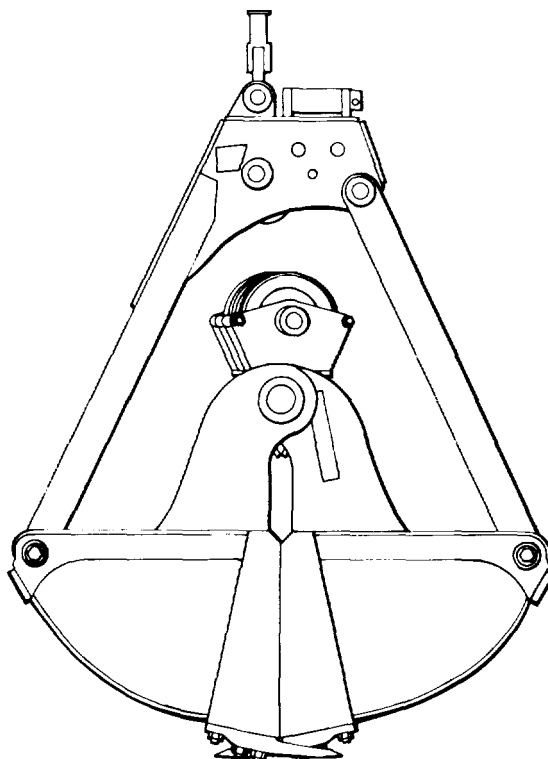


TECHNICAL MANUAL

**OPERATOR, UNIT, INTERMEDIATE
SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LIST)**



**BUCKET, CLAMSHELL, TYPE II SIZE 75
3/4 CU. YD. GENERAL PURPOSE
INTERGY MODEL 34GP S
NSN 3815-01-249-4092**

**HEADQUARTERS, DEPARTMENT OF THE ARMY
23 DECEMBER 1988
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TECHNICAL MANUAL
No. 5-3815-225-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 23 December 1988

OPERATOR, UNIT, INTERMEDIATE SUPPORT MAINTENANCE MANUAL
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FOR

BUCKET, CLAMSHELL, TYPE II SIZE 75
3/4CU. YD. GENERAL PURPOSE
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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual, direct to: Commander , U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

This technical manual is an authentication of the manufacturers commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

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SAFETY PRECAUTIONS

READ THIS MANUAL

EVEN THOUGH YOU MAY BE FAMILIAR WITH CLAMSHELL BUCKET OPERATION. SAFETY PROCEDURES, HOOK-UP DIRECTIONS AND MAINTENANCE REQUIREMENTS ARE THOROUGHLY DISCUSSED. FOR REFERENCE, AN ILLUSTRATION OF THIS BUCKET HAS BEEN PLACED ON PAGES 3 AND 4 OF THIS MANUAL. PARTS ORDER INFORMATION SUCH AS BUCKET TYPE, SIZE, MODEL NUMBER AND SERIAL NUMBER ARE ON THE FRONT.

THE OPERATING AND MAINTENANCE RECOMMENDATIONS IN THIS MANUAL REQUIRE VERY LITTLE TIME AND EXPENSE. HOWEVER, COMPLIANCE WITH THESE RECOMMENDATIONS WILL RESULT IN LOWER OPERATING COSTS AND SAFE, PRODUCTIVE OPERATION.

****** WARNING ******

DO NOT REMOVE BOWL RESTRAINTS BEFORE UNPACKING YOUR BUCKET.

YOUR BUCKET HAS BEEN SECURED AT THE FACTORY TO PREVENT MOVEMENT DURING SHIPMENT. BECAUSE IT IS A CLAMSHELL TYPE BUCKET, IT MAY OPEN UNEXPECTEDLY IF ANY ATTEMPT IS MADE TO LIFT OR RE-POSITION IT WITH THESE RESTRAINTS REMOVED. ONLY AFTER THE BUCKET IS PLACED UNDER THE CRANE AND IS PROPERLY INSTALLED AND READY FOR USE SHOULD THE FASTENING BE REMOVED.

