

ROTOBALE
COMPACTION SOLUTIONS

PACK MORE, SPEND LESS



SAFETY FIRST!

Operation & Maintenance Manual XL-62 Vertical Baler

Standard MODEL PSR MODEL



Rotobale Compaction Solutions Inc.

7232 Arthur Road #5 West, Kenilworth Ontario, N0G 2E0

Ph: 800-565-8027 / Fax: 519-323-3816

www.rotobalecompaction.ca

Approved for Use/Production

Project:	13-331	Apparatus	XL-62 Vertical Baler
Review Date:	Nov. 25/13	Scope:	Rotobale Compaction Solutions Inc.
Issue Date:	Nov. 25/13	Approved by:	Kenneth A. Mclsaac, Ph.D. , P. Eng
Reviewed by:	Ken Mclsaac		

A) Safety Circuit Observations:

1. The circuit includes a dual channel e-stop and a dual channel safety switch. Both safety elements are tied into a safety relay that requires manual reset.
2. The safety switches are wired on two channels of a safety relay, so both switches need to be closed to permit motion. The hazardous motion in the system is the "down" motion. The down motion is stopped by the safety switches through a control reliable circuit that requires manual reset and stops the hydraulic pump. The up motion is non-hazardous and is not controlled by the door. The door must be open to permit the eject motion, which is hold to run.

The Safety Control circuit has been reviewed and approved in accordance with CSA Z432, Clause 8.2 Safety control system performance criteria.

B) Fixed and Interlocked Guarding Observations:

1. The apparatus contains an interlocked door to access the baler area for removal of the baled material.
2. The door is a minimum of 990mm (39") from the floor.
3. Fixed guarding is installed around the perimeter of the machine to restrict access to the moving hazards.




The fixed and interlocked guarding has been reviewed and approved in accordance with CSA Z432, Clause 10.2 Barrier guards, fixed and interlocked

Reviewed Documents:

- 1) Electrical Wiring Schematics (XL-62 Vertical Baler, dated May 2012)

The XL-62 Vertical Baler constructed by Rotobale Compaction Solutions located in Kenilworth, Ontario has been reviewed and approved for use in full production based on a combination of design review and installation verification performed by ProSafe Inc..

Approved by:


Kenneth A. Mclsaac, Ph.D. , P. Eng



Pre-Start Health and Safety Review Exemption

Project:	13-331	Apparatus	XL-62 Vertical Baler
Reviewed by:	Kevin J. Harris, C.Tech.	Scope:	Pre-Start Health and Safety Review
Review Date:	Nov. 25/13	Drawing Set:	Group: XL-62 Vertical Baler, May 2012
Issue Date:	Nov. 25/13	Date Rec'd:	Nov. 7/13

On Nov. 25/13 a review was conducted during the machine design stage to investigate the safety controls proposed for the **XL-62 Vertical Baler** constructed by Rotobale Compaction Solutions Inc. in Kenilworth, Ontario.

The following list of stakeholders, were present and involved in the review and design process.

Company	Personnel	Title
ProSafe Inc	Kenneth A. McIsaac, Ph.D., P. Eng	Approving Engineer
ProSafe Inc	Miles Purvis	President
ProSafe Inc	Kevin J. Harris	Project Manager
Rotobale Compaction Solutions	Steve Sequeira	Manager

The people at the design review participated in a Design Review using a series of common evaluation methods as follows.

- 1) CSA Z432 – Safeguarding of Machinery
- 2) EN 954-1 - Safety Related Parts of Control Systems.

The following safeguarding components are employed in the machine and/or system.

- 1) GuardSwitch (by Sentrol Industrial), 301-BT-12K, non-contact coded magnetic interlock
- 2) GE Interlogix, INT-03-120, Safety Monitoring Relay


Based on the safety component installation instructions and electrical drawings provided by Rotobale Compaction Solutions Inc., the following items are in compliance with the relevant standards:

Description	Standards requirement met for compliance
Safety control circuit design	Is in accordance with the manufacturer requirements and CSA Z432, Clause 8.2 Safety control system performance criteria.
Emergency stop	Is in accordance with NFPA 79 Electrical Standard for Industrial Controls, Clause 9.5.2 Stop Functions – Category <0,1,2>

In order to complete the exemption, Rotobale Compaction Solutions Inc. shall provide a letter of declaration to the end user, stating the safeguarding items are installed in accordance with the manufacturer's instructions

This document must be kept readily available in the workplace for as long as the protective element remains or is used in the workplace according to Section 7, subsection 10 of the Regulation.

Approved by:



Kenneth A. McIsaac, Ph.D., P. Eng



Vertical Baler Operating Instructions

- 1) Lay a large flat piece of material inside the bale chamber. It is very important to **securely close the bottom door**. Tighten the latch wheel by hand only. Do not over tighten by any other method.
- 2) Feed material into the baler. (spreading material out evenly increases bale weight).
- 3) Close the top door (door must not be obstructed by material).
- 4) Press the “Start” button and the ram proceed downward compressing material. At the end of the downward stroke the ram will automatically rise and lift the top door.
- 5) Repeat steps 2, 3, and 4 until the “full” light illuminates.
- 6) When full: press and hold eject button. When ram reaches top, release eject button.
- 7) Place a large flat piece of material inside the baler, on top of the bale being made.
- 8) Close the top door.
- 9) Press the “start” button. The ram will proceed downward on the bale and the full light will re-activate.
- 10) Turn the “off/on” switch to off.
- 11) With everyone clear from the front of the baler, release the bottom door latch and open the bottom door.
- 12) Wear leather gloves and safety glasses for this process;
 - Stand in front of the baler and insert and push the “tie probe” through a top slot. It will go all the way around and come out at the bottom.
 - Attach cord to end of tie probe and pull back with the cord attached
 - Un-attach cord and securely tie the two cord ends together.
 - Repeat procedure for all 6 slots.
- 13) Place skid in front of baler.
- 14) Ensure everyone is clear from the front of the baler.
- 15) Turn the “off/on” switch to on.
- 16) To eject bale, push and hold the “eject” button. The ram will lift the top door up and the bale will eject automatically onto the skid. Release the eject button.
- 17) Congratulations! You just made a bale. Go to step (1).

Rotobale Compaction Solutions Inc.

Monthly Maintenance Check

Hydraulic System:

The manufacturer recommends monthly inspection of all hoses and visual inspection of hydraulic components. All inspections must be done with baler disabled. By doing so the user becomes more familiar with the baler, which in turn guarantees early detection of possible problems (E.g.: leaks). When inspecting hoses look for cuts, abrasions and fluid. If any hydraulic fluid is visible, the user should contact the manufacturer. The hydraulic fluid level in the baler reservoir should be maintained at 2ö from the top of the tank, with the ram in the up position. Only a qualified technician should service any components in the hydraulic system. Apply grease to the ram guides and cylinder pin fittings monthly.

Electrical System:

NOTE: Only a qualified technician. Should perform work on electrical system

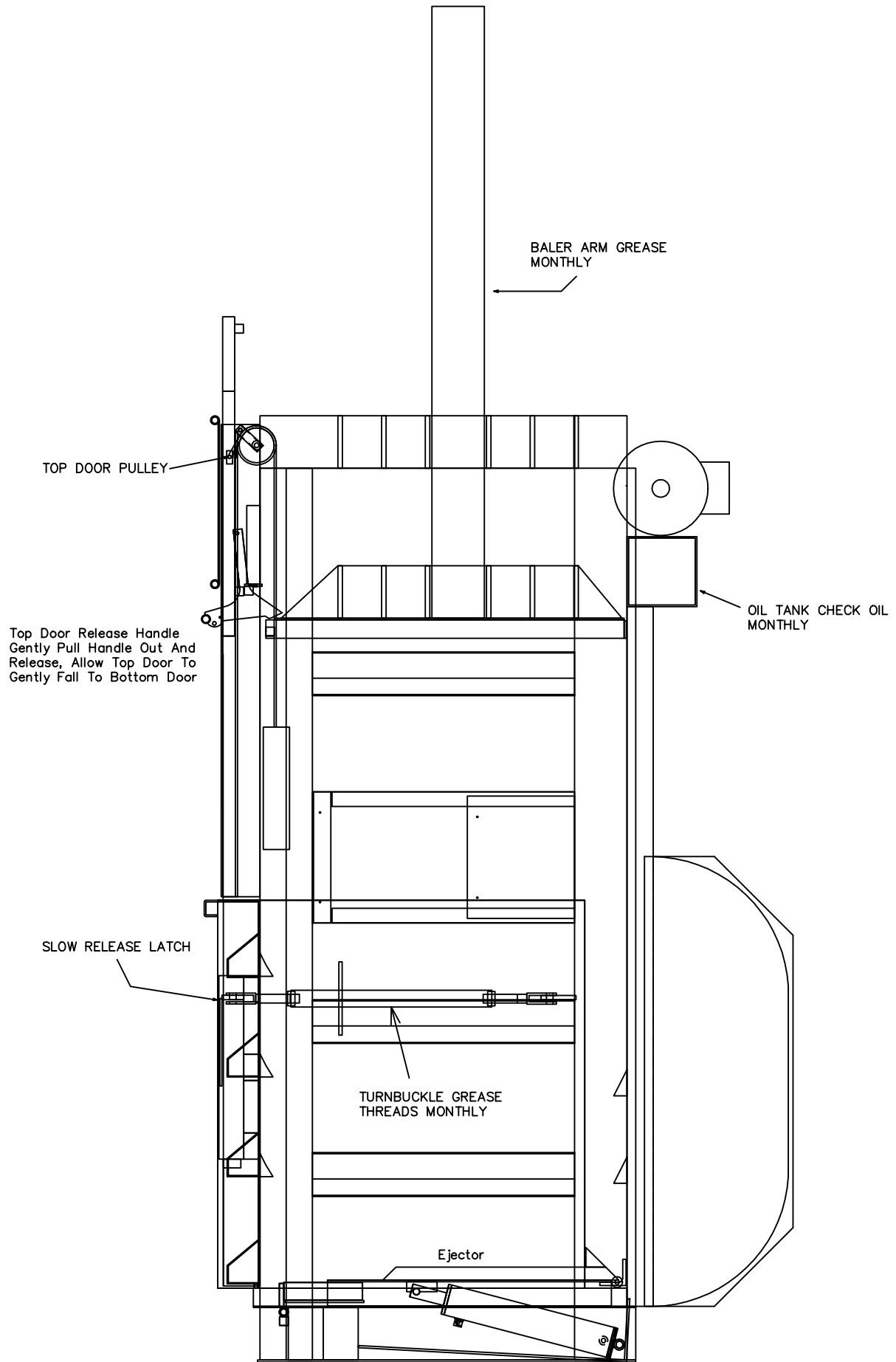
The person working on these machines should turn the machine off with the stop button. To turn off and lockout the power supply, follow the electrical supply cord from the machine to the disconnect box on the wall. This box should be located within 30 feet of the machine. Pull the handle down or turn the switch to the öoffö position to shut off the electricity. Put a padlock through the holes of the handle or switch and lock it so that it cannot be turned on without removing the lock. Only the person locking out the machine should have a key for the padlock. If more than one person is involved, the person who disconnected and locked out the power supply should communicate the purpose and status of the disconnecting and locking out. A non-conducting tag secured in a conspicuous location may serve this purpose. For more guidelines concerning this procedure, refer to the Occupational Health and Safety Act and Regulations for Industrial Establishments.

Warranty:

All equipment designed and manufactured by Rotobale Compaction Solutions Inc. (RCS) carries a (1) year parts and labour warranty. A Rotobale waste system is constructed of high-grade materials and is guaranteed to perform on a continued basis at its rated capacity. Any parts that prove defective within (1) year from the date of installation will be replaced without charge, provided the purchaser notifies any such defects to RCS.

Voiding of Warranty:

If the contents of this manual are explicitly followed, the operation of the Rotobale waste system is guaranteed. If however operations are performed in a matter not in accordance with these instructions and a defect appears in the waste system, the warranty will be considered void.





7232 Arthur Side Rd. #5 West | Kenilworth, Ontario | N0G 2E0
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 Email: info@rotobalecompaction.ca Website: www.rotobalecompaction.ca

Baler Inspection Report

CUSTOMER NAME:

*Rotobale Compaction has provided a technician to complete the following report. Upon completion of each inspection, the customer will be informed of any recommendation and/ or repairs needed. These repairs will be performed **only upon approval from the customer.***

Make/Model of Equipment: _____ **Serial #:** _____

Location of Equipment: _____

Electrical Inspection Points	Complete (Check)	Comments
Off/On switch		
Start button		
Full indicator light		
Power Light		
Ejector Switch		
Timers T1, T2, T3, T4 Settings		
Main Supply & Control fuse Sizing		
Door Switches		
Emergency stop button		

Hydraulic Inspection Points	Complete (Check)	Comments
Cylinder Lugs		
Cylinder extend hoses		
Cylinder retract hoses		
Ejector Hoses		
Cylinder shaft seals		
Pump suction / pressure hoses		
Ejection Valve (shifting, no leaks)		
Hydraulic valve (shifting, no leaks)		
Pump (pressure test, no leaks)		
Relief valve (pressure test, setting XL-42 2,000psi/XL-62 1,500psi)		
Full Pressure Setting (XL-42 1,500psi/XL-62 1,200psi)		
Hydraulic oil level (down 2")		
Water Oil Test		
Filter Type		

Baler Inspection Points	Complete (Check)	Comments
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Hinges greased & functioning		
Cylinder pins secure & greased		
Anchor bolts Secured		
Ram Wear Strips		
Ram Guides Greased		
Door Latch & Turnbuckle (Threads Greased)		
Door Cables mounting brackets		
Top Door & counter-weights		
Door Pulley Assembly		
Ejector assembly		

Recommendations:

Date of Inspection: _____

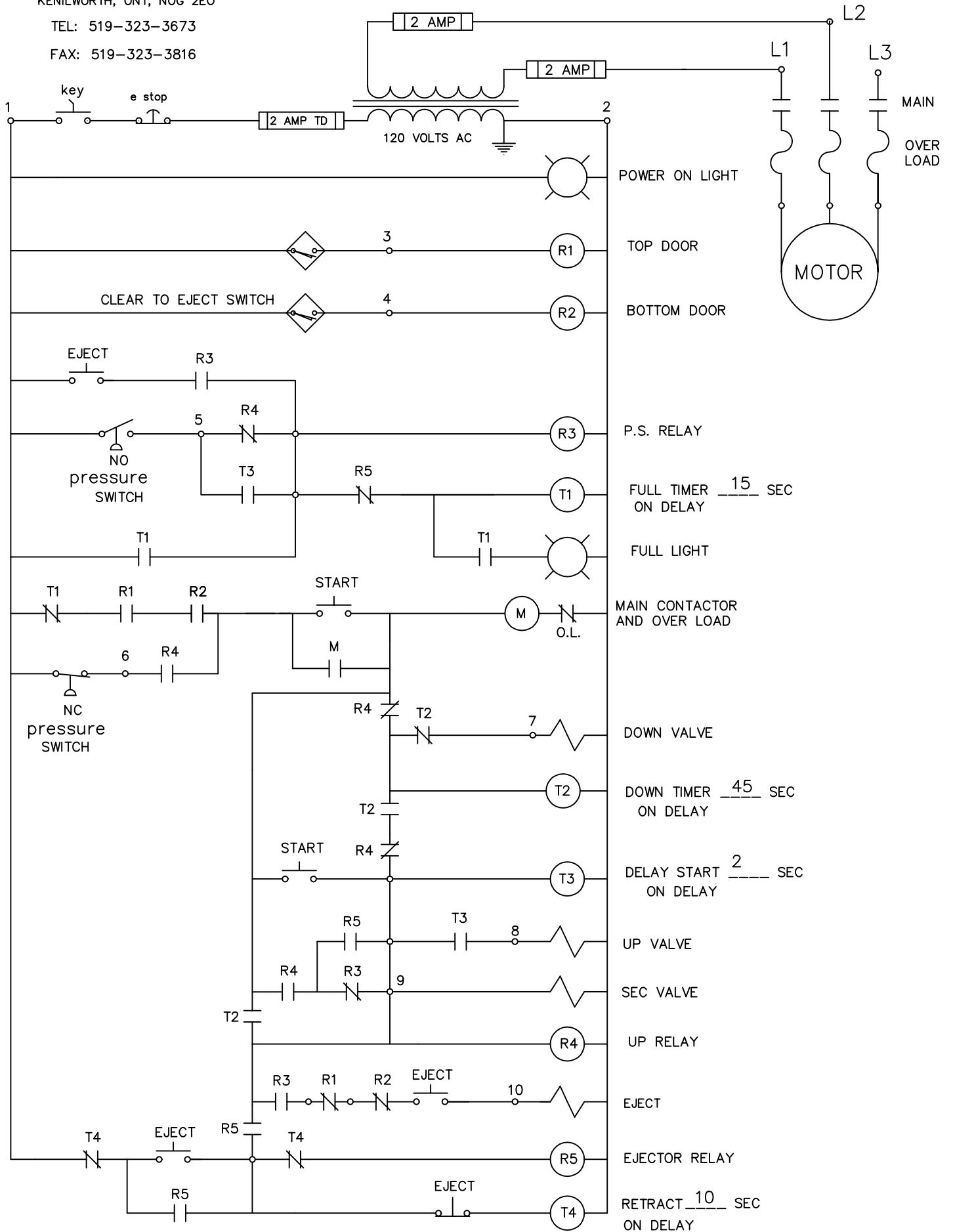
Inspected by: _____

ROTOBALE COMPACTION SOLUTIONS XL 62 Vertical Baler MAY 2012

KENILWORTH, ONT, NOG 2EO

TEL: 519-323-3673

FAX: 519-323-3816

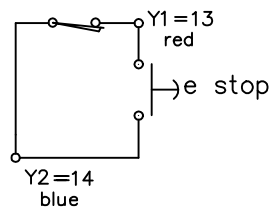
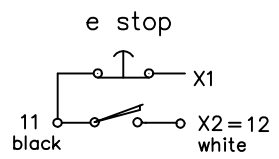
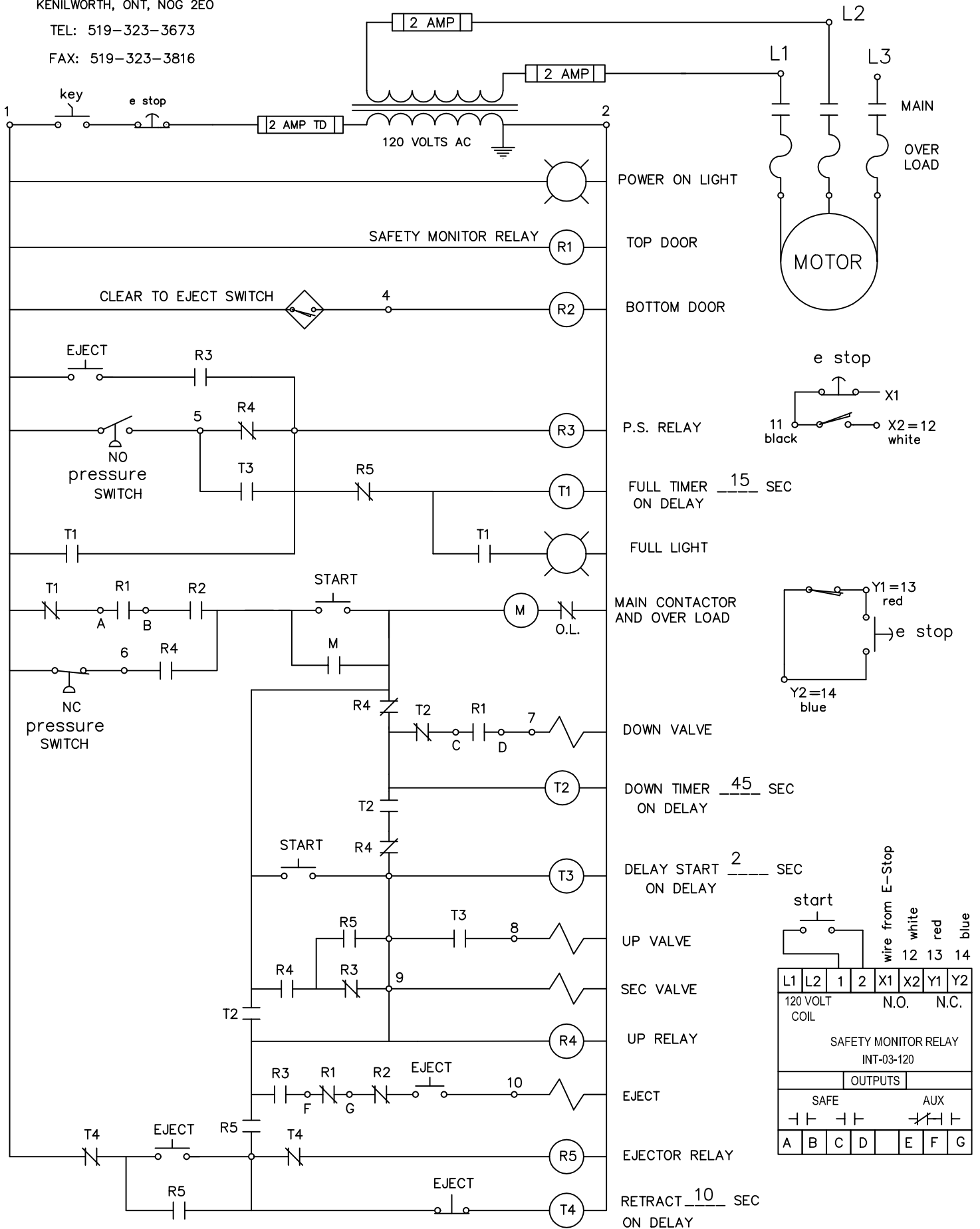


ROTOBALE COMPACTION SOLUTIONS XL 62 Vertical Baler Level 3 MAY 2012

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start

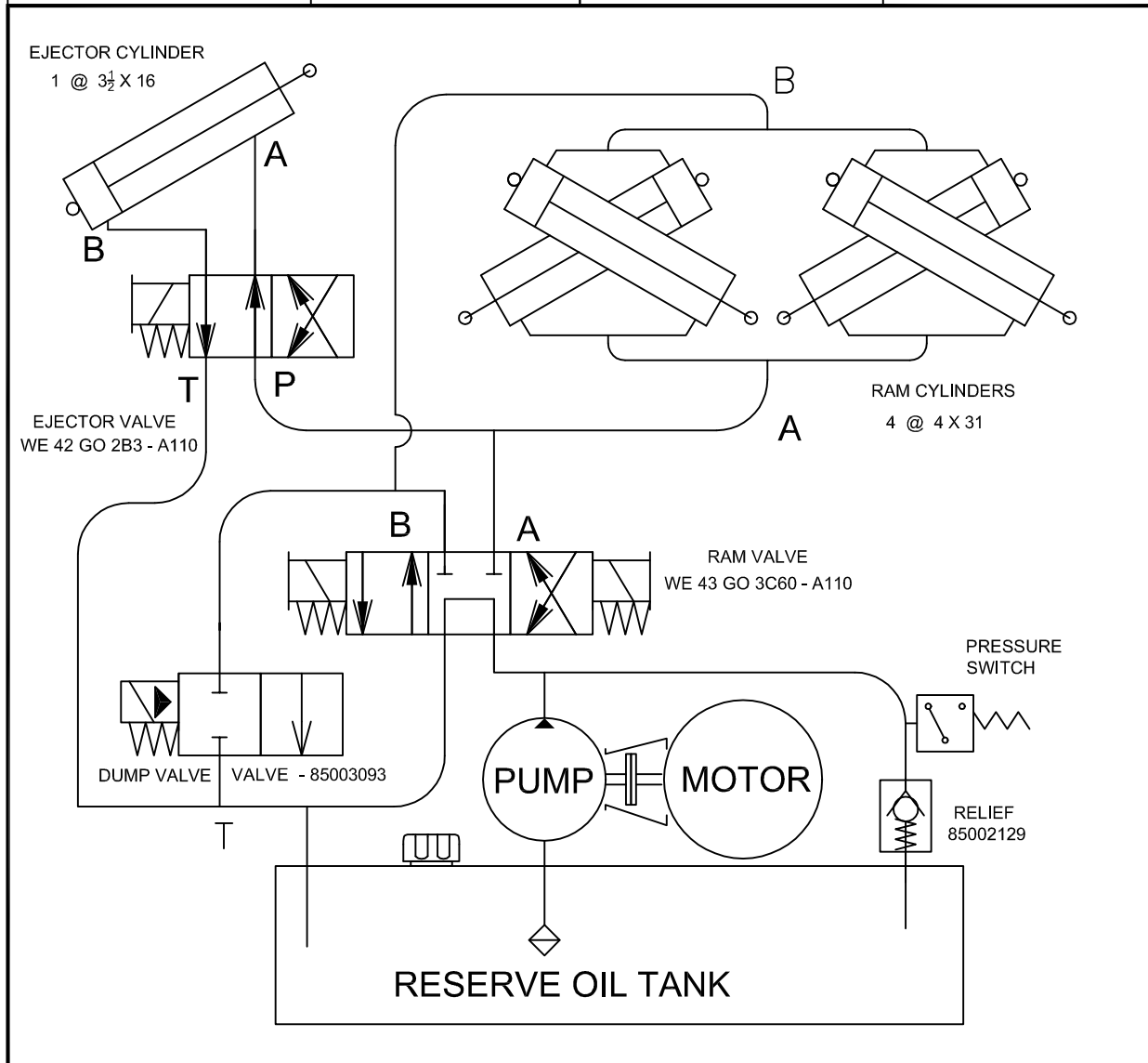
wire from E-Stop

L1	L2	1	2	X1	X2	Y1	Y2
120 VOLT COIL				N.O.	N.C.		
SAFETY MONITOR RELAY INT-03-120							
OUTPUTS							
SAFE				AUX			
-	-	-	-	-	-	-	-
A	B	C	D	E	F	G	

ROTOBALE COMPACTION SOLUTIONS

XL - 62 HYDRAULICS

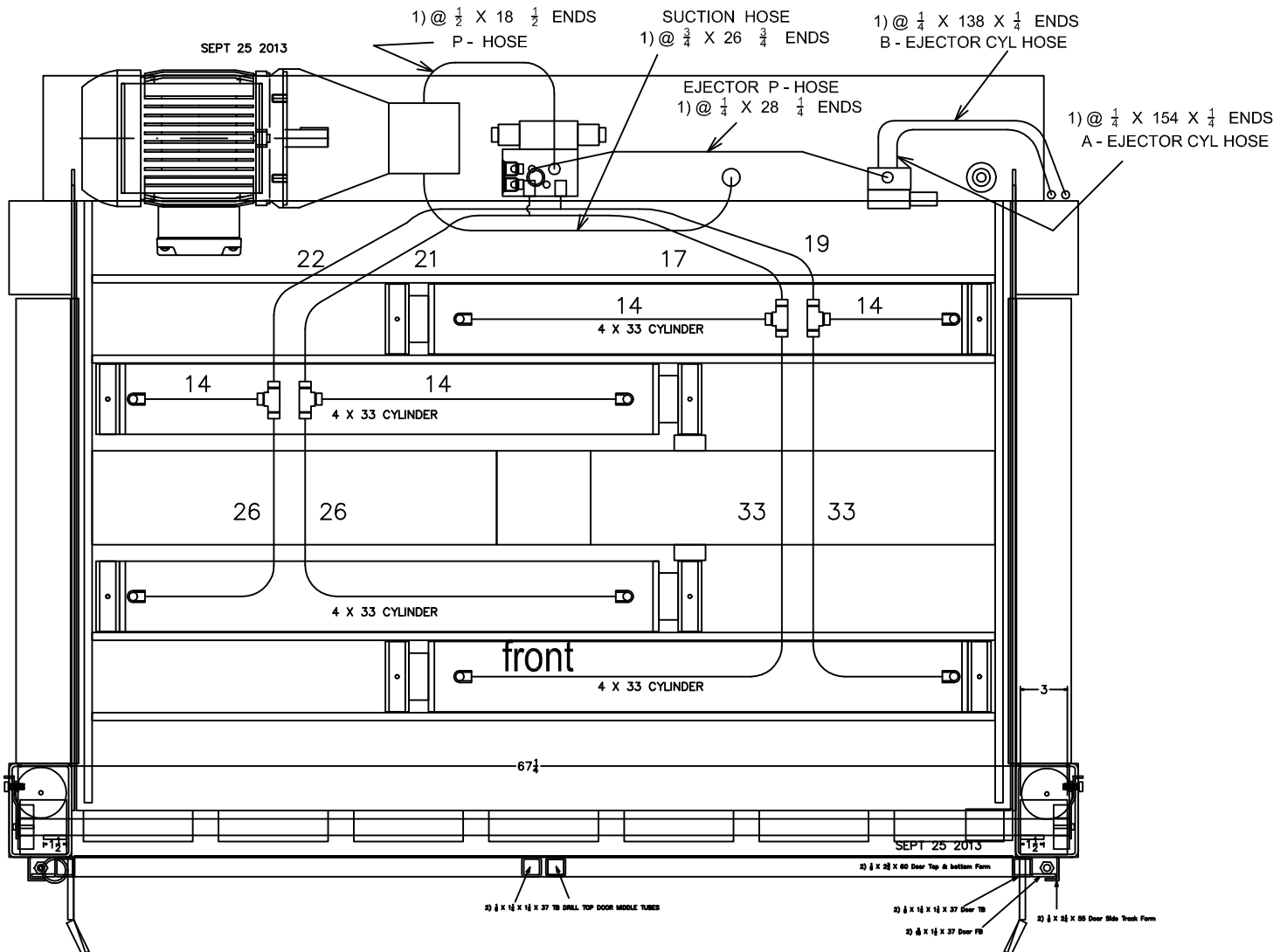
PARTS	DESCRIPTION	PARTS	DESCRIPTION
HOSES			
1) @ $\frac{1}{2}$ " X 22' + $\frac{1}{2}$ " ENDS	T TO MANIFOLD HOSE	1) CYLINDER @ $3\frac{1}{2}$ " X 16	EJECTOR CYLINDER
1) @ $\frac{1}{2}$ " X 21' + $\frac{1}{2}$ " ENDS	T TO MANIFOLD HOSE	4) CYLINDER @ 4" X 31	RAM CYLINDERS
1) @ $\frac{1}{2}$ " X 17' + $\frac{1}{2}$ " ENDS	T TO MANIFOLD HOSE		
1) @ $\frac{1}{2}$ " X 19' + $\frac{1}{2}$ " ENDS	T TO MANIFOLD HOSE	VALVE - 85003093	DUMP VALVE
4) @ $\frac{3}{8}$ " X 14' ENDS	CYLINDER HOSE	VALVE - WE 42 GO 2B3 - A110	EJECTOR VALVE
2) @ $\frac{3}{8}$ " X 26' ENDS	CYL TO SWIVEL HOSE	VALVE - WE 43 GO 3C60 - A110	RAM VALVE
2) @ $\frac{3}{8}$ " X 33' ENDS	CYL TO SWIVEL HOSE		
1) @ $\frac{3}{4}$ " X 26' ENDS	SUCTION HOSE	MANIFOLD ROTOBALE # 1	EJECTOR MANIFOLD
1) @ $\frac{1}{2}$ " X 18' ENDS	P - HOSE	MANIFOLD ROTOBALE # 5	RAM MANIFOLD
1) @ $\frac{1}{4}$ " X 28' ENDS	EJECTOR P - HOSE		
1) @ $\frac{1}{4}$ " X 154' ENDS	A - EJECTOR CYL HOSE	RELIEF 85002129	MAIN RELIEF
1) @ $\frac{1}{4}$ " X 138' ENDS	B - EJECTOR CYL HOSE		
		215 FRAME 1800 RPM	MOTOR
		R 100 $1\frac{1}{2}$ " X $\frac{3}{4}$ "	COUPLING
		A-MOUNT 5	BELL HOUSING
		HAIR 22 - 10 HP	HYDRAULIC PUMP



XL-62 Baler Hoses

Aug 21 2015

- | | | |
|--|----------------------|----------------------|
| 1) @ $\frac{1}{2}$ X 22 $\frac{3}{8}$ | + $\frac{1}{2}$ ENDS | T TO MANIFOLD HOSE |
| 1) @ $\frac{1}{2}$ X 19 $\frac{3}{8}$ | + $\frac{1}{2}$ ENDS | T TO MANIFOLD HOSE |
| 1) @ $\frac{3}{8}$ X 21 $\frac{3}{8}$ | + $\frac{1}{2}$ ENDS | T TO MANIFOLD HOSE |
| 1) @ $\frac{3}{8}$ X 17 $\frac{3}{8}$ | + $\frac{1}{2}$ ENDS | T TO MANIFOLD HOSE |
| 4) @ $\frac{3}{8}$ X 14 $\frac{3}{8}$ | ENDS | CYLINDER HOSE |
| 2) @ $\frac{3}{8}$ X 26 $\frac{3}{8}$ | ENDS | CYL TO SWIVEL HOSE |
| 2) @ $\frac{3}{8}$ X 33 $\frac{3}{8}$ | ENDS | CYL TO SWIVEL HOSE |
| 1) @ $\frac{3}{4}$ X 26 $\frac{3}{4}$ | ENDS | SUCTION HOSE |
| 1) @ $\frac{1}{2}$ X 18 $\frac{1}{2}$ | ENDS | P - HOSE |
| 1) @ $\frac{1}{4}$ X 28 $\frac{1}{4}$ | ENDS | EJECTOR P - HOSE |
| 1) @ $\frac{1}{4}$ X 154 $\frac{1}{4}$ | ENDS | A - EJECTOR CYL HOSE |
| 1) @ $\frac{1}{4}$ X 138 $\frac{1}{4}$ | ENDS | B - EJECTOR CYL HOSE |

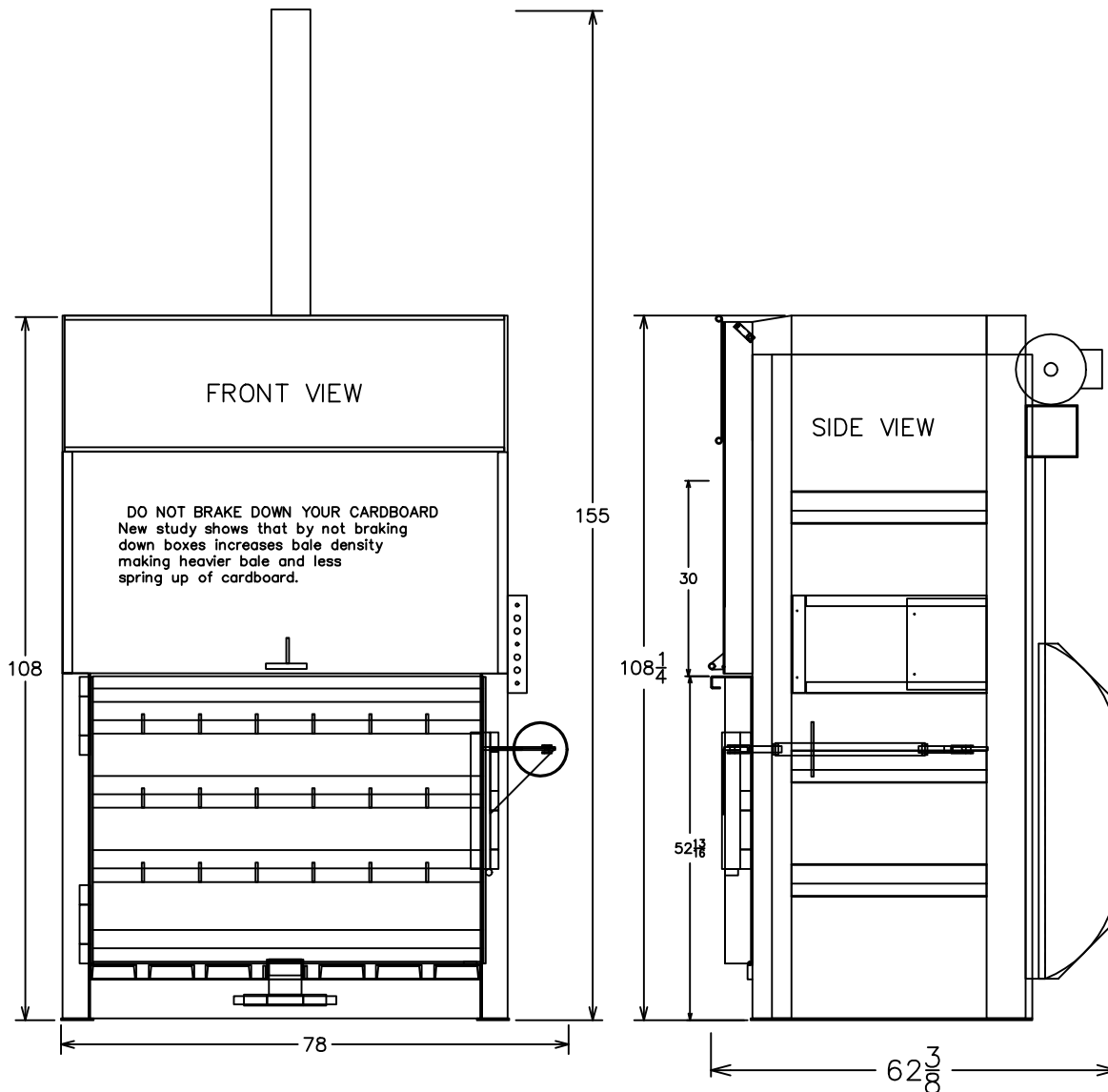


ROTOBALE COMPACTION SOLUTIONS

KENILWORTH, ONTARIO, NOG 2E0,

TEL: 519-323-3673 FAX: 519-323-3816

XI-62 VERTICAL BALER



STANDARD SPECIFICATION

BALE WEIGHT	1500 LBS	BALE TIES	6
MOTOR	5 HP		10 HP
PUMP SIZE	5.4 GPM		10.8 GPM
CYCLE TIME	100 SECONDS		50 SECONDS
VOLTS	208 / 575		208 / 575
AMPS	15 / 6		30 / 12
BALE WIDTH	60"	DEPTH	42"
			HEIGHT 44"

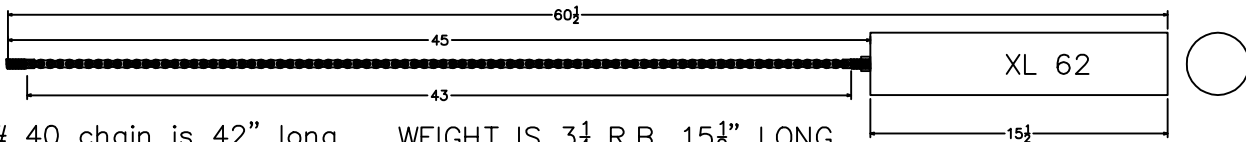
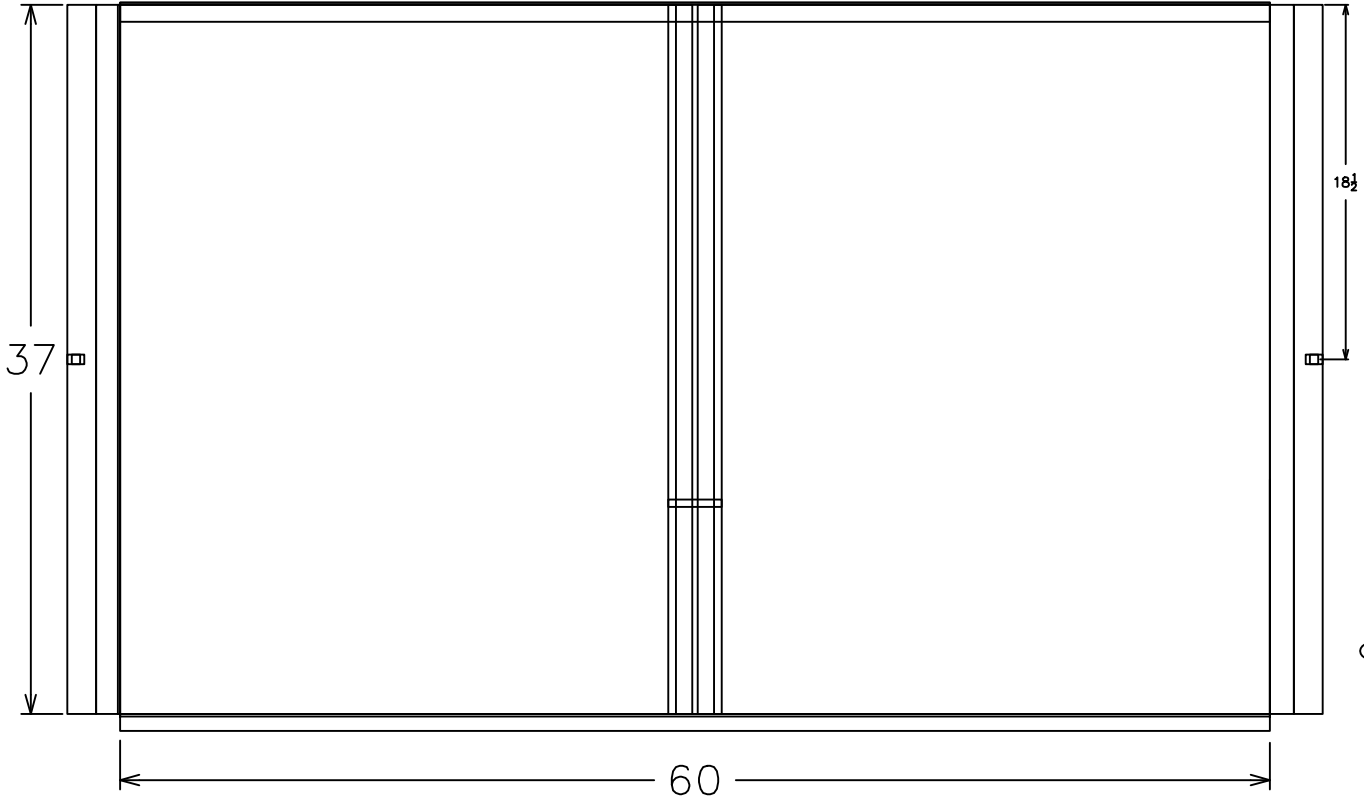
FEATURES

