American Made Systems, Inc.

AMERICAN MADE LINER SYSTEMS

Protective Linings for Industrial Applications

ARMOR GREY HT

HIGH TEMPERATURE BEDLINER

TM

The *hottest* thing in asphalt today...

INSTALLATION INSTRUCTIONS

Please read Warranty before installing liner.
Please read ENTIRE manual BEFORE installation.

2600 Neville Road, Pittsburgh, PA 15225
Phone 800.356.0524 or 412.771.3300 Fax 412.771.3323
www.linersystems.com

American Made Systems, Inc.

Warranty

AMERICAN MADE LINER SYSTEMS

Protective Linings for Industrial Applications

ARMOR GREY HT HIGH TEMPERATURE BEDLINER

EZ BEDLINER Medium Duty System

RE-PRO®

ARMOR GREY HT or RE-PRO Dump Body Liner material is warranted at the time of original purchase to be free from defects in material and workmanship. This Warranty becomes effective from the time the customer takes possession of said Liner. Warranty includes fused seams if utilized under normal use and service for up to four years, or to within 1/8" of the original thickness, whichever comes first.

This warranty does not apply to the design or workmanship of the installation or application performance.

The Warranty applies only to the replacement or repair of ARMOR GREY HT or RE-PRO Liner Sheets at an authorized location designated by American Made Liner Systems. The customer shall prepay any shipping charges involved in getting Liners in whole or in part back to a designated location.

This Warranty does not cover any ARMOR GREY HT or RE-PRO Liner material that has been repaired or altered by other than American Made Liner Systems' employees, or which has been installed or used other than as outlined in American Made's published Installation Instructions.

THIS WARRANTY CANNOT BE CHANGED OR ALTERED BY AN EMPLOYEE OR REPRESENTATIVE OF AMLS, NOR CAN OTHER WARRANTIES BE GRANTED.

AMLS is not bound by any Warranty to incur labor costs in repairing or replacing Liner Sheets.

OTHER THAN STATED, AMERICAN MADE LINER SYSTEMS DOES NOT ASSUME ANY OTHER LIABILITY, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR SECONDARY CHARGES, EXPENSES FOR INSTALLATION OR REMOVAL, OR ANY OTHER CONSEQUENTIAL LOSSES OR DAMAGES.

AMERICAN MADE LINER SYSTEMS MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OR MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE.

WARRANTY CONDITIONS:

(1) Liner must be installed in accordance with American Made Liner Systems' Installation Instructions.

(2) * Do not haul materials hotter than 375° F with an Armor Grey HT bed liner.

(3) * All hot mixes must be loaded Front to Rear with an Armor Grey HT bed liner.

(4) Propane heaters, heated bodies or other flame throwing devices may not be activated in units equipped with Liners.

Liner failures caused from improper installation, use, or maintenance are not covered under this Warranty.

WARRANTY COVERAGE CHART		PERCENT COVERED BY WARRANTY		
LINER MATERIAL	MONTHS	1/2"	3/8"	1/4"
ARMOR GREY, RE-PRO	1-12	100%	100%	100%
ARMOR GREY, RE-PRO	13-36	100%	100%	
ARMOR GREY, RE-PRO	37-48	100%	100%	
ARMOR GREY	49-60	100%	100%	
E-Z LINER	NO WARRANTY ON E-Z LINER MATERIAL			

2600 Neville Road, Pittsburgh, PA 15225
Phone 800.356.0524 or 412.771.3300 Fax: 412.771.3323
www.linersystems.com

INTRODUCTION

Installation of ARMOR GREY HT High Temperature Liner System is easy when following the step-by-step instructions in this Manual. However, it is very important that the installation techniques are followed specifically. Read this Manual thoroughly before starting job. *American Made Liner Systems is not responsible for improperly installed Liner Systems.*

CHECK AND PREPARE DUMP BODY: Condition of Dump Body: The body should be structurally sound. If the bed is used and has deep valleys or dents between the ribs (1" or greater), they should be pounded up or patched...please call your Service Representative if you have any questions. Any holes and rips in the bed should also be patched. Wavy floors will diminish the effectiveness of Liner Systems and may cause premature wear.

Clean Out Body: The body should be clean (swept out or high pressure washed) prior to installation. Any unusual attachments to the floor, doghouse, or wall, such as shovel holders, vibrators, etc., should be removed or ground down as needed.

PREPARE FOR INSTALLATION

Check the Liner Kit: Your Kit will include the following:

(1) Roll of Material
(1) Box of Fasteners
(1) Package of Metal Edge Protectors – Aluminum or Steel (8 ft Sections)
(1) Install Instructions and Customer Care Packet

IMPORTANT: The Metal Edge Protectors are packaged separately from the Liner roll. Always check Liner contents prior to install date. If any contents are missing, call carrier as soon as possible.

Unroll The Liner: The Liner should be unrolled for at least 2-3 hours prior to installation. Put weights on the ends if needed. Every effort should be made to do this in a heated garage. **Temperature should be at least 75 degrees F.**

Note: The warmer the liner material, the easier the installation will be.

Manpower: Installation is usually a two-man job, though a third person would be helpful.

GET TOOLS READY

You will need the following tools: (Note: Always use safety glasses)

(1) Electric Circular Saw with a Carbide or good steel blade
(1) 3/8" – ½" Electric Drill/s
(*) Porta Power (Optional)
(1) Jig Saw or Sawsall
(1) Caulk Gun
(3-6) Cargo Jacks/Load Locks
(1) 1" Hole Saw
(1) Chalk Line
(1) Large Hammer
(1) Tape Measure
(1) Razor Knife
(1) Piece of Cardboard
(1) 2 Ft. Carpenter Square
(1) Pair Safety Glasses
(1) Tube of Silicone Sealant

Heated Garage: **VERY IMPORTANT**: For installation during the winter, it is ***necessary*** to have a heated garage or work area to work in. We recommend tarping over the dump and using a torpedo or blow heater prior to bolt down to keep the Liner warm. EXCESSIVE BUBBLING CAN OCCUR IF LINER IS INSTALLED WHILE TOO COLD.

What You Need To Begin: With the necessary tools and material at hand, you are ready to start. For simplicity, the example used in the installation is a 20 foot ARMOR GREY HT Liner Kit.

***MEASURE DUMP BED & CUT OUT FOR DOGHOUSE TOOLS NEEDED*:**

Tools Needed: Tape Measure, Razor Knife, Circular Saw, White Marker, Chalk Line

(1) Measure the depth of the doghouse for dimension A. Measure the width of doghouse dimension B as shown in Figure 1.

(2) Make a template for the nose (if required) by squaring a piece of cardboard to the front of the body and the doghouse. Force the cardboard to conform to any curvature in the front of the body. Use a razor knife to cut along the crease just made.

(3) Using the Dimensions A & B from the doghouse, find center of ARMOR GREY HT sheet and cut out as shown in figure 2.

(4) Using the cardboard template, place along "A" of sheet. Cut any curvature in plastic as needed.

IMPORTANT: Cut the ARMOR GREY HT sheet approximately 1/2" – 3/4"bigger than dogbox to allow for expansion of material. The Factory Scores should be facing upward and line up with cleanouts.

Best installation temperature is 75-85 degrees or warmer.

