Receiving instructions:
After delivery, IMMEDIATELY remove the packaging from the product in a manner that preserves the packaging and maintains the orientation of the product in the packaging; then inspect the product closely to determine whether it sustained damage during transport. If damage is discovered during the inspection, immediately record a complete description of the damage on the bill of lading. If the product is undamaged, discard the packaging.

NOTES:
1) Compliance with laws, regulations, codes, and non-voluntary standards enforced in the location where the product is used is exclusively the responsibility of the owner/end-user.
2) VESTIL is not liable for any injury or property damage that occurs as a consequence of failing to apply either: a) Instructions in this manual; or b) information provided on labels affixed to the product.

Vestil is not responsible for any consequential damages sustained as a result of failing to exercise sound judgment while assembling, installing, using or maintaining this product.

Table of Contents
Signal Words................................................................. 2
Safe Use Recommendations.................................................. 2
FIG. 1: H-TRAIL exploded parts diagram & bill of materials.................. 3
FIG. 2: H-TRAIL rated loads for specified boom lengths..................... 4
Loading the crane................................................................ 5
Operating the manual hydraulic pump........................................ 5
Boom length adjustment........................................................ 6
Towing the crane................................................................... 6
Inspections............................................................................ 7
Maintenance.......................................................................... 7-8
Labeling diagram............................................................... 8
Limited Warranty............................................................... 9
SIGNAL WORDS:
This manual uses SIGNAL WORDS to indicate the likelihood of personal injuries, as well as the probable seriousness of those injuries, if the product is misused in the ways described. Other signal words call attention to uses of the product likely cause property damage. The signal words used appear below along with their definitions.

[Image]

Identifies a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.

[Image]

Identifies a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.

[Image]

Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE injury.

[Image]

Identifies practices likely to result in product/property damage, such as operation that might damage the product.

Safe use recommendations:
We strive to identify hazards associated with the use of our products. However, material handling is inherently dangerous and no manual can address every risk. The end-user ultimately is responsible for exercising sound judgment at all times during use of this product.

[Image]

Material handling is dangerous. Improper or careless operation might result in serious personal injuries.
- **Failure to read and understand the entire manual before assembling, using or servicing the product constitutes misuse.** Read the manual to refresh your understanding of proper use and maintenance procedures as necessary.
- Always apply proper crane, hoist procedures, and load rigging methods learned during training.
- DO NOT attempt to lift items that weigh more than the maximum rated load of this crane. The capacity of the crane decreases as boom length increases. Capacities for all 3 boom lengths are presented in FIG. 2 on p. 4.
- DO NOT stand or sit on the crane or the load.
- Stand clear of the load while raising and lowering it!
- ONLY use the crane on even, level, compacted surfaces capable of supporting the combined weight of the crane and a full capacity load. DO NOT attempt to move the crane up or down sloped surfaces.
- DO NOT perform maintenance on this crane UNLESS it is unloaded and the casters are chocked to prevent movement. If the crane requires repair, ONLY install manufacturer-approved replacement parts.
- DO NOT attempt to raise a load unless the load hook is centered above it.
- Observe the boom while raising and lowering a load. It should rise smoothly. Watch for binding or jerky movement and listen for unusual noises. Tag the unit "Out of order" and DO NOT use it if you observe anything abnormal.
- DO NOT use the crane unless it is in normal operating condition. Inspect the unit before each use following the inspection instructions on p. 7 to determine whether it is functioning normally.
- Always watch the load carefully while raising and lowering the boom.
- DO NOT continue to move the pump handle back-and-forth if the boom is fully elevated (does not continue to rise).
- Before leaving the crane unattended, unload it and relieve hydraulic pressure by turning the lowering plunger counterclockwise until the boom begins to descend. Lower the boom completely; then close the release valve. (See “Operating the Manual Hydraulic Pump” on p. 5).
- DO NOT alter the pressure relief valve setting!
- DO NOT use the crane UNLESS it is labeled as shown in the "Labeling diagram" on p. 8. Each label must be easily readable and undamaged.
- DO NOT modify this crane in any way. Modifications automatically void the limited warranty and might make it unsafe to use.

