

Atlas[®] Horizontal Balers INCLUDES ET MODELS

OPERATION, SERVICE, AND INSTALLATION

ISSUED DECEMBER 2014

CUSTOMER NAME: _____

SERIAL NUMBER: _____

COMPACTION & RECYCLING SOLUTIONS

0039-ATLAS-1214



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Environmental Solutions Group 201 W. Main Street, Ste 300 Chattanooga, TN 37408 Marathon Customer Care: 1.800.633.8974





IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of the Marathon Equipment Company products. Service procedures recommended by Marathon Equipment Company are described in this Operation, Service, and Installation Manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Marathon Equipment Company could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each method. Consequently, Marathon Equipment Company has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Marathon Equipment Company must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

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OPERATION, SERVICE, AND INSTALLATION ISSUED DECEMBER 2014 0039-ATLAS-1214

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Atlas[®] Horizontal Balers General Information

SECTION 1 GENERAL INFORMATION

Atlas[®] Horizontal Balers General Information

INTRODUCTION

Thank you for purchasing a Marathon® Atlas® Horizontal Baler!

This product is designed to give you reliable service and superior performance for years to come. The purpose of this manual is to provide the owner and/or operators with the necessary information to properly install, operate, and maintain the machine. Also included are sections regarding troubleshooting and service procedures. The manual is not intended as a primary training source, but as a reference guide for authorized, trained personnel. Each person involved in the operation, maintenance, and installation of the machine should read and thoroughly understand the instructions in this manual and follow ALL warnings.

Employers involved in the operation, maintenance, and installation of the machine should also read and understand the most current version of the following applicable standards:

ANSI STANDARD NO. Z245.5, "SAFETY REQUIREMENTS FOR INSTALLATION, MAINTENANCE AND OPERATION"

ANSI STANDARD NO. Z245.51, "SAFETY REQUIREMENTS FOR BALING EQUIPMENT"

A copy of this standard may be obtained from:

ENVIRONMENTAL INDUSTRIES ASSOCIATION 4301 CONNECTICUT AVENUE, NW SUITE 300 WASHINGTON, D.C. 20008

OSHA Standards - 29 CFR

Refer to:

- Part 1910.147: "The Control of Hazardous Energy (Lock-Out/Tag-Out)"
- Part 1910.212: "Machinery and Machine Guarding: General Requirements for all Machines"
- All other applicable OSHA Standards

ANY SERVICE OR REPAIRS THAT GO BEYOND THE SCOPE OF THIS MANUAL SHOULD BE PERFORMED BY FACTORY AUTHORIZED PERSONNEL ONLY!

If you should need further assistance, please contact your distributor. You will need to provide the equipment serial number, installation date, and electrical schematic number to your distributor.

If you have any safety concerns with the equipment or need further information, please contact us at:

Marathon Equipment Company P.O. Box 1798 Vernon, AL 35592-1798 Attn: Field Service Department

877-258-1105

PREFACE

The following sections are a guide for maintenance and service of the Marathon Equipment Company unit. The sections cover preventive maintenance, adjustment, and troubleshooting hints. Before performing maintenance, check the work area carefully to find all the hazards present and make sure all necessary safeguards or safety devices are used to protect all persons and equipment involved. In order to diagnose a problem quickly and effectively, a service person must be thoroughly familiar with the machine. This Operation, Service, and Installation Manual explains the system and its major components. Diagrams and schematics of the electrical and hydraulic systems are in the Service Section.



IMPORTANT!

- Before starting any maintenance, study this section of the manual.
- Read all hazard warnings and decals on the unit.
- Clear the area of other persons before performing any maintenance.
- Know and understand safe use of all controls.
- It is your responsibility to understand and follow manufacturer's instructions on equipment and care.

HAZARD SYMBOLS AND DEFINITIONS

Listed below are the definitions for the various levels of hazards. It is important that the operators of this equipment and people who service units read and understand all warnings as they relate to this equipment operation.

- DANGER indicates an imminently hazardous situation, which WILL result in DEATH or SERIOUS INJURY if you don't follow proper instructions.
- WARNING indicates an imminently hazardous situation, which COULD result in DEATH OR SERIOUS INJURY if you don't follow proper instructions.
- CAUTION indicates an imminently hazardous situation, which will result in MINOR to MODERATE INJURY if you
 don't follow proper instructions.
- NOTICE means unit or other property may be damaged if these instructions are not followed.

You must read and obey all warnings in any manual produced by Marathon Equipment Company to support your unit.

General Information

LOCK-OUT & TAG-OUT INSTRUCTIONS

A DANGER



Before entering any part of the compactor, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the compactor is locked-out and tagged-out in accordance with OSHA and ANSI requirements.

The specific Lock-Out and Tag-Out instructions may vary from company to company (i.e. multiple locks may be required, or other machinery may need to be locked-out and tagged-out). The following instructions are provided as minimum guidelines.

INSTRUCTIONS

- 1. Notify all affected employees that servicing or maintenance is required on the baler and that the baler must be shut down and locked out to perform the servicing or maintenance.
- 2. Perform a hazard assessment;
 - a. The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the baler utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
- 3. Wear proper personal protective equipment.
- 4. If baler is operating, it must be shut down by the normal stopping procedure. If the ram is pressing against a load, move the ram rearward before shutting the baler down.
- 5. De-activate the energy isolating device(s) so that baler is isolated from the energy source(s).
 - a. Shut down all power sources.
 - b. Move the main disconnect lever to the OFF position.
- 6. Lockout the energy isolating device(s) with assigned individual lock(s).
 - a. Padlock the disconnect lever with a keyed padlock and take the key with you.
 - b. Along with the padlock, place an appropriate, highly visible, warning tag on the disconnect lever. The tag should provide a warning such as:
 - "Danger: Do not operate equipment. Person working on equipment." or
 - "Warning: Do not energize without the permission of ______.
 - c. Place operating components in such a position so as not to be subject to possible free fall and/or install additional blocking devices to prevent this potential for any raised or elevated component.
- 7. Stored hydraulic energy must be removed from the baler hydraulic circuit for complete Lock-Out and Tag-Out. Make sure that this energy has been relieved by manually depressing the solenoid valve pin located in the center of each coil end of the directional control valve.
- 8. After locking and tagging the baler, ensure that the baler is disconnected from the energy source by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. Try to start and operate the baler (as outlined in the Operating Instructions) to make sure the Lock-Out and Tag-Out is effective, remove the key from the key switch and take it with you.

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General Information

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

- 9. Before entering baler perform hazard assessment for confined space requirements (hazardous fumes, dust or other toxic material).
- 10. The baler is now locked out.

RESTORING SERVICE

When the servicing or maintenance is completed and the stationary baler is ready to return to normal operating condition, the following steps shall be taken:

- 1. Check the baler and the immediate area around the baler to ensure that nonessential items have been removed and that the baler components, guards and covers are operationally intact.
- 2. Check the work area to ensure that all employees have been safely positioned or removed from any hazardous area.
- 3. Verify that the controls are in neutral.
- 4. Remove the lockout devices and re-energize the baler.

NOTICE

The removal of some forms of blocking may require re-energizing of the baler before safe removal.

- 5. Notify affected employees that the servicing or maintenance is completed and the baler is ready for use.
- 6. Reassess area to determine all hazards are protected.

General Information

SPECIFICATIONS

Specifications	Atlas®	Atlas [®] ET
Cylinder	9" Bore, 6" Rod	10" Bore, 7" Rod
Cylinder Stroke	96"	96"
Force	190,000 lbs	235,600 lbs
Ram Face PSI	109	139
System Pressure	3000 PSI (Max)	3000 PSI (Max)
Pump Flow	75 GPM	94 GPM
Reservoir	150 Gal.	200 Gal.
Cycle Time	22 Sec. (Partial Pen.)	22 Sec. (Partial Pen.)
Control Panel	UL Listed	UL Listed
Motor	30 HP	50 HP
Main Voltage	460 VAC. (3 PH.)	460 VAC. (3 PH.)
Programmable Controller	Standard	Standard
Control Voltage	120 VAC.	120 VAC.
Nominal Bale Size	30" X 48" X 60"	30" X 48" X 60"
Baler Weight (Approximate)	12.5 Tons	14.5 Tons



Atlas[®] Horizontal Balers General Information

SPECIFICATIONS (CONTINUED)



Atlas[®] Horizontal Balers General Information

SERVICE/PARTS ASSISTANCE

Assistance in troubleshooting, repair and service is available by contacting the authorized Marathon Equipment Company Dealer in your area. Parts are available at your Marathon Equipment Company Dealer or through Marathon Equipment Company. Marathon Equipment Company personnel are trained to give prompt, professional assistance.

ALWAYS give the machine serial number in all correspondence relating to the equipment.

GUARDS AND ACCESS COVERS

Before operating or performing maintenance, check the work area carefully to find all the hazards present and make sure all guards and safety devices are in place to protect all persons and equipment involved.

GREASE LUBRICANT RECOMMENDATION

Use a grease gun. Before engaging grease gun, clean the fitting. Always pump enough grease to purge the joint of contaminated grease and wipe off the excess grease. Lubricate a unit as recommended on the lubrication decal on the unit and in the Operation, Service, and Installation Manual. Use NLGI 000 grease.

RECOMMENDED OILS

The following oils by brand name are approved for use in the hydraulic system on this equipment and considered to be all temperature hydraulic fluids.

- Union-UNAX-46, UNAX-AW46
- Gulf-Harmony 47, Harmony 48-AW
- Exxon-Teresstic 46, NUTO 46
- Texaco-Rando 46
- Chevron-AW 46
- Shell-Turbo 46, Tellus 46
- Citgo-Pacemaker 46, Tellus-AW46
- Conoco-Super Hydraulic Oil 46

Automatic Transmission Fluid (for 15 HP and smaller units only)

• Quaker State-Dextron II (ATF)

Cold Weather Fluid

• Amoco-Rycon MV

General Information

WARNING DECALS ON THE UNIT

A WARNING

DO NOT operate without all guards and access covers in place.

Make sure you can read all warning and instruction decals. Clean decals if you cannot read the words. See below for directions on cleaning decals. Replace any decal that is damaged, missing, or is not readable. When you replace a part that has a decal, make sure a new decal is installed on the new part. See the Operation, Service, and Installation Manual for replacement decals. Order replacement decals from Marathon Equipment Company or an authorized dealer.

DECAL CARE

It is important that the decals are properly cleaned to make sure that they are readable and do not come off the unit. Use the following steps to clean the decals.

A. General Instructions

Following these instructions helps the decals adhere longer.

- Wash the decals with a blend of mild car wash detergent and clean water
- Rinse with clean water
- Let the unit air-dry or dry with a micro-fiber cloth
- Do not allow fuels to stay in contact with the decal for an extended period of time. Remove the fuel contamination as quickly as possible
- Do not use carnauba-based wax over the decals
- Do not use a mechanical brush while washing the decals.

B. Pressure Washer Precautions

Pressure washing can cause damage to decals. It can cause the edges of the decals to lift and peel the decal away from the unit. Over time, the decal can fade, crack or chip away.