FAILURE TO FOLLOW THIS PROCEDURE MAY CAUSE PERSONAL INJURY AND/OR BUCKET DAMAGE.

****** WARNING ******

USE CORRECT CABLE. THE SHEAVES, WEDGES, AND SOCKETS OF THIS BUCKET ARE DESIGNED TO USE A PARTICULAR SIZE OF WIRE ROPE CABLE (SEE ILLUSTRATION TABLE NO. 1 FOR PROPER WIRE ROPE SIZE). OTHER SIZE CABLES MAY NOT SEAT PROPERLY AND BECOME LOOSE. AS AN EXTRA PRECAUTION, INSTALL CABLE CLAMPS ON THE LOOSE ENDS OF THE CABLE AFTER IT EMERGES FROM THE ROPE SOCKET (SEE TABLE NO.1) PAGE 7.

GENERAL DESCRIPTION

CLAMSHELL BUCKET
 TYPE II GENERAL PURPOSE
 SIZE 75 3/4 CU.YD.
 MODEL NUMBER 34GPS

SHIPPING CUBE LENGTH 6'-9", HEIGHT 5'-1", WIDTH 3'-0"

TOTAL WEIGHT 3,150 LBS.

HEIGHT OPEN 9'-4"

HEIGHT CLOSED 7'-8"

LENGTH OPEN 7'-3"

LENGTH CLOSED 5'-6"

WIDTH OVERALL 3'-0"

CABLE TO REEVE 51'-0"

CABLE TO CLOSE 28'-0"

DECK AREA 20.6 SQ.FT.

SHIPPING INSTRUCTIONS

REMOVE ALL DIRT AND MUD FROM CLAMSHELL BUCKET. WELD BOWL RESTRAINTS ON TO BOWL SIDES WITH CLAMSHELL IN CLOSED POSITION. REMOVE HOLDING AND CLOSING LINES FROM CLAMSHELL. SECURE HOLDING LINE AND CLOSING LINE SOCKET WEDGES INTO SOCKET BOWLS WITH WIRE. CLAMSHELL IS NOW READY FOR SHIPPING.

CLAMSHELL STORAGE

CLAMSHELL STORAGE SHORT TERM 60 DAYS OR LESS. STORAGE CAN BE INSIDE OR OUTSIDE. GREASE ALL POINTS OF ROTATION WHEN CLAMSHELL IS FIRST PUT IN STORAGE. ENSURE ALL NUTS, BOLTS, COTTER PINS, AND SOCKET WEDGES ARE INSTALLED ON THE CLAMSHELL.

CLAMSHELL STORAGE LONG TERM 60 DAYS OR MORE. STORAGE CAN BE INSIDE OR OUTSIDE. GREASE ALL POINTS OF ROTATION WHEN CLAMSHELL IS FIRST PUT IN STORAGE. ENSURE ALL NUTS, BOLTS, COTTER PINS, AND SOCKET WEDGES ARE INSTALLED ON THE CLAMSHELL. EVERY 60 DAYS ROTATE SHEAVES AND CABLE ROLLERS TO ENSURE FREE ROTATION. EVERY 60 DAYS GREASE ALL POINTS OF ROTATION.

GENERAL DESCRIPTION

READ THIS INTRODUCTION EVEN THOUGH YOU MAY BE FAMILIAR WITH CLAMSHELL BUCKET OPERATION. ILLUSTRATIONS OF THIS BUCKET ARE ON PAGES 6 AND 7 OF THIS MANUAL. PERTINENT PARTS ORDERING INFORMATION SUCH AS BUCKET TYPE, SIZE, MODEL NUMBER AND SERIAL NUMBER ARE ON THE FRONT OF THIS MANUAL.