[Image]

Proper use and maintenance are essential for this product to function properly.
- Always use this product in accordance with the instructions in this manual and consistent with any training relevant to all other devices used with this product (e.g. rigging).
- Periodically lubricate pivot points.
- Only use approved replacement parts. To order replacement or spare parts for this equipment, contact the factory.
### FIG. 1: H-TRAIL Exploded Parts Diagram & Bill of Materials

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Part no.</th>
<th>Description</th>
<th>Quantity</th>
<th>Item no.</th>
<th>Part no.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28-514-081</td>
<td>Weldment, frame</td>
<td>13</td>
<td>13</td>
<td>11319</td>
<td>(\frac{1}{8})&quot; – 11 x 4&quot; bolt</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>28-516-040</td>
<td>Weldment, bracket, wheel, left</td>
<td>14</td>
<td>14</td>
<td>65105</td>
<td>(\frac{5}{32})&quot; x 1(\frac{1}{2})&quot; zinc-plated cotter pin</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>28-516-041</td>
<td>Weldment, bracket, wheel, right</td>
<td>15</td>
<td>15</td>
<td>37036</td>
<td>(\frac{1}{8})&quot; – 11 zinc plated nylock nut</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>28-514-080</td>
<td>Frame, weldment, boom</td>
<td>16</td>
<td>16</td>
<td>13317</td>
<td>(\frac{1}{8})&quot; – 11 x 3(\frac{1}{4})&quot; HHCS #5 zinc plated bolt</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>28-514-079</td>
<td>Weldment, frame, beam</td>
<td>17</td>
<td>17</td>
<td>16-132-214</td>
<td>5 x 2 steel wheel, (\frac{1}{4})&quot; diameter</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>01-140-022</td>
<td>Assembly, cylinder, pump</td>
<td>18</td>
<td>18</td>
<td>09-145-018</td>
<td>(\frac{1}{16})&quot; chain 56&quot; long</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>08-145-001</td>
<td>Swivel hook, 2-ton</td>
<td>19</td>
<td>19</td>
<td>08-145-010</td>
<td>2-ton shackle, (\frac{3}{8})&quot; diameter</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>16-132-011</td>
<td>4 x 2 rubber swivel caster</td>
<td>20</td>
<td>20</td>
<td>28-112-030</td>
<td>(\frac{7}{8})&quot; – 3(\frac{1}{2})&quot; retaining clevis pin, zinc-plated</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>16-132-279</td>
<td>Pneumatic tire, 4.8&quot; x 8&quot;</td>
<td>21</td>
<td>21</td>
<td>16-132-280</td>
<td>Wheel/caster, rim for pneumatic tire</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>11219</td>
<td>(\frac{1}{4})&quot; – 13 x 4&quot; hex bolt</td>
<td>22</td>
<td>22</td>
<td>99-612-001</td>
<td>Nut and carriage bolt combo</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>11321</td>
<td>(\frac{1}{8})&quot; – 11 x 4(\frac{1}{4})&quot; hex bolt</td>
<td>23</td>
<td>23</td>
<td>45286</td>
<td>(\frac{1}{8})&quot; x 2(\frac{1}{8})&quot; #11 hitch pin clip</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>37030</td>
<td>(\frac{1}{2})&quot; – 13 nylon insert lock nut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
FIG 2: H-TRAIL rated loads for specified boom lengths

WARNING: DO NOT use the crane unless the inner and outer booms are securely pinned together.

The boom has 3 length settings: 53\(\frac{3}{4}\) inches; 65\(\frac{3}{4}\) inches; 77\(\frac{3}{4}\) inches. Boom length increases in 12 inch increments. Boom length determines the capacity of the crane as shown in the table below, i.e. capacity decreases as boom length increases.

NOTE: The legs are adjustable to 3 set points in approximately 12 inch increments as well. Both legs must be adjusted to match the boom configuration. When the boom is fully extended, both legs must be fully extended. When the boom is extended to its intermediate length, the legs should also be pinned at their intermediate lengths.

