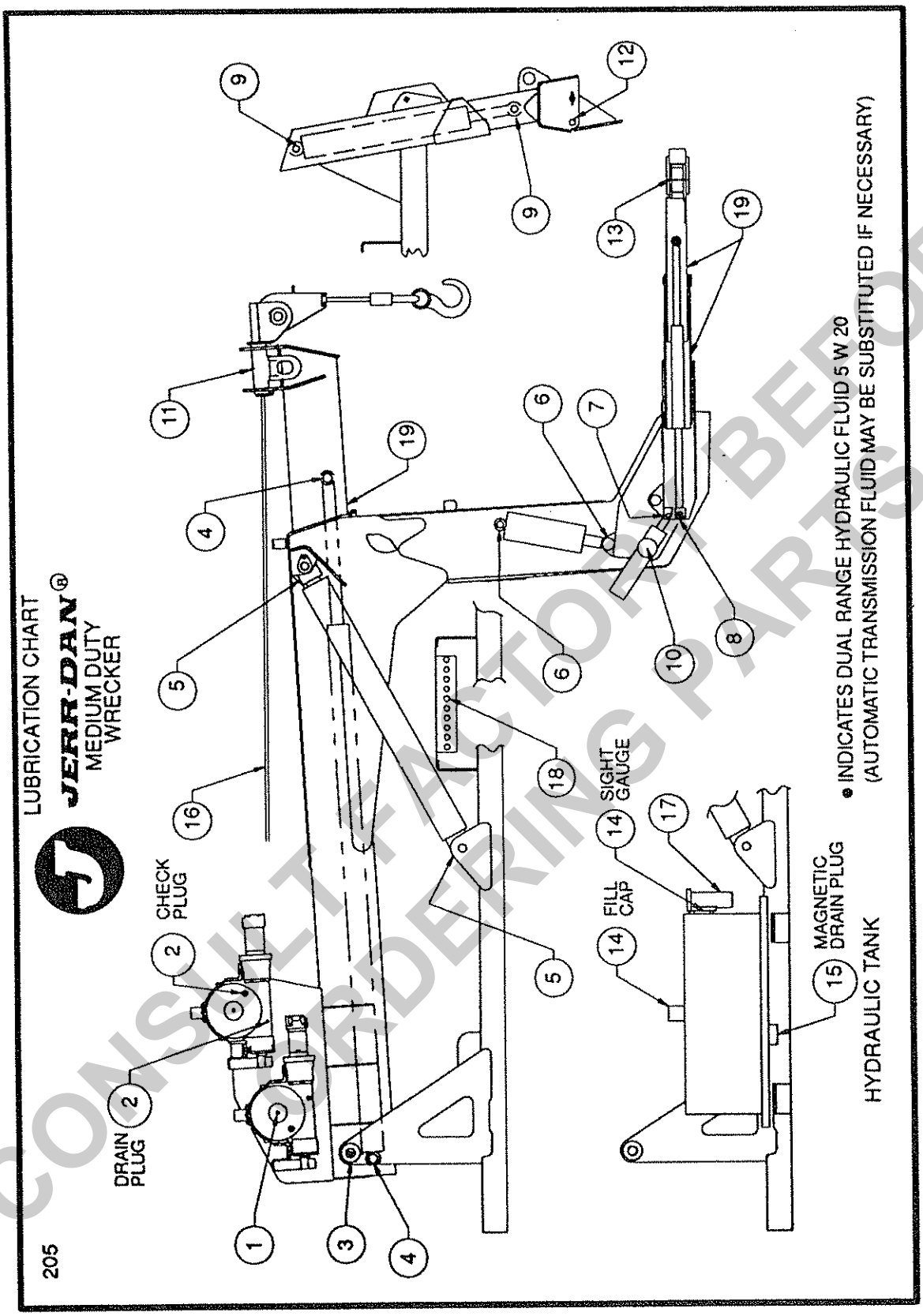
LUBRICATION POINTS

The following lubrication charts are located inside the tool box lid on the driver's side of the HDL500/280 body.

212 LUBRICATION CHART

JERR-DAN®
MEDIUM DUTY
WRECKER

INTERVAL (HOURS)	REF. NO.	IDENTIFICATION	SERVICE	LUBRICANT	NO. OF POINTS
WEEKLY	16	CABLE	OIL	ENGINE OIL	2
50 OR MONTHLY	2	WINCH GEAR BOX	CHECK		2
	19	BOOM FLY	COAT	MPG	3
100 OR BI-MONTHLY	1	WINCH	LUBE	MPG	6
	3	BOOM PIVOT	LUBE	MPG	2
	4	WRECKER BOOM EXT. CYLINDER	LUBE	MPG	2
	5	WRECKER BOOM LIFT CYLINDER	LUBE	MPG	4
	6	UNDERLIFT TILT CYLINDER	LUBE	MPG	2
	7	UNDERLIFT FOLD CYLINDER	LUBE	MPG	1
	8	UNDERLIFT EXTEND CYLINDER	LUBE	MPG	2
	9	SPADE EXTEND CYLINDER	LUBE	MPG	2
	10	UNDERLIFT FOLD CYLINDER	LUBE	MPG	2
	11	WRECKER BOOM SHEAVE	LUBE	MPG	2
	12	SPADE CLAW PIVOT	LUBE	MPG	2
	13	UNDERLIFT PIVOT	LUBE	MPG	1
	14	HYDRAULIC RESERVOIR	CHECK		1
	18	VALVE SPOOLS	CLEAN & OIL	ENGINE OIL	9
250 OR SEMI-ANNUALLY	2	WINCH GEAR BOX	DRAIN & FILL	GL 5 #140	2
	17	HYDRAULIC FILTER	CHANGE		2
1000 OR YEARLY	14	HYDRAULIC RESERVOIR	DRAIN & FILL	•	1
	15	MAGNETIC PLUG	CLEAN		1



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TROUBLE SHOOTING

You probably won't require anything but preventive maintenance to keep your HDL500/280 running, however, the following chart should help you isolate and correct minor problems if they occur with use. Any service work on the hydraulic system should be performed by qualified mechanics.

HYDRAULIC SYSTEM

Problem	Cause	Solution
Slow operation	a. Low engine RPM	a. Speed up engine
	b. Low oil level	b. Check dipstick and fill with the specified oil
	c. Blocked or restricted hoses	c. Inspect: remove blockage
	d. Dirty hydraulic oil	d. Drain, flush and refill with clean oil, replace filter
	e. Hydraulic pump worn	e. Rebuild or replace
Valve handle sticks tight or frozen	a. Insufficient lubrication	a. Lubricate per lube chart
	b. Broken centering spring or clogged with foreign material	b. Inspect, clean or replace
Valve leaks	a. Defective seals	a. Replace
Cylinder leaks	a. Defective seals or rods	a. Inspect and replace
Erratic cylinder function	a. Air in the system	a. Cycle hydraulic system 10 to 15 times to remove air
	b. Defective pump (pulsating)	b. Replace if necessary
Electric hand controller fails to respond	a. Electric power turned off	a. Turn on CONTROL power switch

P.T.O. FUNCTIONING IMPROPERLY

Problem	Cause	Solution
Cable tight or frozen	a. Cable kinked or bent b. Cable and P.T.O. connection not adjusted properly c. Mounting bracket nuts are over tightened at P.T.O.	a. Straighten or replace b. Inspect and adjust c. Loosen if necessary
Rattling noise in P.T.O.	a. P.T.O. backlash too loose (Consult P.T.O. Manual)	a. Shims must be removed
Howling noise in P.T.O.	a. P.T.O. backlash too tight (Consult P.T.O. Manual)	a. Shims must be added
Gear oil leak between P.T.O. and pump	a. Defective shaft seal	a. Remove and replace
P.T.O. will not engage or disengage	a. Cable and P.T.O. connection not adjusted properly b. Defective shifter cover plate	a. Inspect and adjust b. Inspect and replace

HYDRAULIC PUMP

Problem	Cause	Solution
Pump noisy (Cavitation)	a. Low oil supply b. Heavy oil c. Dirty oil filter d. Restriction in suction line e. Pump worn	a. Fill to proper level b. Fill with proper oil (See chart) c. Replace filter d. Clean out and remove e. Repair or replace
Pump slow or fails to respond	a. Low oil supply	a. Fill to proper level
Oil heating up	a. Foreign material lodged in relief valve b. Using too light oil c. Dirty oil d. Oil level too low e. Pump worn (slippage)	a. Inspect and remove/replace filter b. Drain and refill with clean oil c. Drain, flush and refill with clean oil/replace filter d. Fill to proper level e. Repair or replace
Oil foaming	a. Air leaking into suction line b. Wrong kind of oil c. Oil level too low	a. Tighten all connections b. Drain and refill with non-foaming type of hydraulic oil (See lube chart) Replace filter c. Refill to proper level
Hydraulic oil leak between P.T.O. and pump	a. Defective shaft seal	a. Replace shaft seal
Pump leaks at front and rear covers	a. Defective seals	a. Replace seals

WINCH FUNCTIONING IMPROPERLY

Problem	Cause	Solution
Winch screeches during operation	a. Insufficient lubrication	a. Lubricate per lube chart
Winch will not pull load or take in wire rope	a. Free-spooling device not engaged	a. Engage
	b. Sheared keys or broken coupling	b. Inspect or replace
	c. Hydraulic pump worn	c. Inspect and replace
Free-spool device non-functional	a. Electrical power turned off	a. Turn on CONTROL power switch
	b. No air pressure	b. Turn truck on
	c. Insufficient air pressure	c. Allow truck to run
	d. Defective pressure switch	d. Inspect and replace
	e. Defective electrical switch	e. Inspect and replace
Free-spool indicator light will not work	a. Burned out light	a. Replace

PARTS

To order repair parts, call your nearest Jerr-Dan Distributor or call 800-876-1415 for further information.

Give Sales Order No., Serial No. and Model No. along with part number and description of part.

HDL500/280
UNDER LIFT SYSTEM
PARTS

PARTS LIST - SUBFRAME

Ref. No.	Part No.	Description	Qty.
1	3868000132	Subframe Weldment	1
2	4679000127	Pad	2
3	7115161223	Capscrew	4
4	7660162601	Locknut	4
5	7262000025	Chain w/Latch Hook	2
6	7120000016	Capscrew	2
7	7660182301	Locknut	2
8	4754000003	D-Ring	2
9	4691000244	D-Ring Pin	2
10	7690142845	Spring Pin	2
11	7118221816	Capscrew	24
12	7660222308	Locknut	24

Applies to both Single and Tandem Axle Applications.

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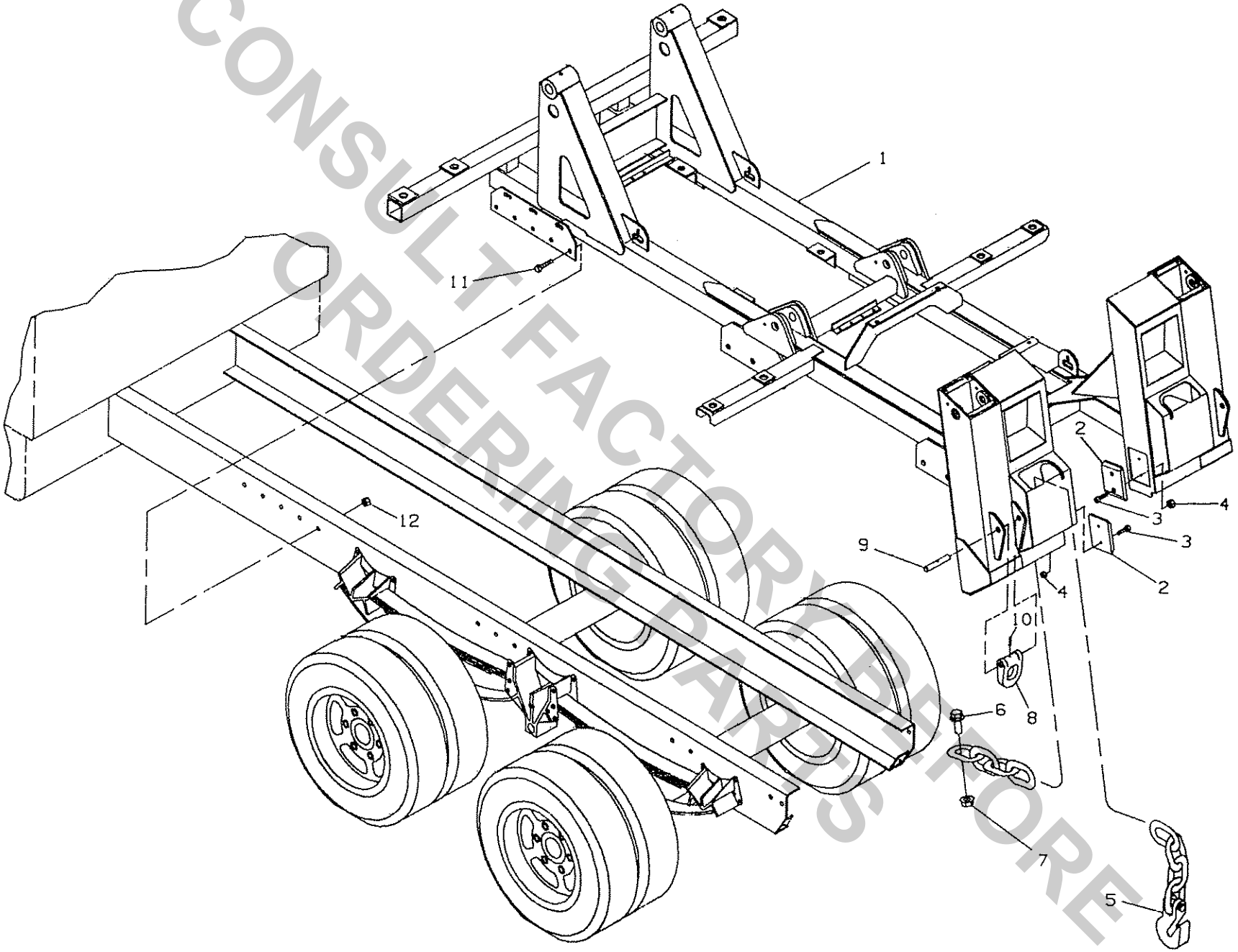
SUBFRAME



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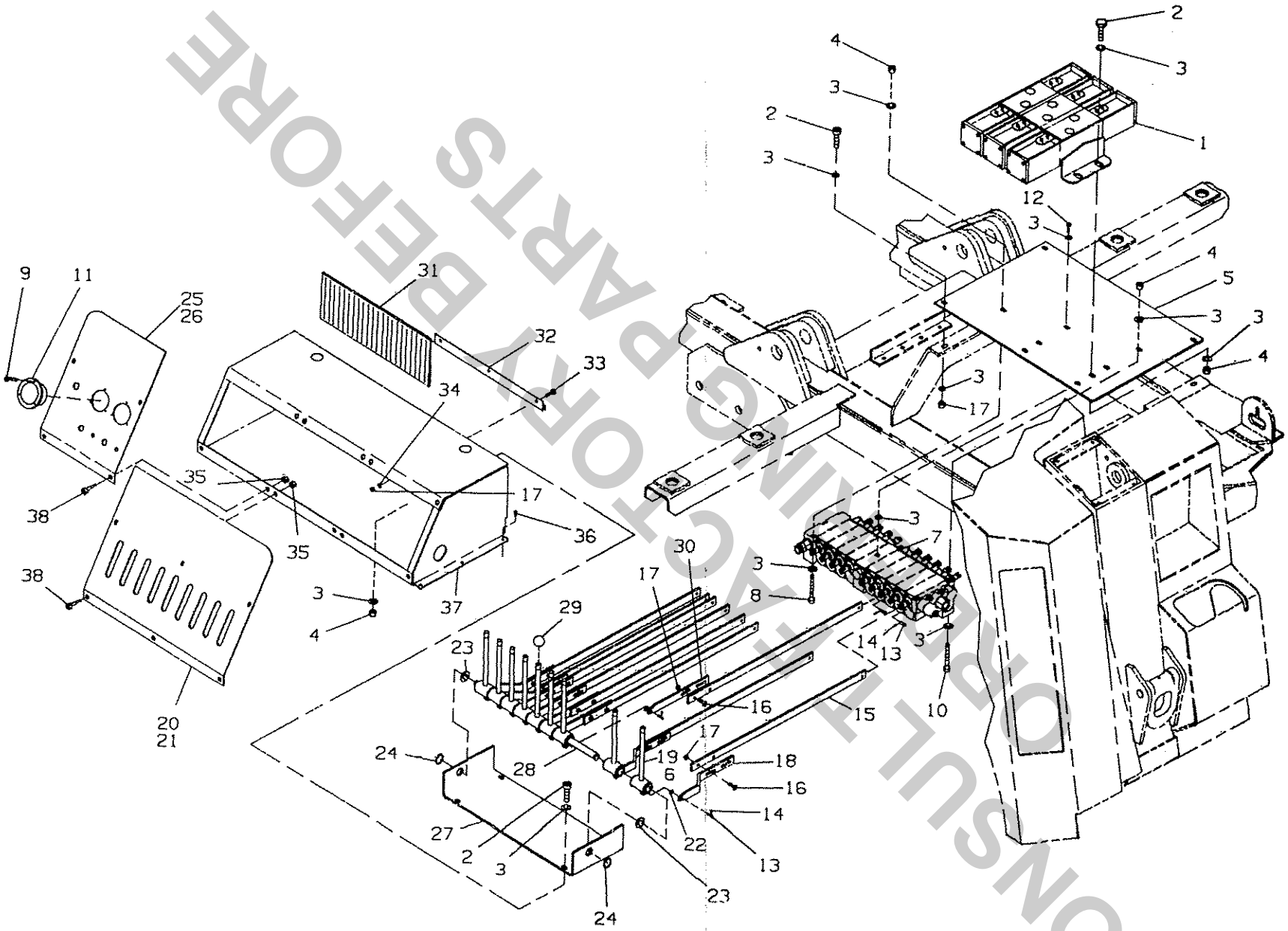
UNDERLIFT/CONTROLS INSTALLATION



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PARTS LIST - UNDERLIFT/CONTROLS INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7935000065	Valve	1
2	7115161050	Capscrew	16
3	7950160252	Washer	37
4	7660162601	Locknut	19
5	4706001549	Plate	1
6	3551000037	Handle Weldment	9
7	4935000055	Valve Assembly	1
8	7115161650	Capscrew	1
9	7790060676	Screw	12
10	7115162450	Capscrew	2
11	7470000004	Pressure Gauge	4
12	7118160621	Capscrew	1
13	7690000810	Cotter Pin	36
14	7690141200	Clevis Pin	36
15	4062000212	Bar	18
16	7115140864	Carriage Bolt	36
17	7660142601	Locknut	42
18	4062000211	Bar	8
19	3551000038	Handle Weldment	9
20	4686000081	Control Panel, LH	1
21	4686000084	Control Panel, RH	1
22	7950100151	Flatwasher	18
23	7082000005	Bearing	4
24	7754000009	Retaining Ring	4
25	4686000082	Gauge Panel, LH	1
26	4684000083	Gauge Panel, RH	1
27	4178000227	Bracket	2
28	4806000017	Shaft	2
29	7551000002	Knob	18
30	4062000210	Bar	10
31	4638000002	Brush	2
32	4411000104	Brush Holder	2
33	7115140650	Capscrew	6
34	7950140161	Flatwasher	6
35	7661000006	Well Nut	20
36	7759000008	Rivet	20
37	3686000016	Panel Weldment	2
38	7111140813	Machine Screw	20

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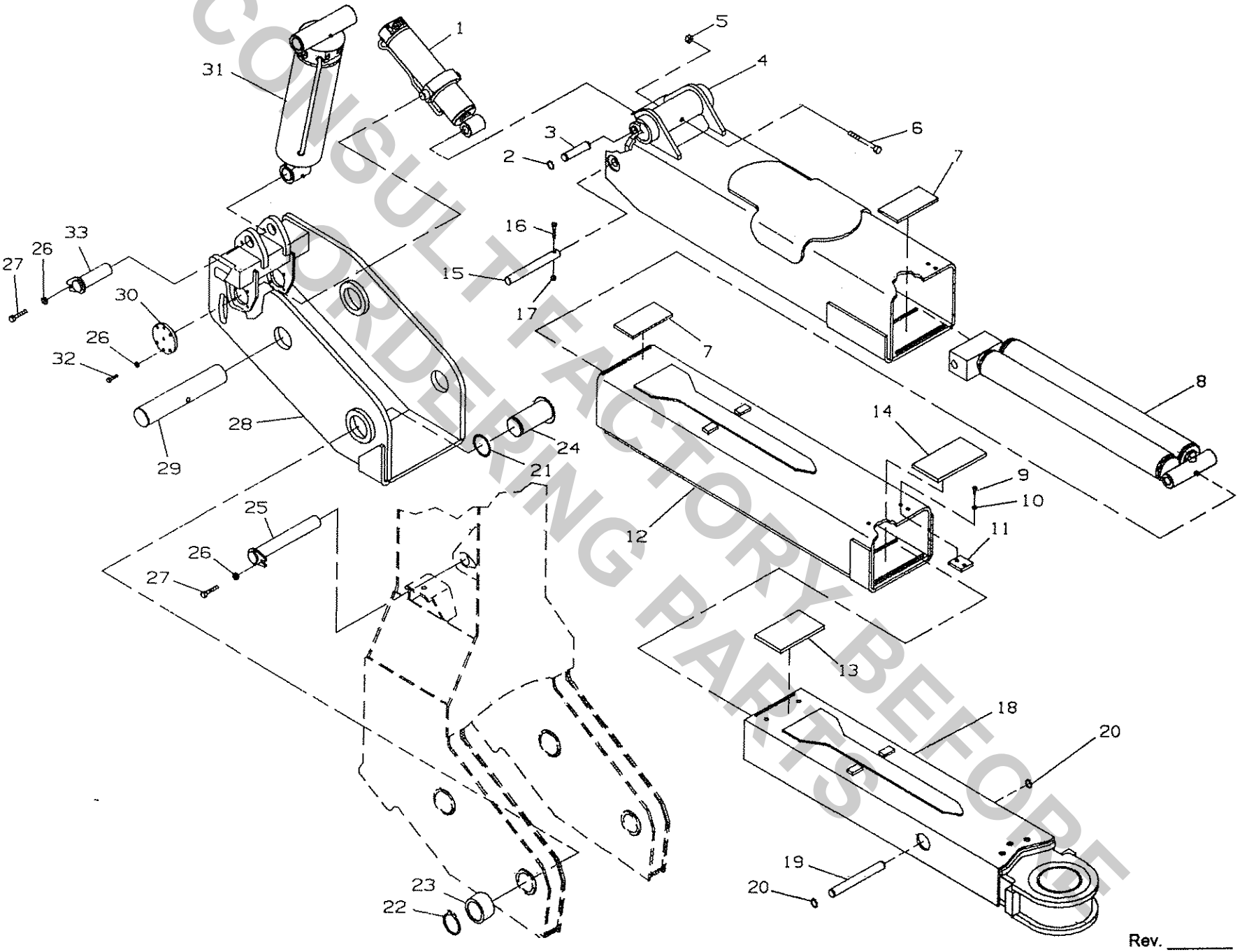
PARTS LIST - UNDERLIFT INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7320000007	Fold Cylinder	1
2	7754000019	Retaining Ring	2
3	4691000223	Pin	1
4	3170000101	Base Boom Weldment	1
5	7660182600	Locknut	1
6	7115183250	Capscrew	1
7	4679000113	Pad	2
8	7320000010	W/L Ext Cylinder	1
9	7108180650	Capscrew	8
10	7950180153	Washer	8
11	4831000062	Spacer	4
12	3170000102	Mid Boom Weldment	1
13	4679000112	Pad	1
14	4679000109	Pad	1
15	4691000224	Pin	1
16	7115151650	Capscrew	1
17	7660152601	Locknut	1
18	3170000103	Fly Boom Weldment	1
19	4691000226	Back Pin	1
20	7754000019	Retaining Ring	2
21	4949000033	Shim (.09 Thk)	1
	4949000034	Shim (.06 Thk)	1
22	7754000005	Retaining Ring	2
23	4912000192	Tube	2
24	4691000253	Pin	2
25	3691000128	Pin	1
26	7950160162	Flatwasher	1
27	7115160850	Capscrew	2
28	3170000091	Tilt Link	1
29	4691000202	Pin	1
30	4254000009	Trunnion Cap	2
31	7320000011	Tilt Cylinder	1
32	7115160650	Capscrew	8
33	3691000130	Pin Weld	1

UNDERLIFT INSTALLATION



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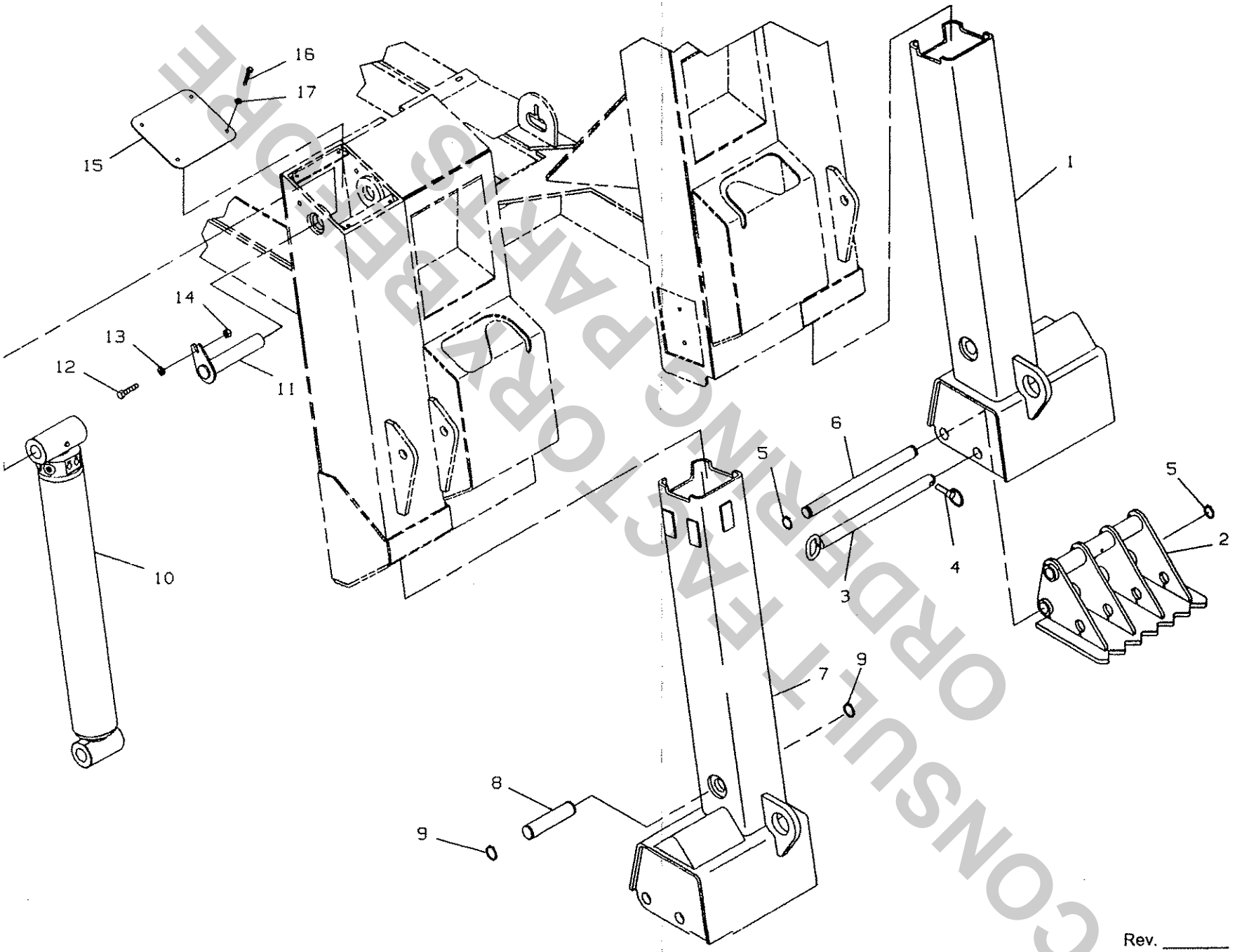
SPADE INSTALLATION



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Date _____

PARTS LIST - SPADE INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	3263000053	RH Channel Weldment	1
2	3706000066	Spade Claw	2
3	3691000126	Pin	2
4	7691000019	Lynch Pin	2
5	7754000008	Retaining Ring	4
6	4691000200	Pin	2
7	3263000054	LH Channel Weldment	1
8	4691000207	Rod Pin	2
9	7754000033	Retaining Ring	4
10	7320000006	Spade Cylinder	2
11	3691000139	Pin	2
12	7115161250	Capscrew	2
13	7950160151	Washer	2
14	7660162601	Locknut	2
15	4706001578	Plate	2
16	7115140650	Capscrew	8
17	7950140151	Washer	8

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PARTS LIST - EXT. CYLINDER
7320000010

Ref. No.	Part No.	Description	Qty.
1	30241	Lube Fitting	1
2	10006*	Wiper	2
3	15536*	O-Ring	2
4	10016*	Seal	2
5	10072*	Back-up	2
6	30163*	Wear Ring	4
7	72735	Head	1
8	5E837	Rod Assy	1
9	86885	Spacer	1
10	13521*	O-Ring	2
11	11950*	Seal	2
12	30225*	Wear Ring	2
13	14525*	Washer Seal	1
14	32326	Bleeder Plug	1
15	32504	Check Valve	1
16	30002	Lube Fitting	1
17	75169	Head	1
18	4J761	Tube Assy	1
19	5E835	Rod-Tube Assy	1
20	86491	Spacer	1
21	75377	Piston	2
22	20011	Locknut	2
23	10134*	O-Ring	2

*Available only in Service Kit #7577000171

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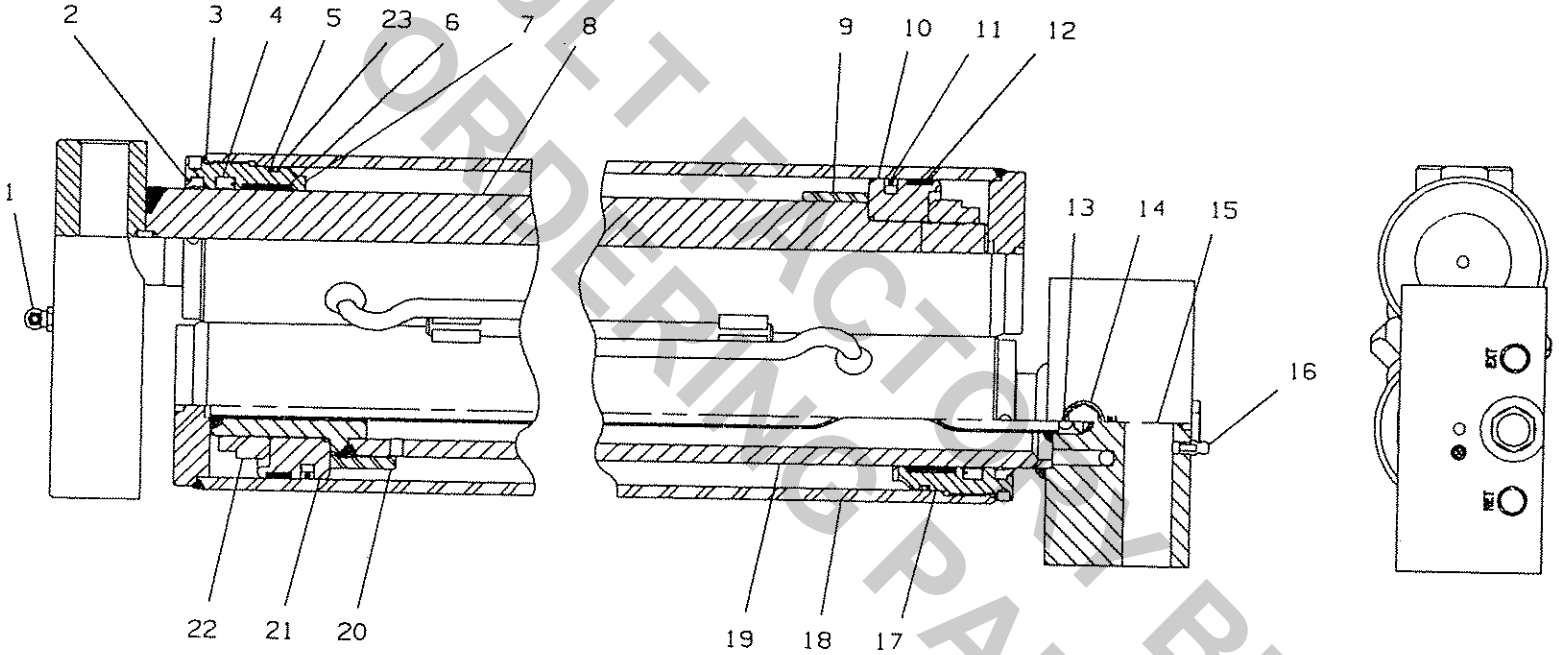
EXT. CYLINDER
7320000010



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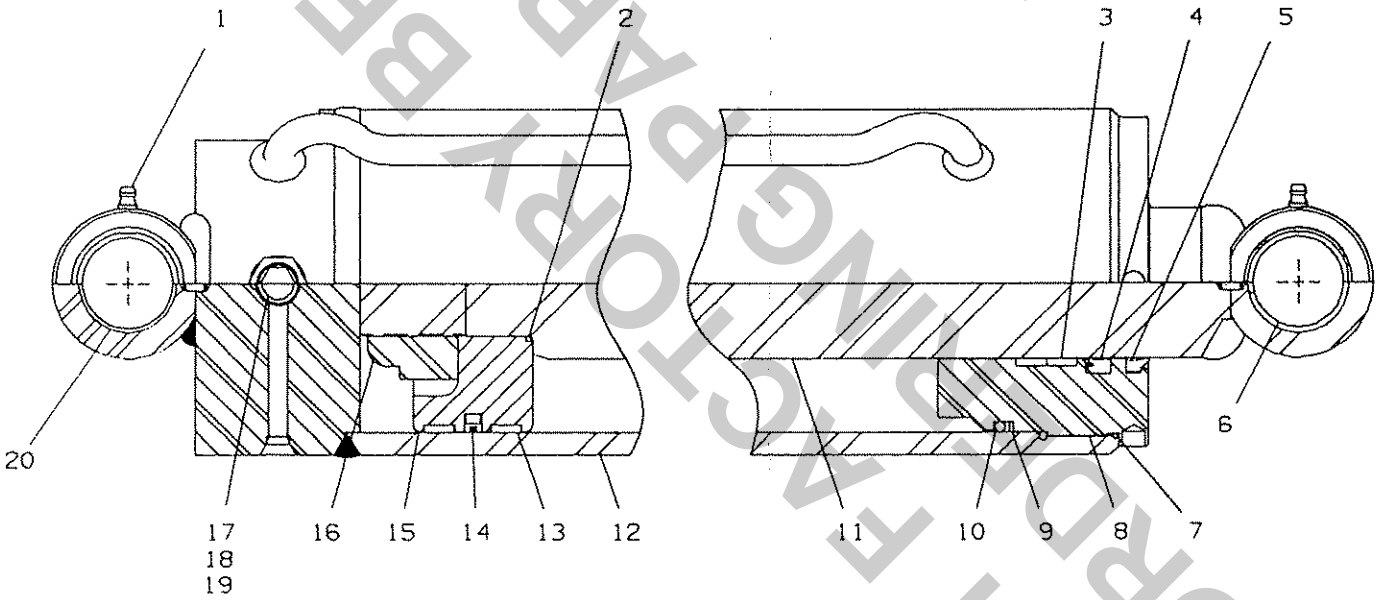
TILT CYLINDER
7320000011



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PARTS LIST - TILT CYLINDER
7320000011

Ref. No.	Part No.	Description	Qty.
1	30002	Lube Fitting	2
2	13454*	O-Ring	1
3	30420*	Wear Ring	1
4	10017*	Seal	1
5	10007*	Wiper	1
6	86488	Bushing	2
7	15532*	O-Ring	1
8	72776	Head	1
9	10559*	Back-up	1
10	15531*	O-Ring	1
11	5G188	Rod Assy	1
12	4J757	Tube Assy	1
13	30423*	Wear Ring	2
14	11954*	Seal	1
15	75372	Piston	1
16	20192	Locknut	1
17	14525*	Washer Seal	1
18	32326	Bleeder Plug	1
19	32539	Counterbalance Valve	1
20	86487	Bushing	2

* Available only in Service Kit #7577000172

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PARTS LIST - FOLD CYLINDER
7320000007

Ref. No.	Part No.	Description	Qty.
1	30225*	Wear Ring	1
2	10263*	O-Ring	1
3	11950*	Seal	1
4	74064	Piston	1
5	4J759	Tube Assy	1
6	5E833	Rod Assy	1
7	10072*	Back-up	1
8	10134*	O-Ring	1
9	72906	Head	1
10	15536*	O-Ring	1
11	30002	Lube Fitting	1
12	10005*	Wiper	1
13	10015*	Seal	1
14	30419*	Wear Ring	2
15	20010	Locknut	1
16	33057	Counterbalance Valve	1
17	32326	Bleeder Plug	1
18	14525*	Washer Seal	1

* Available on in Service Kit #7577000168

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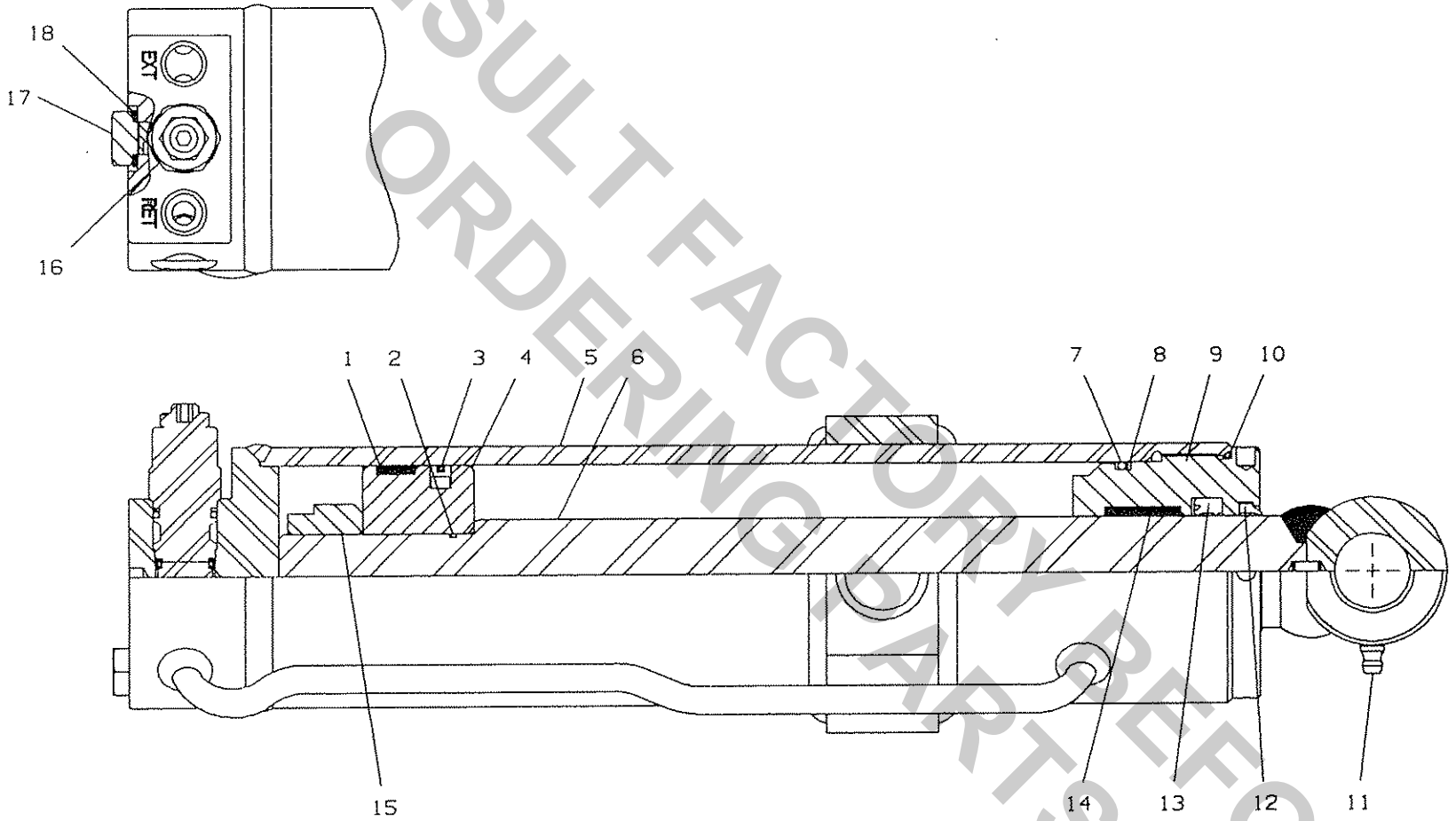
FOLD CYLINDER
7330000007



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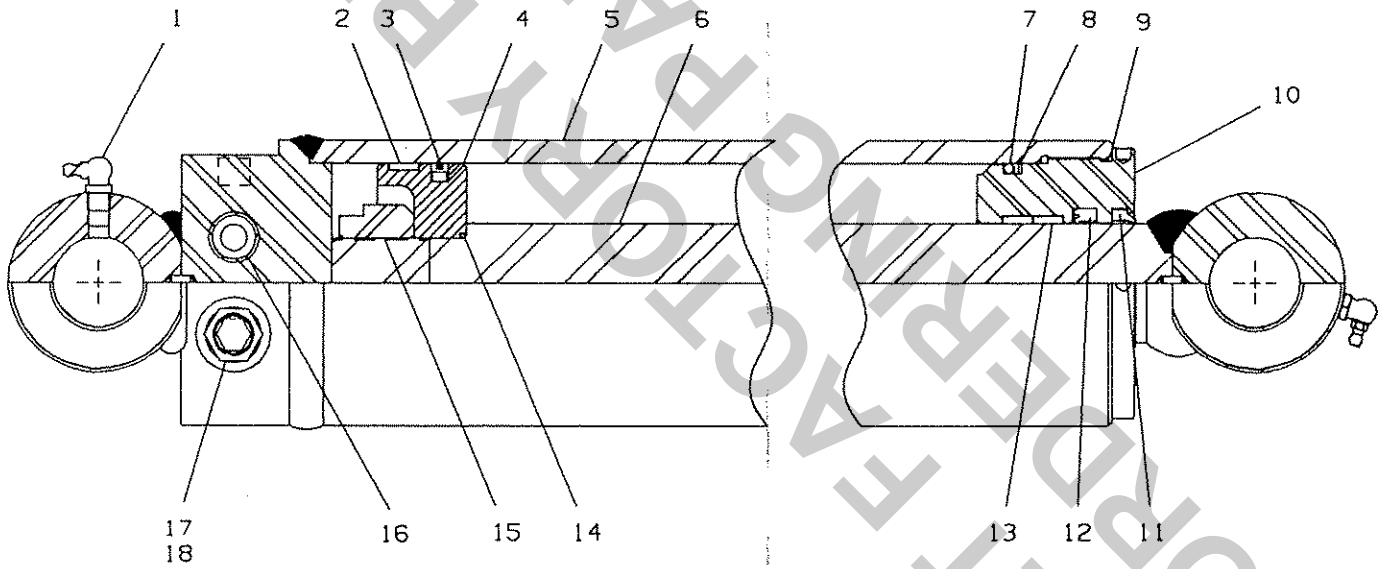
SPADE CYLINDER
7320000006



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PARTS LIST - SPADE CYLINDER
7320000006

Ref. No.	Part No.	Description	Qty.
1	30241	Lube Fitting	2
2	30162*	Wear Ring	1
3	11952*	Seal	1
4	75164	Piston	1
5	4J730	Tube Assy	1
6	5E807	Rod Assy	1
7	10721*	O-Ring	1
8	10082*	Back-up	1
9	15202*	O-Ring	1
10	75165	Head	1
11	10006*	Wiper	1
12	10016*	Seal	1
13	30163*	Wear Ring	2
14	13509*	O-Ring	1
15	20012	Locknut	1
16	32539	Counterbalance Valve	2
17	14525*	Washer Seal	2
18	32326	Bleeder Plug	2

* Available only in Service Kit #7577000167

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BODY PARTS

PARTS LIST - BODY - DOOR AND HARDWARE ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	4679000117	Rubber Pad	2
2	4679000119	Rubber Pad	2
3	4679000131	Rubber Pad	2
4	7660102601	Locknut	40
5	7178000023	Bracket	8
6	7114100618	Capscrew	16
7	4062000174	Bar	4
8	7843000022	Spring	8
9	7660152601	Locknut	8
10	7865000001	Ball Stud	8
11	7115140650	Capscrew	16
12	7950140161	Flatwasher	16
13	7114140518	Capscrew	24
14	7949000025	Lockwasher	24
15	3555000007	Hinge Weldment	4
16	7660142601	Locknut	16
17	4632000007	Door Seal	4
18	4686000074	Horizontal Door	4
19	3555000008	Hinge Weldment	4
20	7585000004	Latch Striker	4
21	7115161050	Capscrew	8
22	7950160161	Flatwasher	16
23	7660162601	Locknut	8
24	7661000021	Locknut	4
25	4178000225	Bracket	4
26	7950100151	Flatwasher	24
27	7796000038	Gasket	4
28	7595000005	Rotary Latch	4
29	7790101276	Pan Head Screw	16

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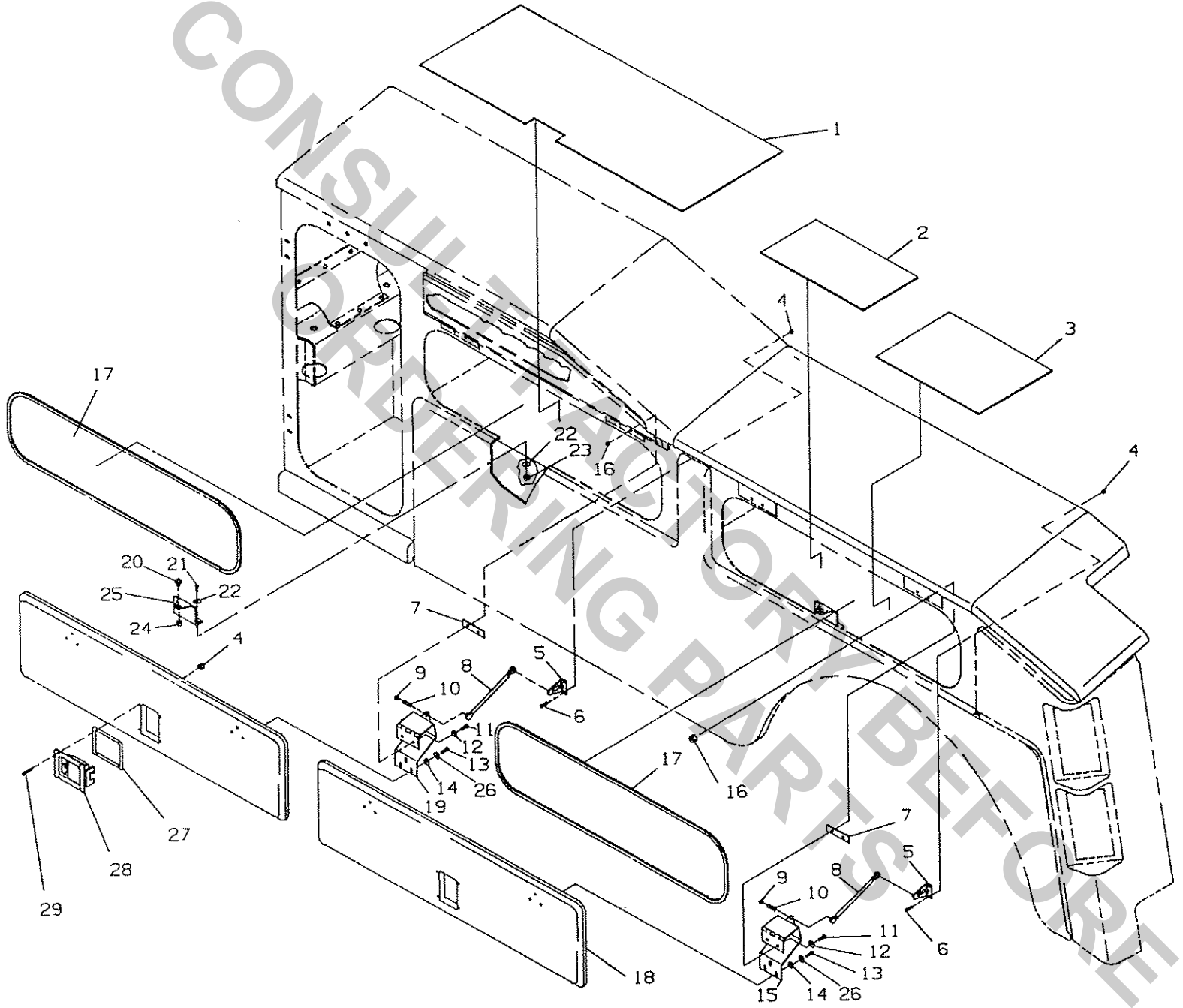
BODY - DOOR AND HARDWARE ASSEMBLY