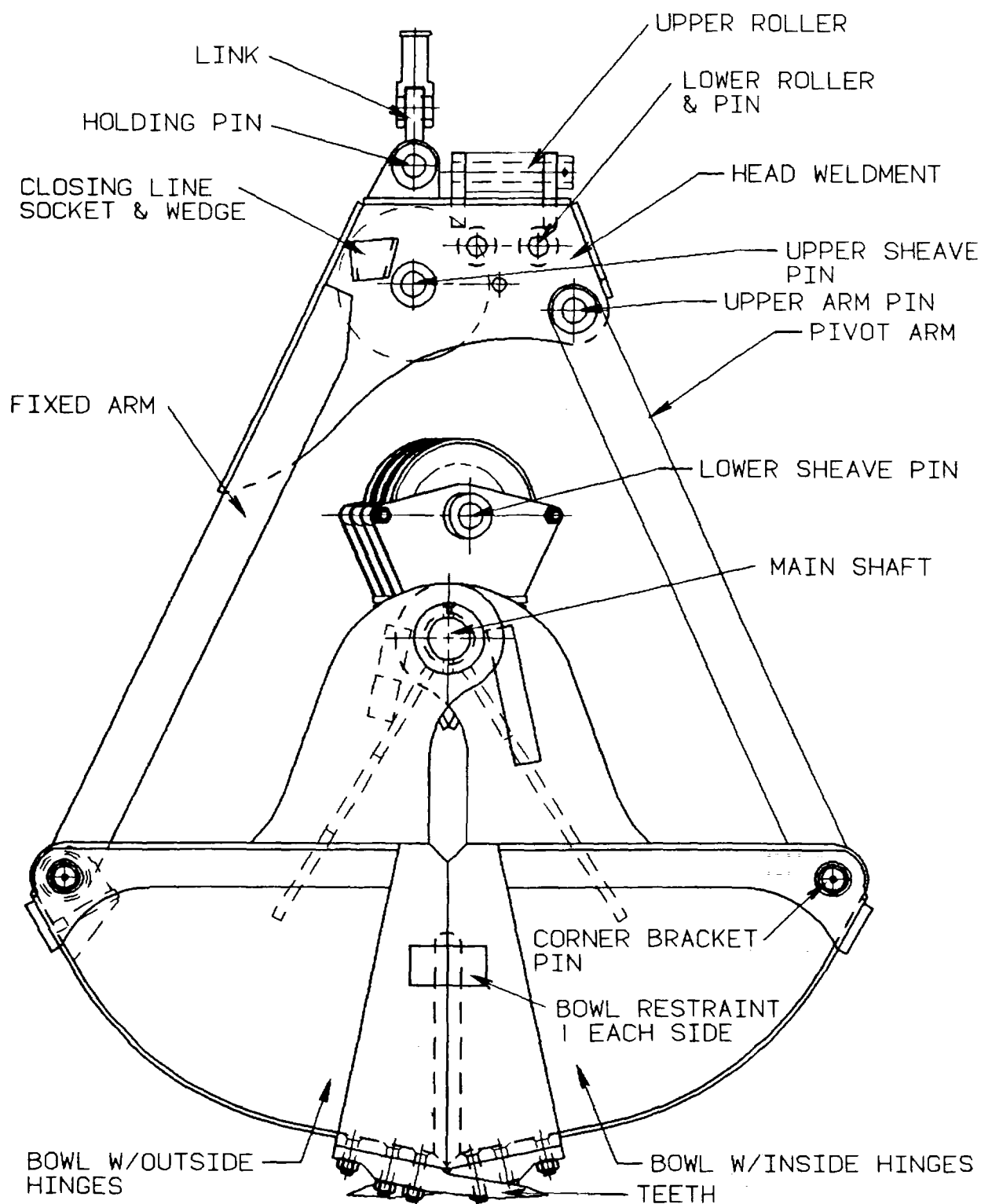
THE CLAMSHELL BUCKET IS A JACK OF ALL TRADES. IT CAN DO MOST OF THE JOBS OTHER BUCKETS CAN DO. THE CLAMSHELL HAS ITS OWN SPECIALTY OF DIGGING DEEP, NARROW, STRAIGHT-SIDED EXCAVATIONS, WITH NEAT REHANDLING OF MATERIALS. THIS GENERAL PURPOSE CLAMSHELL IS DESIGNED TO EXCAVATE, REHANDLE AND DREDGE MATERIALS IN A LOOSE OR SLIGHTLY COMPACTED STATE. IT WILL OPERATE EFFECTIVELY IN MATERIALS WEIGHING UP TO 130 POUNDS PER CUBIC FOOT.