Use pressure washing only when other cleaning methods are not effective. If you use a pressure washer, use the following precautions.

- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from vehicle' s body
- Distance of nozzle to decal: 15" minimum
- Water pressure: less than or equal to 800 psi
- Length of time: not more than 30 sec.
- Do not use sharp angles to clean the decals this can lift the decals from the unit.
- NEVER use a "turbo pressure nozzle".

C. Remove Difficult Debris

When normal cleaning procedures do not remove difficult debris from the decals, try the following:

- Spot clean the decal with Isopropyl Alcohol and a micro-fiber cloth (rag)
- If these methods do not work on a problem area, call a Marathon Equipment Company Dealer or Marathon Equipment Company Customer Support.

Atlas® Horizontal Balers

General Information

DECAL CARE - CONTINUED



INCORRECT TECHNIQUE

General Information

HYDRAULIC SYMBOLS



General Information

HYDRAULIC SYMBOLS (CONTINUED)



General Information

ELECTRICAL SYMBOLS

SYMBOL DEFINITIONS

BATTERY d di FUSE SOLENOID CONTACT RELAY CR1 CR1 NORMALLY OPEN CONTACT OF CR1 NORMALLY CLOSED CONTACT OF CR1 INDICATOR LIGHT (GREEN) PUSH BUTTON SWITCH NORMALLY CLOSED 0 PUSH BUTTON SWITCH NORMALLY OPEN **TOGGLE SWITCH** DIODE PRESSURE SWITCH LIMIT SWITCH NORMALLY OPEN 0 LIMIT SWITCH NORMALLY CLOSED ~ ~ -1CAPACITOR

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Atlas[®] Horizontal Balers Installation

SECTION 2 INSTALLATION

CONTACT INFORMATION



Technical Service:

877-258-1105

Parts and Warranty:

800-528-5308

For parts visit our e-commerce market place at www.mecomerchant.com.

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday 8:00am - 5:00pm

(Central Standard Time)

Atlas[®] Horizontal Balers Installation

GENERAL INSTALLATION

CAUTION

Review this manual before beginning the installation. Study the jobsite and installation requirements carefully to be certain all necessary safeguards and/or safety devices are provided to protect all personnel and equipment during the installation and as a completed system. Special attention is directed to the extract from the most current version of the American National Standards Institute Z245.5 standard at the time the baler was manufactured. This baler is designed for INDOOR USE ONLY. NEXGEN does not assume responsibility for the installation procedures of this equipment. Conformance to applicable local, state, and federal laws concerning installation rests with the customer.

Concrete Pad or Floor

The pad or floor should be a minimum 3000 psi concrete, steel reinforced, 6" thick. It is recommended that the pad or floor be flush with the surrounding area. Working clearance for the panel box must comply with state and local building codes. Allow enough space in front of bale chamber for bale handling vehicle.

Anchoring

Anchor the baler to the pad or floor using anchor plates at the corners of baler base. Four 1" diameter anchor bolts 3 3/4" long are required, Red Head type recommended. If the Atlas is fed by conveyor, the conveyor should be anchored per the manufacturer's instructions. Anchor bolts are not provided by NEXGEN.

Decals

Installation of the baler is not complete until an inspection of the warning decals has been made. Decals should be clearly visible, legible, securely applied and in the proper location.

Printed in U.S.A.

ELECTRICAL AND HYDRAULIC INSTALLATION

A DANGER

The panel box contains high voltage components. Only authorized service personnel should be allowed inside. See **Lock-Out Tag-Out** 6 procedures.

A DANGER

All equipment should be grounded per National Electric Code.

This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the appliance. If there is any doubt whether the equipment is properly grounded, a qualified electrician should be consulted.

Before making any electrical connection, be sure that the disconnect switch has been placed in Lock-Out/Tag-Out 6 mode.

- 1. Use the FUSE AND CIRCUIT BREAKER and WIRE SIZE charts on page 2-11 for reference during the electrical installation.
- 2. Before connecting power to the baler, check the incoming line voltage with a voltmeter. Also, check voltage wiring in the baler panel box. If the baler is not wired to the proper voltage, make necessary corrections before proceeding.
- 3. A lockable disconnect switch is provided on the baler and is sized in accordance with the baler. Three phase power should be connected to the top of this disconnect switch. Be careful not to let incoming wires touch each other. A properly sized equipment ground should be connected to the enclosure ground lug.
- 4. If the baler is to be used with a conveyor, when the conveyor is anchored into place, connect the Sealtite from the conveyor to the baler panel box. Next, connect the green wire to the ground lug in the panel box. Then connect the remaining wires to the panel box per the schematic shipped with the baler.
- 5. Connect the hydraulic hoses to the power unit and baler. The two larger hoses connect the power unit main hydraulic manifold to the main cylinder at the rear of the baler. The two smaller hoses connect the power unit latch valve to the latch cylinder hard piping on the side of the baler.

ELECTRICAL AND HYDRAULIC INSTALLATION (CONTINUED)

Start-Up Instructions

Make sure all persons and installation materials are clear of charge box area before starting the baler.

- 1. Make sure that all electrical and hydraulic connections are complete.
- 2. Check motor rotation by the following:
 - a. Turn disconnect switch to the ON position.
 - b. Have someone turn ON the keyswitch and depress the AUTOCYCLE button and start the machine (20 second start-up). As soon as the motor rotates, immediately depress the EMERGENCY STOP button. Check motor rotation by watching the hub coupling through the slot in the pump-to-motor adapter. A rotation decal on the power unit shows correct rotation. In the event that this decal is missing, look at the hub coupling from the motor end. Rotation should be clockwise.

If the pump rotates backward, stop immediately! The pump will be damaged if it is operated in reverse even for short periods. Reversing any two incoming power lines will change the motor/pump rotation.

Before making any changes to the electrical connections, be sure that the disconnect switch has been in Lock-Out/Tag-Out 6 mode.

- With the ram in the full retract position, check to be sure the oil reservoir is filled to the 3/4 level on the sight gauge (refer to the **Periodic Maintenance** for hydraulic oil recommendations). The hydraulic system pressure has been factory set.
- 4. If the baler is used with a conveyor, check the conveyor rotation by turning the CONVEYOR CONTROL selector to the ON position. If the conveyor rotates backwards, stop immediately, and reverse any two wires connecting to the appropriate terminals (per the schematic) in the baler panel box.
- 5. The baler is equipped with photocells, a keyed interlock, a door switch, proximity switches, and a limit switch. These items have been factory adjusted. Check the proper function of each of these prior to operation start-up.
- 6. MAKE SURE THAT THE OPERATORS ARE THOROUGHLY TRAINED IN THE PROPER USE OF THIS EQUIPMENT.

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Atlas[®] Horizontal Balers Operation

SECTION 3 OPERATION

CONTACT INFORMATION



Technical Service:

877-258-1105

Parts and Warranty:

800-528-5308

For parts visit our e-commerce market place at www.mecomerchant.com.

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday 8:00am - 5:00pm

(Central Standard Time)

PRE-OPERATION INSTRUCTIONS

Employers should allow only authorized and thoroughly trained personnel to operate this baler.

This baler is equipped with a key operated locking system. Keys should be in possession of only authorized personnel. Turn off and remove the key after use.

NOTICE

Federal regulation prohibits the use of this equipment by anyone under 18 years of age.

Do not operate baler until operating instructions are thoroughly understood. Wear safety glasses and gloves when operating this equipment.

Stay clear of all internal baler parts and all moving external baler parts when in operation. Failure to do so could result in serious personal injury or death!

Never enter any part of baler unless the disconnect switch has been turned off, padlocked, and all stored energy sources have been removed. See "Lock-Out/Tag-Out Instructions".

Before starting baler, be sure no one is inside. Be certain that everyone is clear of all operation points and pinch point areas before starting.

A WARNING

This baler is controlled by photocells and will start automatically when photocells detect ANY OBJECTS in the charge box.

The compression ram in this baler travels at a very fast speed. Stand clear of the baler when in operation.

A WARNING

ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE PANEL BOX. The panel box contains high voltage components. See "Lock-Out/Tag-Out Instructions".

The baler hydraulic system operates at high pressures and at high temperatures. If you suspect a leak, do not check with your hands and avoid contact with piping, hoses, and cylinders.

PRINCIPLES OF OPERATION

Atlas Baler Operating Characteristics

Electrical

The Atlas baler is equipped with a programmable logic controller (PLC). This controller is a computer that monitors inputs, determines what action is needed, and turns on outputs to make the baler function. The PLC is made up of three basic parts: inputs, outputs, and the central processing unit.

All of the inputs and outputs on the baler are digital. They are either on or off. They are also all equipped with LED lights to tell the operator if an input or output is on or off.

The central processing unit (CPU) is the brain of the PLC. The CPU takes the information supplied by the input devices and decides when to open and close the output contacts. In the event that a problem should arise in the CPU or its program, the CPU FAULT light will be illuminated. The baler cannot run until the fault has been cleared. To clear the fault, turn off the power and wait 60 seconds. Then turn the power back on. If the FAULT light remains on, call the Marathon Equipment Company Service Department at 1-800-633-8974. If the fault light goes out and the RUN light is illuminated, the baler will run properly.

The sequence of operation which the baler should follow is stored electrically as a program in an EEPROM memory module that plugs into the front of the PLC. If the CPU loses power, the program may be lost. For this reason, the CPU has a battery backup. The battery should be replaced once a year and is available from Marathon. If the LOW BATTERY light is illuminated, change the battery as soon as possible to avoid memory loss. Contact Maraton Equipment Company's Service Department for instuctions on battery replacement. DO NOT turn power off to the baler until the battery has been replaced and the battery light is no longer illuminated on the PLC. Turning power off to the baler in this condition could result in a program loss in the CPU.

The baler can be started by inserting the key into the keyswitch, turning it to the ON position, depressing POWER ON and then touching one of the function buttons on the touch screen (AUTOCYCLE, FORWARD, REVERSE) for 20 seconds. After 20 seconds, the PLC will start the motor. If the R1 relay should turn off for any reason, the machine will stop immediately. Once the motor is running, the baler can be cycled by touching any of the function buttons.

General

The Atlas baler can be operated in PHOTOELECTRIC CYCLE mode, AUTOCYCLE mode, or Manua Imode (using FORWARD and REVERSE controls). The ram must be at the rear position, on the limit switch, to initiate the PHOTOELECTRIC CYCLE or AUTOCYCLE modes.

The baler is limit switch shifted at the rear position and timer and pressure switch shifted on the extend position. The timer does not start counting until the extending ram passes the BALE MADE position limit switch. At that time, the BALE MADE limit switch is actuated which starts the timer. With an empty bale chamber, the ram will extend fully past the BALE MADE position and after a preset time, the timer will time out and shift the hydraulic control valves, retracting the ram. When the ram reaches the rear position in the AUTOCYCLE mode or the PHOTOELECTRIC CYCLE mode (if no material is detected in the charge chamber), then the power unit will run until sleep timer setting is reached then shutdown.