FIGURE #1

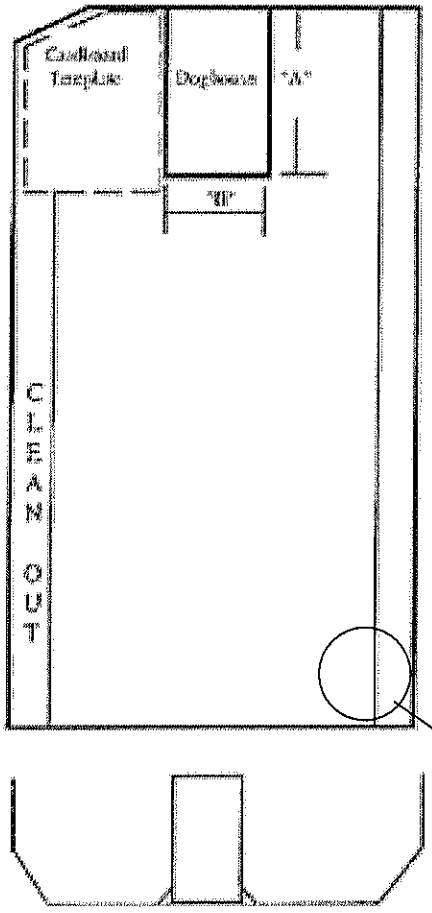
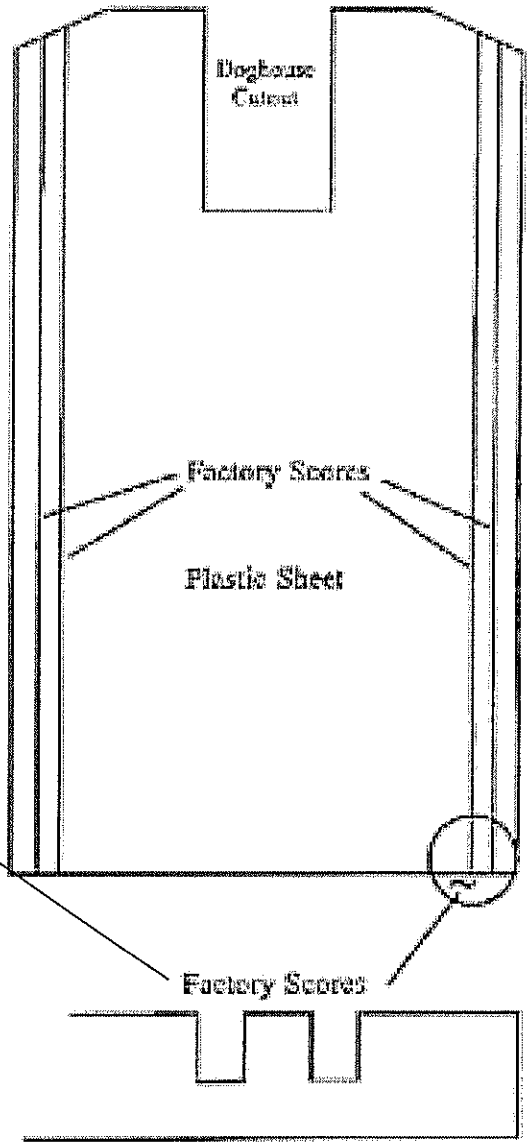


FIGURE #2



FASTENER LAYOUT

TOOLS NEEDED: ½" Drill, Markers, Screws, Tape Measure

ARMOR GREY HT MOUNTING SYSTEM

The Front Float Mount System is the only way in which ARMOR GREY HT can be installed. This is due to the expansion of the sheet while hot materials are loaded. The chart below assumes a temperature of 75 degrees Fahrenheit and indicates the distance the liner needs to be trimmed.

NOTE: If Steel Hold Down Plate is attached at tailend of liner, cut excess material off front of liner per chart below.

Trailer Length	Cutback Liner At Front	No. of Bolts Around Doghouse
Up to 20 ft	4" – 5"	5
20ft - 34 ft	5" – 6"	6
35ft - 40 ft	6" – 7"	8

FASTENER INSTALLATION

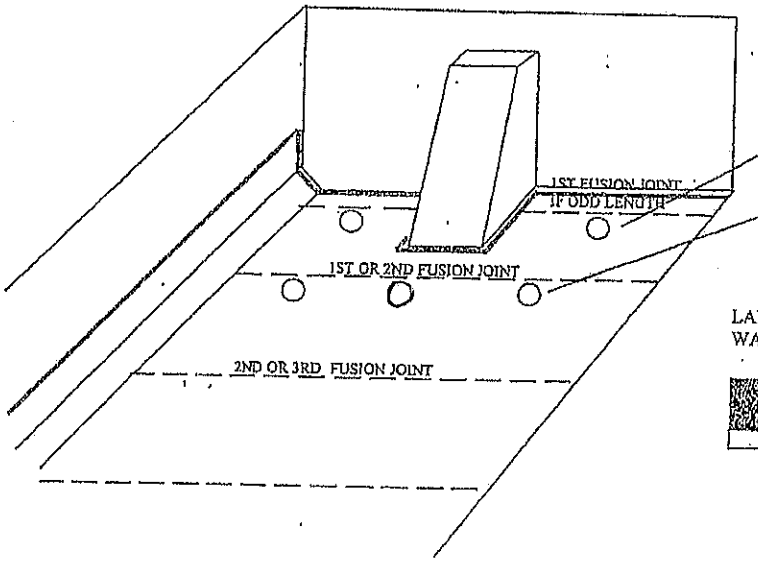
TOOLS NEEDED: 1/2" Drill, Hole Saws, Markers, Wrenches, Tape Measure

ARMOR GREY HT MOUNTING SYSTEM

Note: Before making any marks in liner, be sure you are not going to hit a crossmember or beam underneath when drilling holes.

Mark approximate hole pattern as shown in Fig. 3, and use 1" hole saw (provided with kit) to drill through Liner and body. Insert Fasteners as shown in Figure 4. BE SURE SECOND TWO FASTENERS COVER PAST 1ST OR 2ND FUSION JOINT (Figure 3). FAILURE TO DO SO WILL CAUSE LONGER LINERS TO TWIST OR KINK, **WHICH WILL VOID WARRANTY**.