THE CLAMSHELL IS A SINGLE MAIN SHAFT, BLOCK AND TACKLE TYPE OF CONSTRUCTION. THE CLAMSHELL IS DESIGNED TO USE ITS WEIGHT, PITCH OF TEETH, SHARPNESS AND ANGLE OF THE LIP IN CONNECTION WITH THE MACHINE LINE PULL TO DRAW THE BUCKET DOWNWARD INTO THE MATERIAL. THE CLAMSHELL MUST ALWAYS BE PLACED IN THE MATERIAL IN THE OPEN POSITION TO START ITS DIGGING CYCLE.

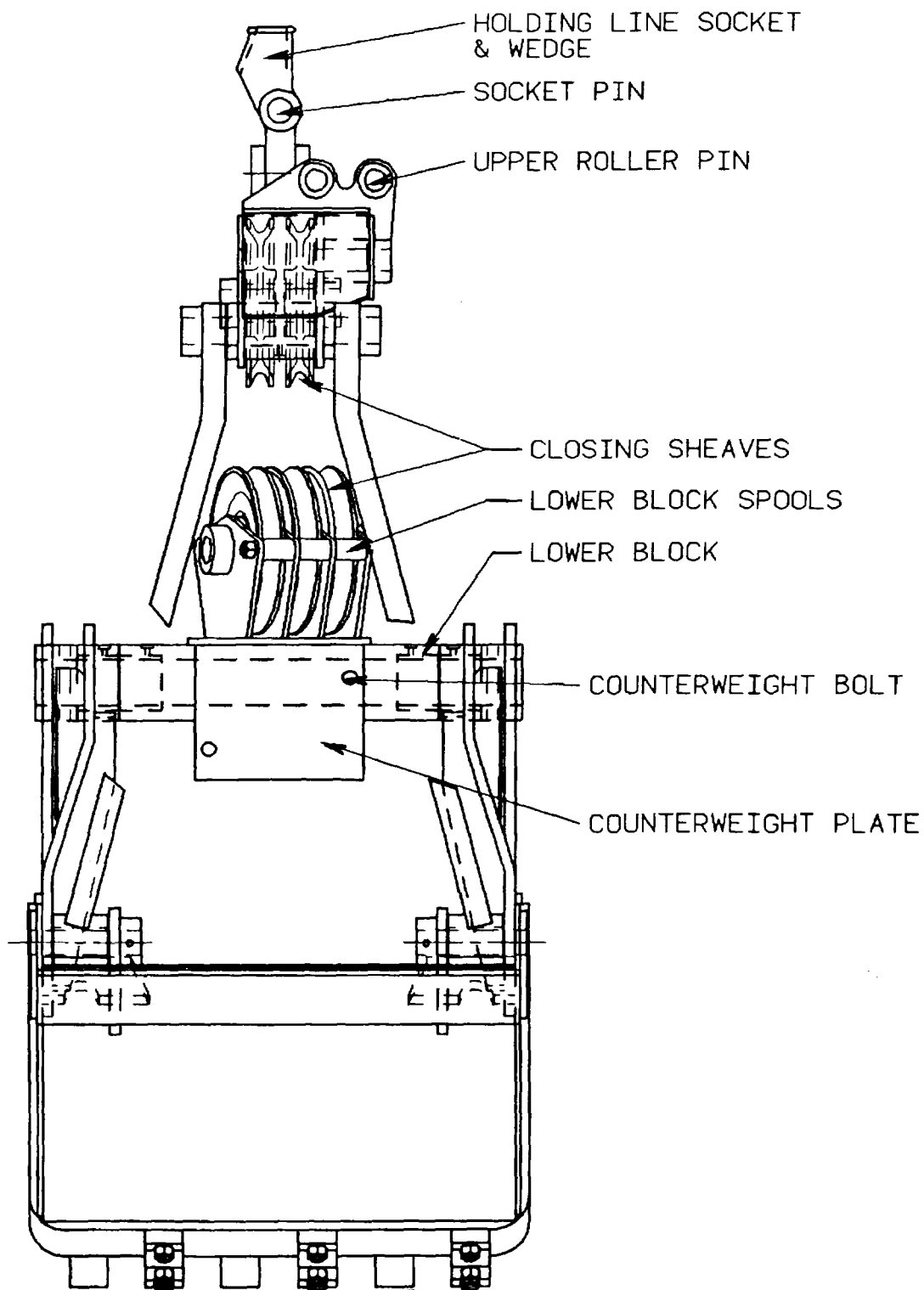
THE CLAMSHELL CLOSING MECHANISM IS THE BLOCK AND TACKLE ARRANGEMENT OF THE CLOSING SHEAVES. AS THE CLOSING LINE FROM THE MACHINE PULLS ON THE SHEAVES THE BOWL HALVES PIVOT AROUND THE MAIN SHAFT. AS THE CABLE IS PULLING THE TWO SETS OF SHEAVES TOGETHER A POWERFUL CLOSING FORCE IS DEVELOPED BETWEEN THE BOWL HALVES. SINCE THE ARM BARS ARE FIXED AND WILL NOT ALLOW THE OUTER ENDS OF THE BOWLS TO RISE, THE BOWLS PIVOT ON THEIR HINGES AND ROTATE INWARD UNTIL THEY MEET. THE BUCKET IS NOW CLOSED, AND WILL PICK UP ITS LOAD IF RAISED. IF THE CLOSING LINE IS RELEASED WHILE THE BUCKET IS HELD IN THE AIR BY THE HOLDING LINE, GRAVITY WILL CAUSE THE MAIN SHAFT TO MOVE DOWN PUSHING THE BOWLS DOWNWARD AND OUTWARD AND DUMP THE LOAD.