As the bale chamber is filled with material, the ram is timer shifted by the bale made limit switch. The ram compacts the material until the bale made limit switch is actuated and starts a timer in the program. When the timer setting is reached the control valve shifts and the ram retracts. As the baler compacts the material, each time the ram will pass the BALE MADE position, actuate the BALE MADE limit switch, and then build pressure against the material. This continues as material is fed into the baler until the ram detects the 2300 psi pressure setting before reaching the BALE MADE limit switch. At that time, the BALE MADE indicator will come on, an alarm will sound, and the baler will shut down.

The standard Atlas has an AUTO mode as well as a continuous run (ON) mode for conveyor operation. When the CONVEYOR CONTROL selector is on AUTO, and the baler is operating in the PHOTOELECTRIC CYCLE or AUTOCYCLE mode, the conveyor will stop running when the ram is cycling. If the baler is equipped with an upper photocell, the conveyor will stop running once the material in the charge chamber has reached the level of the upper photocell.

Atlas[®] Horizontal Balers Operation

PRINCIPLES OF OPERATION (CONTINUED)

Hydraulic

In a typical automatic cycle, the Atlas will operate as follows: Upon starting the baler (key in the ON position and AUTOCYCLE button pressed and held for 20 seconds) the motor starter is energized and the electric motor rotates the hydraulic pump. The solenoids SF1, SV5, SF3, and SV2 on the cartridge manifold shift and cause the oil to fill the base end of the cylinder and leave the rod end of the cylinder thus extending the ram.

If the pressure in the base end of the cylinder reaches 900 psi, the solenoid SV5 will be de-energized. This allows the 50 gpm pump flow to be vented to the tank, reducing the load on the electric motor. As the ram extends, the bale made limit switch is actuated and a timer is energized. If the bale chamber is empty, the ram will extend and the timer will time for 8.5 seconds. After this period, the timer will de-energize solenoids SF2 and SV2 and will energize solenoids SF3, SV4 and SV1. This opens the base end of the cylinder to tank and directs the oil flow to the rod end of the cylinders, retracting the ram. When the ram retracts to the rear and actuates the rear limit switch, the baler will continue to run until the sleep timer setting has been reached and then shut down.

Atlas[®] Horizontal Balers Operation

START-UP ALARM

NOTICE

The Atlas features an ANSI compliant start-up alarm that is both audible and visible during the initial activation of the baler

Each time the Atlas is started, an alarm is activated to warn personnel working around the baler that the motor is starting and the ram is about to start moving. When the key is inserted into the key switch and turned to ON, the POWER ON button is pressed, and either the AUTO-CYCLE, FORWARD, or REVERSE (see Operating Instructions) buttons are pressed and held for 20 seconds, then the following describes the start-up alarm process that immediately occurs:

- Both the audible and visual start-up alarms will energize for 5 seconds.
- After 5 seconds the audible alarm will stop, but the visual alarm will continue for an additional 15 seconds (for a total of 20 seconds).
- After 20 seconds, the motor will start and the ram will extend (FORWARD), retract (REVERSE), or both (AUTOCYCLE) - depending on the controls used.
- If the baler is put in PHOTO ELECTRIC CYCLE mode, the light will continue to flash until the unit is manually turned off, automatically shuts down, or is switched to another operating mode.
- If the photocell(s) is not blocked or if there is no operation of the push buttons, the unit will shut down after the sleep timer setting is reached.

In PHOTO ELECTRIC CYCLE mode, the power unit will restart the ram automatically anytime the photocell(s) detects ANY OBJECT in the charge box!



OPERATING INSTRUCTIONS

This baler can be operated in either Automatic (Photo Electric Cycle) or Manual (Forward/Reverse/Auto-cycle) modes. The ram must be fully retracted before initiating Photo Electric Cycle or Auto-cycle modes.

A DANGER

Do not operate baler until Pre-Operating Instructions 25 are read and thoroughly understood. Never enter any part of the baler when in operation as it can result in serious injury or death.

In Case of Emergency: PUSH the large red button to STOP.

Automatic (Photo Electric Cycle) Mode

- 1. Insert the key into the key switch and turn to the ON position. Depress the POWER ON push button. The POWER ON green light will illuminate.
- 2. Touch and hold the Auto-cycle button for 20 seconds. The start-up alarm will activate and afterward the motor will start and the ram will both advance and retract fully (one cycle).
- 3. Set the Photocell Select Switch to ALL if you are baling small materials that require the charge chamber to be completely full to guarantee bale fullness (i.e. aluminum cans).

OR

Set the Photocell Select Switch to ANY if you are baling larger materials that do not require a completely full charge chamber to assure bale fullness (i.e aluminum radiators).

4. Touch the Photo Electric Cycle push button. The Photocell Mode button will illuminate on the touch screen and the start-up alarm beacon will flash continuously when in this mode. If the Photocell Select is set to ALL, the ram will start automatically any time all photocells sense that the feed hopper/charge chamber has an OBJECT or OBJECTS in it. If the Photocell Select is set to ANY, the ram will start automatically anytime any one of the photocells sense that the feed hopper/charge chamber has ANY OBJECT in it.

NOTICE

If the sleeping timer setting is reached without a cycle being initiated by the photocell(s) or without operation of any of the push buttons, the power unit will automatically shut down.

In Photo Electric Cycle mode, the power unit will restart the ram automatically anytime the photocell(s) detects any object in the charge box.

- 5. Completely fill the charge chamber with material. NOTE: Thin sheet materials must either be placed in the baler charge chamber along with other materials or they must be placed in the charge chamber in a manner to prevent jamming at the shear blades (i.e. with the edges of the material pointing towards the front and rear of the baler).
- 6. When a bale is completed, the BALE MADE indicator will flash, the buzzer will sound, and the unit will shut down automatically.

OPERATING INSTRUCTIONS (CONTINUED)

A DANGER

Do not operate baler until Pre-Operating Instructions 25 are read and thoroughly understood. Never enter any part of the baler when in operation as it can result in serious injury or death.

In Case of Emergency: PUSH the large red button to STOP.

Manual (Forward/Reverse/Auto-Cycle) Mode

- 1. Insert the key into the key switch and turn to the ON position. Depress the POWER ON push button. The POWER ON green light will illuminate.
- 2. Completely fill the charge chamber with material. NOTE: Thin sheet materials must either be placed in the baler charge chamber along with other materials or they must be placed in the charge chamber in a manner to prevent jamming at the shear blades (i.e. with the edges of the material pointing towards the front and rear of the baler).
- 3. Touch and hold the Auto-cycle button for 20 seconds. The Start-Up Alarm 28 will activate and afterward the motor will start and the ram will both advance and retract fully (one cycle). Repeat steps 2 & 3 until the BALE MADE indicator comes on and the buzzer sounds.
- 4. The baler can also be operated using the FORWARD or REVERSE push buttons. The baler will start if the key switch is ON and either the FORWARD or REVERSE button is touched and held for 20 seconds.

Conveyor Control

- 1. When using a conveyor that has been properly connected to the baler electrical circuit, the conveyor will operate continuously if the Conveyor selector switch (ON / OFF / AUTO) is set to ON (baler key switch must be ON).
- 2. When the Conveyor Selector (ON / OFF / AUTO) is placed in the AUTO mode, the conveyor will start automatically when the baler is in any mode and the photocell(s) does not detect material in the hopper. The conveyor will shut down when the material reaches the level of the photocell(s) or the upper photocell (if so equiped) so the baler can process the material.

Atlas[®] Horizontal Balers Operation

CONTROL PANEL

Baler Side View



Baler Operation Controls



- 1. POWER ON Illuminated Push button (Green) This button is pressed to supply power to the PLC and controls.
- ON/OFF Key Switch Turning this switch to this ON position energizes the controls on the control station. The baler cannot be operated unless the key is in the switch and turned to the ON position. When the switch is OFF, the key should be removed and in the possession of authorized personnel only.

TOUCH SCREEN CONTROLS

Main Screen



Operation Instructions

- 1. GOTO AUTO SCREEN: Touching Goto Auto Screen will take you to the screen for automatic control.
- 2. BALE COUNTS: The Bale Counts display shows the overall number of bales produced by the baler. It cannot be reset.
- 3. GOTO SETTINGS: Touching Goto Settings will take you to the settings screen where adjustments to how the baler operates can be made.
- 4. TOTAL HOURS: The Total Hours display shows the overall number of hours the main motor and pump have run. It cannot be rest.
- 5. TOTAL HOURS PER SHIFT: The Total Hours Per Shift display shows the number of hours the main motor and pump have run during a specific period of time or shift. It can be reset from the settings screen.
- 6. GOTO MANUAL SCREEN: Touching the Goto Manual Screen will take you to the screen for manual control.
- 7. BALE COUNTS PER SHIFT: The Bale Counts Per Shift display shows the total number of bales made during a certain period of time or shift. It can be reset from the settings screen.
- 8. GOTO ALARMS: Touching Goto Alarms will take you to the alarm screen.
- 9. LANGUAGE SELECTOR: Touching this button will cause the Language Selection box to appear. Use the up arrow to choose English and the down arrow to choose Spanish. Use the enter button to enter the selected language. There will be a couple second delay before the language changes on the screen. The selection box will stay on the screen for 5 seconds before hiding in the back ground again.
TOUCH SCREEN CONTROLS (CONTINUED)

Automatic Screen



- 1. AUTO CYCLE: Touching Auto Cycle will start the baler and cause the baler to make one complete cycle and return to the rear limit switch.
- 2. DOOR OPEN: Touching Door Open will open the door latch.
- 3. DOOR CLOSE: Touching Door Close will close the door latch.
- 4. BALE MADE: When the baler reaches the bale made pressure setting the Bale Made indicator will illuminate red and will be accompanied by a warning horn. When a bale is made the baler will cease operation. Follow the procedures for bale tie off and removal.
- 5. CONVEYOR OFF/ON/AUTO: Touching Conveyor Off/On/Auto will change the setting for the conveyor control. The image will also change to indicate what state the conveyor control is set to.

TOUCH SCREEN CONTROLS (CONTINUED)

- 6. DOOR PRESSURE TOO HIGH: This dialog box will appear if an attempt is made to open the bale door latch while the main ram is holding pressure against the bale inside the bale chamber. If this dialog box appears follow the prompt to retract the ram until the pressure against the bale is low enough to allow the bale door latch to open.
- 7. FAULT RESET: If a fault should occur the Fault Reset button will flash red and the image will change to read PUSH TO RESET FAULT. Touching Fault Reset will reset the fault. If the fault condition has not been corrected the fault condition will return.
- 8. LOW OIL LEVEL: If your baler is equipped with the Oil Management Package the Low Oil Level indicator will be visible on the screen. When the oil level in the hydraulic reservoir is at normal levels the indicator will illuminate green. If the oil level should drop below normal levels the indicator will illuminate red and will be accompanied by a warning horn. The baler operation will cease. Once the hydraulic oil level has been returned to normal levels the Low Oil Level alarm can be reset and baler operation may be resumed.
- 9. PHOTOCELL MODE: Touching Photocell Mode will allow the baler to cycle anytime the material level in the charge chamber blocks the photocell beam. The baler will cycle until the material level falls below the level of the photocell. The baler must be running and the ram must be fully retracted before it can be placed into photocell mode. The photocell delay setting and photocell watchdog timer setting can be adjusted from the settings screen.
- 10. GOTO MANUAL SCREEN: Touching Goto Manual Screen will take you to the screen for manual control.
- 11. GOTO MAIN SCREEN: Touching Goto Main Screen will take you to the main start up screen.
- 12. HIGH OIL TEMP: If your baler is equipped with the Oil Management Package the High Oil Temp indicator will be visible on the screen. When the temperature of the oil in the hydraulic reservoir is at normal levels the indicator will illuminate green. If the oil temperature should rise above normal levels the indicator will illuminate red and will be accompanied by a warning horn. The baler operation will cease. Once the hydraulic oil temperature has been returned to normal levels the High Oil Temp alarm can be reset and baler operation may be resumed.