FIGURE #3



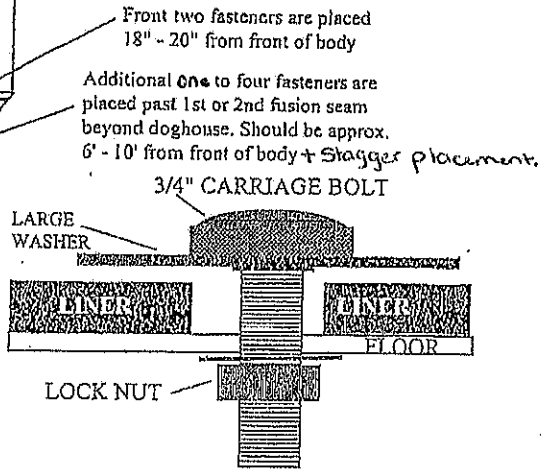
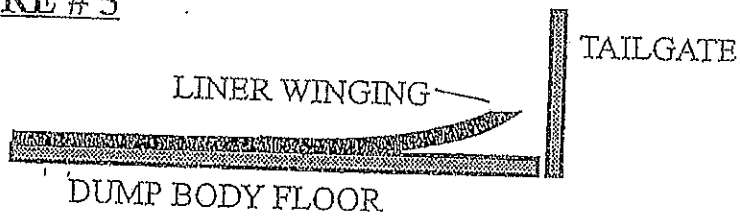


FIGURE #4

NOTE: TAIL SECTION WINGING:

Liner will have a Steel Hold Down Plate attached to tailend to reduce winging.

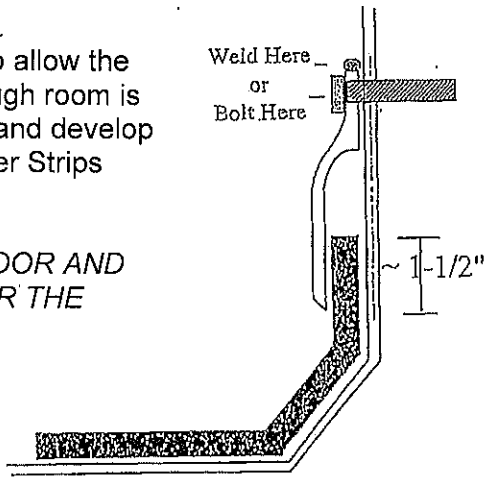
FIGURE # 5



INSTALLING METAL EDGE PROTECTORS

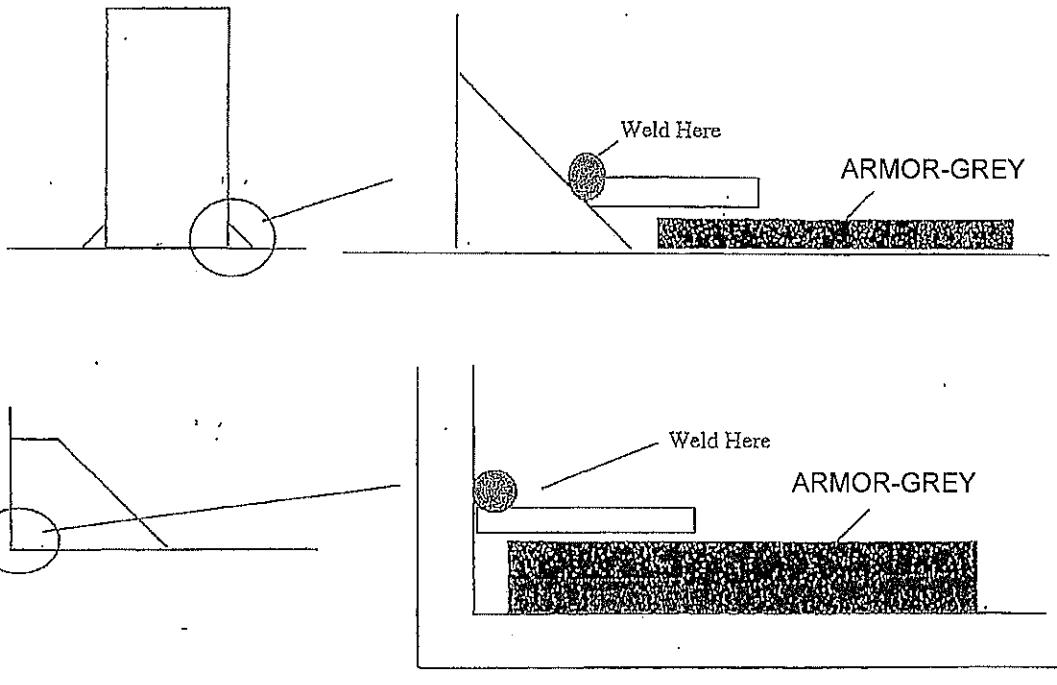
Installing Metal Edge Protectors (Cover Strips) on the side wall to allow the proper expansion of ARMOR GREY HT is very important. If enough room is not provided under the Cover Strips, the Liner will hit the top rail and develop a buckle in the center of the sheet. To avoid this, place the Cover Strips approximately 1- 1/2" over the Liner.

NOTE: BE SURE LINER IS COMPLETELY FLAT AGAINST FLOOR AND CLEANOUT OTHERWISE LINER MAY POP OUT FROM UNDER THE COVER STRIPS.



Start at rear of body. Have someone hold Cover Strip while you "tack" in place. Butt 8ft sections together and continue toward front. Once tacking is complete, then either continuous weld or stitch weld the entire length.

You will be provided Flat Stock to weld around perimeter as shown below.



American Made Systems, Inc.

CARE & MAINTENANCE:

ARMOR GREY HT HI-TEMP ASPHALT/ROCK DUMP LINERS

To activate your warranty, it is necessary to read and understand these procedures.
To ensure a successful installation, you will need to carefully follow the installation instructions.
To help keep your Armor Grey HT Liner performing properly, here are some key preventative maintenance steps.

Coverstrips:
Properly installed coverstrips at the outer edges of your liner leave enough room for it to expand and contract freely under the strips. During installation, make sure liner is pushed down tightly into "cleanouts", simulating a heavy load. This will help to accurately position coverstrips for welding or bolting onto the walls. Improper installation of coverstrips can result in the liner popping out from under the strips because too much room was left for expansion. Not enough room will cause the liner to jam under the coverstrips, possibly resulting in the liner kinking, etc. Any such situation needs to be corrected immediately. Remove any bulk materials that may get lodged up under the coverstrips. This will keep the area free for the thermal expansion and contraction needed by the liner. Periodically check for and remove bends, dents, or kinks in the coverstrips.

Material Under the Liner:
Check regularly to be certain no materials get up under the tail end of your liner during loading or unloading. Clean out as needed with a flat bar or other device. Material under the liner will cause accelerated wear and can cause holes in the liner.

Release Agents:
Due to the diversity of hot asphalt mixes, use of release agents should be considered with the first few loads hauled, as well as with any mixes known to be difficult to dump.

Repair of Liner:
Any repair of liner or any component should not be attempted unless American Made is called for consultation. Warranty would be voided otherwise.

Summer Use:
During warm weather, polymer liners will expand, and some lifting will take place. This is normal, and will not affect performance of the liner.

Winter Use:
Do not load hot asphalt or other high heat mixes when outside temperature is below freezing. This can cause buckling beyond repair. Also, do not bolt, unbolt, or make any other corrections or repairs to liner in cold weather unless liner is heated up to at least 75 °F. Use torpedo heaters if necessary.

Asphalt Emulsion Build-up on Liner:
Bulk materials can stick to emulsion build-up. Emulsion used as an asphalt binder can accumulate on liner. Use a release agent, or rotate with abrasive loads to wear away the build-up.

Proper Asphalt Loading:
Always load hot asphalt from front to rear. Incorrect loading of hot mixes can cause buckling and liner failure, and voids any warranty.

Heated Beds:
Do not use heating mechanisms with liner installed. They exceed the heat tolerance of the liner. Turn off or disconnect heat baffles. Any damage caused by this affect is not covered by our warranty.

Hauling Limits:
Armor Grey liners in ½" thickness are engineered to withstand heat up to 375 °F. Hauling material hotter than 375 °F will cause the liner to pit, and material will become embedded in the liner, resulting in excessive sticking. This is considered improper use of the liner and will void the warranty.

LINER FAILURES CAUSED FROM IMPROPER USE, MAINTENANCE, OR INSTALLATION ARE NOT COVERED UNDER THE WARRANTY.

2600 Neville Road, Pittsburgh, PA 15225
Phone 800.356.0524 or 412.771.3300 Fax 412.771.3323
www.linersystems.com