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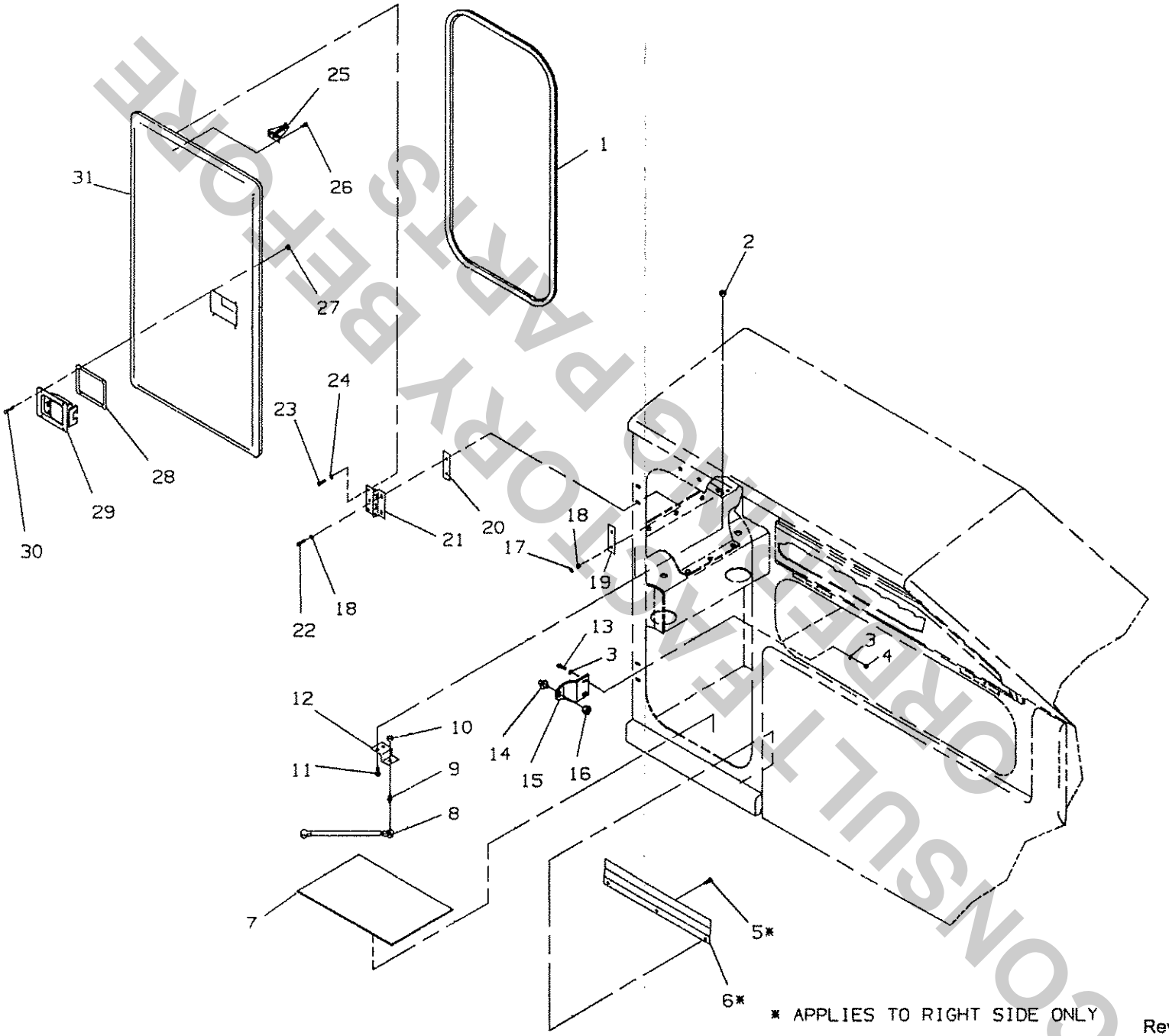
BODY - DOOR AND HARDWARE ASSEMBLY



* APPLIES TO RIGHT SIDE ONLY

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PARTS LIST - BODY - DOOR AND HARDWARE ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	4632000006	Door Seal	2
2	7660152601	Locknut	4
3	7650160141	Flatwasher	6
4	7660162601	Locknut	4
5	7790141251(B)	Hex Head Screw	3
6	4811000135(B)	Sheet	1
7	4679000118(A)	Rubber Pad	1
	4679000114(B)	Rubber Pad	1
8	7843000020	Spring	2
9	7865000001	Ball Stud	2
10	7660152601	Locknut	2
11	7115150650	Capscrew	4
12	4178000240	Bracket	2
13	7115161050	Capscrew	4
14	7585000004	Latch Striker	2
15	4178000225	Bracket	2
16	7661000021	Locknut	2
17	7660142601	Locknut	8
18	7950140161	Flatwasher	16
19	4062000173	Bar	4
20	4812000052	Shim	4
21	7555000002	Hinge	4
22	7114140818	Capscrew	8
23	7114140418	Capscrew	12
24	7949000025	Washer	12
25	7178000023	Ball Stud Bracket	2
26	7114100418	Capscrew	6
27	7660102601	Nut	8
28	7796000038	Gasket	2
29	7595000005	Rotary Latch	2
30	7790101276	Capscrew	8
31	4686000072(A)	Panel Door - LH	1
	4686000073(B)	Panel Door - RH	1

A - Applies to Left Side Only.
B - Applies to Right Side Only.

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PARTS LIST - FLARE INSTALLATION TANDEM AXLE

Ref. No.	Part No.	Description	Qty.
1	7002000187	Rubber Fender Flare	2 Pair
2	4415000019	Wheelwell Flare - LH	1
	4415000017	Wheelwell Flare - RH	1
3	7660142601	Locknut	*
4	7950140151	Flatwasher	*
5	7111141050	Capscrew	10
6	7415000010	Flare Junction Panel	2
7	4636000032	Rubber Mount	2
8	7949000022	Fender Washer	2
9	7790142051	Capscrew	2
10	4415000018	Wheelwell Flare - LH	1
	4415000016	Wheelwell Flare - RH	1
11	4415000020	22.50" Body Flare	2
	4415000024	44.50" Body Flare	
	4415000025	68.75" Body Flare	
	4415000026	93.00" Body Flare	
12	7415000013	Cap - RH	1
	7415000014	Cap - LH	1
13	7115141850	Capscrew	*

*Quantity varies according to Body Length

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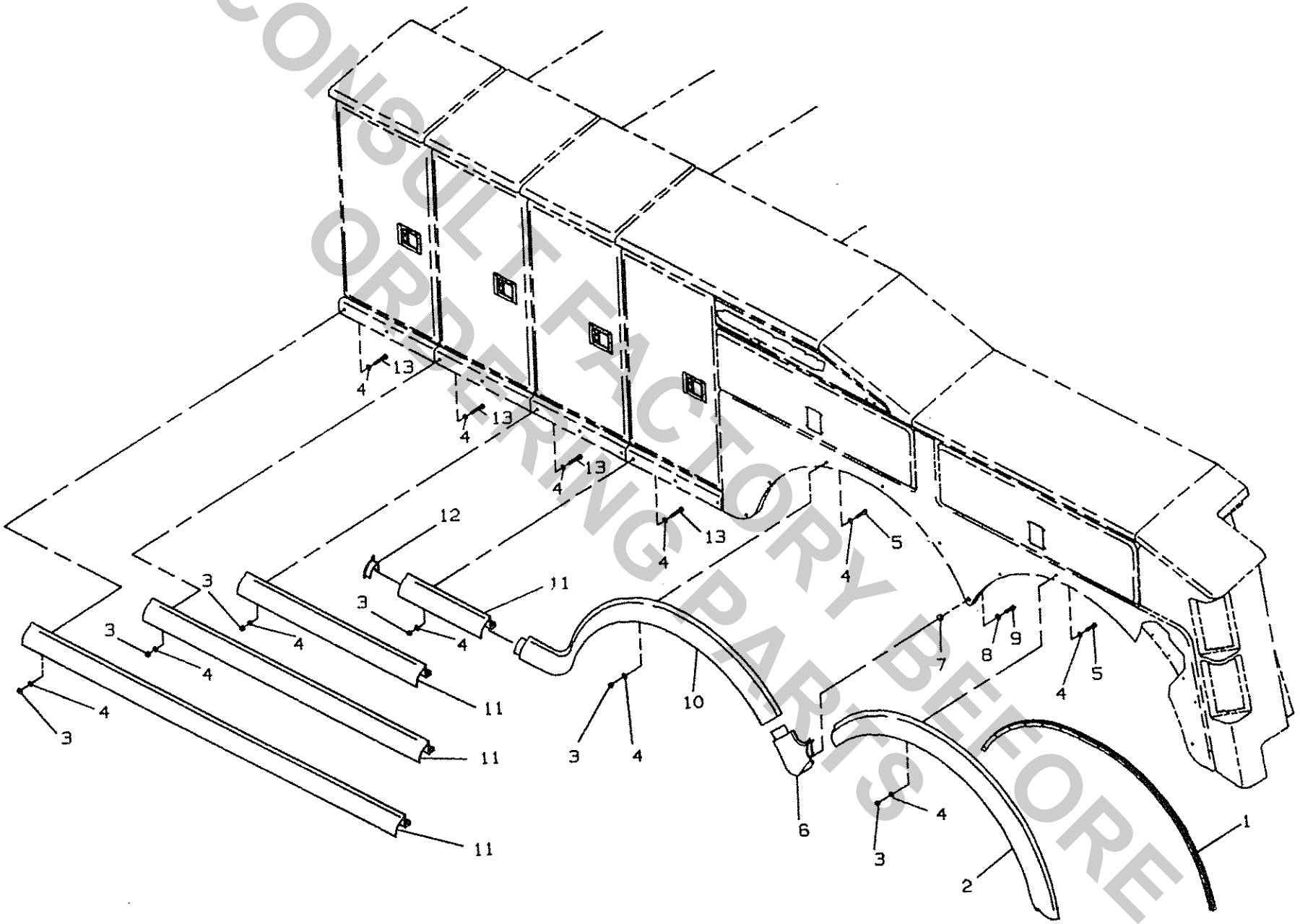
FLARE INSTALLATION TANDEM AXLE



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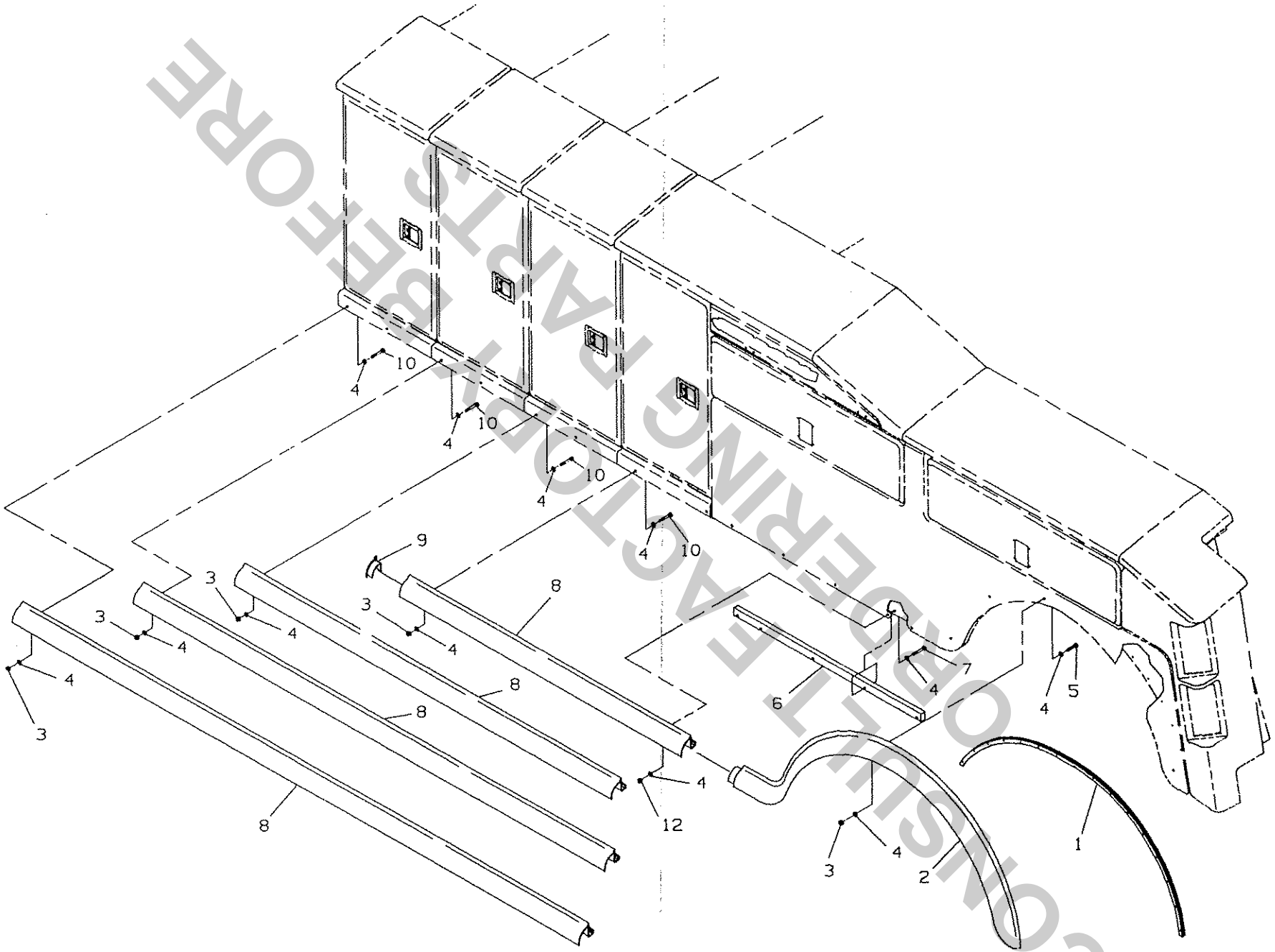
FLARE INSTALLATION SINGLE AXLE



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PARTS LIST - FLARE INSTALLATION SINGLE AXLE

Ref. No.	Part No.	Description	Qty.
1	7002000187	Rubber Fender Flare	1 Pair
2	7415000008	Wheelwell Flare - LH	1
	7415000007	Wheelwell Flare - RH	1
3	7660142601	Locknut	*
4	7950140151	Flatwasher	*
5	7111141050	Capscrew	10
6	4831000068	Spacer	2
7	7115142050	Capscrew	10
8	4415000015	72.25" Body Flare	2
	4415000021	96.50" Body Flare	
	4415000022	120.75" Body Flare	
	4415000023	145.00" Body Flare	
9	7415000013	Cap - RH	1
	7415000014	Cap - LH	1
10	7115141850	Capscrew	*

*Quantity varies according to body length

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PARTS LIST - BODY, MUDFLAP AND TOOLHOLDERS INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	4017000719	Angle	2
2	7118151250	Capscrew	12
3	7950150151	Flatwasher	40
4	7638000007	Mud Flap	2
5	4706001815	Plate	2
6	7660152601	Locknut	20
7	4178000242	Bracket	2
8	7115150850	Capscrew	8
9	7115202850	Capscrew	4
10	7950200161	Flatwasher	4
11	7949000019	Snub Head Washer	4
12	7636000008	Mount	4
13	7949000020	Snub Tail Washer	4
14	7660200001	Nut	4
15	3178000222	Basetool Holder	1
16	7115160850	Capscrew	16
17	7660160001	Nut	19
18	3178000221	Intermediate Tool Holder	2
19	3178000220	Top Tool Holder	1
20	7115161050	Capscrew	3
21	4812000047	Shim	1
22	7115223250	Capscrew	4
23	7950220161	Flatwasher	4
24	7949000017	Washer	4
25	7636000007	Mount	4
26	7949000018	Washer	4
27	7660220001	Nut	4

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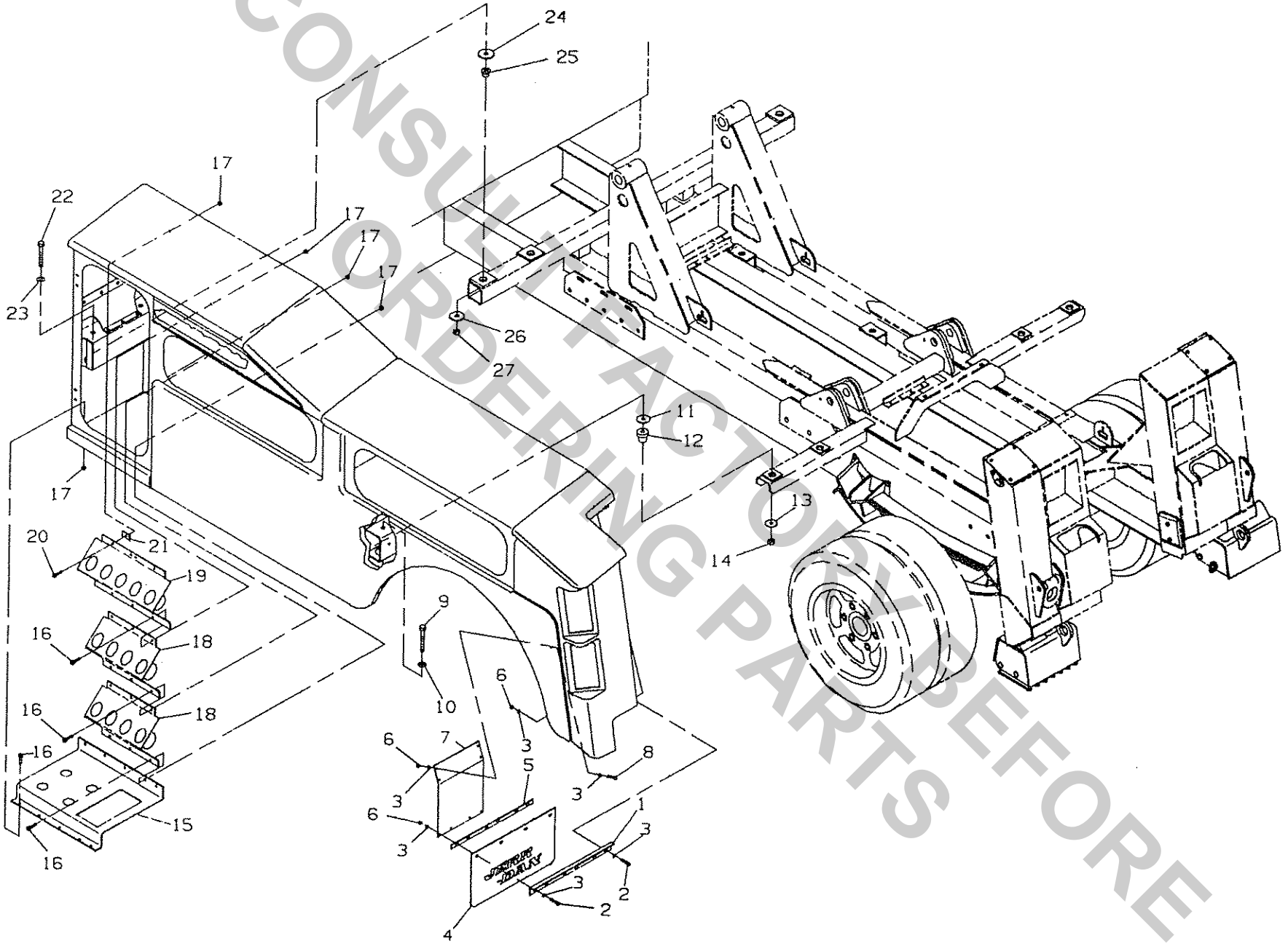
BODY, MUDFLAP AND TOOLHOLDERS INSTALLATION



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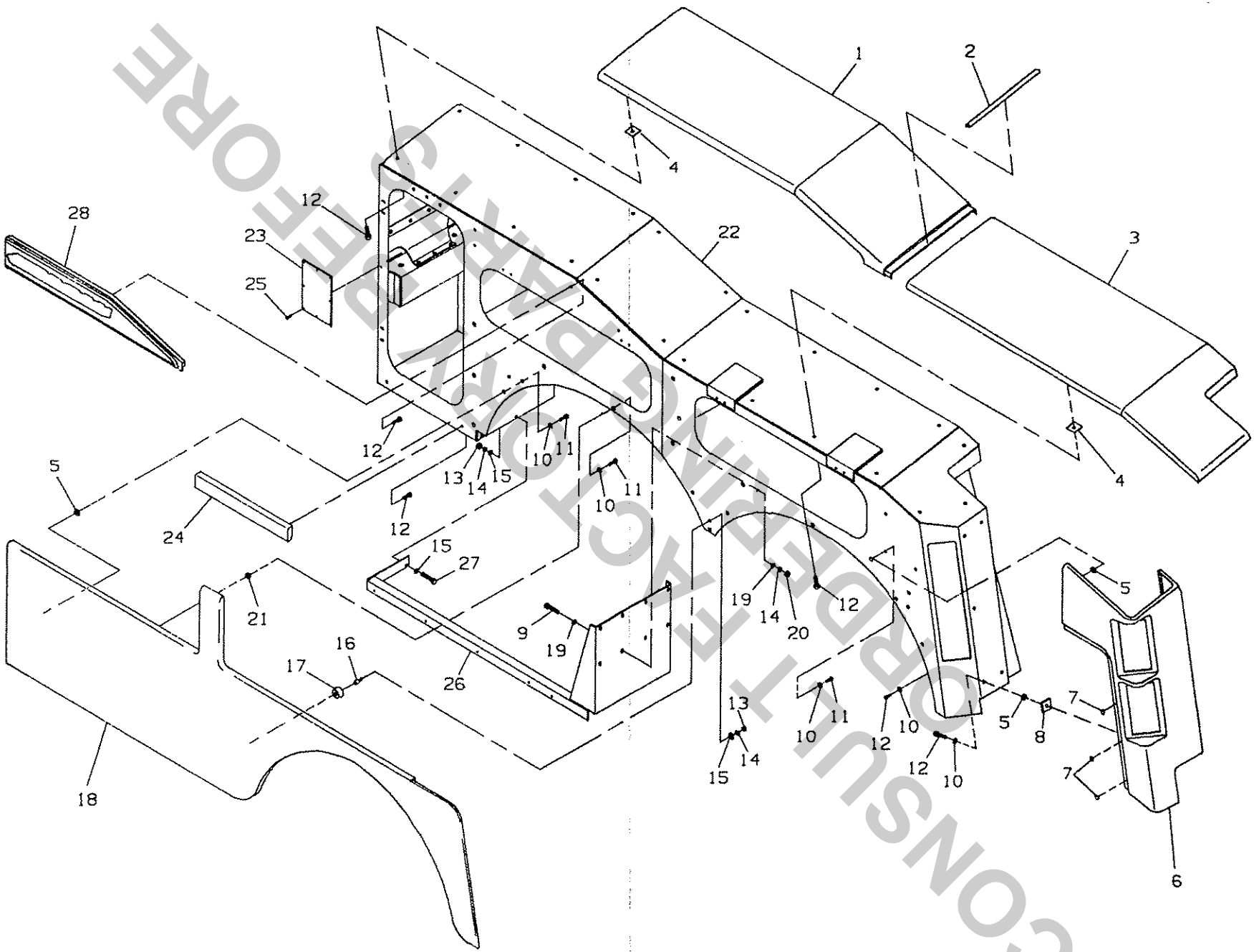
BODY PANEL - 1 AXLE



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PARTS LIST - BODY PANEL - 2 AXLES

Ref. No.	Part No.	Description	Qty.
1	7686000009	Front Cap Panel - RH	1
	7686000010	Front Cap Panel - LH	1
2	7632046022	Moulding	2
3	7686000017	Rear Cap Panel - RH	1
	7686000018	Rear Cap Panel - LH	1
4	4679000120	Rubber Pad	46
5	4636000031	Rubber Mount	40
6	7686000013	Tail Light Panel - RH	1
	7686000014	Tail Light Panel - LH	1
7	7189000015	Bumper	6
8	4679000121	.25 Rubber Pad	10
	4679000122	.38 Rubber Pad	10
9	4636000032	Rubber Mount	14
10	7949000022	Fender Washer	58
11	7790142051	Hex Hd Screw	54
12	7790141251	Hex Hd Screw	54
13	7660160001	Nut	6
14	7950160000	Lockwasher	6
15	7950160161	Flatwasher	6
16	4691000245	Pin	6
17	4636000033	Rubber Mount	6
18	4686000078	Wheel Well Panel - RH	1
	4686000077	Wheel Well Panel - LH	1
22	7686000019	Filler Strip Panel	2
23	7686000015	Logo Panel - RH	1
	7686000016	Logo Panel - LH	1
24	4811000091	Sheet	2
25	7790100856	Screw	16
26	3503080003	Body Assy - RH	1
	3503080002	Body Assy - LH	1

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PARTS LIST - BODY PANEL - 1 AXLE