<table>
<thead>
<tr>
<th>Boom length</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>53(\frac{3}{4}) inches</td>
<td>4,000 lb. (1,818.2kg)</td>
</tr>
<tr>
<td>65(\frac{3}{4}) inches</td>
<td>1,500 lb. (681.8kg)</td>
</tr>
<tr>
<td>77(\frac{3}{4}) inches</td>
<td>650 lb. (295.5kg)</td>
</tr>
</tbody>
</table>

DO NOT use the crane unless the inner and outer booms are securely pinned together.

STANDARD FEATURES:
- MAXIMUM WIDTH: 47 1/2"
- MAXIMUM HEIGHT: 103 7/16"
- MAXIMUM LENGTH: 93 3/4"
- (3) ADJUSTABLE ARM LENGTHS
- ARM LENGTH DETERMINES HEIGHTS AND CAPACITY - SEE CHART
- CASTERS: 2- PNEUMATIC TIRE, Ø16"
  2- HARD RUBBER, SWIVEL, Ø4" x 2"
Loading the crane:
1) Disconnect the crane from the trailer hitch.
2) Lift the tongue to bring all four casters into contact with the ground. NOTE: The pneumatic wheels should no longer contact the ground. If the ground is uneven causing one or both wheels to still be in contact with it, reposition the crane.
3) Prepare the load with appropriate rigging to properly interface with the load hook at the end of the boom.
4) If necessary, adjust the position of the boom.
   a. To raise the boom, move the pump handle back-and-forth.
   b. To lower the boom, slowly turn the release handle () counterclockwise until the boom begins to lower. To increase the lowering rate, turn the release handle further counterclockwise. Close the release valve when the boom position is adequately adjusted. To close the valve, turn the release handle clockwise until the connection is tight.
5) Attach the rigging to the load hook. The floor crane must be on a sound, level and dry surface. Before raising the boom, be sure that the load hook is centered above the load. If the hook is not centered above the load, the load might swing when the boom lifts it off of the ground.
   NOTE: Rigging and all other load-engaging equipment must be added to the weight of the load to determine the net weight applied to the crane. The net weight must be less than or equal to the capacity of the crane. As FIG. 2 on p. 4 indicates, capacity decreases as boom length increases.
6) Slowly raise the load until it is suspended by the boom. Only raise the load a few inches above the ground.
   a. The load should not swing as it rises.
   b. The crane should not tip or rock while suspended.
   c. If the crane is unstable when the load is suspended, do not use the crane to transport the load. Return it to the ground and use another means to move it.
7) Carefully push the crane to transport the load. Do not leave the crane with a suspended load. Always lower the boom until the load is entirely supported by the ground or other surface before leaving the crane.

Operating the manual hydraulic pump:
This crane is equipped with a hand-operated hydraulic pump that controls the up and down movement of the boom. To raise the boom, move the handle back-and-forth until the desired height is achieved. Lowering is controlled by a lowering plunger. With the lowering plunger in the closed position (rotated clockwise until the connection is snug), moving the pump handle back-and-forth causes a piston to extend. The piston presses against the bottom of the boom. As the piston extends, the boom pivots upwardly which raises the load hook.

To lower the boom, pull the pump handle out of the handle socket (see “Pump” diagram below). There are slots in the end of the handle that fit onto the lowering plunger. Engage the plunger in the handle slots and slowly rotate the plunger counterclockwise until the boom begins to descend. The farther the plunger is turned counterclockwise, the faster the boom lowers. If you wish to decrease load elevation but not lower the load completely, simply close the plunger when the load achieves the desired height. Close the plunger by turning it clockwise until the connection is snug.

**Pump:**

**Load hook and shackle:**
Boom length adjustment:
To adjust the length of the boom, first use the hand pump to raise the end of the boom until the boom is level. Remove the hitch pin; then pull out the clevis pin. The inner boom is now unfastened from the outer boom. Pull the inner boom and align the appropriate holes in the inner and outer booms to achieve the necessary boom length. Reinstall the clevis pin and secure it with the hitch pin.

Next, adjust both legs to match the boom length. For example, when the boom is pinned in position, the legs should also be pinned in position C.