MATCH THE CLAMSHELL BUCKET TO THE CAPACITY OF THE CRANE FOR MAXIMUM EFFICIENCY. OPERATING EFFICIENCY IS DETERMINED BY THE WORKING RADIUS, BOOM LENGTH, MACHINE COUNTER-WEIGHT AND ENGINE CAPACITY. A TABLE OF LIFTING CAPACITIES WILL BE IN THE CRANE, THE WEIGHT OF THE BUCKET AND LOAD SHOULD NOT EXCEED THIS CAPACITY.

CLAMSHELL NOMENCLATURE



CLAMSHELL NOMENCLATURE



INSTALLATION INSTRUCTIONS

**** WARNING ****

WEAR OSHA APPROVED HARD HATS, SAFETY GLASSES, SAFETY SHOES AND WORK GLOVES WHEN PERFORMING MAINTENANCE WORK.

- I. LOCATE HOLDING LINE SOCKET AND REMOVE WEDGE.
SEE ILLUSTRATION I

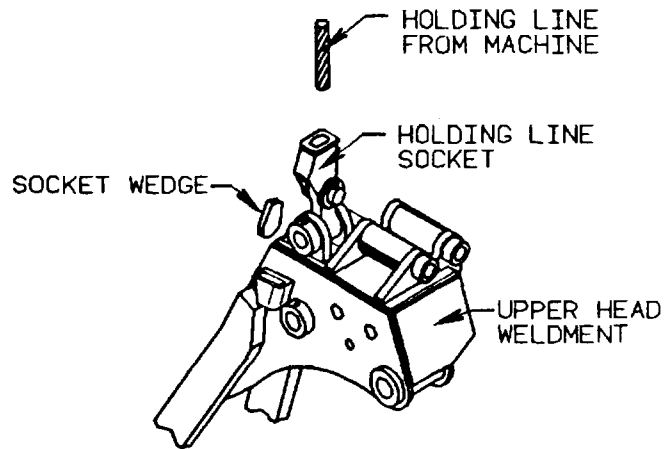


ILLUSTRATION I

2. INSERT HOLDING LINE FROM MACHINE INTO HOLDING SOCKET AND SECURE WITH SOCKET WEDGE. SEE ILLUSTRATION NO.2 EXTEND DEAD END OF ROPE 12 INCHES THROUGH SOCKET SECURE WITH CLAMPS SEE TABLE I PAGE 7

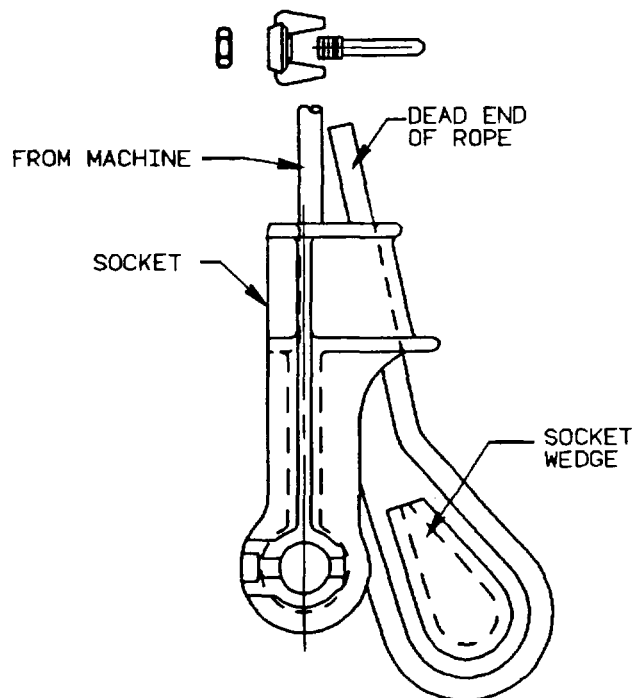


ILLUSTRATION NO. 2

INSTALLATION INSTRUCTIONS

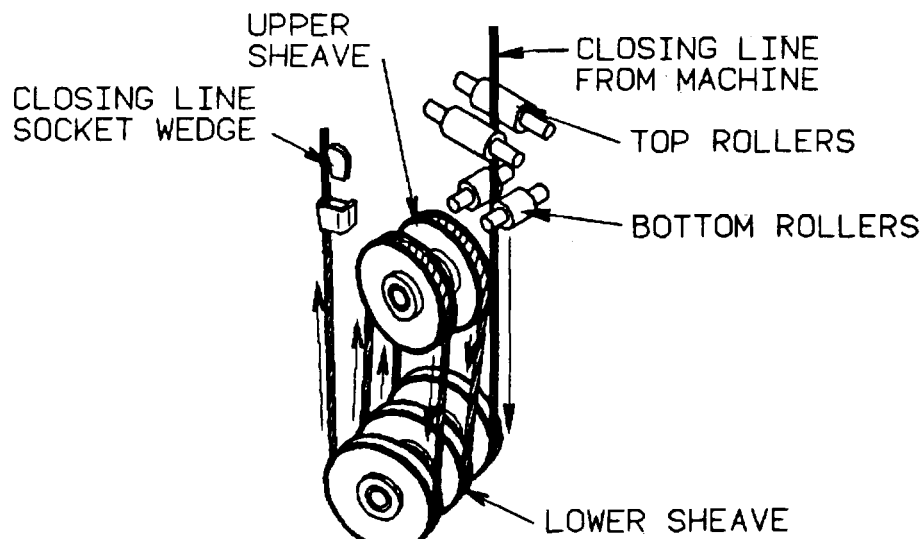


ILLUSTRATION NO.3

3. LOCATE AND REMOVE CLOSING LINE SOCKET WEDGE.
4. TO REEVE THE CLOSING SHEAVES, PASS THE CABLE DOWN BETWEEN THE UPPER ROLLERS AND REEVE AROUND THE LOWER SHEAVE DIRECTLY BELOW. CONTINUE REEVEING TO THE SHEAVE DIRECTLY ABOVE. THE LEADS WILL BE STRAIGHT FROM THE GROOVE OF ONE SHEAVE TO THE GROOVE OF THE NEXT ONE. SEE ILLUSTRATION 3 SHOWING REEVEING THE PARTS OF LINE.
5. INSERT CLOSING LINE FROM MACHINE INTO CLOSING LINE SOCKET AND SECURE WITH SOCKET WEDGE SEE ILLUSTRATION 4.

EXTEND DEAD END OF WIRE ROPE 12 INCHES THROUGH SOCKET SECURE WITH CLAMPS SEE TABLE I PAGE 7 .

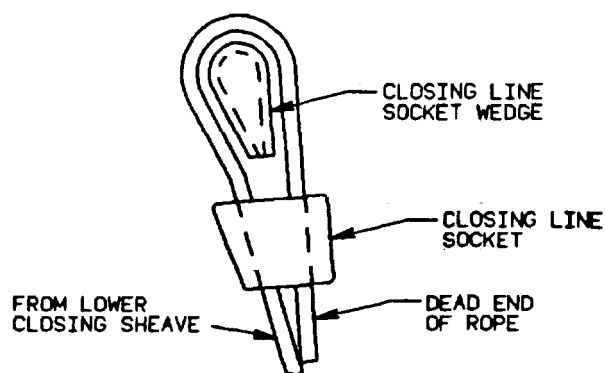


ILLUSTRATION NO.4

INSTALLATION INSTRUCTIONS

6. CHECK BUCKET BEFORE HOISTING ALL PIN, PINLOCKS MUST BE IN PLACE AND TIGHT. ALL SOCKET WEDGES MUST BE IN SOCKETS TIGHT.
7. REMOVE BUCKET BOWL RESTRAINTS (ARC AIR/CUTTING TORCH) SEE CLAMSHELL NOMENCLATURE PAGE 6.(NEW BUCKETS ONLY)
8. PRIOR TO DIGGING OPERATION MAKE **4 OR 5** PASSES WITH BUCKET. RECHECK ALL SOCKETS AND WEDGES TO INSURE WIRE ROPE IS PROPERLY SEATED.

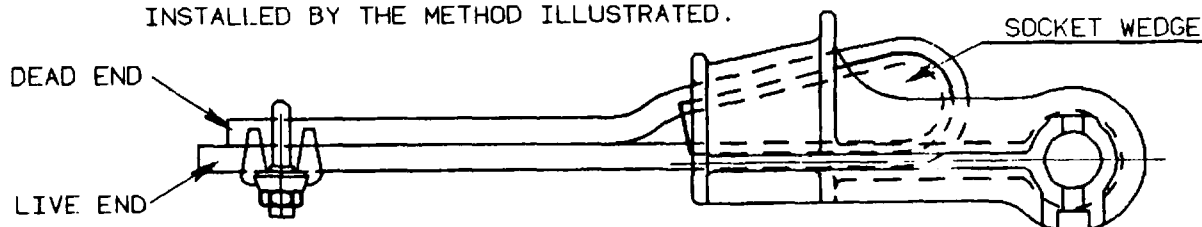
**** WARNING ****

WEAR OSHA APPROVED HARD HATS, SAFETY GLASSES, SAFETY SHOES AND WORK GLOVES WHEN PERFORMING MAINTENANCE WORK.

TABLE I

DIAMETER OF ROPE (INCHES)	NUMBER OF CLIPS	CENTER-TO-CENTER SPACE BETWEEN CLIPS (INCHES)	LENGTH OF WIRE ROPE TURNED BACK EXCLUSIVE OF EYE (INCHES)
5/8	3	3 3/4	12

TO GET THE MAXIMUM STRENGTH FROM A CONNECTION, CLAMPS WILL BE INSTALLED BY THE METHOD ILLUSTRATED.



STEP 1. APPLY FIRST CLAMP-ONE SADDLE WIDTH FROM DEAD END OF WIRE ROPE U-BOLT OVER DEAD END-LIVE END RESTS IN CLIP SADDLE. TIGHTEN NUTS EVENLY.