Ref. No.	Part No.	Description	Qty.
1	7686000009	Front Cap Panel - RH	1
	7686000010	Front Cap Panel - LH	1
2	7632046022	Moulding	2
3	7686000017	Rear Cap Panel - RH	1
	7686000018	Rear Cap Panel - LH	1
4	4679000120	Rubber Pad	46
5	4636000031	Rubber Mount	40
6	7686000013	Tail Light Panel - RH	1
	7686000014	Tail Light Panel - LH	1
7	7189000015	Bumper	6
8	4679000121	.25 Rubber Pad	10
	4679000122	.38 Rubber Pad	10
9	7115161250	Capscrew	16
10	7949000022	Fender Washer	58
11	7790142051	Hex Hd Screw	54
12	7790141251	Hex Hd Screw	56
13	7660160001	Nut	10
14	7950160000	Lockwasher	26
15	7950160161	Flatwasher	14
16	4691000245	Pin	6
17	4636000033	Rubber Mount	6
18	4686000076	Wheel Well Panel - RH	1
	4686000075	Wheel Well Panel - LH	1
19	7950160151	Flatwasher	32
20	7660160000	Nut	16
21	4636000032	Rubber Mount	14
22	3503080003	Body Assy - RH	1
	3503080002	Body Assy - LH	1
23	4811000091	Sheet	2
24	7686000019	Filler Strip Panel	2
25	7790100856	Screw	16
26	3017000027	Bracket Weldment-RH	1
	3017000026	Bracket Weldment-LH	1
27	7115161050	Capscrew	4
28	7686000015	Logo Panel - RH	1
	7686000016	Logo Panel - LH	1

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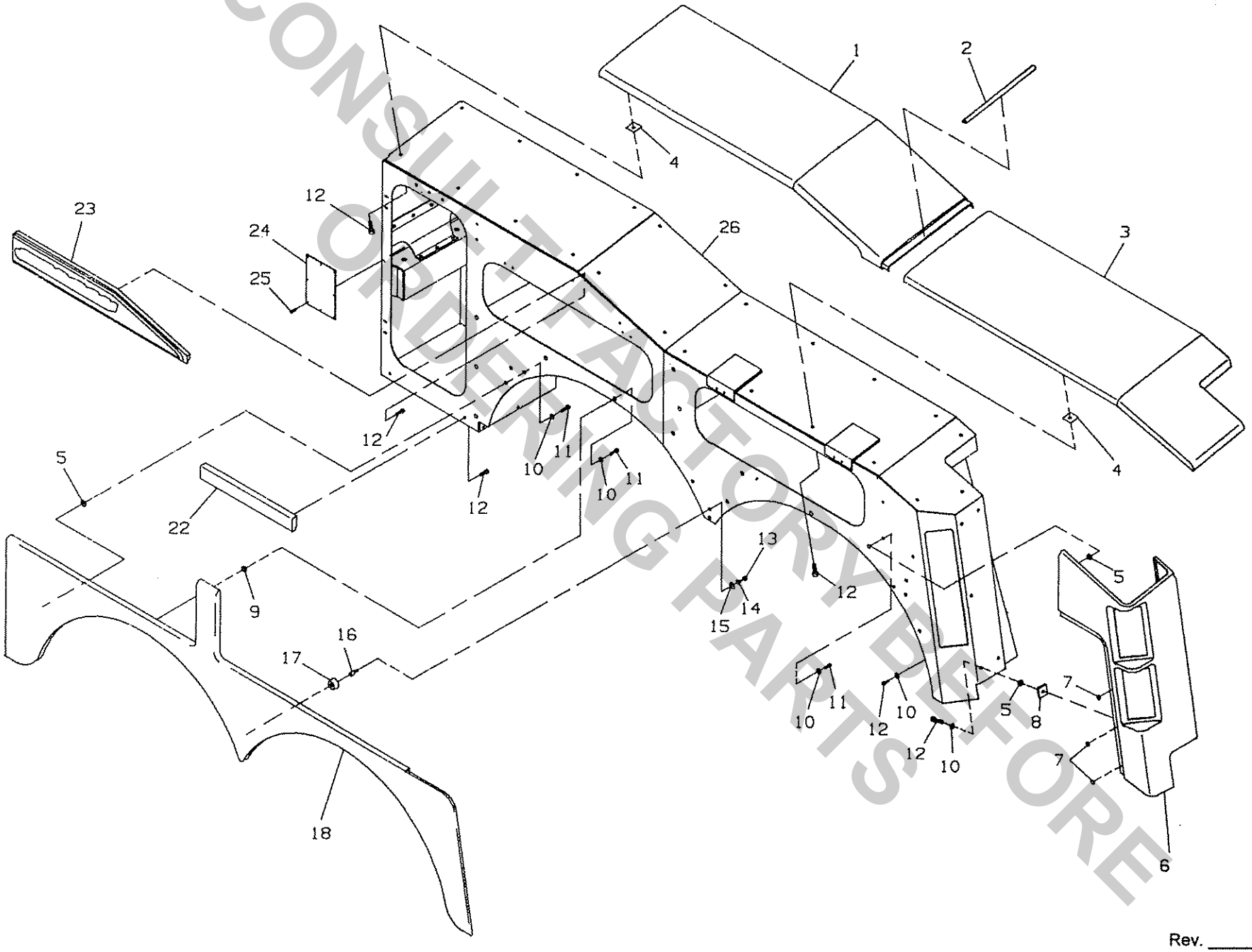
BODY PANEL - 2 AXLES



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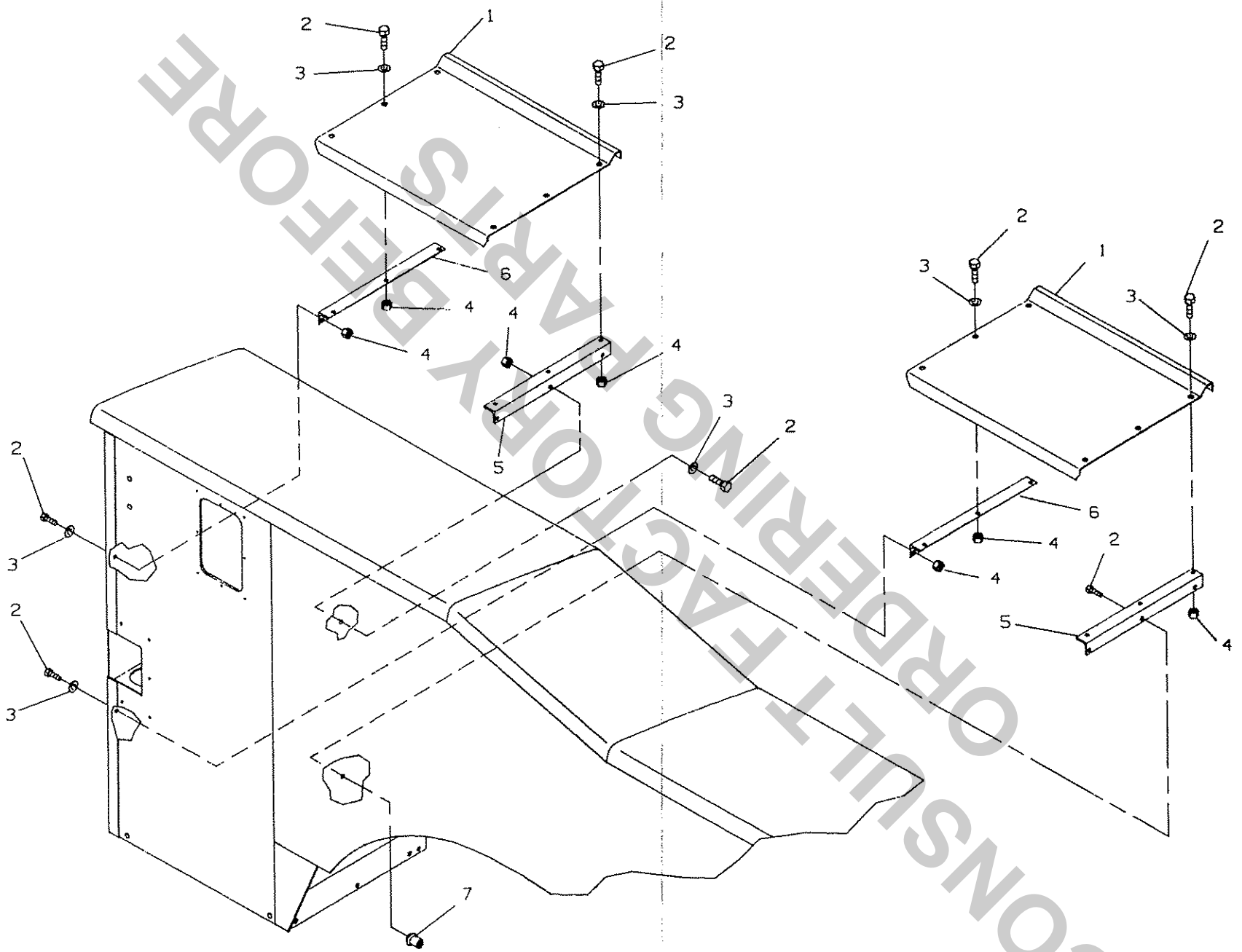
BRACKET ASSEMBLY



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PARTS LIST - BRACKET ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	4811000142	Sheet	2
2	7115160850	Capscrew	24
3	7950160161	Flatwasher	21
4	7660160001	Nut	21
5	4017000727	Angle, LH	2
6	4017000714	Angle, RH	2
7	7661000003	Rivnut	3

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PARTS LIST - TOOLBOX - DOOR AND HARDWARE ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	7595000005	Rotary Latch	2
2	7796000038	Gasket	2
3	7790101276	Pan Head Screw	8
4	7660102601	Locknut	8
5	4686000072	Door Panel LH	1
6	7178000022	Bracket	2
7	7114100418	Capscrew	6
8	7114140418	Capscrew	12
9	7950140500	Lockwasher	12
10	4812000052	Shim	10
11	7555000002	Hinges	4
12	7114140818	Capscrew	8
13	7950140161	Flatwasher	20
14	7660142601	Locknut	12
15	4679000116	Rubber Pad	1
16	7686000008	Top Cap Panel	2
17	4679000120	Rubber Pad	8
18	7790141651	Hex Head Screw	14
19	4178000229	Bracket	4
20	7660182301	Locknut	20
21	7950180153	Flatwasher	16
22	7115181050	Capscrew	16
23	4686000073	Door Panel RH	1
24	4632000006	Seal	2
26	3274000011	Clamp Weldment	4
27	7950180252	Flatwasher	4
28	3503740005	Toolbox Body Assembly	1
29	7115182050	Capscrew	4
30	3911000033	Tube Weldment	1
31	7115202850	Capscrew	4
32	7950200161	Flatwasher	4
33	7949000020	Washer	4
34	7636000008	Mount	4
35	7949000020	Washer	4
36	7660200001	Hex Nut	4
37	8632000008	Rubber Seal	12 FT
38	7796000002	Seal	12 FT
39	4811000135	Alum Sheet	2
40	7115140850	Hex Head Capscrew	4
41	7686000019	Filler Strip Panel	2
42	4679000115	Rubber Pad	2
43	4178000240	Bracket	2
44	7115150650	Hex Head Capscrew	4
45	7660152601	Locknut	6
46	7843000020	Gas Spring	2
47	7865000001	Ball Stud	2
48	4062000174	Bar	2
49	4178000222	Bracket	2
50	7585000004	Latch Striker	2
51	7661000021	Locknut	2

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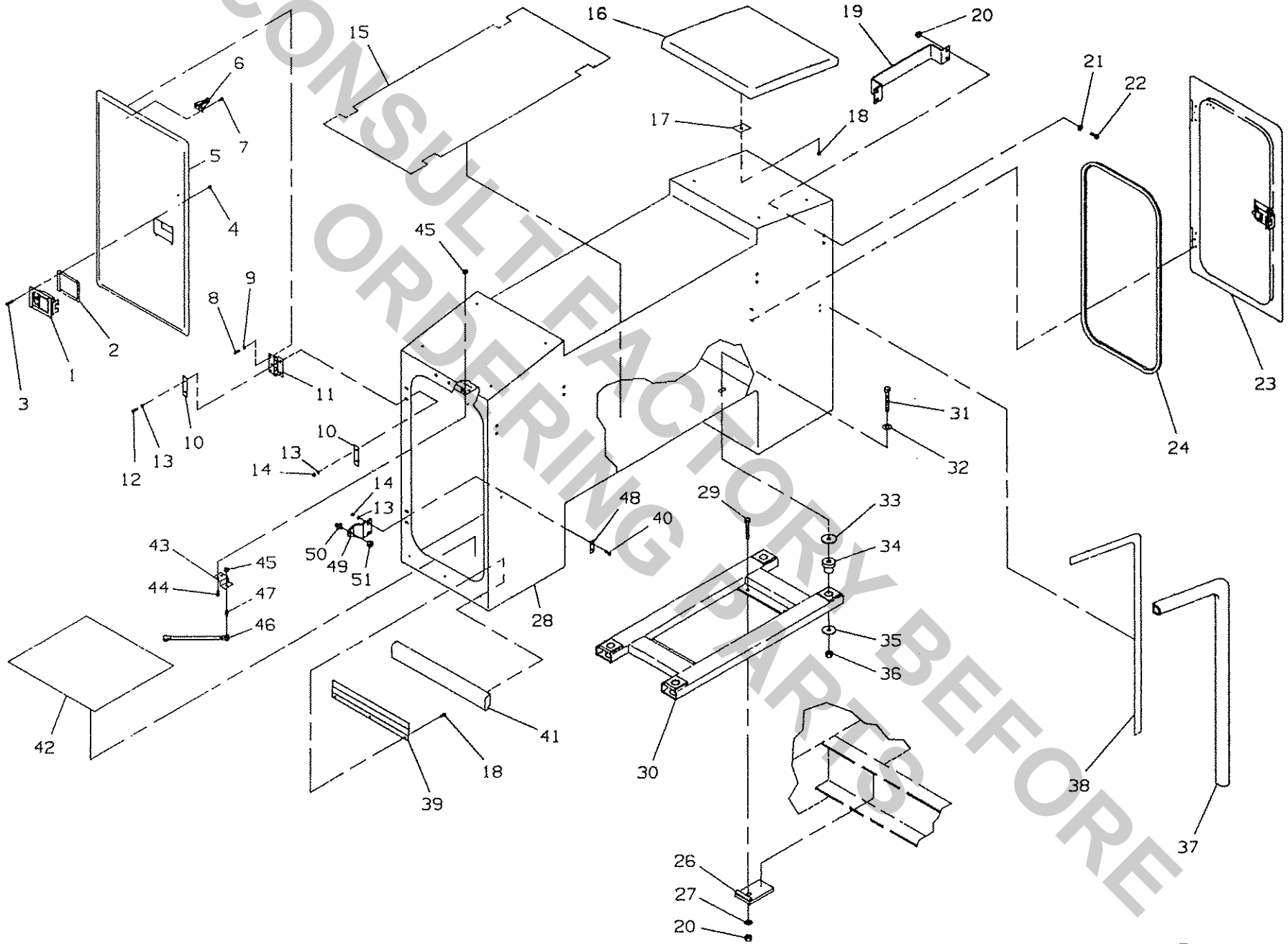
TOOLBOX - DOOR AND HARDWARE ASSEMBLY



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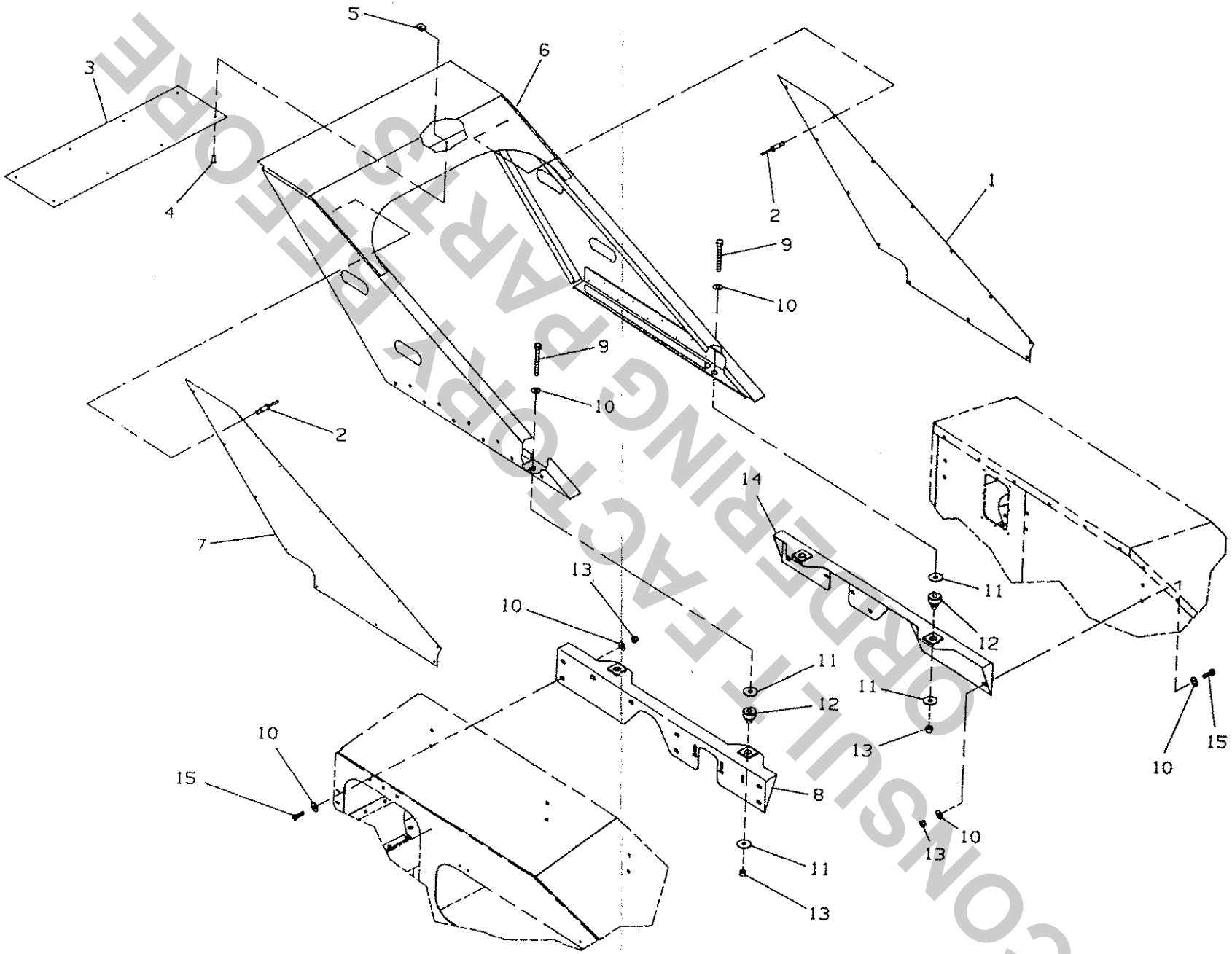
HEADBOARD INSTALLATION



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PARTS LIST - HEADBOARD INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	4707000084(A)	Plate	1
	4707000082(B)	Plate	1
2	7759000009	Rivet	26
3	4707000080	Plate	1
4	7114140623	Capscrew	8
5	7661000019	U-Nut	8
6	3241000052(A)	Headboard Assembly	1
	3241000050(B)	Headboard Assembly	1
7	4707000083(A)	Plate	1
	4707000081(B)	Plate	1
8	3178000227	Bracket Weldment LH	1
9	7115182850	Capscrew	4
10	7950180161	Flatwasher	24
11	7949000021	Washer	8
12	7636000009	Mount	4
13	7660182601	Locknut	16
14	3178000228	Bracket Weldment RH	1
15	7115181250	Capscrew	12

A - Application with 38.93" Headboard
B - Application with 28.93" Headboard

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PARTS LIST - 112" BODY LIGHT

Ref. No.	Part No.	Description	Qty.
1	7114100610	Screw	8
2	7661000002	Hex Nut w/Lockwasher	12
3	7346000077	Guard	2
4	7346000076	Gasket	2
5	7590000104	Light	2
6	7661000024	Nut	16
7	7188000001	Bulb	4
8	7188000002	Bulb	4
9	7590000092	Tail Light	2
10	7114101210	Screw	16
11	7590000093	Tail Light	2
12	7590000011	Light	2
13	7590000096	Light	2
14	7346000078	Boot	1
15	7346000055	Socket	1
16	7590000107	Indicator Light	2
17	7870000028	Switch	2
18	7870000044	Power Dist. Panel	1
19	7660142601	Locknut	4
20	7950140151	Flatwasher	10
21	7115140650	Capscrew	4
22	7112101411	Screw	4
23	4346000003	Junction Box	1
24	7790100856	Screw	32
25	7590000094	Light Assembly w/Switch	8
26	7457000011	Fuse, 10 Amp	3
27	7457000012	Fuse, 20 Amp	16
28	7457000019	Fuse, 5 Amp	6
29	7661000023	Nut w/Ext Lockwasher	18
30	7457000006	Fuse, 15 Amp	1
31	7457000023	Fuse, 20 Amp	2
32	7457000013	Fuse, 15 Amp	2
33	7740000001	Relay	14
34	7870000042	Switch Panel	1
35	7790141651	Screw	6

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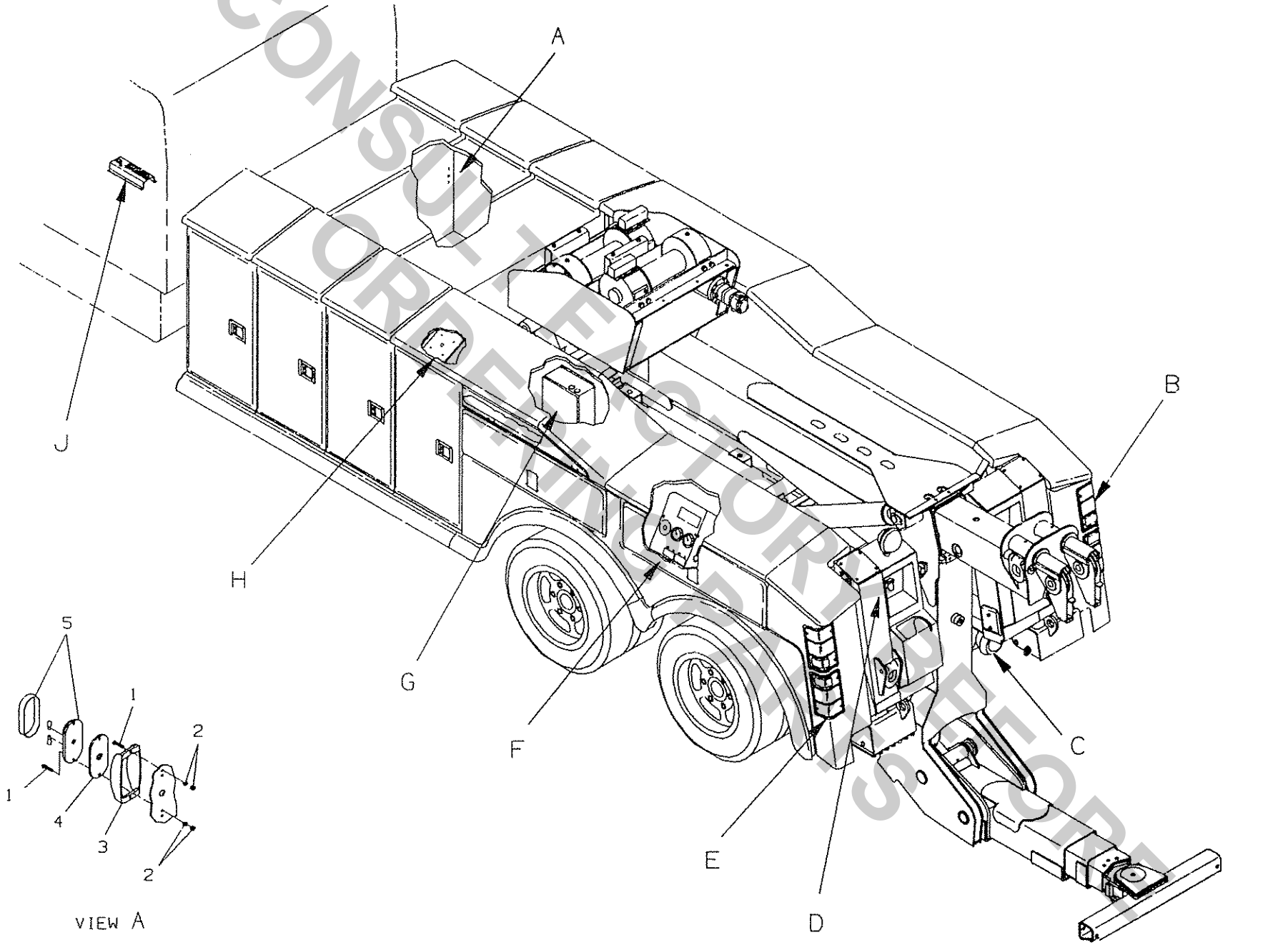
112" BODY LIGHT
(Sheet 1 of 2)