Towing the crane:
This product is designed to be towed behind a vehicle having a class 2 ball hitch. To put the crane into towing configuration, grasp the tongue of the trailer and slowly pull it downwards. The crane will pivot onto the pneumatic tires as the tongue is lowered.

NOTE: The crane weights 530 lb. If necessary, two or more people should work together to put the crane into towing configuration.

Remove the pump handle from the socket and put it in the cab of the towing vehicle.

Attach the coupler to the ball hitch. The ball clamp must be open in order for the ball hitch to seat properly inside the coupler. Once the ball is seated in the coupler, close the clamp. (See diagram below).

Check the crane to make sure that the boom and legs are secure. Check all fasteners (pins, bolts, and nuts) for secure connections.

DO NOT exceed 45mph while towing the crane.
Inspections:

**WARNING** If a problem is discovered during an inspection, restore the crane to normal operating condition BEFORE using it again.

- **DO NOT** use a crane that is structurally damaged in any way. Structural damage includes, but is not limited to, cracked welds, warping or deformation of the frame, the upright girder, or the inner or outer boom.
- Improper maintenance or repair may make the crane unsafe to use, which could result in serious personal injuries or death. **DO NOT** attempt to repair or maintain the crane UNLESS you are qualified and authorized to do so.
- **Lower** the boom and unload the crane BEFORE beginning maintenance/repairs.
- Only qualified, authorized personnel trained to maintain hydraulic components should attempt troubleshooting and repair of this equipment.

(A) Before each use, inspect the following items:

1. Structural members, pump mounting brackets, & booms (inner and outer) — examine each item for damage, deformation, and corrosion.
2. Pump — raise and lower the boom. Listen for unusual noise; watch the piston to confirm that it extends and retracts smoothly and does not bind or lurch. Check the pump for oil leaks.
3. Load hook and shackle — closely examine the load hook and shackle. Make sure that neither is severely worn, warped, bending or cracking. Confirm that the safety latch (of the hook) operates correctly. Also inspect the shackle bracket (see “Load hook & shackle” diagram on p.5). The bracket should be square and rigid and lack cracks and significant bends. The pin hole (for the shackle pin) should not be elongated.

(B) Inspect the following at least once per month:

1. Hardware — check the integrity of all nuts, bolts, and pins. Replace any item that is damaged.
2. Casters — move the crane and determine whether any caster is loose, significantly worn, or damaged. Remove any material stuck to the surface of the casters.
3. Wheels — put the crane into towing configuration and connect it to a class 2 ball coupler. Tow the crane a short distance. Listen for unusual sounds as the wheels turn. Watch the crane as it moves. It should roll smoothly, i.e. not wobble from side-to-side. Check tire inflation and add/remove air as necessary. Tire inflation specifications are molded onto the side of the tires.
4. Hitch coupler — examine the hitch coupler. Make sure that the clamp mechanism functions properly by attaching the coupler to a class 2 ball hitch. Lock the ball clamp. Lift the tongue to confirm that the coupler is securely hitched to the ball.
5. Complete crane assembly — listen for unusual noises and watch for abnormal movement while elevating and lowering the boom.
6. Labels — check all information/safety labels. The crane should be labeled at all times as shown in the labeling diagram on p. 8.

(C) Yearly inspection:

In addition to the inspections described above in parts A and B, check the hydraulic fluid at least once per year. Change the oil if it darkens, becomes gritty, or turns a milky color (indicating the presence of water). Replace the hydraulic fluid with anti-wear hydraulic oil of viscosity grade 150 SUS at 100°F, (ISO 32 at 40°C), for example, AW 32 or HO 150 hydraulic oil, or a non-synthetic transmission fluid. You may use a synthetic transmission fluid if you flush the system with the synthetic fluid before filling the reservoir.

Maintenance:

Implement a maintenance program to ensure that the product functions properly. The following steps should be utilized in conjunction with inspections.

**WARNING** **DO NOT** use the product if adjustments and repairs are incomplete! Return it to service ONLY after finishing all necessary repairs and adjustments but do not modify the crane.