TOUCH SCREEN CONTROLS (CONTINUED)

Manual Screen



- 1. FORWARD: Touching Forward will start the baler and cause the main ram to move forward. As long as the Forward button is held the ram will extend until it reaches the end of the cylinders stroke.
- 2. DOOR OPEN: Touching Door Open will open the door latch.
- 3. DOOR CLOSE: Touching Door Close will close the door latch.

TOUCH SCREEN CONTROLS (CONTINUED)

- 4. LOW OIL LEVEL: If your baler is equipped with the Oil Management Package the Low Oil Level indicator will be visible on the screen. When the oil level in the hydraulic reservoir is at normal levels the indicator will illuminate green. If the oil level should drop below normal levels the indicator will illuminate red and will be accompanied by a warning horn. The baler operation will cease. Once the hydraulic oil level has been returned to normal levels the Low Oil Level alarm can be reset and baler operation may be resumed.
- 5. CONVEYOR OFF/ON/AUTO: Touching Conveyor Off/On/Auto will change the setting for the conveyor control. The image will also change to indicate what state the conveyor control is set to.
- 6. DOOR PRESSURE TOO HIGH: This dialog box will appear if an attempt is made to open the bale door latch while the main ram is holding pressure against the bale inside the bale chamber. If this dialog box appears follow the prompt to retract the ram until the pressure against the bale is low enough to allow the bale door latch to open.
- 7. FAULT RESET: If a fault should occur the Fault Reset button will flash red and the image will change to read PUSH TO RESET FAULT. Touching Fault Reset will reset the fault. If the fault condition has not been corrected the fault condition will return.
- 8. REVERSE: Touching Reverse will start the baler and cause the ram to retract. As long as the Reverse button is held the ram will retract until it reaches the rear limit switch.
- 9. GOTO AUTOMATIC SCREEN: Touching Goto Automatic Screen take you to the screen for automatic control.
- 10. GOTO MAIN SCREEN: Touching Goto Main Screen will take you to the main start up screen.
- 11. HIGH OIL TEMP: If your baler is equipped with the Oil Management Package the High Oil Temp indicator will be visible on the screen. When temperature of the oil in the hydraulic reservoir is at normal levels the indicator will illuminate green. If the oil temperature should rise above normal levels the indicator will illuminate red and will be accompanied by a warning horn. The baler operation will cease. Once the hydraulic oil temperature has been returned to normal levels the High Oil Temp alarm can be reset and baler operation may be resumed.

TOUCH SCREEN CONTROLS (CONTINUED)

Settings Screen



- 1. SLEEP TIMER SETTING: The sleep timer is a function that will shut the main motor down if the baler sits idle for a specified amount of time. The baler will restart on its own if it is in photocell mode and the photocell is blocked. The sleep timer setting can be adjusted by touching the blue box to the left of the caption. When it is touched a numerical entry display will pop up on the screen. Enter the desired amount of time in seconds and touch the enter button. The new value will be entered into the PLC program and will show on the display.
- 2. PHOTOCELL DELAY SETTING: The photocell delay is the amount of time it takes after the photocell is blocked before the machine will cycle. The photocell delay time can be adjusted by touching the blue box to the left of the caption. When it is touched a numerical entry display will pop up on the screen. Enter the desired amount of time in seconds and touch the enter button. The new value will be entered into the PLC program and will show on the display.

Atlas[®] Horizontal Balers Operation

TOUCH SCREEN CONTROLS (CONTINUED)

- 3. PHOTOCELL DELAY SETTING: The photocell delay is the amount of time it takes after the photocell is blocked before the machine will cycle. The photocell delay time can be adjusted by touching the blue box to the left of the caption. When it is touched a numerical entry display will pop up on the screen. Enter the desired amount of time in seconds and touch the enter button. The new value will be entered into the PLC program and will show on the display.
- 4. PHOTOCELL WATCHDOG SETTING: The photocell watchdog setting is a function that will shut the baler down if the photocell remains blocked for a specified amount of time. If the baler shuts down because of the photocell watchdog function, an alarm will appear on the screen accompanied by a warning horn. The condition must be corrected before the alarm can be reset and cleared. The photocell watchdog time setting can be adjusted by touching the blue box to the left of the caption. When it is touched a numerical entry display will pop up on the screen. Enter the desired amount of time in seconds and touch the enter button. The new value will be entered into the PLC program and will show on the display.
- 5. UPPER PHOTOCELL DELAY SETTING: The upper photocell delay setting is a function that is used to control a conveyor if the baler is equipped with one. If your baler is not equipped with an upper photocell this setting will not appear on the screen. The upper photocell delay time setting can be adjusted by touching the blue box to the left of the caption. When it is touched a numerical entry display will pop up on the screen. Enter the desired amount of time in seconds and touch the enter button. The new value will be entered into the PLC program and will show on the display.
- 6. PHOTOCELL ALL/ANY: The Photocell All/Any button is used to select the method with which the baler will start and cycle while in photocell mode. Touching the button will toggle between photocell all or photocell any. In Photocell All, all of the photocells must be blocked before the baler will cycle. In Photocell Any, any one of the three photocells can be blocked to make the baler cycle.
- 7. SHORT CYCLE: The Short Cycle On/Off control is used to select between the normal cycle mode and short cycle mode. Short cycle is used to prevent over filling of the charge chamber when a bale is close to being made.
- BALE COUNTS RESET: To reset the Bales Per Shift display on the Main screen, simply touch the Reset Bales Per Shift button. RESET HOURS PER SHIFT. To reset the Hours Per Shift display on the Main screen, simply touch the Reset Hours Per Shift button.
- 9. GOTO MAIN SCREEN: Touching Goto Main Screen will take you to the main start up screen.
- 10.GOTO ALARM SCREEN: Touching Goto Alarm Screen will take you to the alarm screen.
- 11.GOTO DIAGNOSTICS SCREEN: Touching Goto Diagnostics Screen will take you to the diagnostic screen.
- 12.GOTO CONFIGURATION SCREEN: Touching Goto Configuration Screen will take you to the diagnostic screen. A user/password request will pop up on the screen. This screen is used by Marathon Equipment during manufacturing to set the baler up with the correct options and settings. Should there be a reason you need to access this screen please contact Marathon Equipment Company's Service Department. See Contact Information 18 for phone numbers.
- 13.HOURS PER SHIFT RESET: To reset the Hours Per Shift display on the Main screen, simply touch the Reset Hours Per Shift button.

TOUCH SCREEN CONTROLS (CONTINUED)

Alarm Screen



- 1. SCROLL UP: The scroll up button allows you to scroll to the top of the alarm log.
- 2. ENTER BUTTON: The enter button can be used to acknowledge alarms on the log.
- 3. SCROLL DOWN: The scroll down button allows you to scroll to the bottom of the alarm log.
- 4. CLEAR ALL ALARMS: The clear all alarms button will clear all alarms from the alarm log when touched.
- 5. Goto MAIN SCREEN: Touching Goto Main Screen will take you to the main start up screen.
- 6. FAULT RESET: If a fault should occur the Fault Reset button will flash red and the image will change to read PUSH TO RESET FAULT. Touching Fault Reset will reset the fault. If the fault condition has not been corrected the fault condition will return.
- 7. GOTO HELP 1-2-3-4: The Goto Help 1-2-3-4 buttons will only appear if there is a fault that has not yet been reset. If a help button is present, touching it will take you to a help screen that will display text to direct you to what the possible causes of the fault may be. Should there be a reason you need to access this screen please contact Marathon Equipment Company's Service Department. See Contact Information 18 for phone numbers.
- 8. ALARM LOG DISPLAY: The alarm log displays alarms or faults in a list organized by time and date of occurrence. Each time an alarm or fault occurs it will appear in the list with an occurrence time and occurrence date. If the fault or alarm has been acknowledged there will also be an acknowledged time and acknowledged date displayed. The alarm log can be used to track the frequency of reoccurring alarms or faults. This can be helpful when trouble shooting problems.

TOUCH SCREEN CONTROLS (CONTINUED)

Help Screen



- 1. HELP SCREEN DIALOG: If a fault occurs a help button will appear on the alarm screen. Touching the help button will bring you to the corresponding help screen. On the help screen text will be displayed directing you to things that may be the cause of the fault. In most cases only one text box will appear although on rare occasions more than one may appear or there may be more than one help button available. Should there be a reason you need to access this screen please contact Marathon Equipment Company's Service Department or your local Marathon Equipment distributor. See Contact Information 18 for phone numbers.
- 2. GOTO MAIN SCREEN: Touching Goto Main Screen will return you to the main startup screen.

TOUCH SCREEN CONTROLS (CONTINUED)

Diagnostic Screen



- 1. INPUT INDICATOR: The input indicators show the status of the inputs on the PLC. If an input is on its corresponding indicator will illuminate green.
- 2. OUPUT INDICATOR: The input indicators show the status of the outputs on the PLC. If an output is on its corresponding indicator will illuminate green.
- 3. GOTO MAIN SCREEN: Touching Goto Main Screen will return you to the main startup screen.

BALE TIE OFF



Wear safety glasses and leather gloves during the following operations.

Bale Tie Off Operations

When the bale made red indicator comes on and the buzzer sounds, it is time to tie off and eject the completed bale from the baler. The Atlas baler is designed with 6 tie slot and wire guide locations around the bale chamber for tying the completed bale. Bale ties must be inserted through each slot and tied securely before ejecting the bale. Use the following 3 steps below for bale tie off. See next page for Bale Eject (43) instructions.



Recommend Bale Tie

The recommended wire tie to be used for most non-ferrous materials:

• 11 Ga., 70,000 PSI, single loop, 14'-0" long.

NOTICE

For all other materials, heavier gauge wire ties maybe required and multiple ties maybe required at each tie location.

Atlas[®] Horizontal Balers Operation

BALE EJECT

When all of the bale ties have been tied hand-tight as described on the previous page and shown in the diagram to the right, it is time to eject the bale. Follow the steps below to properly eject a made bale from the Atlas.