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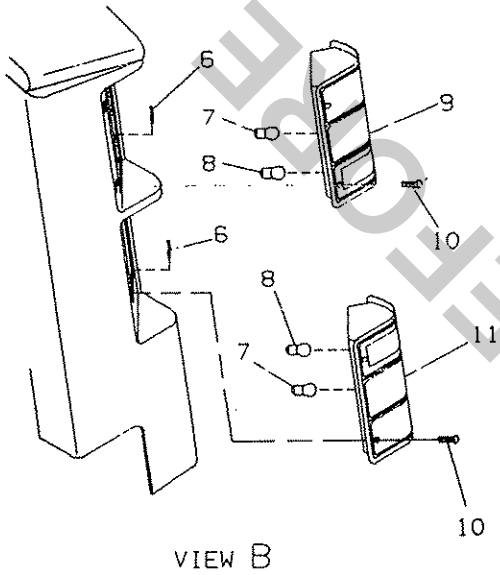
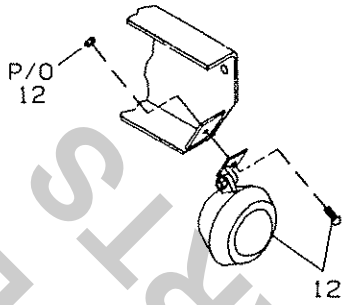
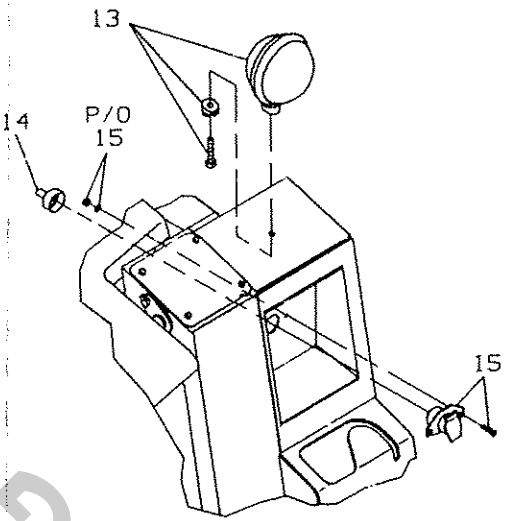
112" BODY LIGHT
(Sheet 2 of 2)



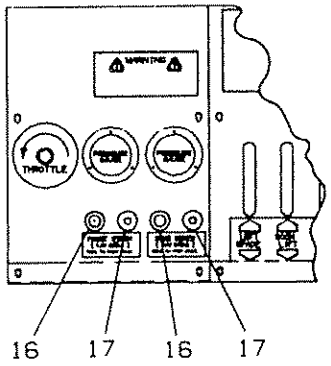
VIEW B



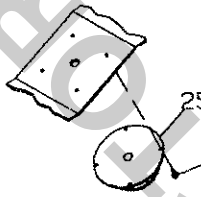
VIEW C



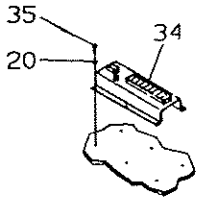
VIEW D



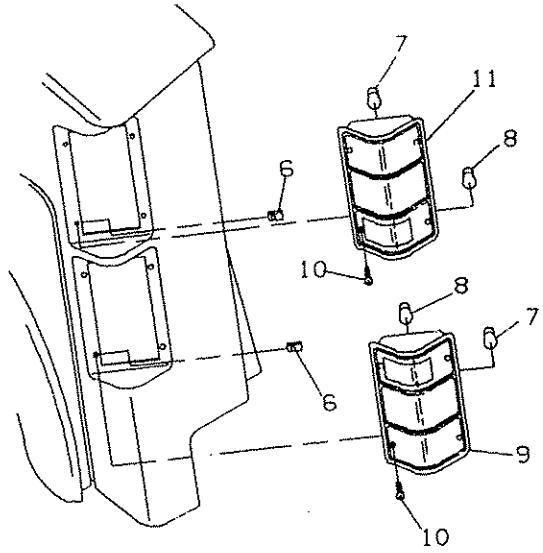
VIEW F



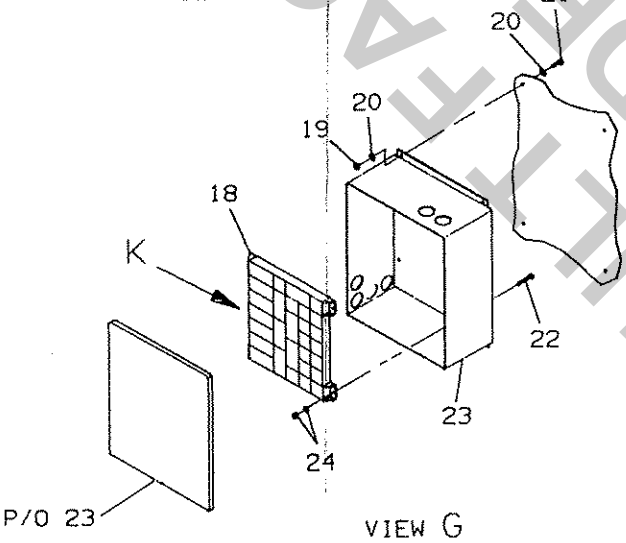
VIEW H



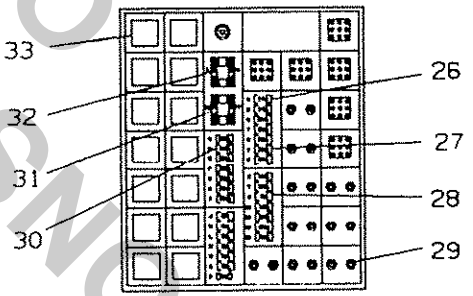
VIEW J



VIEW E



VIEW G



VIEW K

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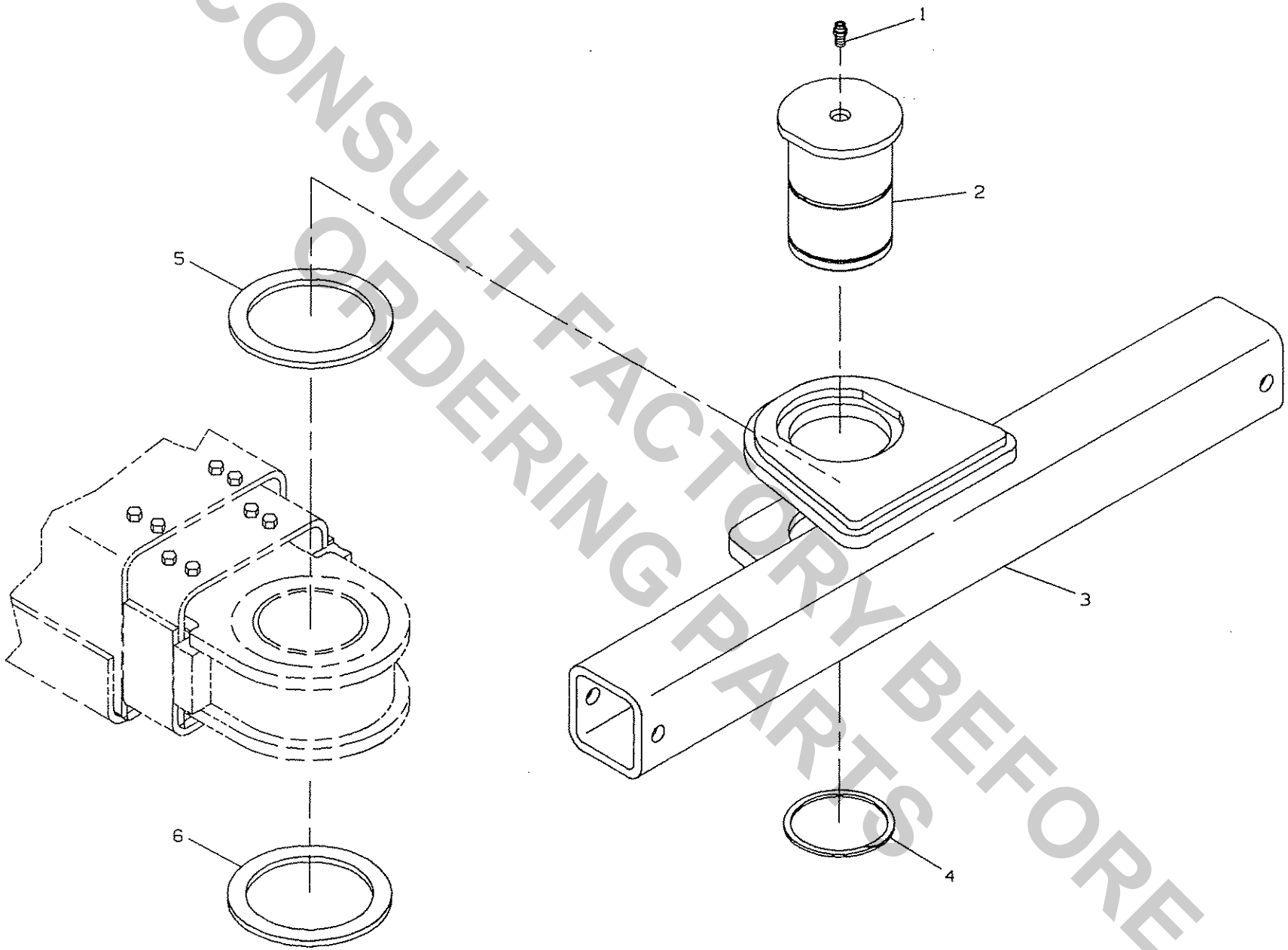
Date _____

UNDER LIFT
GRID PARTS

PARTS LIST - CROSSTUBE INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7440003000	Grease Fitting	1
2	4691000242	Pivot Pin	1
3	3913000049	Crosstube Weldment	1
4	7754000042	Retaining Ring	1
5	4949000041	Shim	1
6	4949000042	Shim	1

CROSSTUBE INSTALLATION



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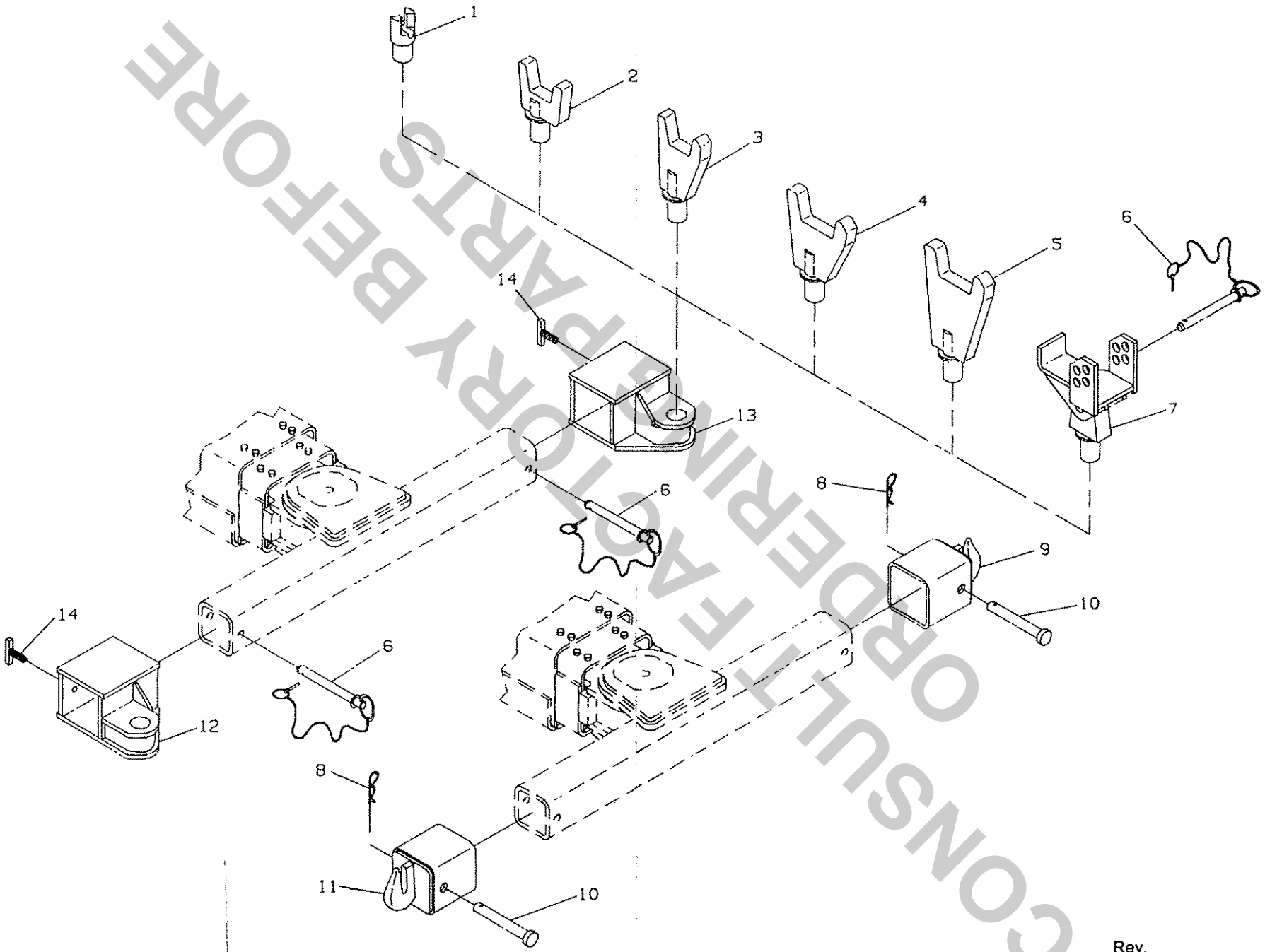
FRAME FORK INSTALLATION



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PARTS LIST - FRAME FORK INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	4007000007	Chain Adapter	2
2	3454000006	Short Fork Weldment	2
3	3454000005	Narrow Fork Weldment	2
4	3454000003	Wide Fork Weldment	2
5	3454000004	Long Fork Weldment	2
6	7691000021	Hitch Pin	4
7	3178000226	Spring Lift Bracket	2
8	7691000020	Hairpin	2
9	3007000004	Chain Adapter RH	1
10	7691000022	Clevis Pin	2
11	3007000005	Chain Adapter LH	1
12	3007000007	Lift Receiver RH	1
13	3007000006	Lift Receiver LH	1
14	3551000036	T-Handle Weldment	2
15	7262000026	Safety Chain (Not Shown)	2

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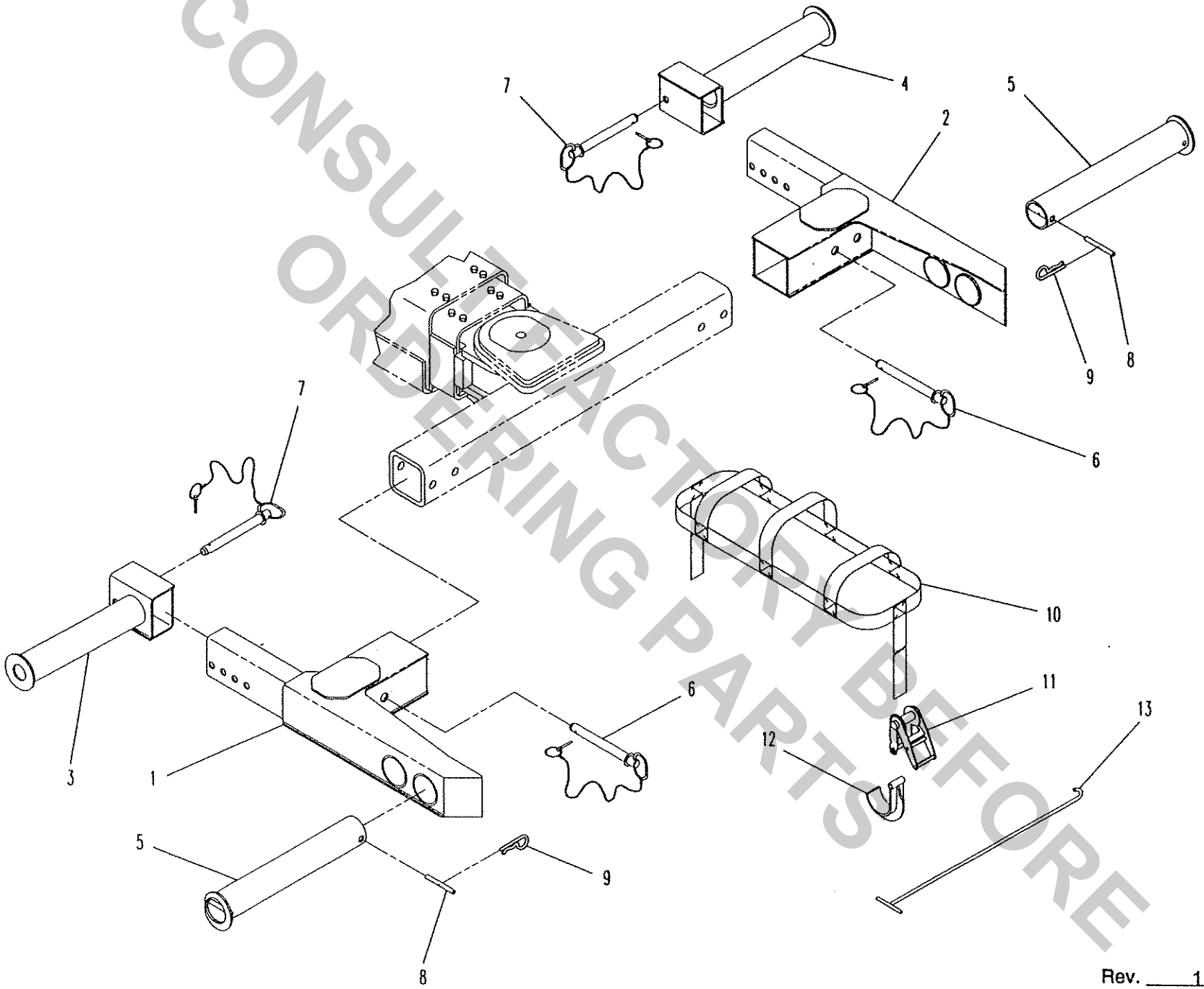
PARTS LIST - BUS BAR GRID ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	3484000033	LH Bus Arm Grid	1
2	3484000032	RH Bus Arm Grid	1
3	3020000039	LH Arm	1
4	3020000040	RH Arm	1
5	3913000055	Tube	2
6	7691000021	Hitch Pin w/Lanyard	2
7	7691000026	Hitch Pin w/Lanyard	2
8	4691000274	Pin	2
9	7691000020	Hair Pin	2
10	7894000032	Tie Strap	2
11	7894000028	Ratchet	4
12	3561000008	Hook	4
13	3561000007	Pull Hook	1

BUS ARM GRID ASSEMBLY



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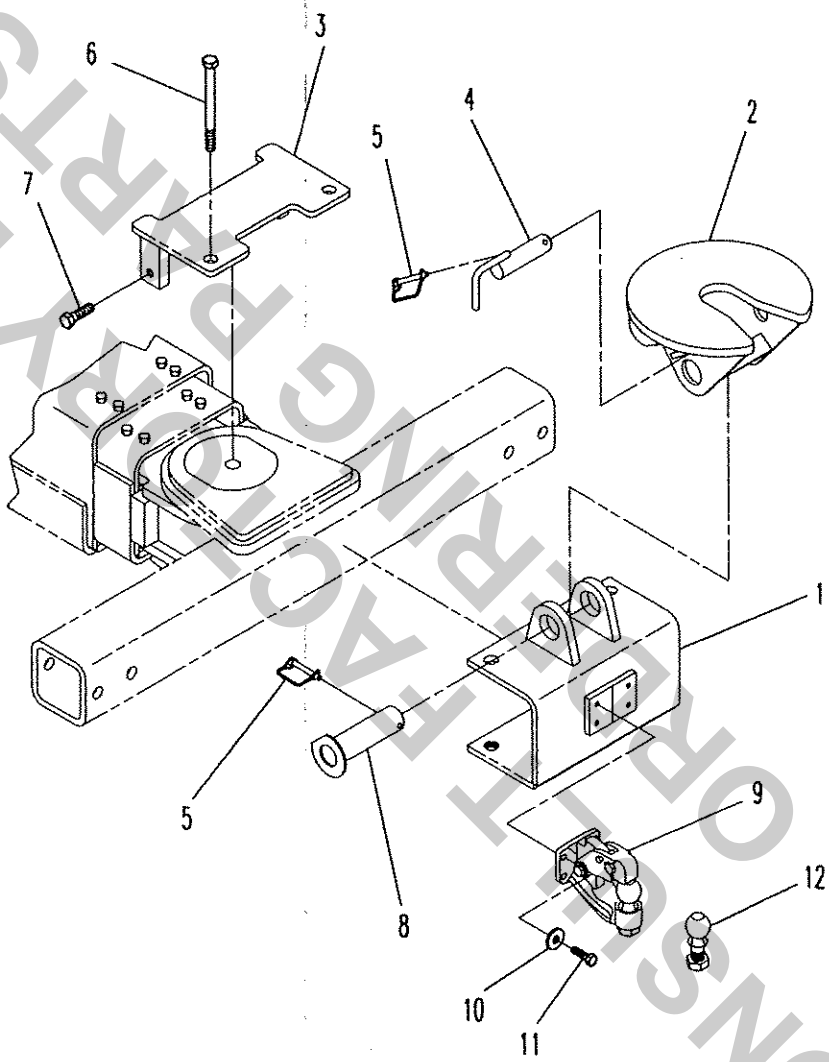
Date 8-18-97

5TH WHEEL AND PINTLE HOOK ADAPTER



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Date 8-18-97

PARTS LIST - 5TH WHEEL AND PINTLE HOOK ADAPTER

Ref. No.	Part No.	Description	Qty.
1	3178000240	Adapter Bracket	1
2	3178000239	5th Wheel Plate Bracket	1
3	3706000080	Adapter Bracket Plate	1
4	3691000145	5th Wheel Pin	1
5	7691000025	Snap Pin	2
6	7118267250	Capscrew	2
7	7118221650	Capscrew	2
8	3691000144	Pin	1
9	7561000020	Dual Purpose Hitch with 2" Ball (Domestic)	1
	7561000022	Dual Purpose Hitch with 50mm Ball (Foreign)	
10	7950180000	Lockwasher	4
11	7115181250	Capscrew	4
12	7056000003	1 7/8" Ball Replacement	1
	7056000004	2" Ball Replacement	
	7056000005	2 5/16" Ball Replacement	
	7056000006	50mm Ball Replacement	

HDL500/280
WRECKER BOOM
PARTS

PARTS LIST - WRECKER BOOM INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7690142845	Spring Pin	2
2	4754000003	D-Ring	2
3	7754000049	Retaining Ring	2
4	7440003000	Grease Fitting	2
5	3503900004	Sheave Support	2
6	7754000048	Retaining Ring	2
7	3691000129	Sheave Pin	2
8	7809000002	Sheave	2
9	4949000031	Shim (.06 Thk)	2
	4949000032	Shim (.09 Thk)	
10	7660141600	Locknut	4
11	3249000001	Cable Guide Weldment	2
12	4249000001	Cable Guide	4
13	7115142050	Capscrew	4
14	4691000243	Pin	2
15	7660161600	Locknut	3
16	7189000013	Rubber Bumper	2
17	7115162050	Capscrew	1
18	7950160251	Flatwasher	5
19	3503100010	Wrecker Boom Assembly	1
20	7115162250	Capscrew	2
21	4706001799	Plate	2
22	3691000132	Barrel Pin	2
23	7189000014	Spring	2
24	4691000220	Pin	2
25	7660182600	Locknut	4
26	7115184050	Capscrew	2
27	4706001622	Plate	1
28	7320000009	Boom Lift Cylinder	2
29	3691000133	Rod Pin	2
30	7115160850	Capscrew	2
31	7950140151	Flatwasher	4
32	7249000001	Cable Tensioner Wear Block	2
33	7115181650	Capscrew	6
34	7950180153	Flatwasher	6
35	7115140524	Capscrew	4
36	7120000025	Hoist Ring	2

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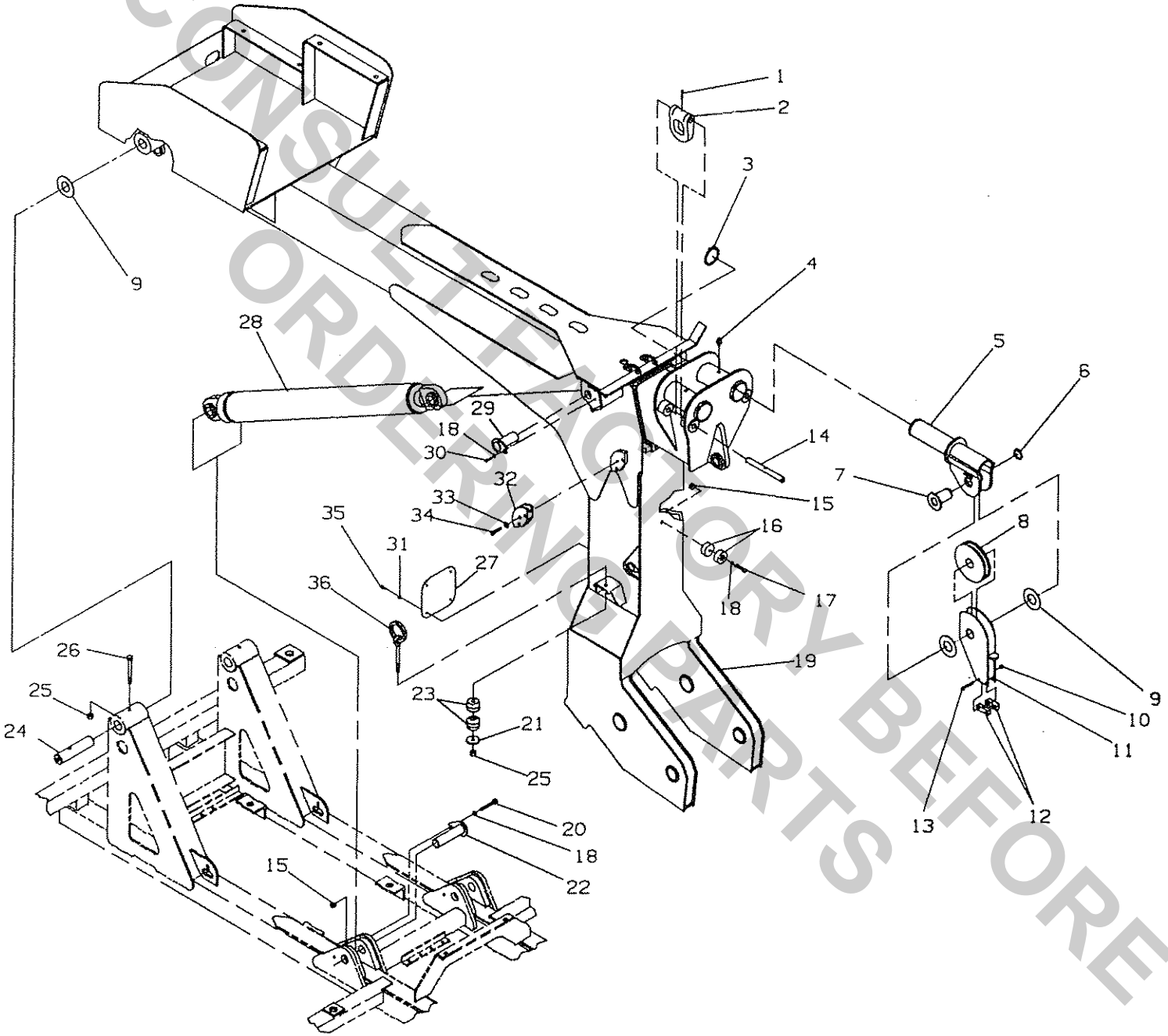
WRECKER BOOM INSTALLATION



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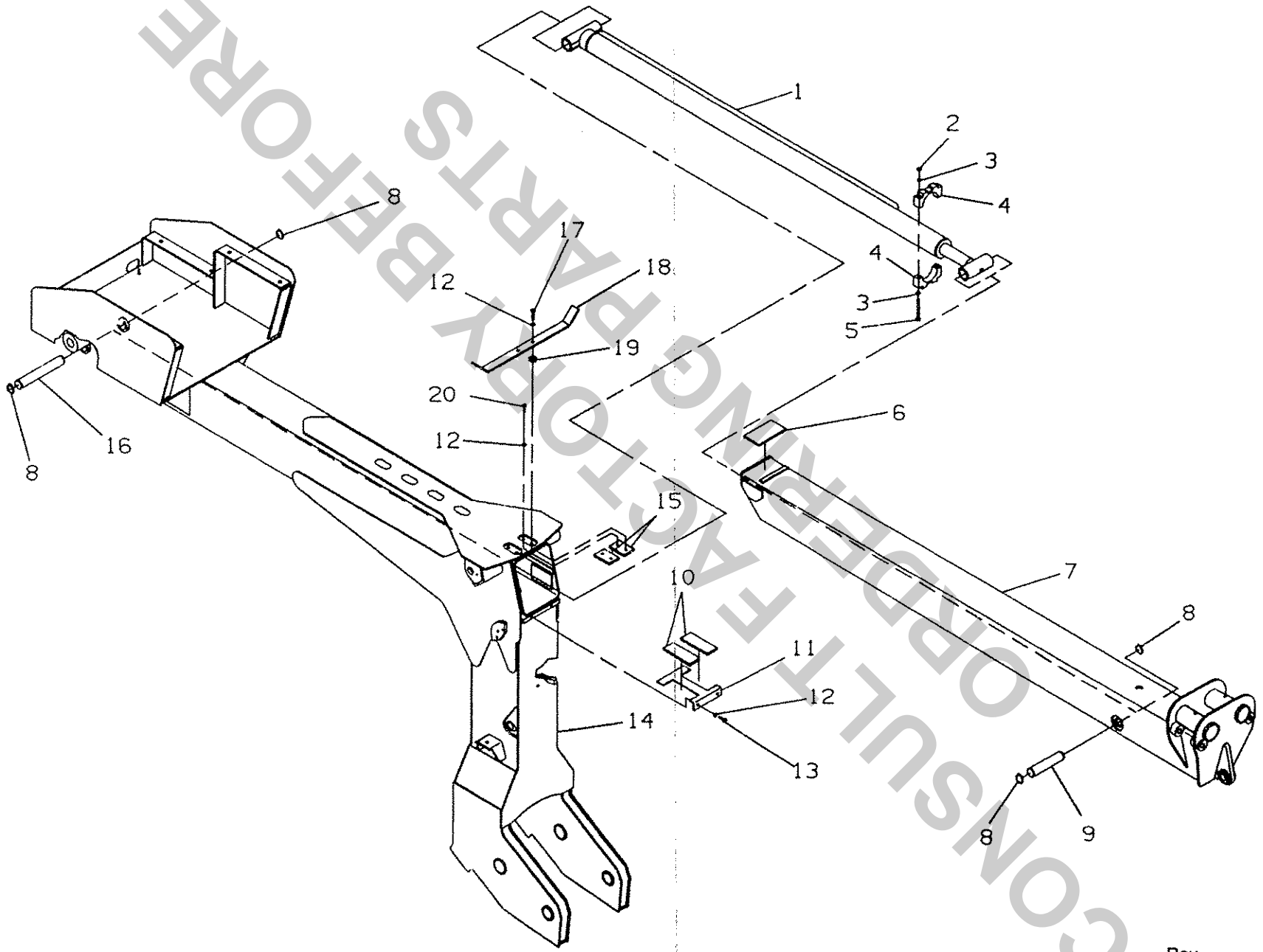
WRECKER BOOM ASSEMBLY



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PARTS LIST - WRECKER BOOM ASSEMBLY

Ref. No.	Part No.	Description	Qty.
1	7320000008	Boom Ext Cylinder	1
2	7660161600	Locknut	2
3	7950160251	Washer	4
4	4177000033	Support	2
5	7115164450	Capscrew	2
6	4679000109	Pad	1
7	3170000087	Inner Boom Weldment	1
8	7754000048	Retaining Ring	4
9	4691000210	Pin	1
10	4679000110	Pad	2
11	4706001621	Plate	1
12	7950180153	Flatwasher	6
13	7115181050	Capscrew	2
14	3170000092	Boom Tower	1
15	4831000061	Spacer	2
16	4691000208	Barrel Pin	1
17	7115181450	Capscrew	2
18	4062000158	Bar	1
19	4831000064	Spacer	2
20	7115180650	Capscrew	2

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PARTS LIST - WINCH INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7970000031	Worm Gear Winch	1
2	7118221816	Capscrew	8
3	7660222308	Locknut	8
4	7970000030	Worm Gear Winch	1
5	7248000040	Cable Assembly	2

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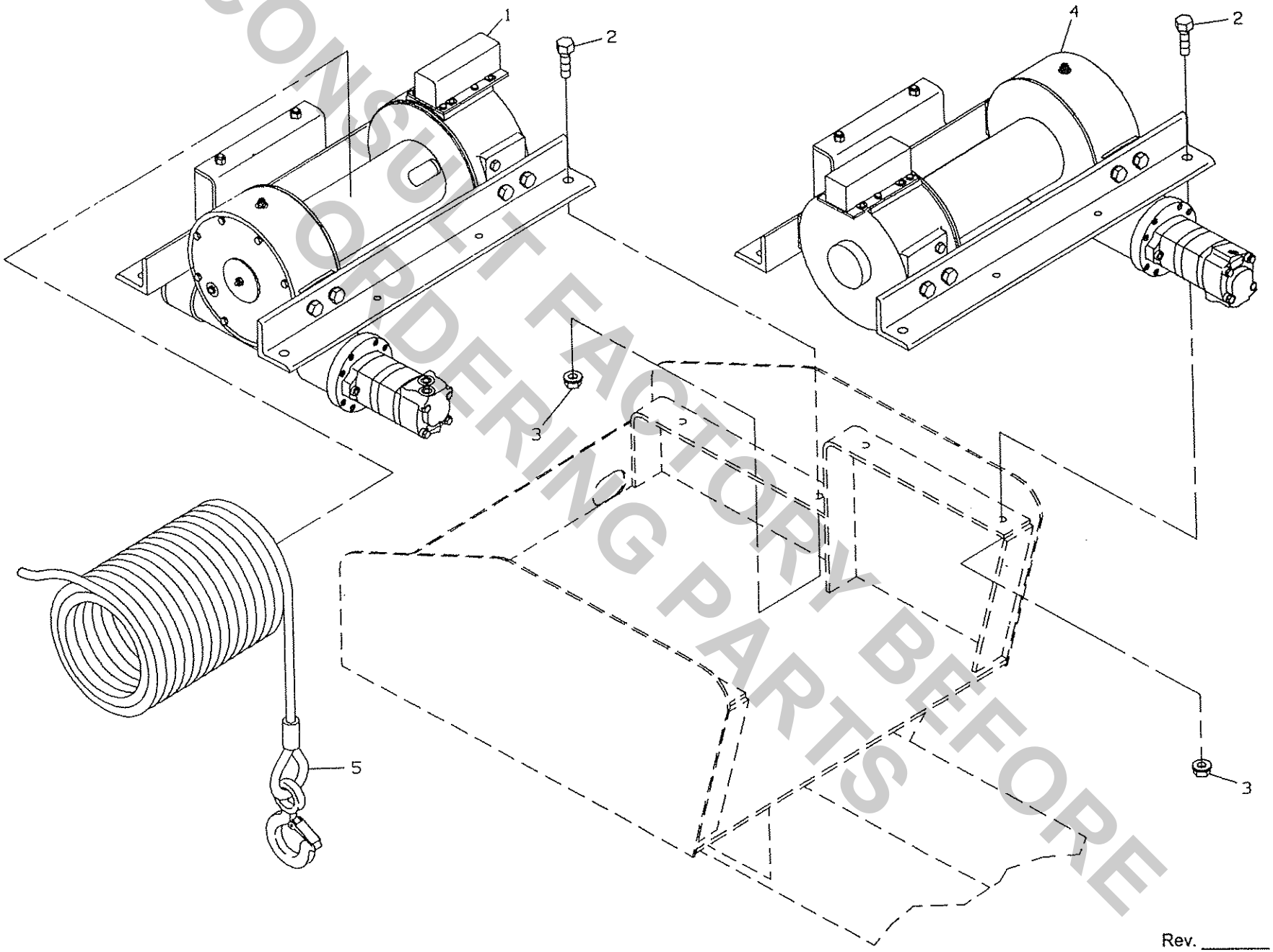
WINCH INSTALLATION



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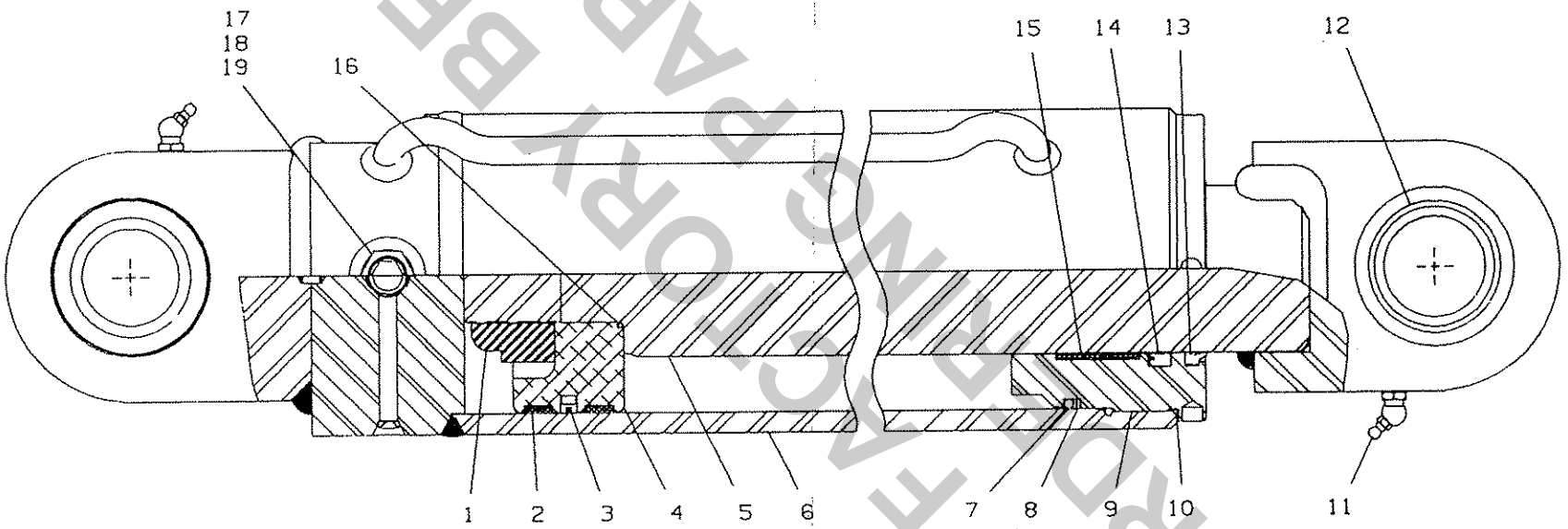
WRECKER BOOM LIFT CYLINDER
7320000009



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PARTS LIST - WRECKER BOOM LIFT CYLINDER
7320000009

Ref. No.	Part No.	Description	Qty.
1	20192	Locknut	1
2	30423*	Wear Ring	2
3	11954*	Seal	1
4	75372	Piston	1
5	5E829	Rod Assy	1
6	4J753	Tube Assy	1
7	15531*	O-ring	1
8	10559*	Back-up	1
9	75168	Head	1
10	15532*	O-Ring	1
11	30085	Lube Fitting	2
12	30200	Spherical Bushing	2
13	10008*	Wiper	1
14	10018*	Seal	1
15	30332*	Wear Ring	3
16	13454*	O-Ring	1
17	32539	Counterbalance Valve	1
18	14525*	Washer Seal	1
19	32326	Bleeder Plug	1

* Available only in Service Kit #7577000170

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PARTS LIST - WRECKER BOOM EXT. ASSEMBLY
7320000008

Ref. No.	Part No.	Description	Qty.
1	30241	Lube Fitting	2
2	32504	Check Valve	1
3	30693	Port Plug	1
4	20012	Locknut	1
5	30162*	Wear Ring	2
6	11952*	Seal	1
7	75358	Piston	1
8	5E825	Rod Assy	1
9	4J747	Tube Assy	1
10	10721*	O-Ring	1
11	10082*	Back-up	1
12	72721	Head	1
13	15202*	O-Ring	1
14	10007*	Wiper	1
15	10017*	Seal	1
16	30420*	Wear Ring	2
17	13509*	O-Ring	1

* Available only in Service Kit #7577000169

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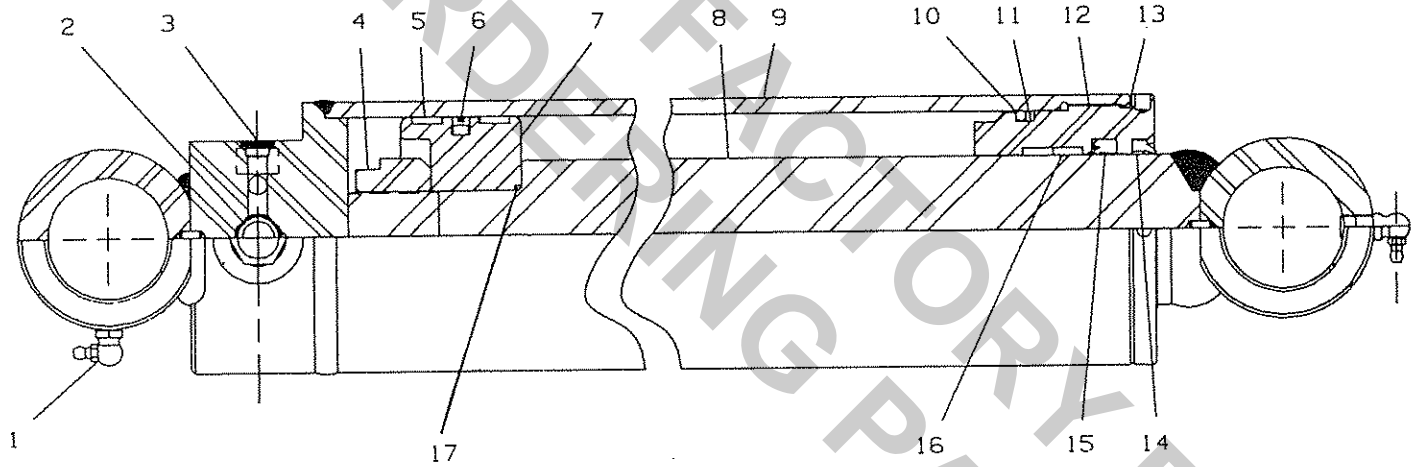
WRECKER BOOM EXT. CYLINDER
7320000008



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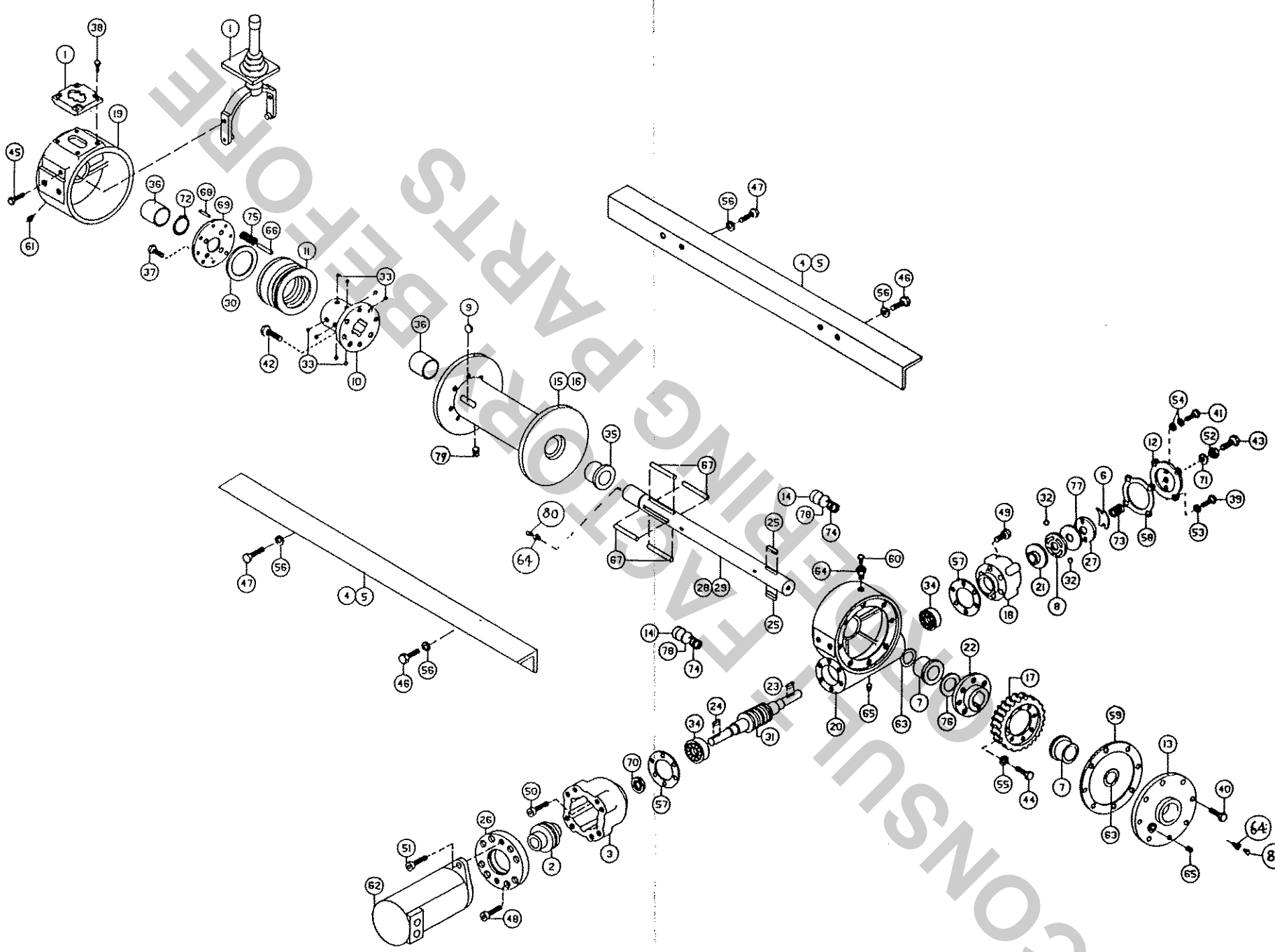
WINCH PARTS



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PARTS LIST - WINCH

Ref. No.	Part No.	Description	Qty.
1	276033	Shifter Assembly	1
2	299047	Coupling Assembly	1
3	300048	Adapter	1
4	302710	Angle	2
5	302711	Angle	2
6	306035	Spring-Flat	1
7	308083	Bushing	2
8	314007	Cam Plate	1
9	314010	Cable Anchor	1
10	324151	Clutch	1
11	324318	Locking Ring	1
12	328027	Cover	1
13	328122	Cover	1
14	330010	Shoe	2
15	332167	Drum-800	1
16	332172	Drum-Y800	1
17	334086	Gear, RH	1
18	338221	Housing	1
19	338235	Housing	1
20	338242	Housing	1
21	340011	Hub	1
22	340068	Hub	1
23	342053	Key	1
24	342092	Key	1
25	342153	Key	2
26	350535	Plate	1
27	352021	Plate	1
28	357498	Shaft	1
29	357502	Shaft	1
30	362224	Spacer	1
31	368082	Worm, RH	1
32	400007	Ball-Brake	2
33	400011	Ball-Clutch	8
34	402045	Bearing-Ball	2
35	412051	Bushing	1
36	412052	Bushing	2
37	414038	Capscrew	4
38	414069	Capscrew	4
39	414111	Capscrew	4
40	414277	Capscrew	8
41	414399	Capscrew	2
42	414571	Capscrew	8
43	414603	Capscrew	1
44	414608	Capscrew	8
45	414619	Capscrew	2

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PARTS LIST - WINCH

Ref. No.	Part No.	Description	Qty.
46	414751	Capscrew	4
47	414777	Capscrew	4
48	414871	Capscrew	8
49	414897	Capscrew	6
50	414909	Capscrew	6
51	414950	Capscrew	2
52	418067	Nut	1
53	418163	Lockwasher	4
54	418184	Washer-Flat	4
55	418217	Lockwasher	8
56	418249	Lockwasher	8
57	442192	Gasket	2
58	442194	Gasket	1
59	442195	Gasket	1
60	456008	Fitting-Relief	1
61	456031	Fitting-Lube	1
62	458048	Motor-Hydraulic	1
63	462013	Quad-Ring	2
64	468002	Reducer	3
65	468011	Pipe Plug	2
66	470042	Pin-Roll	4
67	470044	Pin-Dowel	4
68	470056	Pin-Roll	4
69	474030	Plate-Retainer	1
70	486068	Seal-Oil	1
71	486076	Thread Seal	1
72	490025	Ring-Retainer	1
73	494010	Spring	1
74	494022	Spring-Disc	2
75	494069	Spring	4
76	518016	Thrust Washer	1
77	530007	Disc-Brake	1
78	530094	Spacer	2
79	416059	Setscrew	1
80	456004	Lube Fitting	2

SCHEMATICS

PARTS LIST - REMOTE CONTROL WIRING

Ref. No.	Part No.	Description	Qty.
1	7552000093	Harness, Valve Bank	1
2	7295000025	Hand Controller	1
3	7552000094	Harness, Remote Control	1

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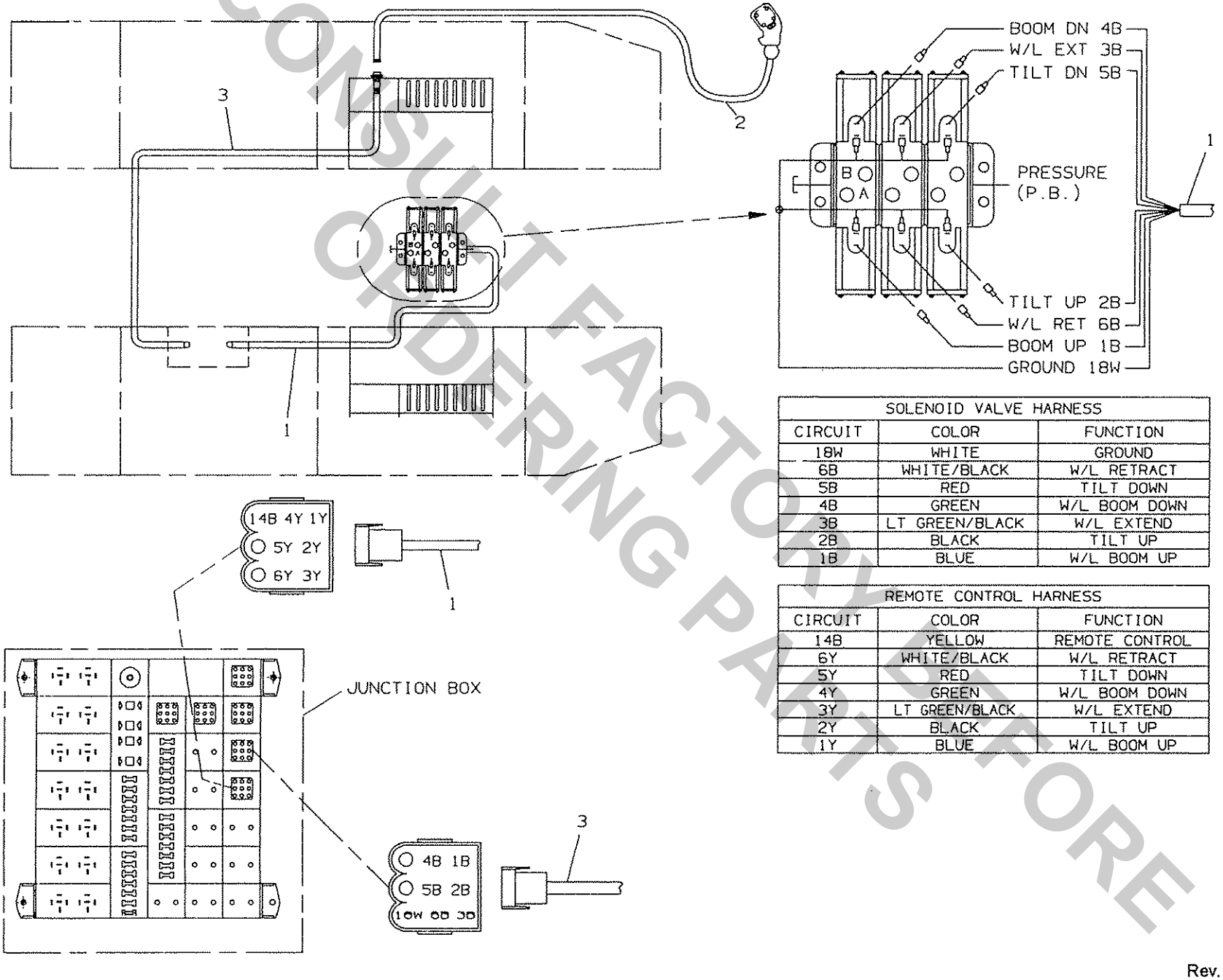
REMOTE CONTROL WIRING



SOLENOID VALVE HARNESS		
CIRCUIT	COLOR	FUNCTION
18W	WHITE	GROUND
6B	WHITE/BLACK	W/L RETRACT
5B	RED	TILT DOWN
4B	GREEN	W/L BOOM DOWN
3B	LT GREEN/BLACK	W/L EXTEND
2B	BLACK	TILT UP
1B	BLUE	W/L BOOM UP

REMOTE CONTROL HARNESS		
CIRCUIT	COLOR	FUNCTION
14B	YELLOW	REMOTE CONTROL
6Y	WHITE/BLACK	W/L RETRACT
5Y	RED	TILT DOWN
4Y	GREEN	W/L BOOM DOWN
3Y	LT GREEN/BLACK	W/L EXTEND
2Y	BLACK	TILT UP
1Y	BLUE	W/L BOOM UP

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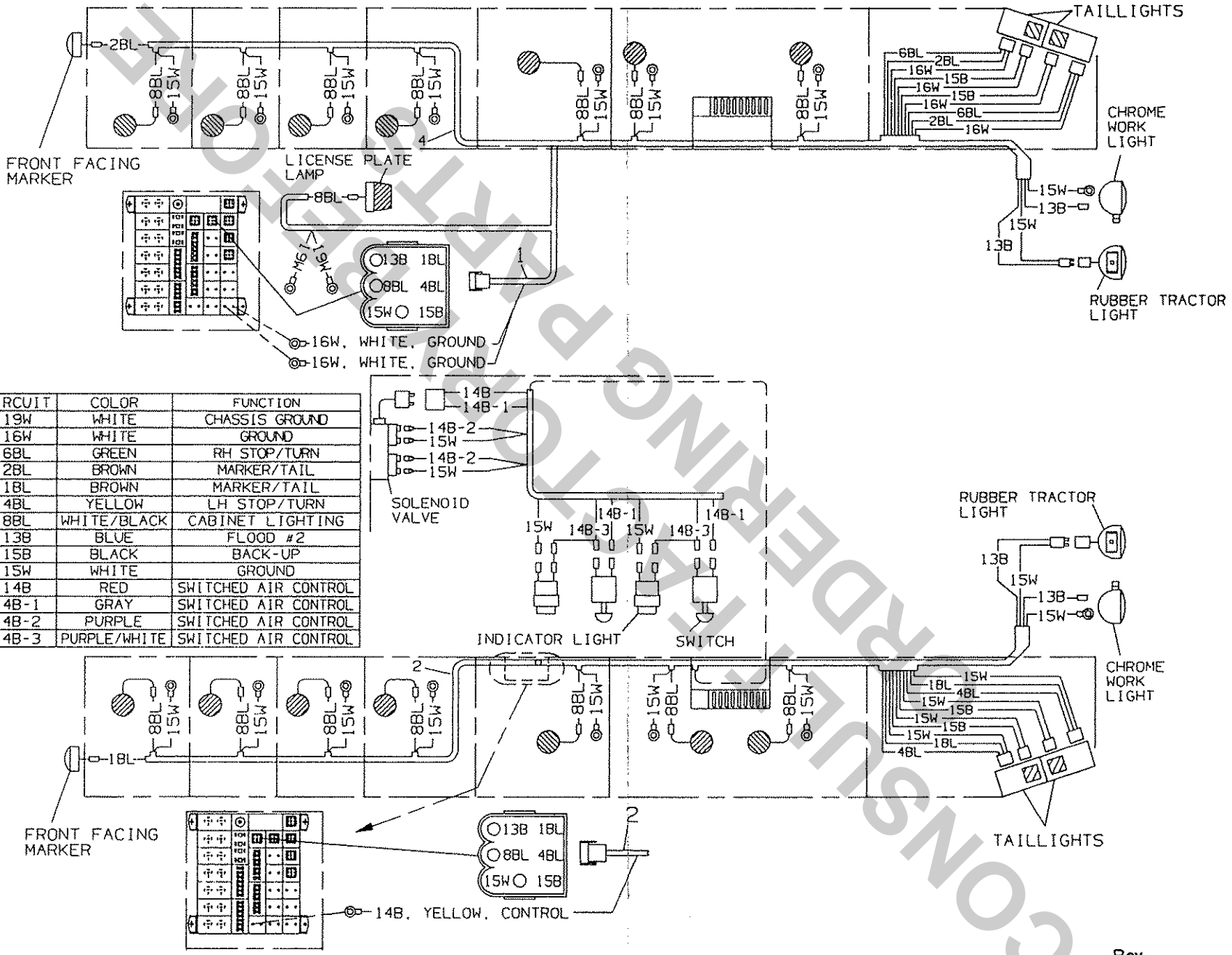
BODY WIRING



CIRCUIT	COLOR	FUNCTION
19W	WHITE	CHASSIS GROUND
16W	WHITE	GROUND
6BL	GREEN	RH STOP/TURN
2BL	BROWN	MARKER/TAIL
1BL	BROWN	MARKER/TAIL
4BL	YELLOW	LH STOP/TURN
8BL	WHITE/BLACK	CABINET LIGHTING
13B	BLUE	FLOOD #2
15B	BLACK	BACK-UP
15W	WHITE	GROUND
14B	RED	SWITCHED AIR CONTROL
14B-1	GRAY	SWITCHED AIR CONTROL
14B-2	PURPLE	SWITCHED AIR CONTROL
14B-3	PURPLE/WHITE	SWITCHED AIR CONTROL

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PARTS LIST - BODY WIRING

Ref. No.	Part No.	Description	Qty.
1	7552000090	Harness, RH	1
2	7552000091	Harness, LH	1

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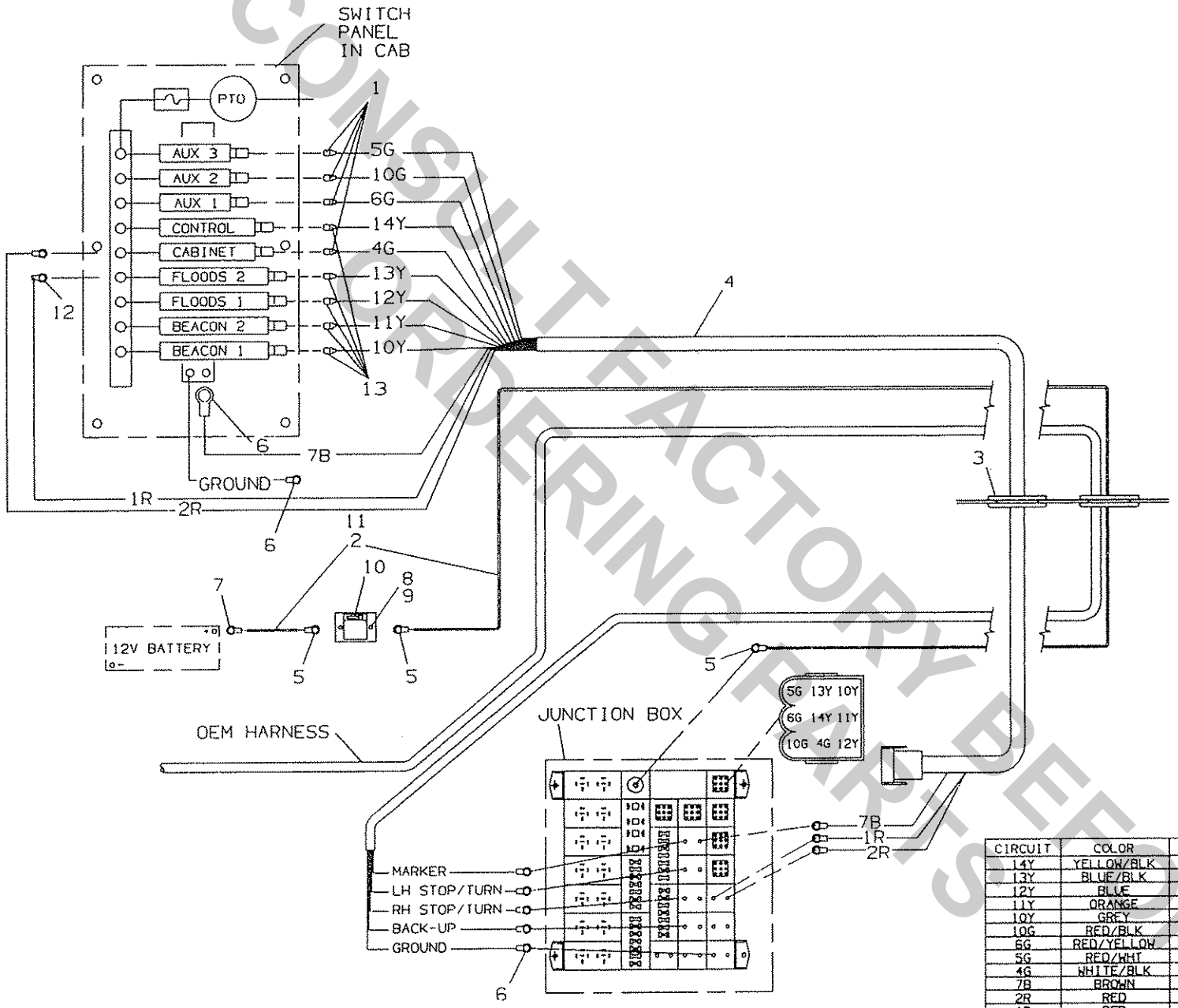
PARTS LIST - SWITCH PANEL WIRING

Ref. No.	Part No.	Description	Qty.
1	7345001910	Tab	4
2	7978000011	Cable	25 FT
3	7493000011	Grommet	14
4	7552000092	Harness, Switch	1
5	7345222202	Ring Terminal	3
6	7345211702	Ring Terminal	7
7	7345242202	Ring Terminal	1
8	7115140650	Capscrew	2
9	7660142601	Locknut	2
10	7870000043	Circuit Breaker	1
11	8597650001	Loom	25 FT
12	7345211902	Ring Terminal	2
13	7345001710	Tab	5

SWITCH PANEL WIRING



CIRCUIT	COLOR	FUNCTION
14Y	YELLOW/BLK	CONTROLS SWITCH
13Y	BLUE/BLK	FLOOD #2 SWITCH
12Y	BLUE	FLOOD #1 SWITCH
11Y	ORANGE	BEACON #2 SWITCH
10Y	GREY	BEACON #1 SWITCH
10G	RED/BLK	AUX #2 SWITCH
6G	RED/YELLOW	AUX #1 SWITCH
5G	RED/WHT	AUX #3 SWITCH
4G	WHITE/BLK	CABINET SWITCH
7B	BROWN	SWITCH PANEL ID
2R	RED	POWER TO SWITCH PANEL
1R	RED	POWER TO SWITCH PANEL

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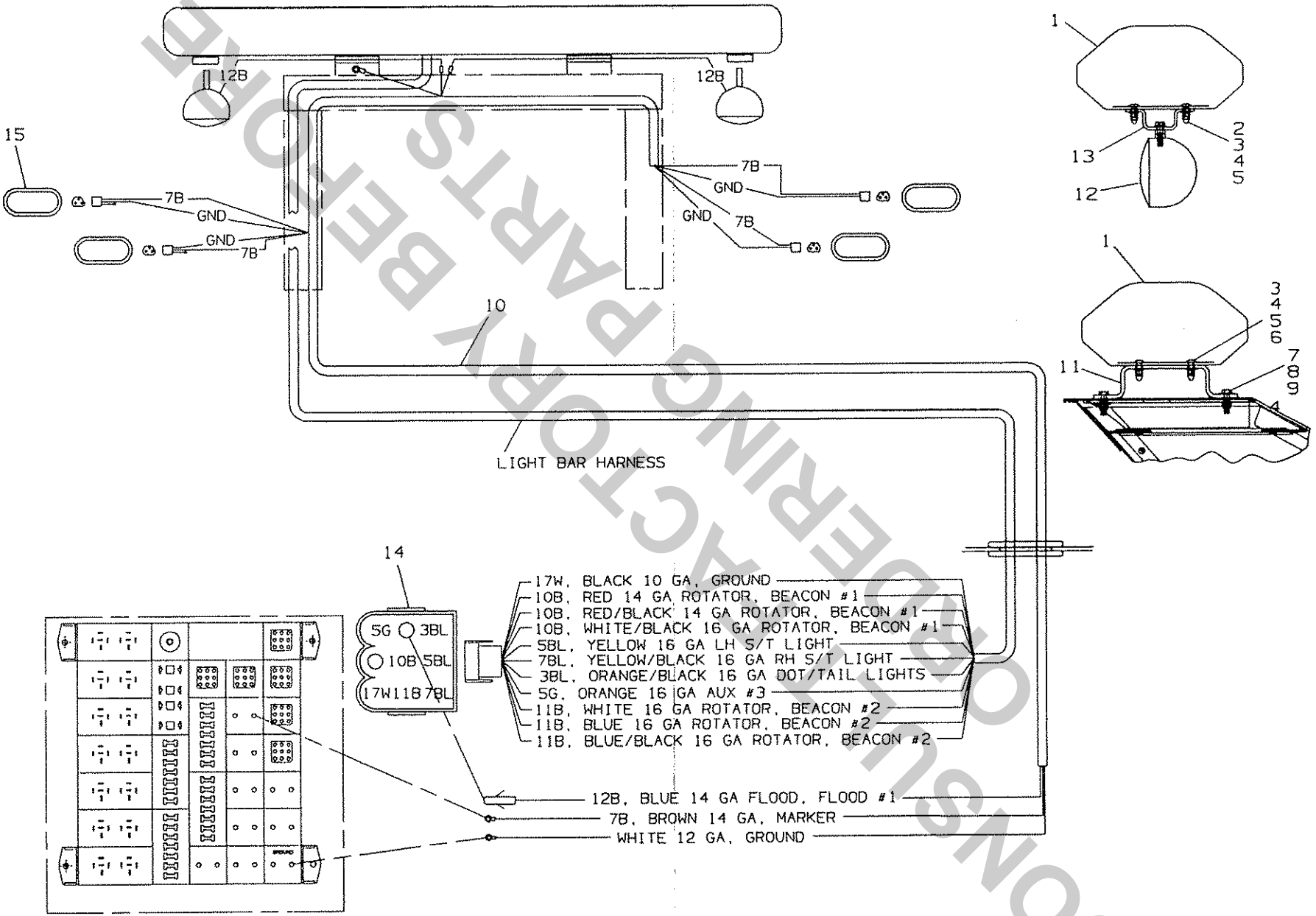
EMERGENCY LIGHT INSTALLATION



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PARTS LIST - EMERGENCY LIGHT INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7590000097	Lightbar	1
2	7115150664	Carriage Bolt	4
3	7950150000	Lockwasher	12
4	7950150161	Flatwasher	12
5	7660152200	Acorn Nut	12
6	7115150864	Carriage Bolt	8
7	7115161250	Capscrew	8
8	7660162601	Locknut	8
9	7950160161	Flatwasher	16
10	7552000095	Harness Pylon	1
11	4178000234	Bracket	2
12	7590000096	Work Light	2
13	4178000207	Bracket	2
14	7577000173	Plug Kit	1
15	7590000095	Marker Light Assembly	4

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PARTS LIST - HYDRAULIC SCHEMATIC

Ref. No.	Part No.	Description	Qty.
1	7445081243	Adapter	6
2	4569130034	Hose Assembly	2
3	4569152097	Hose Assembly	2
4	4569130033	Hose Assembly	2
5	4569130032	Hose Assembly	2
6	4569130025	Hose Assembly	2
7	7445040421	Hydraulic Fitting	4
8	4567110053	Hose Assembly	1
9	4567110050	Hose Assembly	1
10	4567132026	Hose Assembly	1
11	7445060843	Adapter	8
12	4569150028	Hose Assembly	2
13	4569150030	Hose Assembly	2
14	7445080843	Adapter	4
15	7443000030	Female Fitting Tee	4
16	7443000108	Restrictor	1
17	4567110042	Hose Assembly	1
18	7443000052	Tee Branch	2
19	4567110041	Hose Assembly	1
20	7443000153	Tube Reducer	2
21	7445080042	Tube Nut	2
22	7443000063	Tee	2
23	4567130020	Hose Assembly	1
24	4569152079	Hose Assembly	4
24	7445100822	Union	4

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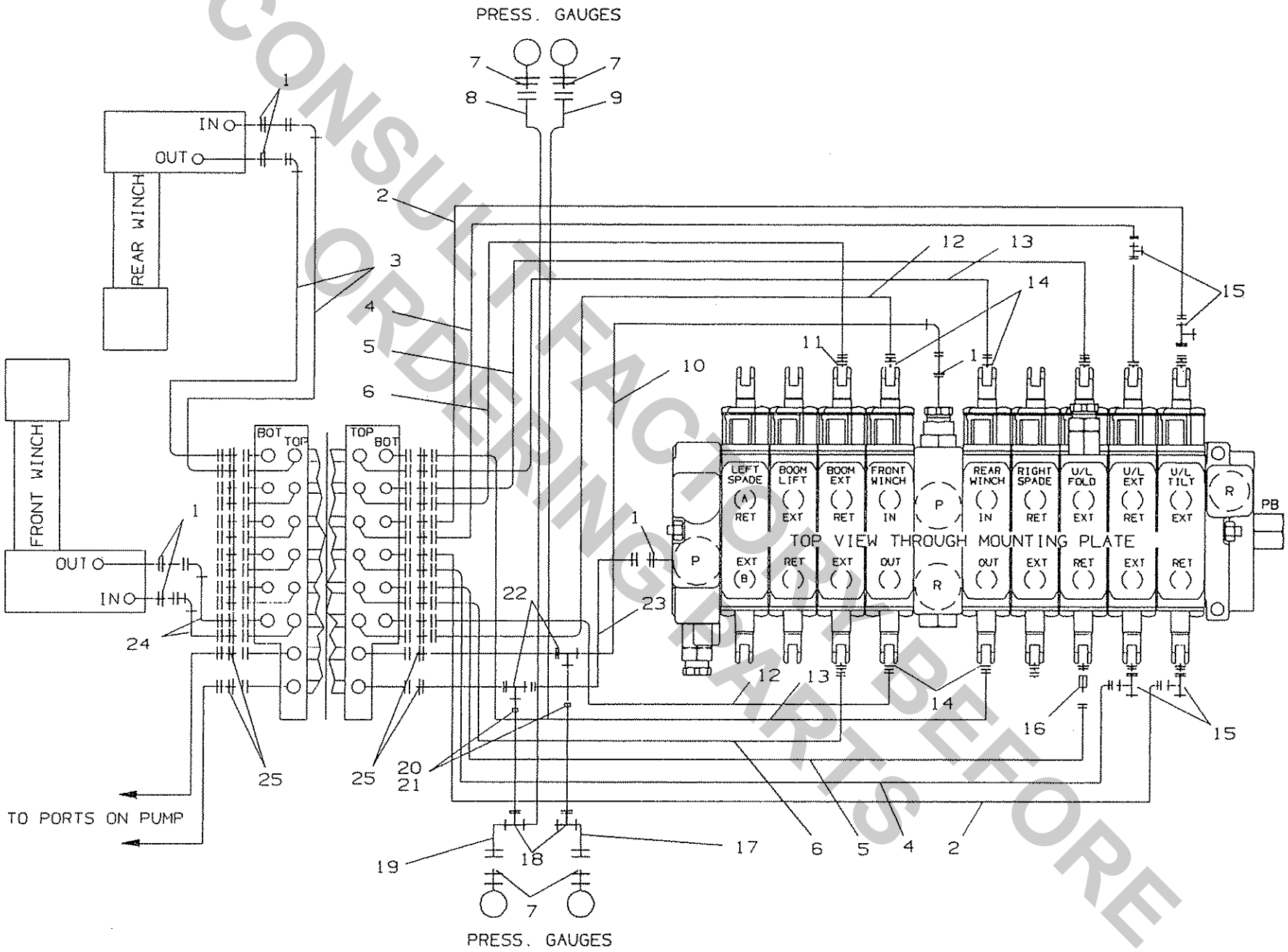
HYDRAULIC SCHEMATIC



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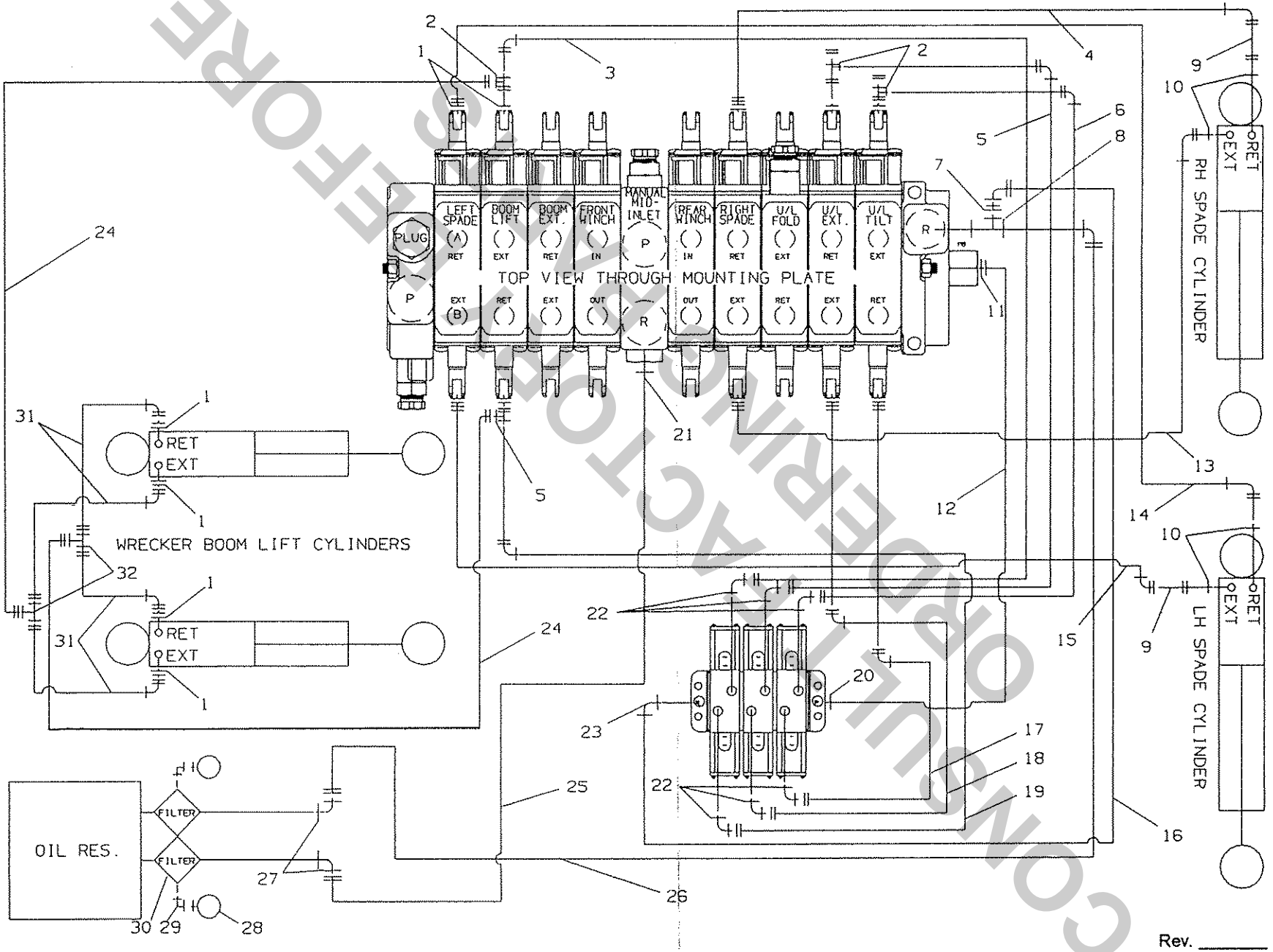
HYDRAULIC SCHEMATIC