CLOSED BACK SAVES 1 HOUR ON MAKING BALE AND 6 SQUARE FEET OF FLOOR SPACE, BY ALLOWING BALER TO BE MOVED BACK TO WALL NO MOVING PARTS AT BACK OF BALER INCREASES SAFETY
EMPLOYEE SAFE
LARGE BALE
BALE READY LIGHT
HYDRAULIC EJECTOR
FEED DOOR LIFTS AUTOMATICALLY

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE
TO ACCOMMODATE EQUIPMENT IMPROVEMENTS

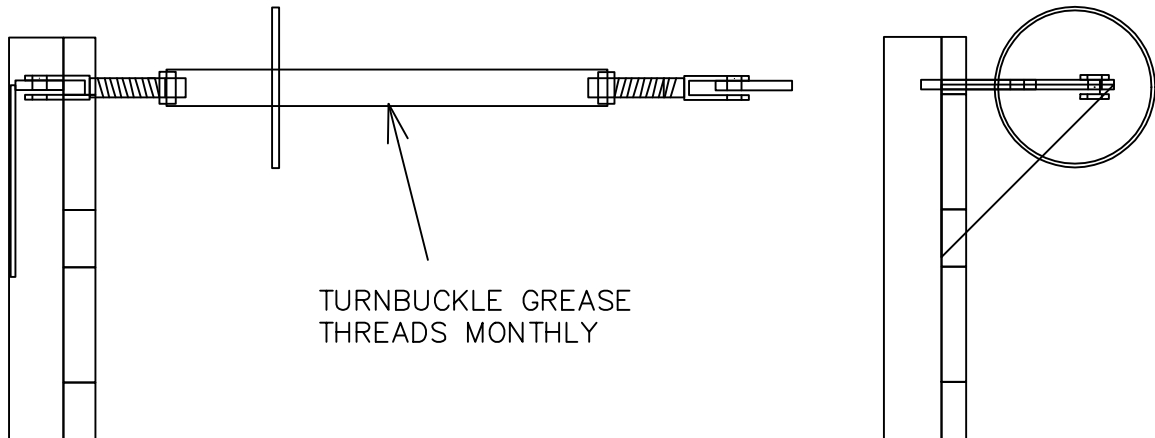


XL 62 TOP DOOR SEPT 23 2013



) # 40 chain is 42" long WEIGHT IS 3 1/4 R.B. 15 1/2" LONG

XL-62 chain cut to 42" long
with master link and bolt on each end
it will be 45" long total May 20 2015

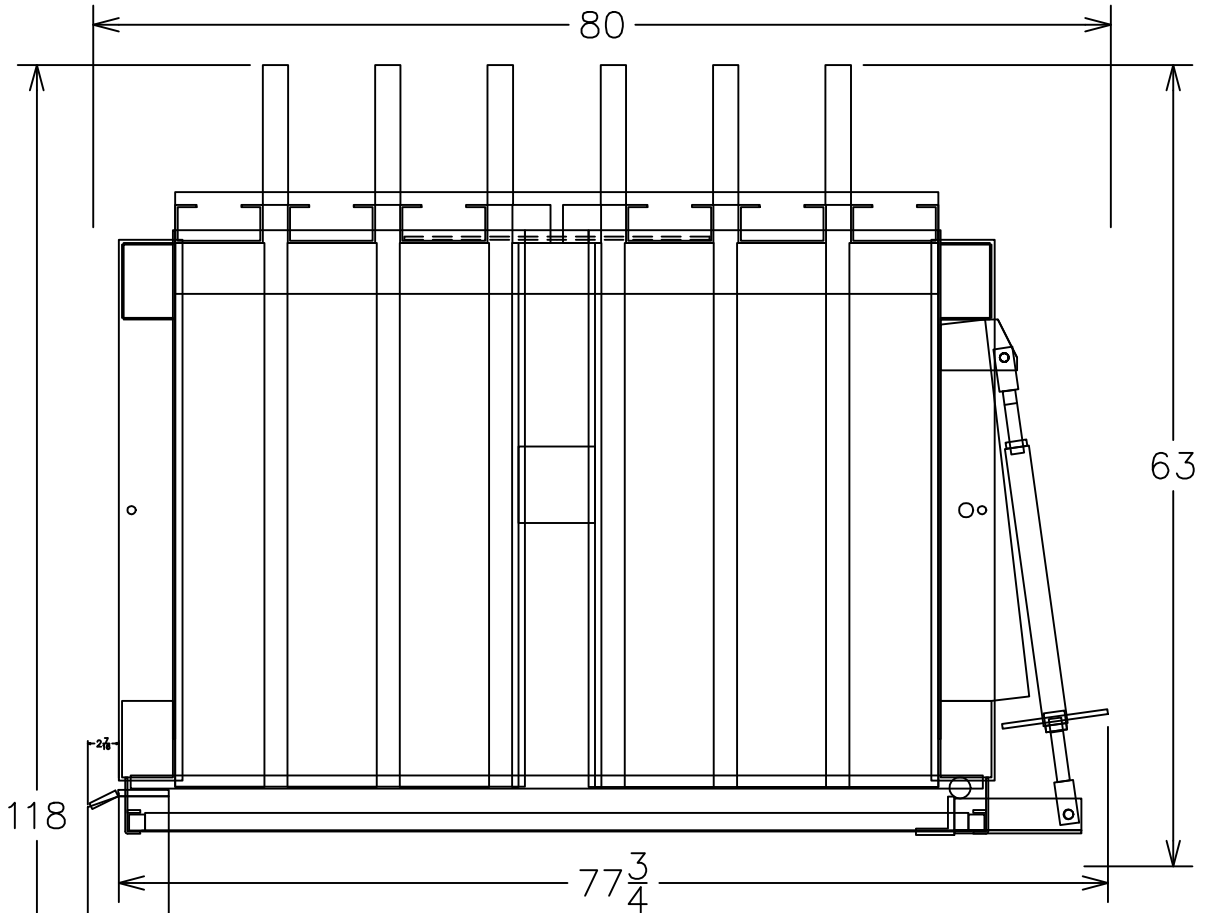


ROTOBALE COMPACTION SOLUTIONS

KENILWORTH, ONTARIO, NOG 2E0, P.O. BOX 100, ARTHUR ROAD # 5

TEL: 519-323-3673 FAX: 519-323-3816

XL42 LOW PROFILE VERTICAL BALER



TOP VIEW

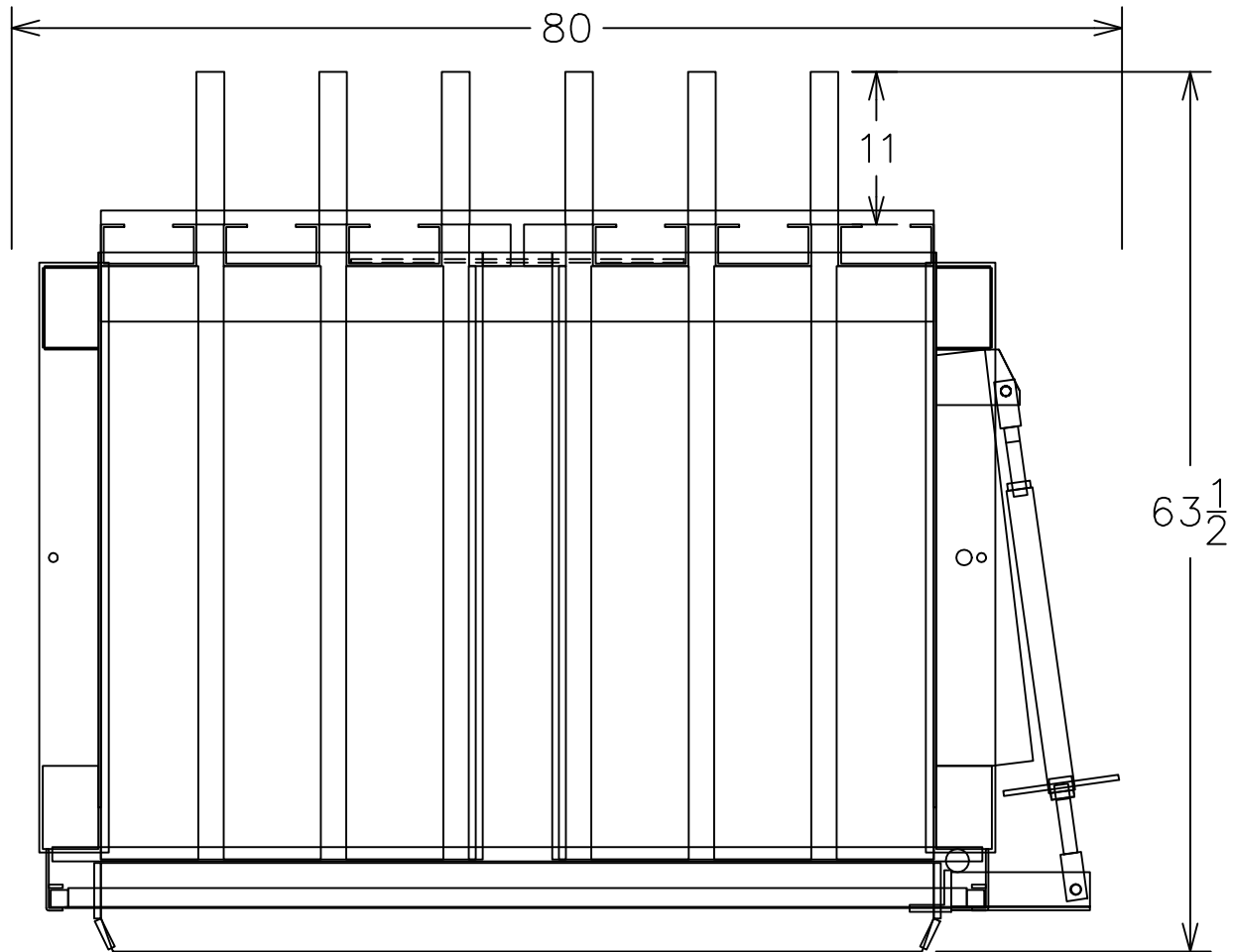
BOTTOM
DOOR
OPEN

ROTOBALE COMPACTION SOLUTIONS

KENILWORTH, ONTARIO, NOG 2E0, P.O. BOX 100, ARTHUR ROAD # 5

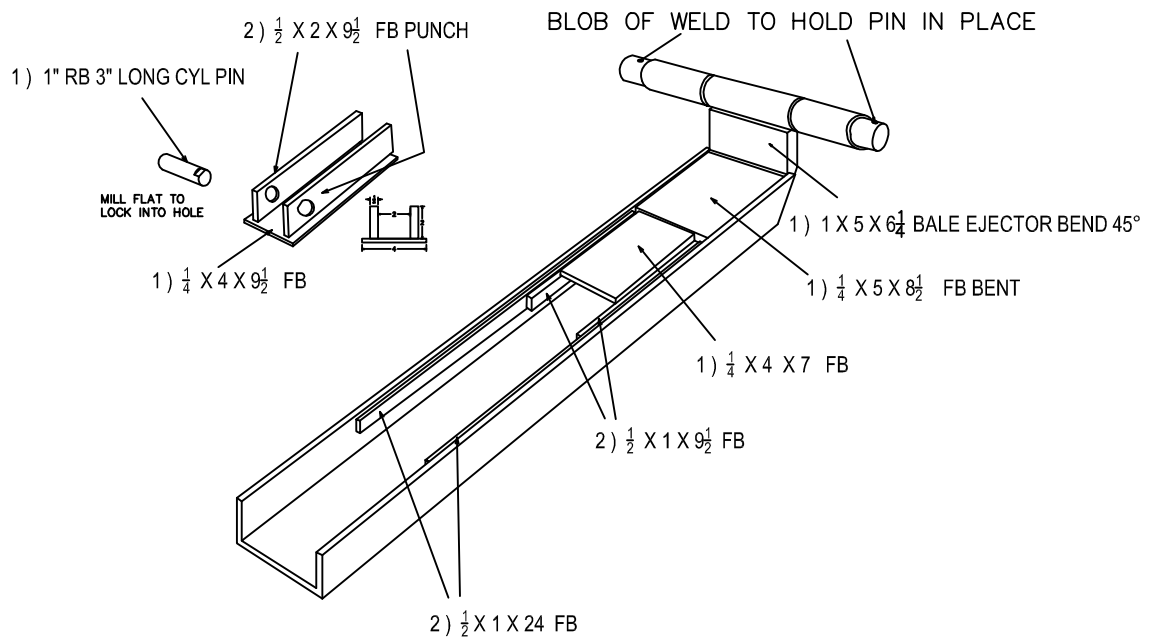
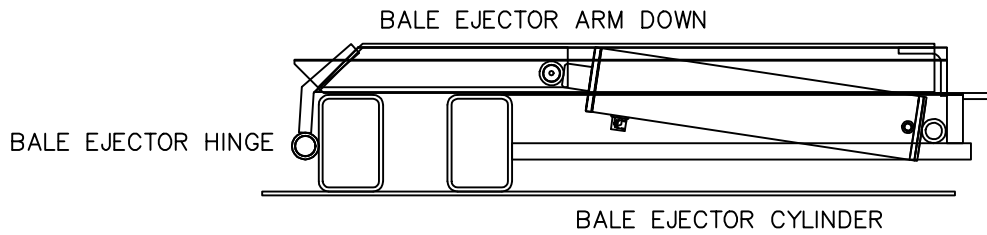
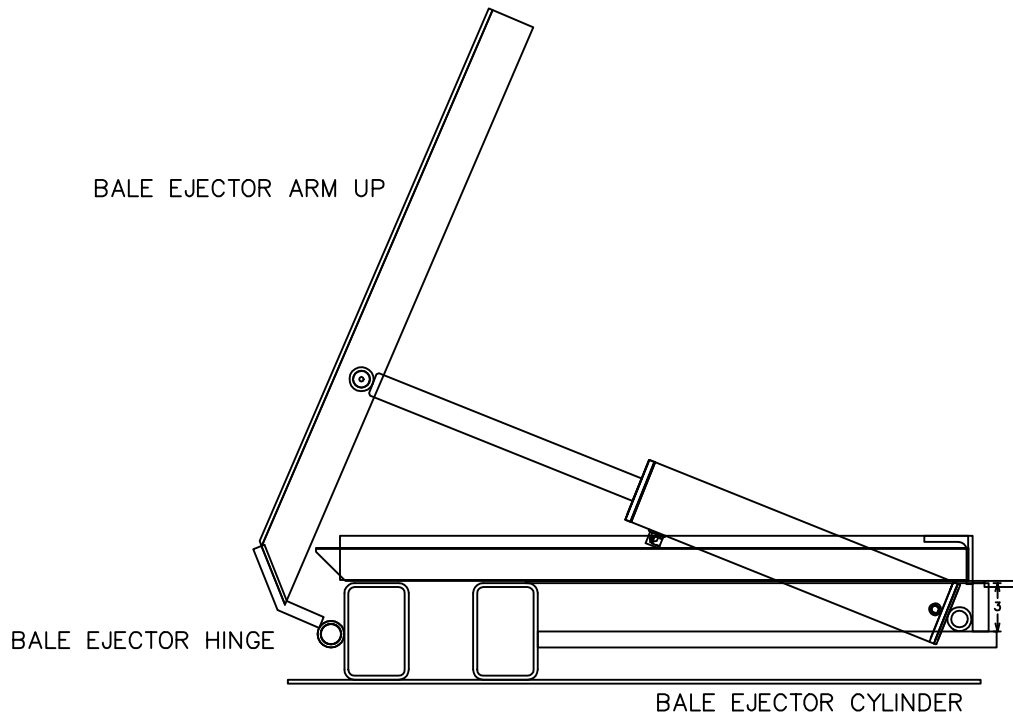
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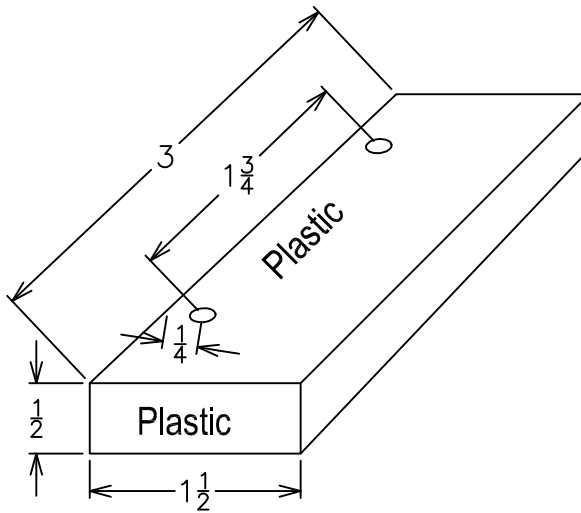
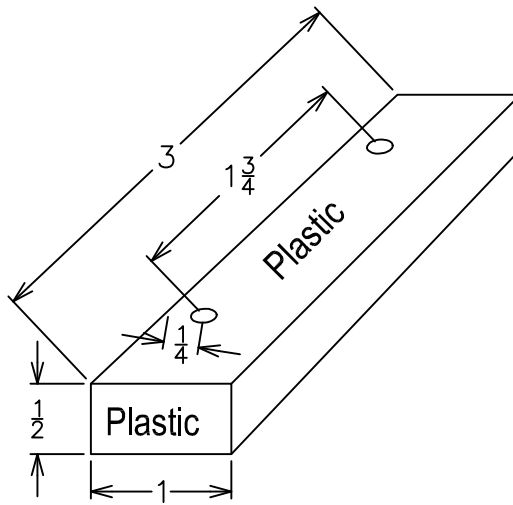
XL-62 VERTICAL BALER



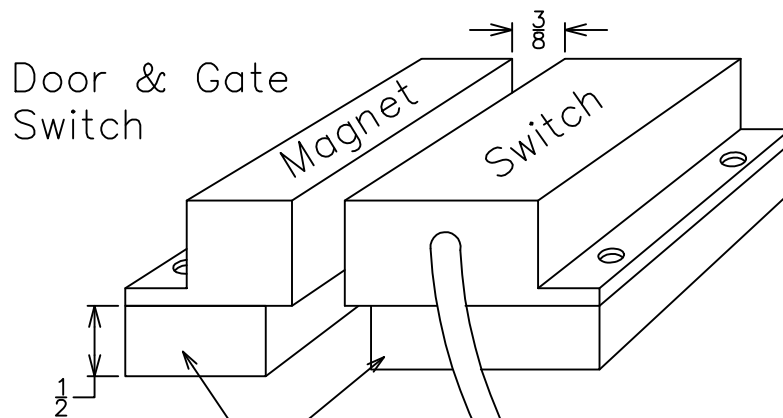
TOP VIEW

BOTTOM
DOOR
CLOSED





Must hold $\frac{3}{8}$ " apart and must be aligned straight



Must Have $\frac{1}{2}$ Inch Of Plastic To Insulate the Magnetic Field From Steel

Wire

NOCOLUBE AW SERIES

Product Data Sheet

NOCOLUBE AW SERIES

NOCOLUBE AW Series are premium hydraulic fluids formulated from high quality paraffinic base oils that meets severe pump requirements of all major manufacturers. NOCOLUBE AW Series provides outstanding anti-wear protection. The oils will provide excellent long service life under severe industrial and mobile hydraulic applications.

Typical Approvals

Vickers I-286-S, M-2950-S	AFNOR NF-E 48-690/1
Cincinnati Milacron P-68, P-69, P-70	AFNOR E 48-603 HM
Denison HF-0	ISO 11158 TYPE HM
DIN 51524, Part 2	

GENERAL CHARACTERISTICS

NOCOLUBE AW	32	46	68	100	220
Product Code	NOC1657	NOC1658	NOC1659	NOC2778	NOC2779
Appearance	Light Pale	Light Pale	Light Pale	Light Pale	Dark Pale
Flash Pt., COC °C	212	226	234	242	258
Pour Point, °C	-24	-24	-18	-15	-15
Viscosity					
CST @ 40°C	32.0	46.0	68.0	100.0	220.0
CST @ 100°C	5.4	6.7	8.5	11.1	18.7
Rust ASTM D 665B	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion	1A	1A	1A	1A	1A
Oxidation Life (hours), ASTM D-943	2500+	2500+	2500+	ND	ND
Viscosity INDEX	104	104	107	95	93

FEATURES

- Outstanding Thermal Stability
- Long Service Life
- Superior Hydrolytic Stability
- Excellent Remissibility
- Low Pour Point
- Qualified Products

BENEFITS

- Reduces sludge and sticking problems in close tolerance components
- Provides superior system cleanliness with reduced oxidation
- protects against rust and corrosion
- Works well when, contaminated with a small amount of water. Readily separates large amounts of water
- Good low temperature performance
- Proven field performance

Don't pollute! Dispose of used oil properly!

Call your NOCO sales representative for details on our Oil Recovery Program.

All reasonable care has been taken to ensure that the above information is accurate as of the date of printing.

NOCO Energy CORP.
Tonawanda, NY 14150
(800) 500-6626

DATE

16 / 03 / 2015

Product Data Sheet

NOCO MULTI-PURPOSE EP#2

NOCO MULTI-PURPOSE EP#2 is compatible with the most popular greases in use today, including Aluminum complex, calcium, calcium complex and lithium grease. It is not compatible with barium Ben tone or poly urea greases.

NOCO MULTI-PURPOSE EP#2 is multi-purpose, premium quality grease made from high viscosity Index base oils and a lithium complex soap thickener system. Because of its outstanding performance Properties, it can be used for the lubrication of machinery under heavy loads and high temperatures in a wide range of automotive, industrial, agricultural, mining and construction applications.

NOCO MULTI-PURPOSE EP#2 can be used to lubricate plain ball and roller bearings in equipment Operating from slow to high speeds and at temperatures ranging from -24°C (15°F) to 170°C (365°F).

TYPICAL PROPERTIES & CHARACTERISTICS

Test Methods	Description	Specification
	NLGI Grade	2
ASTM D 217	Cone penetration @ 77°F , worked 60 strokes	265 - 295
ASTM D 128	Thickener Type	Lithium Complex
ASTM D 128	Thickener Content, %	4 - 7
ASTM D 2265	Dropping Point	168°C , (360°F)
ASTM D 445	Base Oil Viscosity, cut @ 40°C	175 - 180
ASTM D 2270	Viscosity Index	80 min.
VISUAL	Color	Dark Amber
VISUAL	Appearance	Smooth
ASTM D 2509	Timkin OK Load, lbs.	35 min

Don't Pollute! Dispose or used oil properly!

Call your NOCO sales representative for details on our Oil Recovery Program

All reasonable care has been taken to ensure that the above information is accurate as of the date of printing.

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Tonawanda, NY 14150
(800) 500-6626