Before Opening the bale chamber door, reverse the ram to relieve pressure on the door. Make sure that all personnel are clear of the bale chamber door and door latch areas. Before standing in front of the bale chamber door, make sure that the latch is fully open and there is no pressure exerted on the bale chamber door by the compacted material.

Bale Eject Instructions

- 1. Turn the key switch to the ON position and depress the POWER ON button. Touch the DOOR OPEN button on the touch screen and open the door latch completely. Open the bale chamber door all the way. The door must be opened more than 90 degrees before the ram will operate (see diagram below).
- 2. Touch and hold the FORWARD button on the touch screen. The baler will restart and eject the bale.

BALE EJECT (CONTINUED)

NOTICE

It is recommended that a pallet or some other bale support device be positioned to support the bale after ejection (see diagram below).

3. Touch the REVERSE button to retract the ram. Close the bale chamber door completely. Close the door latch completely by touching the DOOR CLOSE button on the touch screen.

NOTICE

If you experience difficulty in getting a bale tie wire through the tie slots in the ram or through the wire guides, see the Tie Slot & Wire Guide Cleaning Instructions 50 on the next page.



Atlas[®] Horizontal Balers Baler Information

SECTION 4 BALER INFORMATION

Atlas[®] Horizontal Balers Baler Information

POWER UNIT FOR ATLAS - 30 HP

The power unit diagram shown below is for Atlas balers that have a 30 HP power unit. Match reference numbers to the chart on the following 3 pages. Replacement parts may be ordered by calling our parts department at 800-528-5308.









Baler Information

POWER UNIT FOR ATLAS - 30 HP (CONTINUED)								
		REFERENCE CHART FOR 30 HP POWER UNIT						
PART #	REF. #	DESCRIPTION	QTY.					
02-0021	1	COUPLING 1/4 NPT	1					
02-0040	2	ADAPTER 3/8 NPTF X 1/2 NPTM	1					
02-0048	3	NIPPLE 3/4 NPT	2					
02-0132	4	ADAPTER 1/2 NPTF X 3/4 NPTM	1					
02-0214	5	VALVE RELIEF 20 GPM CART PILOT	1					
02-0215	6	GAUGE SIGHT LEVEL 5 INCH	2					
02-0254	7	PLUG 2 NPT SQ HD	2					
02-0300	8	VALVE RELIEF 20 GPM CART PILOT	1					
02-0310	9	TEE 3/4 NPTF	1					
02-0316	10	PLUG 3/4 NPT	1					
02-0332	11	HOSE END 3/8 WB X 3/8 NPTM	1					
02-0565	12	FLANGE C61 1 1/4 SPLIT	4					
02-0606	13	TUBING END 3/8 X 6 ORM 90	2					
02-0612	14	CLAMP TUBE 3/8 WELD	2					
02-0634	15	FLANGE C61 1 #12 O-RING	1					
02-0668	16	FILTER SUCTION 3 NPTF 100 GPMSEC-100-3	1					
02-0697	17	ELL 12 ORM X 12 JICM	1					
02-0698	18	HOSE END 3/4 WB X 12 JICF	2					
02-0805	19	COUPLING 2 SCH 40	2					
02-0822	20	TEE 12 JICM X 12 ORM BRANCH	1					
02-0823	21	CLEAN OUT COVER 14	2					
02-0824	22	CLEAN OUT COVER MNTG BRKT REMOVABLE	2					
02-0863	23	OIL COOLER AOCH-20	1					
02-0872	24	FLANGE C61 4 WELD 500 PSI	1					
02-0878	25	FLANGE C61 1 SPLIT W/BOLTS	2					
02-0879	26	HOSE END 1 WB X 1 F61 SPT 90	1					
02-0883	27	ELL 1 1/4 WELDF 90 SCH 160	1					
02-0908	28	HOSE END 1 WB X 1 F61 SPT	1					
02-0932	29	HUB COUPLING 1 1/4-5/16 X 1 7/8-1/2	1					
02-1028	30	NIPPLE 3 NPT SCH 40	1					
02-1062	31	FLANGE C61 1 1/4 WELD COMP W61-20-20	1					
02-1088	32	HOSE END 1 1/4 WB X 1 1/4 F61SPT 3000	1					
02-1098	33	HOSE END 1 1/4 WB X 1 1/4 F6190 5000	2					
02-2258	34	CLAMP FOR 1 1/2 ID HOSE BARB FITTING	1					
02-3427	35	COUPLING 4 SCH 40 FEMALE NPT THREAD	1					
02-3780	36	HOSE END 3/8 2WB X 6 JICF SWV	1					
02-4043	37	ADAPTER PUMP/MTR SAE C 2B X 286TC X 7.88	1					
02-4154	38	HOSE END 3/4 WB X 12JICF 90 DAYCO#HY12-12FJ	2					
02-4155	39	ELL 3/4 NPTM X 12 JICM 90 KRJOHNSON 2501-12-	1					
02-4253	40	FILTER BREATHER BAYONET FLANGE 2 INCH	1					
02-4254	41	FILTER BREATHER BASKET 2 INCH	1					
02-4324	42	FILTER RETURN 12 ORM 6 MICRONTANK TOP VICKER	1					

Baler Information

POWER UNIT FOR ATLAS - 30 HP (CONTINUED)								
		REFERENCE CHART FOR 30 HP POWER UNIT						
PART #	REF. #	DESCRIPTION	QTY.					
02-4328	43	FILTER BREATHER BAYONET ADAPTER F/ 02-3229	1					
02-4330	44	FILTER BREATHER SPIN ON VICKERS V0211B1R03	1					
02-4331	45	CAP 2 NPT SCH 40	1					
02-4340	46	ADAPTER 1/2 NPTM X 12 JICM	1					
02-4343	47	FILTER INDICATOR GAUGE 1/8 NPTM COLOR CODED	1					
02-4404	48	MANIFOLD DUAL D08 REGEN 75 GPM	1					
02-4405	49	VALVE 4-WAY 08 T 3-POS EXT P&D HI-FLOW	1					
02-4406	50	VALVE 4-WAY 08 A TO T 3-POS EXT P & D HI-FLO	1					
02-4407	51	PUMP VANE 53 18 12 VICKERS VMQ	1					
02-4409	52	UNLOADING VALVE 1 1/4 W/ SOLENOID VENT	1					
02-4410	53	VALVE CHECK 1 1/4 CODE 61 FLANGE 75 PSI CRAC	1					
02-4411	54	ELL 6 ORM X 6 JICM	1					
02-4426	55	VALVE BUTTERFLY 4 WAFFER SUCTION	1					
02-4427	56	FLANGE ANSI 4 NPTF	2					
03-1179	57	MOTOR 30 HP 1760 208-230/460V286TC TEFC SP	1					
03-0689	58	SWITCH LEVEL PLUG ADAPTER 1 1/4	1					
05-0015	59	NUT 3/8-16 UNC HEX SELF-LOCKING	4					
05-0052	60	WASHER 1/2 FLAT	1					
05-0061	61	BOLT 1/2-13 X 1 1/4 HEX HD GR2	8					
05-0064	62	WASHER 1/2 LOCK	4					
05-0075	63	NUT 1/2-13 HEX SELF-LOCKING	11					
05-0105	64	NUT 5/16-18 HEX SELF-LOCKING	2					
05-0148	65	BOLT 1/2-13 X 1	7					
05-0199	66	BOLT 1/2-13 X 2 1/2 ALLEN HD	12					
05-0236	67	BOLT, HEX, 3/4-10UNC X 5 1/2	4					
05-0263	68	NUT 3/4-10 HEX LOCKING	4					
05-0338	69	BOLT 5/8 X 1 1/2 GR 2 HHCS ZINC	2					
05-0521	70	WASHER 1/2 LOCK GRADE 8 HI-COLLAR80-0123	12					
05-0549	71	BOLT5/16-18 X 1 1/4 GRD 5 HEXHD	6					
05-0561	72	WASHER 5/8 LOCK	2					
05-2301	73	NUT 5/8-11 NC SLN	4					
05-3644	74	BOLT 7/16-14 X 7 1/2 SOCKET HD GRADE 8	4					
05-2001	75	WASHER, LOCK, 5/16"	4					
06-0011	76	DECAL MOTOR ROTATION 3/4 X 4	1					
23-5425	77	1 1/4 X SCH80 X 4 PIPE SQ CUT	1					
26-9656	78	1/2 X SCH40 X 23 PIPE	1					
24-5256	79	7GA X 1-1/4 X 5	1					
28-1367	80	1 1/4 X SCH40 X 23 PIPE	1					
28-1562	81	1/4 X SCH80 X 6 PIPE	1					
28-1869	82	7GA X 13 X 14-3/4	1					
28-6058	83	2 1/2 X SCH40 X 24 PIPE	1					
28-6693	84	7GA X 3 X 20	1					

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Baler Information

POWER UNIT FOR ATLAS - 30 HP (CONTINUED)								
REFERENCE CHART FOR 30 HP POWER UNIT								
PART #	REF. #	DESCRIPTION	QTY.					
28-6694	85	1/4 PL X 3 X 3	1					
28-8762	86	4 X SCH40 X 6 PIPE	1					
08-8763	87	4 X SCH40 X 15 PIPE	1					
28-8953	88	7GA X 6-3/4 X 12 (1=2)	1					
08-8963	89	7GA X 14 X 28-1/4	1					
99-0676	90	WASHER 7/16 HI-COLLAR LOCKING	4					
99-6723	91	ADAPTER 4 NPTM X 3 NPTF	1					
99-6929	92	HOSE END 1 1/4 WB X 1 1/4 F61SPT 45	1					
99-7009	93	SWITCH OIL LEVEL & TEMP NC UPTL 008180F	1					
99-7152	94	COUPLING 4 DRESSER 4 BOLT X 5LONG	1					
99-7235	95	BOLT 5/8-11 X 4 1/2 NOT PLATED	4					
99-7783	96	ADAPTER 3/4 NPTF X 2 NPTM SCH80	2					
02-0880	97	HOSE 1 WB 4000PSI	4					
02-0335	98	HOSE 1 1/4 WIRE BRAID 5000	6					
02-0333	99	HOSE 3/8 WIRE BRAID (TWO) 2500 PSI	2					
02-3725	100	TUBING 3/8 OD .083 WAL	8					
02-0327	101	HOSE 3/4 2WB 3100 PSI	5					
02-1091	102	HOSE 1 1/2 WB 5000PSI	1					

Atlas[®] Horizontal Balers Baler Information

POWER UNIT FOR ATLAS ET - 30 HP

The power unit diagram shown below is for Atlas balers that have a 30 HP power unit. Match reference numbers to the chart on the following 3 pages. Replacement parts may be ordered by calling our parts department at 800-528-5308.



Atlas® Horizontal Balers

Baler Information

POWER UNIT FOR ATLAS ET - 30 HP (CONTINUED)

REFERENCE CHART FOR 30 HP POWER UNIT										
PART #	DESCRIPTION	QTY.	UM	REF. #						
030675	MOTOR 50 HP TEFC 230/460 326TC	1	EA	1						
094865	1 X 3 X 3 BAR	4	EA	2						
020810	ADAPTER PUMP/MOTOR C2 X 324TCX	1	EA	3						
998140	HUB COUPLING 1 1/4-1/4X 2 1/8-	1	EA	4						
998139	PUMP 62 32 12 DENISON VANE	1	EA	5						
020872	FLANGE C61 4 WELD 500 PSI	1	EA	6						
023141	PIPE 4 SCH 40 X 18	1	EA	7						
021054	FLANGE SUCTION 4	1	EA	8						
021053	FILTER SUCTION 4 200GPM	1	EA	9						
021052	ELL 4 NPTM X 4 NPTF 90	1	EA	10						
021098	HOSE END 1 1/4 WB X 1 1/4 C61	1	EA	11						
020879	HOSE END 1 WB X 1 C61 SPT 90	1	EA	12						
021088	HOSE END 1 1/4 WB X 1 1/4 C61	1	EA	14						
020908	HOSE END 1 WB X 1 C61 SPT	1	EA	15						
020698	HOSE END 3/4 WB X 12 JICF	3	EA	16						
020663	FLANGE C61 1 1/4 SPLIT W/ BOLT	2	EA	17						
020878	FLANGE C61 1 SPLIT W/BOLTS	2	EA	18						
020914	HOSE END 2 WB X 2 C61 SPT	2	EA	20						
020901	FLANGE C61 2 SPLIT	2	EA	21						
025832	HOSE 2 WB 1000PSI YELLOW	2	EA	22						
020335	HOSE 1 1/4 WIRE BRAID 5000	2	FT	23						
020880	HOSE 1 WB 4000PSI	2	FT	24						
020327	HOSE 3/4 2 WB 3100 PSI	6	FT	25						
022145	ADAPTER 12 ORM X 12 JICM	2	EA	26						
024148	SUBPLATE 05 1 STN 8 ORF R ON P	1	EA	27						
020852	VALVE 4-WAY 05 T 3 SOFT SHIFT	1	EA	28						
020214	VALVE RELIEF 20 GPM CART PILOT	1	EA	29						
024200	HOSE END 1 1/4 WB X 20 JICF 90	1	EA	41						
342249	10 GA X 4 3/8 X 8	1	EA	32						
024873	ELL 1/2 NPTM X 12 JICM	1	EA	33						
025628	FILTER RETURN LINE 10 MICRON	1	EA	34						
025831	FILTER RETURN LINE 20 MICRON	1	EA	35						
025821	OIL COOLER AKG AR20-3	1	EA	36						
220455	7 GA X 5 3/4 X 24 3/8	1	EA	37						
220456	7 GA X 5 3/4 X 28 3/8	1	EA	38						
950076	7 GA X 10 X 10 (1=2)	2	EA	39						
020682	ADAPTER 12 ORF X 20 ORM	1	EA	40						
020614	ADAPTER 20 ORM X 20 JICM	2	EA	42						
023605	HOSE 1 1/4 WB 1000 PSI YELLOW	2	FT	44						
020254	PLUG 2 NPT SQ HD	2	EA	45						
020123	PLUG 1 1/4 NPT	3	EA	46						

Atlas® Horizontal Balers

Baler Information

POWER UNIT FOR ATLAS ET - 30 HP (CONTINUED)

REFERENCE CHART FOR 30 HP POWER UNIT										
PART #	DESCRIPTION	QTY.	UM	REF. #						
020219	CLEAN OUT COVER 6	4	EA	47						
020215	GAUGE SIGHT LEVEL 5 INCH	2	EA	48						
020700	GAUGE PRESSURE 1/4 NPTM 0-5000	3	EA	49						
060011	DECAL MOTOR ROTATION 3/4 X 4	1	EA	50						
025671	MANIFOLD ASSY REGEN W/CART	1	EA	51						
020856	BREATHER WELD RISER F/02-0647	1	EA	52						
020647	BREATHER 2 HOLE W/STRAINER	1	EA	53						
024333	ELL 6 JICM X 8 ORM	2	EA	54						
020634	FLANGE C61 1 X #12 O-RING	1	EA	13						
024151	ELL 12 ORM X 12 JICM	1	EA	19						
024154	HOSE END 3/4 WB X 12JICF 90	1	EA	55						
021046	HOSE END 1 1/4 WB X 20 JICF 30	1	EA	56						
025432	NIPPLE, MALE, GAUGE PORT ADAPT	2	EA	57						
025083	ADAPTER TEST PORT X 1/4 NPTF	2	EA	58						

Atlas[®] Horizontal Balers Baler Information

BALING MATERIALS LIST

List of Materials

The following is a representative guideline for materials that can be baled in the Atlas baler. Other materials of comparable size and composition may also be baled. All materials should be fed in a manner consistent with the shearing capabilities of the baler.

- OCC Old Corrugated Cardboard
- ONP Old Newspaper disperse material evenly and not in stacks or clumps.
- High-Grade/Misc. Paper disperse material evenly and not in stacks or clumps.
- UBC Used Beverage Containers (aluminum cans)
- Steel Cans Food cans and other light gauge containers, 5 gallons or less.
- PET Containers
- HDPE Containers
- Aluminum Extrusions Aluminum shapes with 0.125" thickness or less.
- Aluminum Pipe or Tubing 0.125" maximum wall thickness, 3" maximum diameter.
- Radiators Automotive radiators or equivalent size heat exchangers.
- Aluminum Siding
- Aluminum Sheet Scrap 0.125" max. thickness for 6" wide or less otherwise 0.063" max. thickness.
- Aluminum/Copper Cable Recommended 1" diameter or less
- Copper Sheet Scrap 0.125" max. thickness for 6" wide or less otherwise 0.063" max. thickness.

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SECTION 5 SERVICE

CONTACT INFORMATION



Technical Service:

877-258-1105

Parts and Warranty:

800-528-5308

For parts visit our e-commerce market place at www.mecomerchant.com.

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday 8:00am - 5:00pm

(Central Standard Time)

LOCK-OUT & TAG-OUT INSTRUCTIONS

A DANGER



Before entering any part of the compactor, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the compactor is locked-out and tagged-out in accordance with OSHA and ANSI requirements.

The specific Lock-Out and Tag-Out instructions may vary from company to company (i.e. multiple locks may be required, or other machinery may need to be locked-out and tagged-out). The following instructions are provided as minimum guidelines.

INSTRUCTIONS

- 1. Notify all affected employees that servicing or maintenance is required on the baler and that the baler must be shut down and locked out to perform the servicing or maintenance.
- 2. Perform a hazard assessment;
 - a. The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the baler utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
- 3. Wear proper personal protective equipment.
- 4. If baler is operating, it must be shut down by the normal stopping procedure. If the ram is pressing against a load, move the ram rearward before shutting the baler down.
- 5. De-activate the energy isolating device(s) so that baler is isolated from the energy source(s).
 - a. Shut down all power sources.
 - b. Move the main disconnect lever to the OFF position.
- 6. Lockout the energy isolating device(s) with assigned individual lock(s).
 - a. Padlock the disconnect lever with a keyed padlock and take the key with you.
 - b. Along with the padlock, place an appropriate, highly visible, warning tag on the disconnect lever. The tag should provide a warning such as:

"Danger: Do not operate equipment. Person working on equipment." or

"Warning: Do not energize without the permission of ______.

- c. Place operating components in such a position so as not to be subject to possible free fall and/or install additional blocking devices to prevent this potential for any raised or elevated component.
- 7. Stored hydraulic energy must be removed from the baler hydraulic circuit for complete Lock-Out and Tag-Out. Make sure that this energy has been relieved by manually depressing the solenoid valve pin located in the center of each coil end of the directional control valve.
- 8. After locking and tagging the baler, ensure that the baler is disconnected from the energy source by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. Try to start and operate the baler (as outlined in the Operating Instructions) to make sure the Lock-Out and Tag-Out is effective, remove the key from the key switch and take it with you.

LOCK-OUT & TAG-OUT INSTRUCTIONS (CONTINUED)

- 9. Before entering baler perform hazard assessment for confined space requirements (hazardous fumes, dust or other toxic material).
- 10. The baler is now locked out.

RESTORING SERVICE

When the servicing or maintenance is completed and the stationary baler is ready to return to normal operating condition, the following steps shall be taken:

- 1. Check the baler and the immediate area around the baler to ensure that nonessential items have been removed and that the baler components, guards and covers are operationally intact.
- 2. Check the work area to ensure that all employees have been safely positioned or removed from any hazardous area.
- 3. Verify that the controls are in neutral.
- 4. Remove the lockout devices and re-energize the baler.

NOTICE

The removal of some forms of blocking may require re-energizing of the baler before safe removal.

- 5. Notify affected employees that the servicing or maintenance is completed and the baler is ready for use.
- 6. Reassess area to determine all hazards are protected.

TIE SLOT & WIRE GUIDE CLEANING INSTRUCTIONS

In some applications, small pieces of material may get into the ram tie slots and the wire guides on the baler. If the bale tie wires are difficult to push through the slots or guides, it may be necessary to clean them out. A **Tie Slot & Wire Guide Cleaning Solution Tool** is supplied with the baler for this purpose. The following instructions describe the procedure to clear material from the tie slots and wire guides.

Before performing any of the following procedures. Lock-Out & Tag-Out 6 the baler.

Instructions

These instructions assume that a ram tie slot or wire guide is blocked during bale tie-off. To clean out the ram tie slot, insert the hook end (see diagram below) of the tool down through the top of the problem slot (ram is in BALE MADE position). Either hook the obstruction and pull it out or force the material down into the adjacent wire guide. Next, take the tool and insert it "hook down" into the adjacent wire guide by inserting the tool through the slot on the bale door and into the wire guide. Rake the obstructing material out of the wire guide. As an alternative, the tool can be turned around so that the hand guard on the tool can be used to push debris out through the rear of the wire guide.

Preventive Maintenance

It is recommended that the ram slots and wire guides be inspected for blockage prior to starting a new bale. With the bale chamber door open, and the ram retracted to BALE MADE position, visually check each slot and guide. Use the hook-end of the tool to clean out each slot. If a guide is blocked, take the cleaning tool and either rake the blockage from the guide or push the blockage out the rear. After all slots and guides are clean and the bale door/latch is closed, the baler can be restarted.

Clean Out Diagram



PERIODIC MAINTENANCE



Only authorized and trained personnel should perform the following procedures. Lock-Out and Tag-Out the baler as specified in **Lock-Out & Tag-Out Instructions**.

Daily (or every 8 hours of operation)

- 1. Check for any oil leaks. Keep all hydraulic fittings tight.
- 2. Check the oil level and temperature in the hydraulic reservoir. Maintain oil level above 3/4 full in the sight gauge.
- 3. Check all remote emergency stop locations. Make sure that each emergency stop button is not obstructed, damaged, or depressed.

Weekly (or every 40 hours of operation)

- 1. Clean around the power unit and machine to remove any operator hazards.
- 2. Check the function of all emergency stop buttons and interlock switches.
- 3. Make sure all lights, decals, and operator instructions are clear and visible. Clean as required.
- 4. Clean photocell heads, oil door hinge and/or oil door latch hinge.

Monthly (or every 160 hours of operation)

- 1. Check all hoses for chaffing, rubbing, or other deterioration and damage.
- 2. Check operation of standard controls and options.
- 3. Check cylinder pins and make sure they are secure.
- 4. Check shear blade on baler body for nicks, cracks or other damage. Sharpen blades if required per the instructions found on page 2-3. Shim the shear blades if required.
- 5. Adjust holddown bars to maintain contact with ram top. Rotate bars if worn.

Quarterly (or every 500 hours of operation)

1. Change the return oil filter element in the oil filter housing (filter/housing is located on top of reservoir at the end of the oil return line).

Annually (or every 2000 hours of operation)

- 1. Send oil sample out for evaluation.
- 2. Check baler structure for any signs of problems (i.e., cracked welds, bending, etc.).
- 3. Check motor starter contacts.
- 4. Check all electrical connections.

Atlas® Horizontal Balers

Service

PERIODIC MAINTENANCE (CONTINUED)

Periodic Maintenance Chart										
		Daily	Weekly							
<u>Month</u>	Check for Oil Leaks	Check All Remote Emergency Stop Locations	Clean Around to Remove Hazards	Check Function of all Emergency Stop Buttons and Interlocks	Check If Lights, Decals and Operator Instructions or Visible					
Jan										
Feb										
Mar										
Apr										
May										
June										
July										
Aug										
Sept										
Oct										
Nov										
Dec										

Atlas® Horizontal Balers

Service

PERIODIC MAINTENANCE (CONTINUED)

Periodic Maintenance Chart														
	Monthly													
<u>Month</u>	Check Check Check f Function of All Unsafe All Controls Hoses Conditio			for e ons	Check Oil Level		lean Out bris from Ram	Check Door Lock for Operation		Check Container Gone Interlock Operation		Grease the VIP		
Jan														
Feb														
Mar														
Apr														
Мау														
June														
July														
Aug														
Sept														
Oct														
Nov														
Dec														
		Eve	ery	[,] 3 Mor	nth	S		Annually						
Month	Check Functional Operation of Controls			Che (heck for Unsafe Conditions			Clean O Oil Level Debris fr Ram			Check Door Lock for Operation			
Jan														
Feb														
Mar														
Apr														
Мау														
June														
July														
Aug														
Sept														
Dec														

HOLD DOWN BARS & SHEAR BLADES



ONLY authorized and trained personnel should perform the following procedures. Please see Lock-Out Tag-Out before performing any procedures.

Ram Hold Down Bars

Ram hold down bars must be in full contact with ram top during complete ram cycle. If bars are not properly adjusted, the baler can be seriously damaged due to a collision of the shear blades. See adjustment directions in the diagram below.

Body Shear Blade

As time passes, it is normal for the body shear blade to need sharpening. A hand-held grinder can be used to sharpen the edge. Remove only the least amount of material required to sharpen the cutting edge.

This blade is designed so that it can be rotated to use the adjacent edge on the blade if required. The ATLAS body shear blade* has 12 bolts securing it to the baler. These bolts may need to be heated to break them loose. When re-installing the re-sharpened blade, replace the bolts with new ones (3/4" - 10 UNC GR. 8, CSK ALLEN HEAD X 2" long) and torque each bolt to 300 ft./lb. Use a jack or other mechanical means to raise or lower the blade as required. The blade weighs 178 lbs. *ET models have a two-piece body shear blade. Each section weighs 90 lbs.

The clearance gap between the body shear blade and the ram shear blade should be maintained at 0.0" for proper shearing. To shim the blades, loosen the bolts on the body shear blade until blade is lowered to the proper height. Shims are to be placed between the body shear blade and the blade seat. Re-tighten the bolts and torque to 300 ft/lbs.

Ram Shear Blade

The ATLAS has 1 ram shear blade (134 lbs.) and ET models have 2 blades (67 lbs. each). A hand-held grinder can be used to sharpen the edge. Remove only the least amount of material required to sharpen the cutting edge. This blade is designed so that it can be rotated to use the adjacent edge on the blade if required. The ATLAS ram shear blade has 11 bolts securing it to the baler. These bolts may need to be heated to break them loose. Replace the bolts with new ones (3/4" - 10UNC, GR. 8, CSK ALLEN HEAD X 2" long) when installing a new or re-sharpened blade and torque to 300 ft/lb.

NOTICE

For the diagram below, use a jack or other mechanical means to raise or lower the blade as required.



POWER UNIT FILTER INDICATOR

Before operating the Atlas and periodically during the operation, check the indicator on the return line filter housing. The filter housing is located on the top of the power unit reservoir. The indicator can be checked by looking on the side of the filter housing.

NOTICE

If the indicator is in or approaching the red zone, have the filter element replaced immediately. See the picture below for the correct indicator readings.

Return Line Filter Maintenance

The Atlas baler (30HP) uses a 6 micron replaceable filter element in the return line of the power unit. The Atlas ET (50HP) uses a 20 micron return line filter element and a 10 micron filter element in the cooler return line.

Before doing any maintenance on the filters make sure the power unit is off and follow all **Lock-Out/Tag-Out** procedures. To replace the return line filter element on the Atlas 30HP remove the top of the filter housing by unscrewing the housing cap. Remove and replace the filter element and re-instal the filter housing cap. To replace the return line filter element on the Atlas ET 50HP remove the (4) nuts that secure the filter housing cap and remove the cap. Remove and replace the filter element and (4) nuts. To replace the cooler return line filter element remove the filter housing cap by unscrewing the cap. Remove and replace the filter element and re-instal the housing cap and remove the cooler return line filter element remove the filter housing cap by unscrewing the cap. Remove and replace the filter element and re-instal the housing cap.



PRESSURE SETTINGS

A DANGER

Only authorized and trained personnel should perform the following procedures. SEE POWER UNIT DIAGRAM.

Follow these steps to perform the baler pressure settings.

- 1. Loosen the lock nuts and back out on all relief valves
- 2. Manually extend the ram bottoming out the cylinder.
- 3. Check GP1 or GA gauge while adjusting in on RV2 until you have a gauge reading of 300-350 psi.
- 4. Adjust pressure switch (PS2) circuit 1 until the input LED lights up at I9.
- 5. Retract main ram 4-6" then again forward to check correct setting of the pressure switch with the input LED.
- 6. Repeat step 2.
- 7. Check GP1 or GA gauge while adjusting in on RV2 until the gauge reads 900 psi.
- 8. Adjust unloading valve PS1 until motor pitch changes. This is the indication that the 50GPM pump has been unloaded.
- 9. Adjust pressure switch (PS2) circuit 2 until the input LED lights up at I7.

10.Repeat step 5.

- 11.Repeat step 2.
- 12. Check GP1 or GA gauge while adjusting in on RV2 until the gauge reads 2300 psi.
- 13. Adjust pressure switch (PS1) circuit 1 until the input LED lights up at I2.
- 14.Repeat step 5.
- 15.Repeat step 2.
- 16. Check GP1 or GA gauge while adjusting in on RV2 until the gauge reads 3000 psi.
- 17. Touch and hold the DOOR OPEN button on the touch screen and bottom out the door latch cylinder.
- 18. Adjust the relief valve located in the subplate for the door solenoid until the gauge reads 3000 psi.
- 19. Tighten all lock nuts on the relief valve.

PHOTOCELLS, INTERLOCK AND PROXIMITY SWITCH LOCATIONS AND TESTING

A DANGER

Never override the Photocell or Interlocks! Tampering with these items could result in serious damage to the baler, serious personal injury, or death! Never enter any part of the baler unless the disconnect switch has been turned off and padlocked per the **Lock-Out and Tag-Out** instructions.

A DANGER

Only authorized and trained personnel should perform the following procedures.



PHOTOCELLS, INTERLOCK AND PROXIMITY SWITCH LOCATIONS AND TESTING (CONTINUED)

NOTICE

See the image on the previous page for the location of the photocells and interlocks.

Photocell Testing

The Atlas has 3 photocells controlled by the PHOTOCELL SELECT switch (ALL / ANY). Each photocell should be tested individually to ensure correct operation in either mode.

- 1. Start the baler.
- 2. Set the PHOTOCELL SELECT switch to ANY. Touch the PHOTOELECTRIC CYCLE push button on the control panel. To test the photocell, place something solid (cardboard or equivalent) in front of the first photocell. NOTE: The ram will not start or cycle until the light beam from the photocell has been broken.

Never place any part of the body inside the hopper or charge chamber area of the baler while it is in operation.

- 3. The baler will react after the photocell delay time has been reached and make a complete cycle. The baler will continue to cycle as long as the light beam on the photocell is broken.
- 4. Repeat steps 1-3 for each of the remaining photocells.
- 5. If any of the photocells do not perform as specified, Lock-Out and Tag-Out 6 the baler and have the photocell(s) repaired.

Magnetic Interlock Testing (Hopper Door)

- 1. This baler is equipped with a keyed interlock switch. The interlock switch can be checked using a continuity light or OHM meter. DO NOT check the switch with the power on!
- 2. To check the switch, turn the key switch to the ON position. When the feed hopper door is open, the baler should not operate. When the feed hopper door is closed, the baler should operate.
- 3. If the interlock is not working properly, lock-out and tag-out the baler and have the interlock repaired.

Proximity Switch (Bale Door Open and Latch Closed) and Limit Switch Testing (Bale Door Closed)

- 1. Test the bale door open proximity switch as follows. Open the door latch and the bale door. The ram should not extend until the bale door is opened passed 90 degrees or further.
- 2. Test the latch closed proximity switch when the baler is empty. Close the bale door and leave the latch open. The baler should not operate until the latch is closed completely. Close the latch and the baler should operate.
- 3. To test the bale door closed limit switch ,open the bale door slighly but not 90 degrees. Touch the FORWARD button on the touch screen. The ram should not move forward. Close the bale door completely and close the bale door latch. Touch the FORWARD button on the touch screen. The ram should move forward. If the ram does move forward with the bale door open repair or replace the bale door closed limit switch.

If any of the switches do not operate properly, lock-out and tag-out the baler and have the switch checked by an authorized maintenance person and replaced if necessary.

ADJUSTMENT OF BALE MADE LIMIT SWITCH

A DANGER

Do not make any adjustment to the limit switch until the disconnect switch has been turned off and padlocked per the **Lock-Out and Tag-Out** 6 Instructions.

The BALE MADE limit switch is factory adjusted for the proper BALE MADE ram position. If the limit switch is replaced or requires readjustment, the limit switch arm should be positioned so that the switch is not actuated until the ram face is located 5" MIN. - 8" MAX. beyond the front face of the breaker bar as shown below.


Atlas[®] Horizontal Balers

ADJUSTMENT OF REAR LIMIT SWITCH

A DANGER

Do not make any adjustment to the limit switch until the disconnect switch has been turned off and padlocked per the **Lock-Out and Tag-Out** 6 Instructions.

The Rear Limit Switch is factory adjusted for the proper rear ram position. If the limit switch is replaced or requires readjustment, the limit switch arm should be positioned so that the limit switch is actuated when the ram is 1" from the rear position as shown below.



Atlas[®] Horizontal Balers Service

ELECTRICAL CHARTS

PRESSURE SETTINGS						
Model	HP	GPM	Relief Valve 1 (psi)	Relief Valve 2 (psi)	Pressure Switch 1 (psi)	Pressure Switch 1 (psi)
Atlas	30	75	3000	850	2500	900
Atlas ET	50	94	3000	850	2500	900

FUSES AND CIRCUIT BREAKERS					
Motor Size	VAC	Full Load AMP.	Dual Element Fuse Max Size	Circuit Breaker Max Size	Service Disconnect AMP.
30 HP, 3PH	208	88	150	250	200
	230	80	150	200	200
	460	40	70	100	100
	575	32	50	80	100
50 HP, 3PH	208	143	250	350	400
	230	130	225	300	400
	460	65	110	150	200
	575	52	90	125	100

WIRE SIZES				
Motor Size	Voltage	TO 100'	Length TO 200'	TO 300'
30 HP, 3PH	208	2 AWG	2 AWG	1/0 AWG
	230	3 AWG	2 AWG	2 AWG
	460	8 AWG	8 AWG	2 AWG
	575	8 AWG	8 AWG	8 AWG
50 HP, 3PH	208	3/0 AWG	3/0 AWG	3/0 AWG
	230	2/0 AWG	2/0 AWG	2/0 AWG
	460	4 AWG	4 AWG	4 AWG
	575	6 AWG	4 AWG	4 AWG

MOTOR STARTERS & OVERLOADS				
Motor Size	Voltage	Starter Size	Motor Circuit Protector	
30 HP, 3PH	208	115 AMP	OL-60-100 AMP TELE	
	230	115 AMP	OL-60-100 AMP TELE	
	460	40 AMP	OL-37-50 AMP TELE	
	575	40 AMP	OL-30-40 AMP TELE	
50 HP, 3PH	208	185 AMP	OL-90-150 AMP TELE	
	230	150 AMP	OL-90-150 AMP TELE	
	460	80 AMP	OL-55-70 AMP TELE	
	575	65 AMP	OL-48-65 AMP TELE	

Atlas[®] Horizontal Balers Service

PANEL BOX LAYOUT - TYPICAL



- 1. Transformer
- 2. Breaker
- 3. Ground Lug
- 4. Timer
- 5. Relays
- 6. PLC
- 7. Expansion Module
- 8. MCR
- 9. Motor Protector
- 10. Contactor
- 11. Ground Terminals
- 12. Fused Terminals
- 13. Terminals
 14. Overload

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Atlas[®] Horizontal Balers Service

HYDRAULIC SCHEMATIC



SECTION 6 REPLACEMENT PARTS

Atlas[®] Horizontal Balers

Replacement Parts

CONTACT INFORMATION



Technical Service:

877-258-1105

Parts and Warranty:

800-528-5308

For parts visit our e-commerce market place at www.mecomerchant.com.

If you do not have a user name and password, contact our Parts Department and they will assist with your registration.

Normal Business Hours:

Monday-Friday 8:00am - 5:00pm

(Central Standard Time)

DECALS

Warning Decal Requirements

When your baler leaves the factory, several WARNING DECALS are installed for protection. These labels are subject to wear and abuse due to the nature of the baling operation. THE FOLLOWING DECALS MUST BE MAINTAINED. Match the reference numbers below with the diagram on the following page. Additional decals may be purchased through your distributor or from Marathon Equipment Company by calling our parts department. See the Contact Information 18 page.

BODY			
REF. #	PART #	DESCRIPTION	QUANTITY
1	06-0120	DECAL DANGER DISCONNECT & LOCK PWR	1
2	06-0249	DECAL DANGER HAZARDOUS VOLTAGE	10
3	06-3044	DECAL DANGER VOLTS (W/BLANK SPACE)	2
4	06-0250	DECAL DANGER LOCK OUT POINT DANGER LOCK OUT	2
6	06-0121	DECAL NOTICE FEDERAL REGULATION PROHIBITUNDER 18	1
9	06-0116	DECAL DANGER KEEP HANDS OUT	2
10	06-2751	DECAL MARATHON COMP & RECYCLE SOLUTIONS 6X10	2
11	06-0254	DECAL RED/WHITE STRIPED 3X15.5	4
12	06-0129	DECAL CAUTION MONTHLY MAINTENANCE FOR SERVICE	1
13	06-0117	DECAL WARNING STAND CLEAR WHEN BALE IS EJECTED	2
14	06-0118	DECAL WARNING STAND CLEAR WHILE OPERATING	1
16	06-0097	DECAL CONT SERIAL NUMBER PLT NON-UL "MADE IN USA"	1
20	06-3274	DECAL WARNING "FLASH HAZARD" BILINGUAL	1
21	06-1839	DECAL AMERICAN FLAG	2
22	06-3046	DECAL ATLAS ET	1
22	06-0533	DECAL ATLAS	'
23	06-0038	DECAL DANGER DO NOT REMOVE ACCESS	9
24	06-0133	DECAL WARNING STAY OFFDO NOT CLIMB	6
25	06-3776	DECAL 'SV20' WHT. VINYN W BLK LETTERS 2W X 1T W PAINT MASK	1
26	06-3977	DECAL WARNING DO NOT OPERATE OR SERVICE	1
27	06-3978	DECAL DANGER DO NOT OVERIDE OR TAMPER	3

CHUTE FEED HOPPER			
REF. #	PART #	DESCRIPTION	QUANTITY
1	06-0039	DECAL DANGER DISCONNECT & LOCK PWR	6
2	06-0041	DECAL DANGER HAZARDOUS VOLTAGE	2
3	06-0116	DECAL DANGER VOLTS (W/BLANK SPACE)	1
4	06-0117	DECAL DANGER LOCK OUT POINT DANGER LOCK OUT	1
5	06-0249	DECAL NOTICE FEDERAL REGULATION PROHIBITUNDER 18	2
6	06-3123	DECAL DANGER KEEP HANDS OUT	4

Atlas[®] Horizontal Balers

Replacement Parts

DECALS (CONTINUED)

HAND FEED HOPPER			
Ref. #	Part #	Description	Quantity
1	06-0039	DECAL DANGER DISCONNECT & LOCK PWR	7
2	06-0041	DECAL DANGER HAZARDOUS VOLTAGE	2
3	06-0116	DECAL DANGER VOLTS (W/BLANK SPACE)	1
4	06-0117	DECAL DANGER LOCK OUT POINT DANGER LOCK OUT	1
5	06-0249	DECAL NOTICE FEDERAL REGULATION PROHIBITUNDER 18	2
6	06-3123	DECAL DANGER KEEP HANDS OUT	4

VOLTAGE DECALS			
Ref. #	Part #	Description	Quantity
1	06-2684	DECAL 208	3
2	06-2686	DECAL 230	3
3	06-2690	DECAL 460	3

See **Decal Images** 77 for images of the decals.

DECAL IMAGES



DECAL IMAGES





DECAL IMAGES



DECAL PLACEMENT

Match the reference numbers below with the charts on the Decals page 75.

Body Placement









DECAL PLACEMENT (CONTINUED)

Hand Feed Hopper Placement





Chute Hopper Placement



Atlas® Horizontal Balers

Replacement Parts

ATLAS REPLACEMENT PARTS LIST

REPLACEMENT PARTS LIST		
Hydraulic		
Part #	Description	
02-4330	Filter Breather	
04-3689	Cylinder, Main, 9 Bore, 6 Rod, 96 Stroke	
04-0510	Cylinder, Latch, 4 Bore, 8 Stroke	
02-4324	Filter, Return, 6 Micron	
02-0668	Filter, Suction, 3 NPTF, 100 GRM	
02-0932	Hub Coupling, 1 1/4-5/16 X 1 7/8-1/2 M500	
02-0863	Oil Cooler AD CH-20	
02-4407	Valve 4-Wat 08, T 3-POS External, P&D	
02-0215	Slight Gauge	
02-4405	Valve, 4-Wat, 08 T 3-POS, External P&D	
02-4406	Valve 4-Way 08 A TO T 3-POS EXTERNAL P&D	
02-0852	Valve, 4 way, 05T, 3 Pos	
02-4410	Valve Check, 1 1/4 Code 61 Flange 75 PSI Cracking Pressure	
02-0214	Valve Relief, 20 GPM, Cartridge Pilot Operated	
02-0970	Valve, Check, 1 NPTF, 65 PSI	
02-0690	Valve, Check, Pilot OP	
02-4409	Valve Unloading 1 1/4 w/Solenoid Vent	
02-0300	Valve, Relief, 1/2 NPTF, 2500 PSI	

REPLACEMENT PARTS LIST		
Hardware		
Part #	Description	
23-7464	Shear Blade, Body, S7 (2)	
24-2346	Shear Blade, Body, A514 (2)	
05-0534	Body Shear Blade Bolt - 3/4 -10 x 4 FSHCS GR8 (12)	
05-0287	Body Shear Blade Nut - 3/4 - 10 self-locking (12)	
23-7465	Shear Blade, Ram, S7 (2)	
24-2335	Shear Blade, Ram, A514 (2)	
05-0476	Ram Shear Blade Bolt - 3/4 - 10 x 2 CSK (12)	
441015	Shim Kit STD 14Ga, 11Ga, 7Ga, 1/4 pl	

Atlas® Horizontal Balers

Replacement Parts

ATLAS ET REPLACEMENT PARTS LIST

REPLACEMENT PARTS LIST		
Hydraulic		
Part #	Description	
02-0647	Breather Cap	
04-3685	Cylinder, Main, 10 Bore, 7 Rod, 96 Stroke	
04-0510	Cylinder, Latch, 4 Bore, 8 Stroke	
02-5612	Filter, Return Line, 10 Micron	
02-5831	Filter, Return Line, 20 Micron	
02-1053	Filter Suction 4, 200gpm	
99-8140	Hub Coupling, 1 1/4 - 1/4 X 2 1/8 - 1/2, M600	
02-5821	Oil Cooler, AR20-3	
99-8139	Pump, 62 32 12, Vane	
02-0215	Sight Gauge	
02-0852	Valve, 4 way, 05T, 3 Pos	
02-0690	Valve, Check, Pilot OP	
02-0214	Valve Relief, 20 GPM Cartridge Pilot Operated	

REPLACEMENT PARTS LIST		
Hardware		
Part #	Description	
23-7464	Shear Blade, Body, S7 (2)	
05-0534	Body Shear Blade Bolt - 3/4 -10 x 4 FSHCS GR8 (12)	
05-0287	Body Shear Blade Nut - 3/4 - 10 self-locking (12)	
23-7465	Shear Blade, Ram, S7 (2)	
05-0476	Ram Shear Blade Bolt - 3/4 - 10 x 2 CSK (12)	
441015	Shim Kit STD 14Ga, 11Ga, 7Ga, 1/4 pl	

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