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PARTS LIST - HYDRAULIC SCHEMATIC-MEDIUM DUTY

Ref. No.	Part No.	Description	Qty.
1	7445060843	Adapter	14
2	7443000030	Fitting Tee	6
3	4567122046	Hose Assembly	1
4	4567123056	Hose Assembly	1
5	4567122033	Hose Assembly	1
6	4567122028	Hose Assembly	1
7	7443000049	Reducer	1
8	7445121248	Tee Run	1
9	7443000109	Adapter	2
10	7445060643	Adapter	4
11	7445081043	Adapter	1
12	4567130021	Hose Assembly	1
13	4567123058	Hose Assembly	1
14	4567123068	Hose Assembly	1
15	4567123066	Hose Assembly	1
16	4567133025	Hose Assembly	1
17	4567122030	Hose Assembly	1
18	4567122034	Hose Assembly	1
19	4567122048	Hose Assembly	1
20	7445080843	Adapter	1
21	7445121243	Adapter	1
22	7445060845	Elbow	6
23	7445080845	Elbow	1
24	4567122027	Hose Assembly	2
25	4567162062	Hose Assembly	1
26	4567162069	Hose Assembly	1
27	7445121620	Elbow	2
28	7470000002	Oil Filter Gauge	2
29	7443000158	Elbow	2
30	7430000004	Oil Filter Assembly	2
31	4567122017	Hose Assembly	4
32	7445060637	Tee Union	2

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PARTS LIST - HYDRAULIC SCHEMATIC

Ref. No.	Part No.	Description	Qty.
1	7445060843	Adapter	4
2	4569132031	Hose Assembly	2
3	7445060643	Adapter	2
4	4569130081	Hose Assembly	2
5	7445060645	Elbow	2
6	4569130066	Hose Assembly	2
7	7445060646	Elbow	2
8	4569132045	Hose Assembly	2
9	4570000069	Hose Assembly	6

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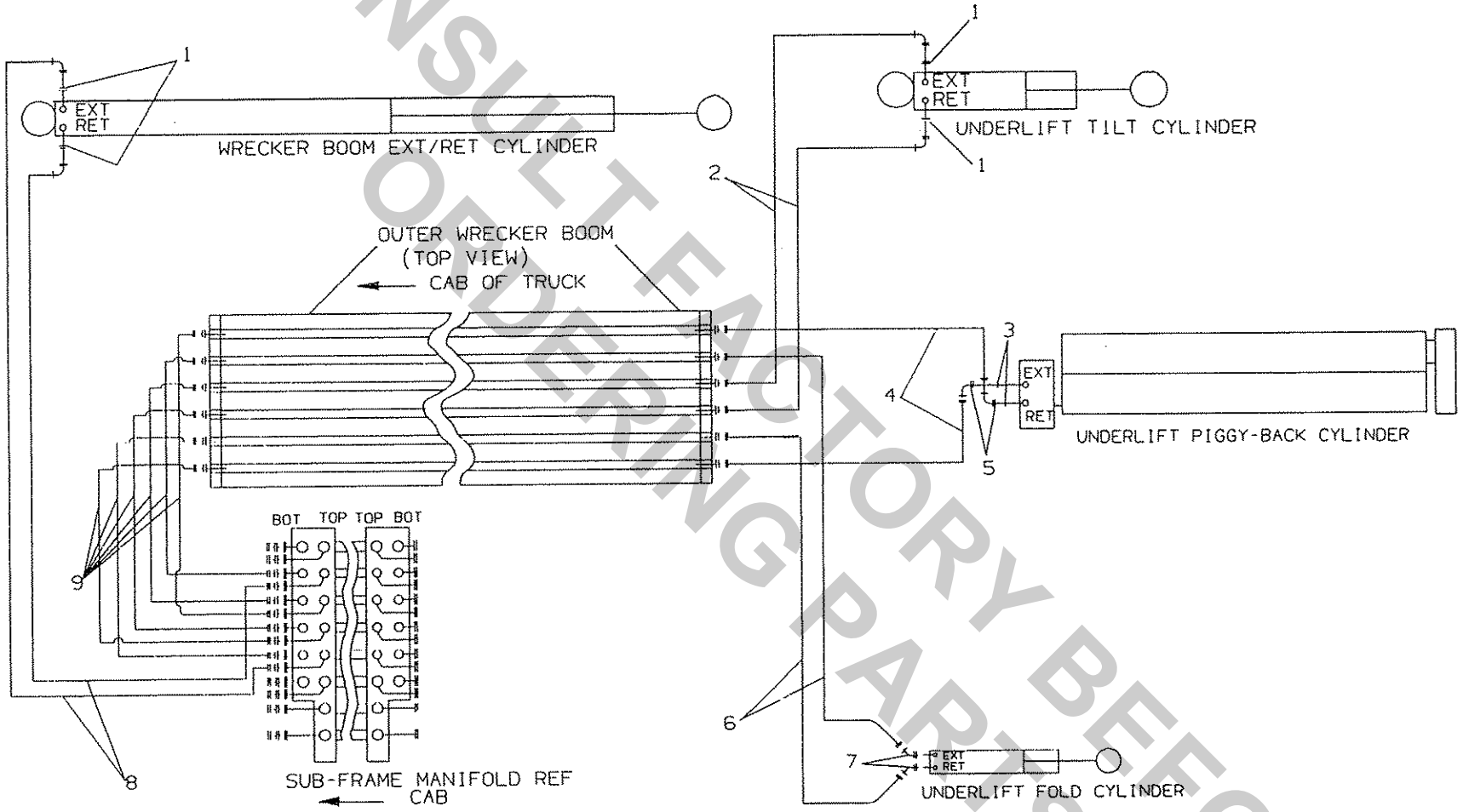
HYDRAULIC SCHEMATIC



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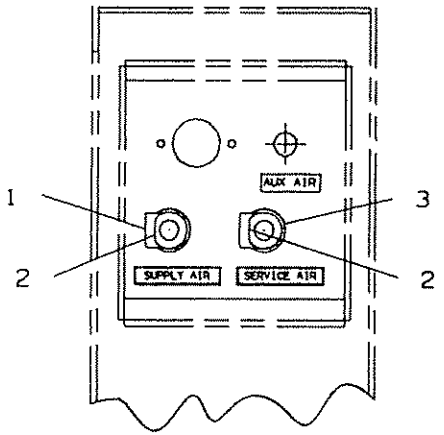
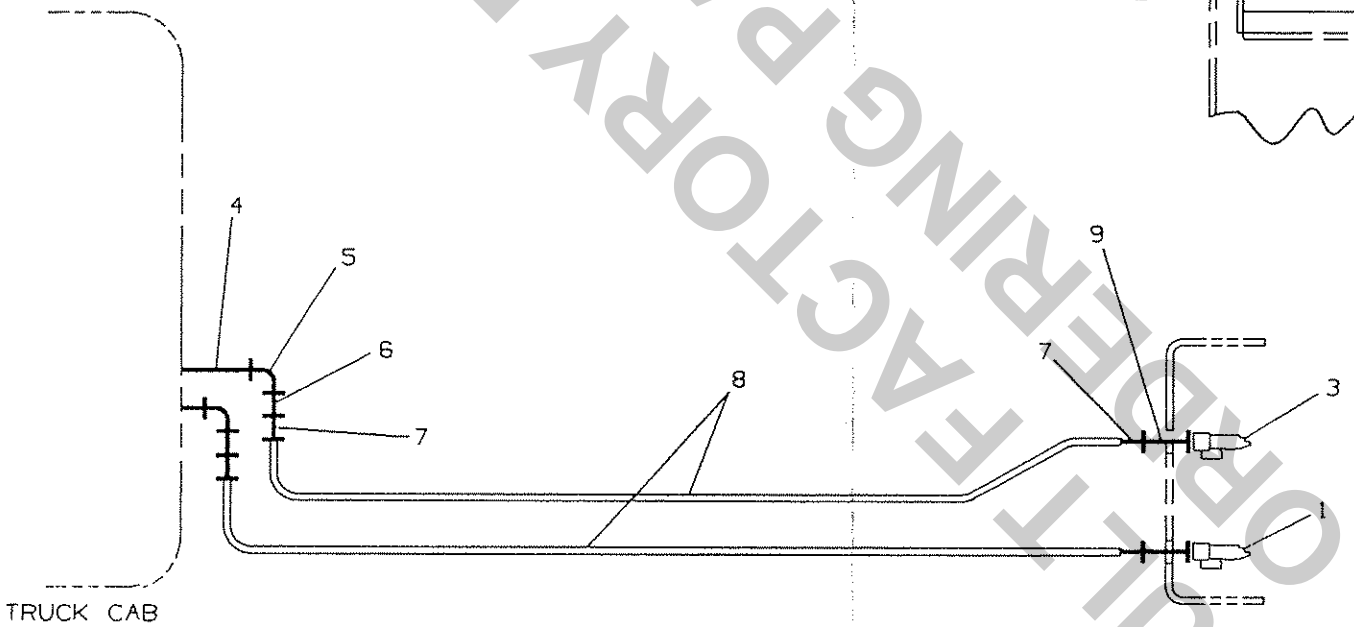
GLAD HAND INSTALLATION





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PARTS LIST - GLAD HAND INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	7312000016	Emergency Glad Hand	1
2	7577000145	Seal Kit	1
3	7312000015	Service Glad Hand	1
4	7443000145	Bushing	2
5	7443000146	Elbow	2
6	7443000148	Bushing	2
7	7446382506	Connector	4
8	7565000014	Air Line	50 FT
9	7446502518	Clamping Stud	2

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PARTS LIST - SCHEMATIC WINCH AND AUX AIR

Ref. No.	Part No.	Description	Qty.
1	7443000154	Bushing	1
2	7443000155	Elbow	1
3	7443000156	Nipple	1
4	7935000120	Air Valve	1
5	7446382506	Connector	2
6	7446380043	Air Brake Insert	2
7	7446251306	Connector	4
8	7446250043	Insert	6
9	7312000017	Air Coupling	1
10	7446502518	Clamping Stud	1
11	7565000016	Tubing	50 FT
12	7870000040	Pressure Switch	1
13	7935000119	Solenoid Valve	1
14	7111061411	Machine Screw	2
15	7660062600	Locknut	2
16	7446251309	Elbow	1
17	7446252507	Elbow	1
18	7443000152	Plug	1
19	7565000014	Air Line	25 FT

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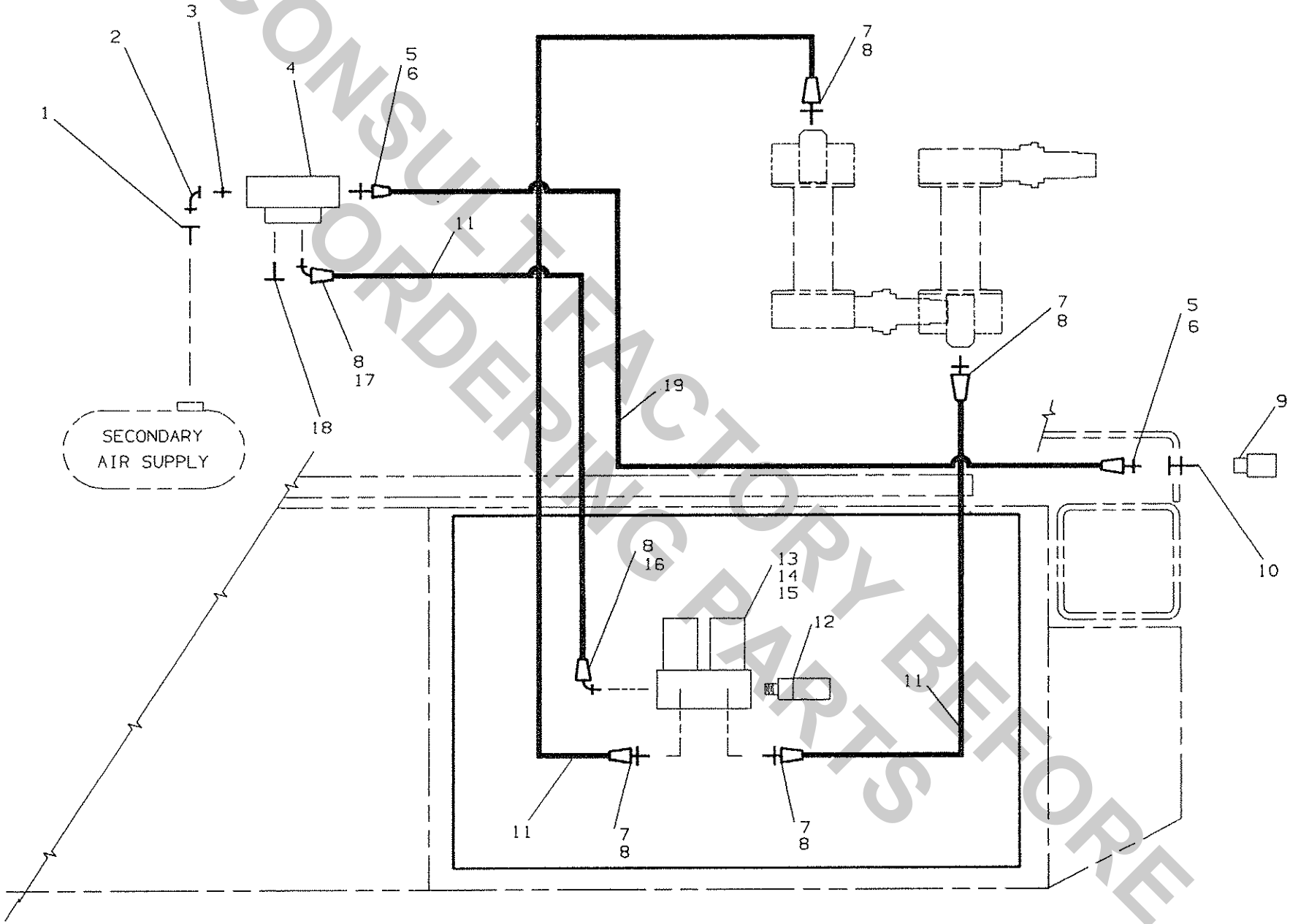
SCHEMATIC WINCH AND AUX AIR



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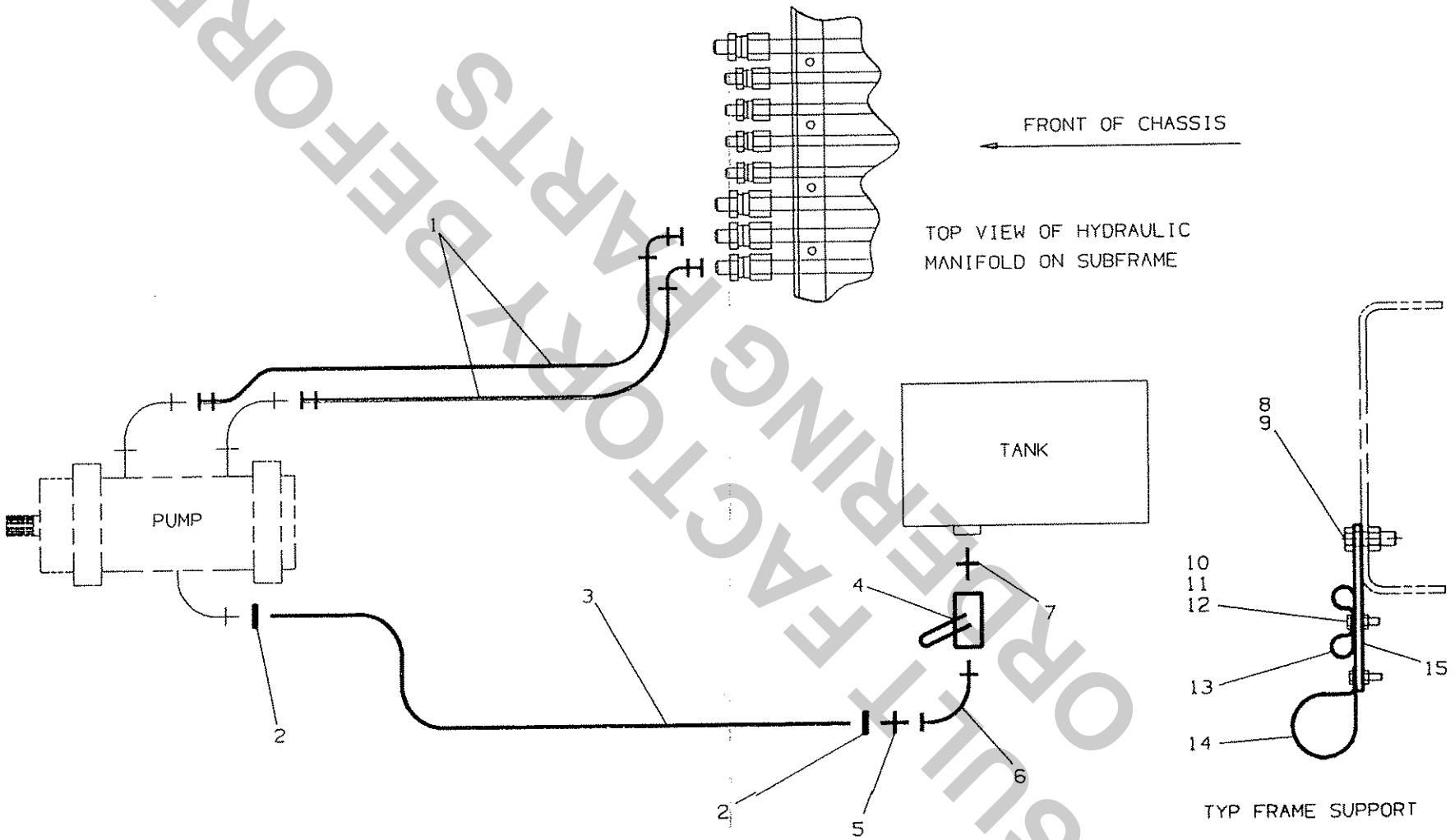
SUPPLY-PRESSURE-RETURN INSTALLATION



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PARTS LIST - SUPPLY-PRESSURE-RETURN INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	4567132156	Hose Assembly	2
2	7274000028	Hose Clamp	2
3	8565000026	Hose	13 FT
4	7935000116	Ball Valve	1
5	7443000130	Fitting	1
6	7444121271	Elbow	1
7	7650120140	Nipple	1
8	7115181250	Capscrew	5
9	7660000011	Hex Nut	5
10	7115140850	Capscrew	10
11	7950140152	Washer	10
12	7660142601	Locknut	10
13	7274000008	Clamp	10
14	7274000007	Clamp	5
15	4062000207	Bar	5

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PARTS LIST - HYDRAULIC TANK INSTALLATION

Ref. No.	Part No.	Description	Qty.
1	3750000013	Hydraulic Tank	1
2	7115181850	Capscrew	4
3	7950180141	Flatwasher	4
4	7949000015	Washer	4
5	7636000006	Mount	4
6	7949000016	Washer	4
7	7660182601	Locknut	4
8	7470000003	Sight Gauge	1
9	7274000030	Clamping Unit	12
10	7183000002	Breather Cap Assembly	1
11	7115150650	Capscrew	36
12	7274000031	Clamping Unit	6
13	7661000022	Stacking Nut	27
14	7007000036	Adapter	9
15	7209000023	Bushing	42
17	7912000035	Tubing	8
18	7209000024	Bushing	18
19	7912000036	Tubing	6
20	7912000037	Tubing	6

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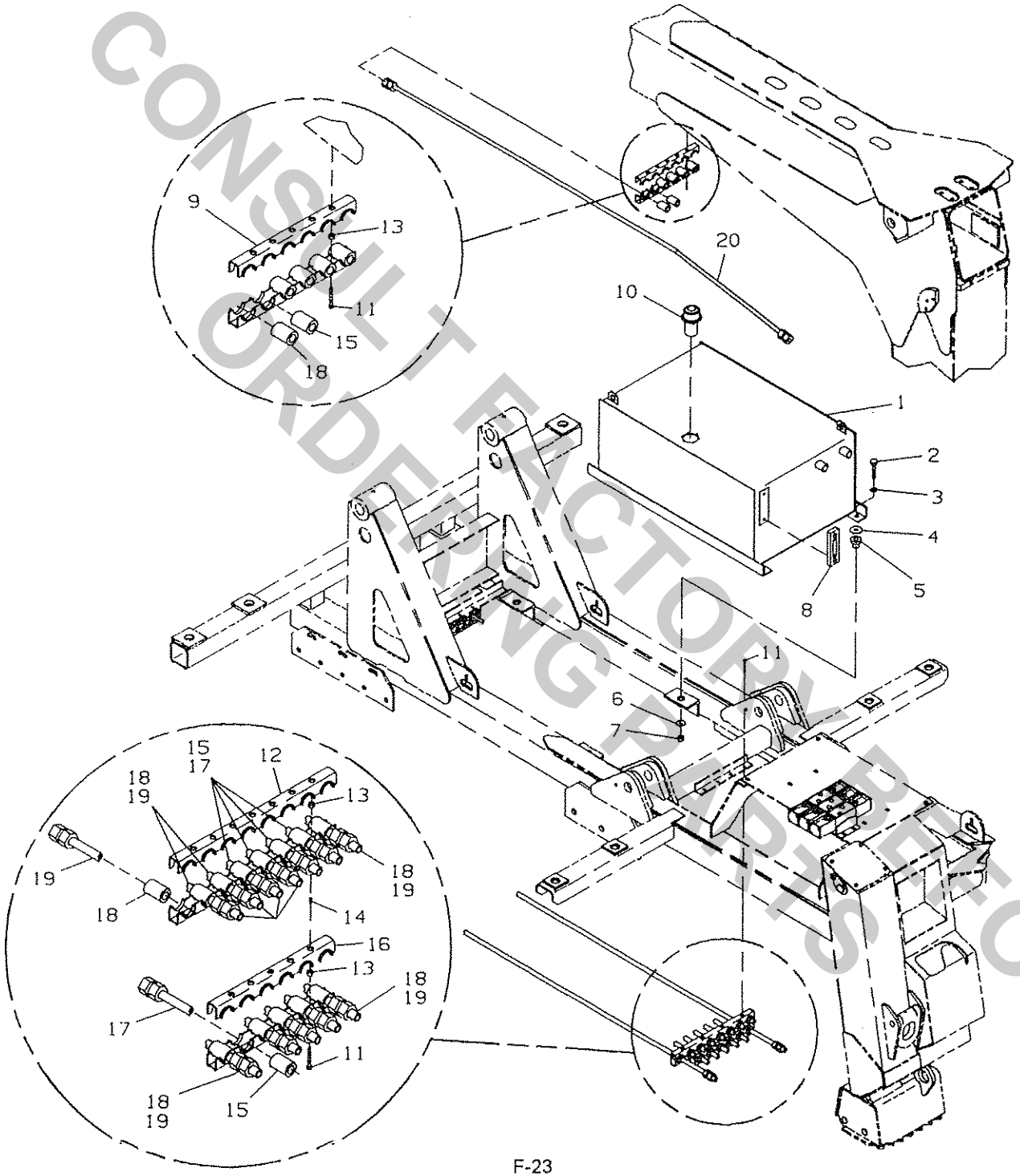
HYDRAULIC TANK INSTALLATION



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