“Adjustments” are simple corrections that restore the crane to normal operating condition, such as tightening loose fasteners or removing dirt or other debris from the surface. “Repairs” involve removing worn parts and installing replacement parts.

“Modifications” on the other hand, are actions that alter the crane from its original condition. Such actions include bending the frame or removing parts. **NEVER** modify this product. Modifications automatically void the limited warranty and might make the crane unsafe to use.

**Step 1:** Tag the boom, “Out of Service.”

**Step 2:** Remove any dirt or other matter from all surfaces.
Step 3: Conduct the scheduled inspection as described on p. 6. If deformity, corrosion, rusting, or excessive wear of structural members is found, permanently remove the unit from service.

Step 4: Perform all necessary adjustments, replacements and/or repairs as indicated during the inspection. DO NOT modify the crane in any way without the express, written approval of Vestil.

Step 5: Make a dated record of all repairs, adjustments and/or replacements made to the crane.

Labeling diagram:
The product should be labeled as shown below at all times. Replace all labels that are missing, faded, or not easily readable.

---

A: Towing instructions:

- Fully retract telescoping sections
- Maintain tire pressure as specified on tires
- Fully lower boom and secure by placing pump handle in storage position
- Maximum towing speed 25 MPH
- Secure safety chains to tow vehicle

---

B: (On side of boom) Label 586

- WARNING
- ADVERTENCIA
- AVERTISSEMENT

- Never operate over rated capacity
- NEVER OPERE MAJOR SEloca o capacidad
- NUNCA SOBREPASAR LA CARGA MÁXIMA
- Use only on hard level surface
- USE SOLAMENTE SOBRE SUPERFICIE NIVELADA
- USE MÓDULO NIVELADO
- Read manual before use
- LEER EL MANUAL ANTES DEL USO

---

C: (On side of boom) Capacity chart

<table>
<thead>
<tr>
<th>Boom &amp; Leg Position</th>
<th>Capacity (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully extended</td>
<td>2,000 lbs.</td>
</tr>
<tr>
<td>Intermediate</td>
<td>3,000 lbs.</td>
</tr>
<tr>
<td>Fully Retracted</td>
<td>4,000 lbs.</td>
</tr>
</tbody>
</table>

---

D: Label 287

- MODEL/MODELO/MODELE
- STATIC CAPACITY (evenly distributed) _____ lbs
- CAPACITÉ STATIQUE (distribuée uniformément) _____ kgs
- LA CAPACIDAD CONSTANTE (distribuida uniformemente) _____ kgs
- SERIAL/SERIE/SÉRIE

---

E: Label 303 (underside of both legs; visible when in towing configuration)
LIMITED WARRANTY

Vestil Manufacturing Corporation ("Vestil") warrants this product to be free of defects in material and workmanship during the warranty period. Our warranty obligation is to provide a replacement for a defective original part if the part is covered by the warranty, after we receive a proper request from the warrantee (you) for warranty service.

Who may request service?

Only a warrantee may request service. You are a warrantee if you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

What is an "original part"?

An original part is a part used to make the product as shipped to the warrantee.

What is a “proper request”?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by any of the following methods:

Mail
Vestil Manufacturing Corporation
2999 North Wayne Street, PO Box 507
Angola, IN 46703

Fax
(260) 665-1339

Phone
(260) 665-7586

Email
sales@vestil.com

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

What is covered under the warranty?

After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following original dynamic components: motors, hydraulic pumps, electronic controllers, switches and cylinders. It also covers defects in original parts that wear under normal usage conditions ("wearing parts"), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original dynamic components is 1 year. For wearing parts, the warranty period is 90 days. The warranty periods begin on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the periods begin when the distributor ships the product. Vestil may, at its sole discretion, extend the warranty periods for products shipped from authorized distributors by up to 30 days to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any covered part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

1. Labor;
2. Freight;
3. Occurrence of any of the following, which automatically voids the warranty:
   - Product misuse;
   - Negligent operation or repair;
   - Corrosion or use in corrosive environments;
   - Inadequate or improper maintenance;
   - Damage sustained during shipping;
   - Collisions or other incidental contacts causing damage to the product;
   - Unauthorized modifications: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty.