

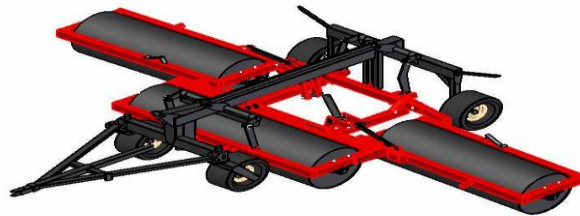
 MADE IN CANADA

Smyth
WELDING
& MACHINE SHOP LTD.

RR2 Auburn, Ontario N0M 1E0 519-529-7212

LAND ROLLER

Operator's Manual



Manufactured By:
Smyth Welding & Machine Shop Ltd.
37452 Glen's Hill Road
R.R. #2 Auburn, ON N0M 1E0
Ph: 519-529-7212
Fax: 519-529-3277
Email: info@smythwelding.com
Website: www.smythwelding.com

Introduction

Thank you for choosing a Smyth Welding land roller. We are confident this equipment will meet your requirements in terms of quality, performance and reliability!

This manual was made to help you in the safe operation of your new land roller. It contains important information which will help you operate your land roller, and help it perform to its fullest capabilities.

Please read this manual completely before operating your land roller, and keep it for future reference.

Before operating your land roller, you or any other person who will be operating the land roller, must familiarize yourself with the safety recommendations and the operating instructions. Please read carefully and be sure to understand and follow all recommendations and procedures.

If you require additional information on your land roller, please contact your dealer or Smyth Welding representative.

Record the serial number (on the small silver sticker on the land roller) and date of purchase of your land roller on your "important information" sheet. Please refer to these numbers when ordering parts from your dealer.

Use Smyth Welding parts for replacements.

Important Information Sheet

This manual has been prepared to provide the owner with the information required to properly operate and maintain their unit. It is important that you, the owner or operator read this manual prior to operating or performing any maintenance work on the unit. This manual is for all land roller models.

DATE OF PURCHASE: _____

SERIAL NUMBER: _____

Information needed for ordering parts:

MODEL NUMBER: _____

SPECIAL OPTIONS:

Warranty

Smyth Welding products are warranted for a period of (12) months from the original date of purchase, by the original purchaser, to be free from defects in material and workmanship under correct and normal use and proper applications.

Smyth Welding obligations under this warranty shall be limited to the repair or exchange at Smyth Welding's option, of any Smyth Welding products or part which proves to be defective as provided. The customer will return the unit to the dealer where it was purchased, and if the dealer agrees with the warranty, they must then notify Smyth Welding to get authorization.

The equipment must be installed (when applicable), operated and maintained in accordance with Smyth Welding's instructions.

This warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Smyth Welding, nor to goods altered or repaired by anyone other than an authorized Smyth Welding representative.

Smyth Welding shall in no event be responsible for any consequential damage of any nature whether special or general, direct or indirect.

Any warranty or claim which differs from that set out is unauthorized by Smyth Welding, and is the warranty only of the party making it. Smyth Welding makes no other warranty expressed or implied and the original user's sole remedy for breach thereof is as set forth.

To obtain warranty, a copy of the original bill of sale is required and all claims must be submitted within a (30) day period from date of failure repair.

SAFETY ALERT SYMBOLS



Frame Pinch Point Hazard-Keep Away

WARNING

WHEN DEALING WITH HYDRAULICS DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE, OR OTHER WORK ON OR NEAR THIS PRODUCT

Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible.

If any fluid penetrates the skin; GET IMMEDIATE MEDICAL ATTENTION. See attached MSDS.

Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS.

Before connecting or disconnecting hydraulic hoses, read your power unit's operator's manual for detailed instructions on connecting and disconnecting hydraulic attachments.

Make certain that all parts meet the specifications for this product when installing or replacing hydraulic hoses or fittings.

After connecting hydraulic lines:

Slowly and carefully raise to check hose clearances and check for any interference.

Operate the hydraulics on this product to check hose clearances and to check for any interference.

Make certain that hoses will not be pinched, or get tangles, in any equipment.

DO NOT lock the auxiliary hydraulics of your power unit in the ON position,

Refer to your power unit's operator's manual and this manual for procedures and intervals, then inspect and maintain the entire hydraulic system to insure that the fluid remains clean, that all devices function properly, and that there is no fluid leaks.

Safety Information

Please read and understand this operator's manual before using this equipment. Review at least annually and thereafter.

Accident prevention regulations, all other generally recognized safety regulations and all road traffic regulations must be observed at all times.

Any modifications made to this land roller may relieve the manufacturer of liability for any resulting damage or injury.

WARNING- Do Not Attempt to raise machine into transport position if mud has built up on rollers, or if machine weight has been increased by any other means. This could lead to mechanical failure.

Do not allow riders.

Use extreme care when making adjustments.

Keep children away from machinery at all times.

This land roller should only be operated, serviced and repaired by persons who are familiar with its characteristics and acquainted with relevant safety procedures.

Always make sure land roller is lowered into field position (cylinders extended) and is blocked to prevent movement and that pressure is relieved from hydraulic circuits before servicing.

Know and follow good work practices when assembling, maintaining, repairing, and storing this equipment.

Wear appropriate protection safety equipment (i.e. hard hat, safety glasses, work gloves, ear protection, and protective shoes).

Keep hands, feet, hair and loose clothing away from moving parts.

Safety Information cont'd

Work on level surfaces in a well lit area.

Use proper tools for the job.

Make sure tools are in good condition for performing the desired function.

When using tools, wear the protective equipment specified by the tool manufacturer.

Only tow at a safe speed, and use caution when making corners or meeting traffic.

Follow all local laws regarding transporting of farm machinery.

Stay clear of overhead lines and other overhead obstructions.

Use additional caution and reduce speed when towing under adverse conditions, when turning and when on unlevel surfaces. Frequently check for traffic from rear, especially during turns.

Keep all safety decals clean.

Please call **Smyth Welding** if any decals are missing or illegible, and we will be happy to send you the decals.

MSDS File Number: 1282 SECTION I - MATERIAL IDENTIFICATION AND USE

FLAMMABILITY 1

REACTIVITY 0

HEALTH (Acute) 0
N (Chronic)

Material Name / Product Identifier

INDUSTRIAL HYDRAULIC ALL-WEATHER SL OIL

Manufacturer's Name

Consumers' Co-operative Refineries Limited P.O. Box 260; 550E 9th Avenue North Regina, SK S4P 3A1 CANADA (306) 721-5353

Supplier's Name

Federated Co-operatives Limited P.O. Box 1050; 401 - 22nd Street East Saskatoon, SK S7K 3M9 CANADA (306) 244-3447

Emergency Telephone Number Emergency Telephone Number

(613) 996-6666 (Canutec)

Mfg Reference Number

Chemical Name Chemical Family Chemical Formula

Mixture Petroleum Hydrocarbon N.D.

Mixture. Hydraulic Oil.

Molecular Weight Trade Name and Synonyms Material Use

32 Grade

SECTION II - HAZARDOUS INGREDIENTS OF MATERIALS

Hazardous Ingredients Approximate Concentration % C.A.S.

Numbers Exposure Limits LD50 / LC 50 (Species and Route)

Base Oil 60.0 - 100.0 % (ACGIH) TLV-TWA 5 mg/m3 (oil mist) (LD50) Oral (rat) > 5,000 mg/kg

Additive Package(*) 6.0 - 8.0 % (ACGIH) TLV-TWA 5 mg/m3 (oil mist)

(*) Denotes: Additive package containing rust/oxidization inhibitor, anti-foam agent, anti-wear compound and viscosity modifier.

SECTION III - PHYSICAL DATA FOR MATERIAL

Physical State Odour and Appearance

Liquid

Yellow-straw coloured liquid; slight hydrocarbon odour N.D.

N.D. 0.855 N.D.

Odour Threshold (ppm) Specific Gravity

Vapour Pressure

Vapor Density (Air = 1)

N.D. N.D.

Boiling Point

Freezing / Pour Point

Solubility in Water (20 C)

Slight

% Volatiles

pH

N.D. N/A N.D.

Coefficient of water / oil distribution

SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

Conditions of Flammability

May form combustible mixtures with air at temperatures at or above the flash point.

Means of Extinction

Foam, water spray, dry chemical, carbon dioxide.

Special Procedures

Cool fire exposed containers with water spray. Due to danger of slop over, avoid getting water into container. Move containers away from fire area if at no risk. Vapours may travel to distant ignition sources and flashback. Fire fighters should wear self contained breathing apparatus.

Flash Point and Method

Upper Explosion Limit

> 147.0 C (Open Cup) N/A N/A 413.0 C

Lower Explosion Limit Auto Ignition Temperature

Explosion Data - Sensitivity to Mechanical Impact

N.D. N.D.

Explosion Data - Sensitivity to Static Discharge

SECTION V - REACTIVITY DATA

Chemical Stability

If no, under conditions?

Yes. Stable under normal conditions of use and storage.

Incompatibility to other substances

Yes.

If so, which ones?

Unstable with strong oxidizers.

Reactivity and under what conditions

Exposure to heat or oxidizing materials will greatly increase fire hazard. Hazardous polymerization will not occur.

Hazardous Decomposition and Combustion Products

Incomplete combustion may produce aldehydes and oxides of carbon, sulphur, calcium, phosphorus and zinc.



Material Name / Product Identifier **INDUSTRIAL HYDRAULIC ALL-WEATHER SL OIL**

SECTION VI - TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry **Skin Contact, Eye Contact, Inhalation.**

Effects of Acute Exposure to Product

Based on data of components, not expected to irritate skin or eyes. Low oral toxicity; if aspirated into the lungs from swallowing or vomiting, this material may cause severe health effects (eg. chemical pneumonitis).

Effects of Chronic Exposure to Product

Repeated or prolonged contact with skin from clothing wet with this material may cause skin irritation.

LD50 of Product

Oral (rat) >5000 mg/kg.

Irritancy of Product

No.

Exposure Limits of Product

See 'Hazardous Ingredients'.

LC50 of Product

N.D.

Sensitization to Product

N.D.

Synergistic materials

N.D.

OTHER TOXICOLOGICAL EFFECTS: None.

There is no data available to indicate any components present at greater than 0.1% that may present a carcinogenic hazard. There is no data available to indicate any components present at greater than 0.1% that may cause mutagenic, teratogenic or reproductive effects.

SECTION VII - PREVENTATIVE MEASURES

Personal Protective Equipment

Wear chemical resistant clothing if prolonged skin contact is likely.

Gloves Eye Protection

Neoprene or nitrile. Safety glasses with side shields or chemical goggles. Not normally required if used with adequate ventilation. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure

Respiratory

limits.

Engineering Controls

Use only in well ventilated areas. Use of mechanical ventilation is recommended.

Leak and Spill Procedure

Ventilate area. Remove ignition sources. Contain (prevent entry into waterways). Wear protective equipment as necessary including rubber boots. Pump up using an explosion proof pump. Soak up remainder with an inert, absorbent material.

Waste Disposal

Recycle, dispose of or incinerate product and/or contaminated materials in accordance with all government regulations. Take the necessary action to prevent or remedy the adverse effects of any spill.

Handling Procedures and Equipment

Avoid prolonged contact with skin. Wear chemical resistant clothing if prolonged skin contact is likely. Avoid eye contact. Wear chemical goggles if splashing may occur. Avoid breathing vapours. Use with adequate ventilation. Wash thoroughly after handling. Launder contaminated clothing before reuse. Keep away from heat and ignition sources. Empty container may contain product residue which may exhibit hazards of

Storage Requirements

product. Store in a cool, ventilated area, out of direct sunlight. Keep container closed when not in use.

Special Shipping Information

TDG: Not Regulated.

SECTION VIII - FIRST AID MEASURES

Skin

Remove contaminated clothing. Wash skin with soap and running water. If irritation persists or develops, seek medical attention. Launder contaminated clothing before reuse.

Eye

Flush eyes with running water for at least 15 minutes while holding eyelids open occasionally to ensure thorough flushing. If irritation persists or develops, seek medical attention.

Inhalation

Remove to fresh air. If breathing has stopped, begin CPR. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion

Do not induce vomiting. Rinse mouth out and give 8 ounces of milk or water to drink. Keep at rest. Seek medical attention.

General Advice

If spontaneous vomiting occurs, have victim lean forward so that their head is between their knees. Vomiting may result in aspiration into the lungs causing chemical pneumonitis.

SECTION IX - PREPARATION OF M.S.D.S

W.H.M.I.S. Classification

Not a controlled product.

N.F.C. Classification

Sources Used

Available upon request.

Prepared By Phone Number

CCRL Safety Department

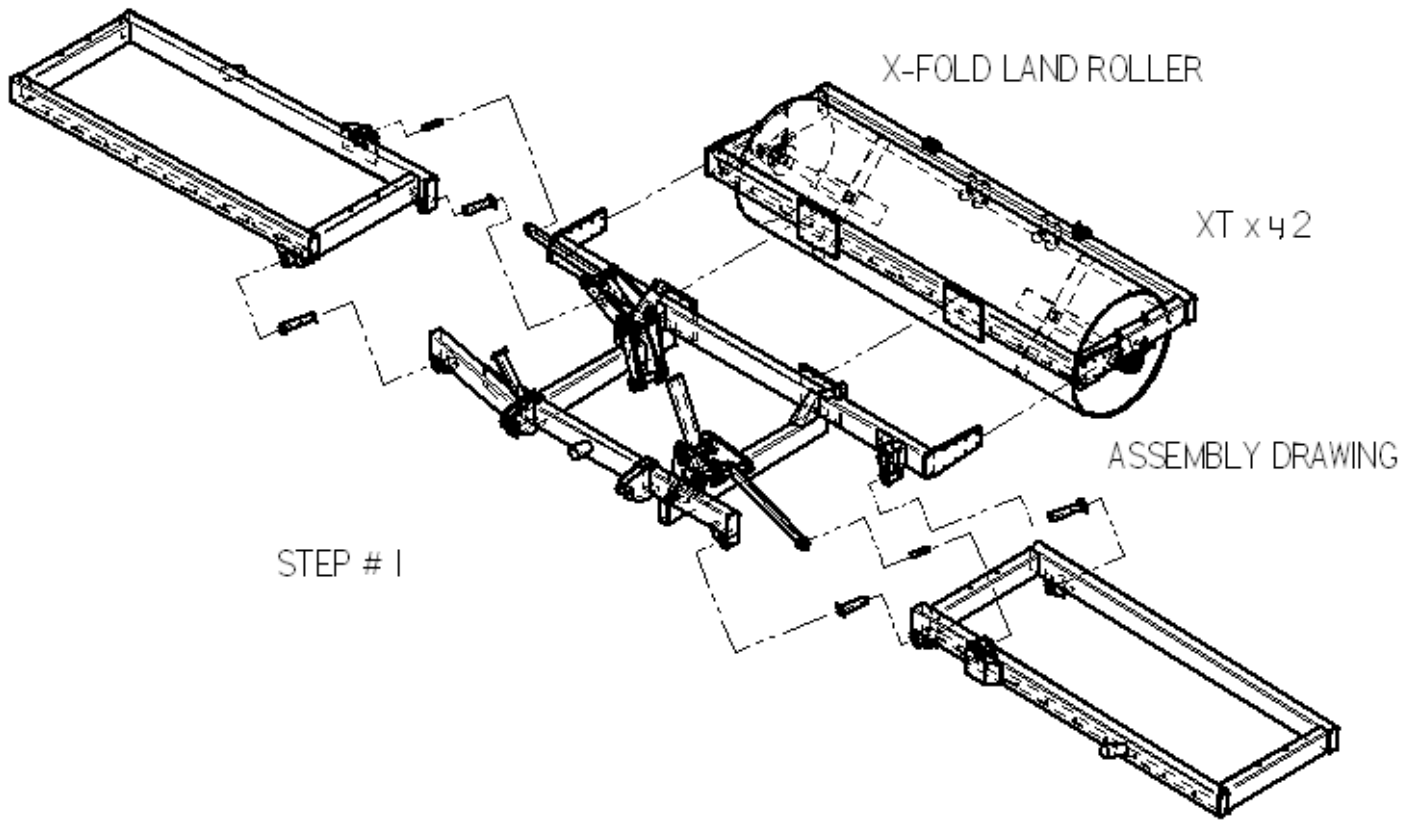
(306) 721-0564

Date

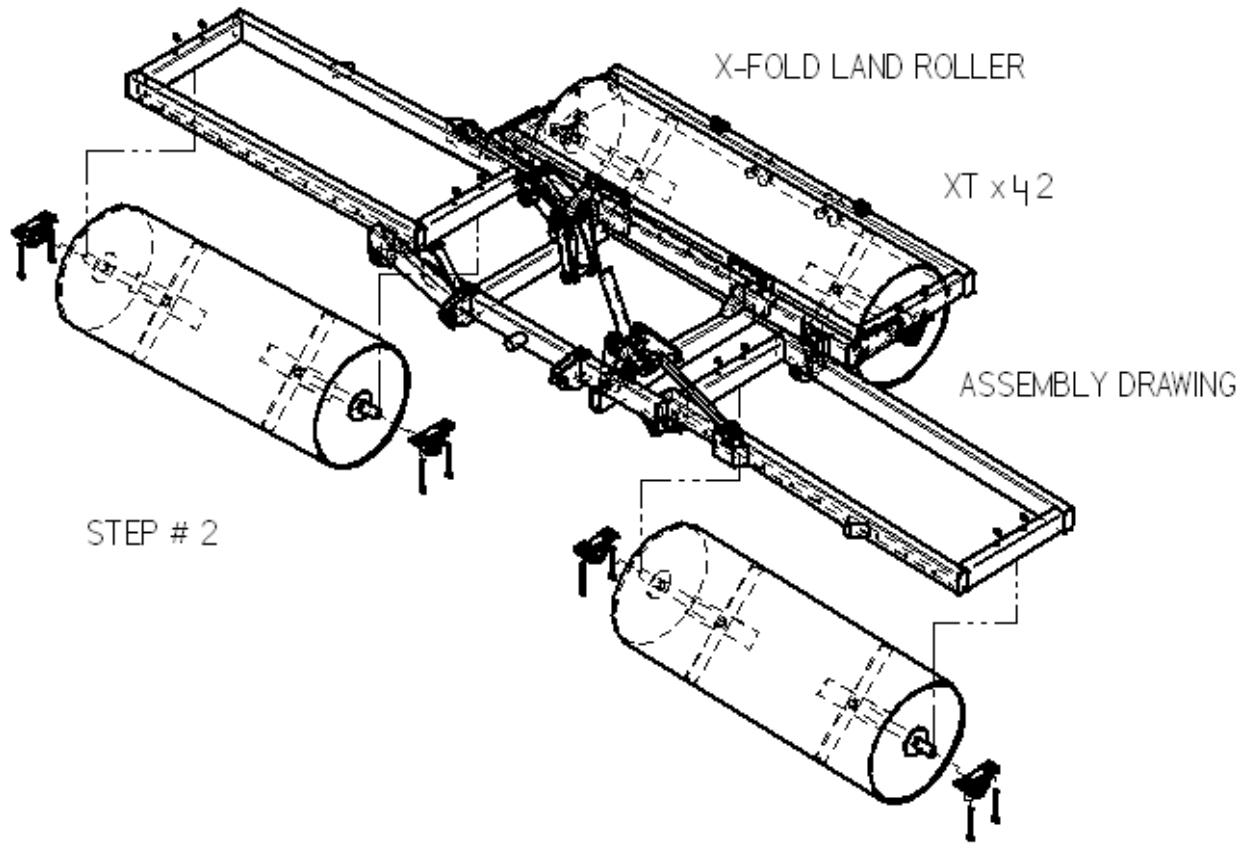
January 2, 2007

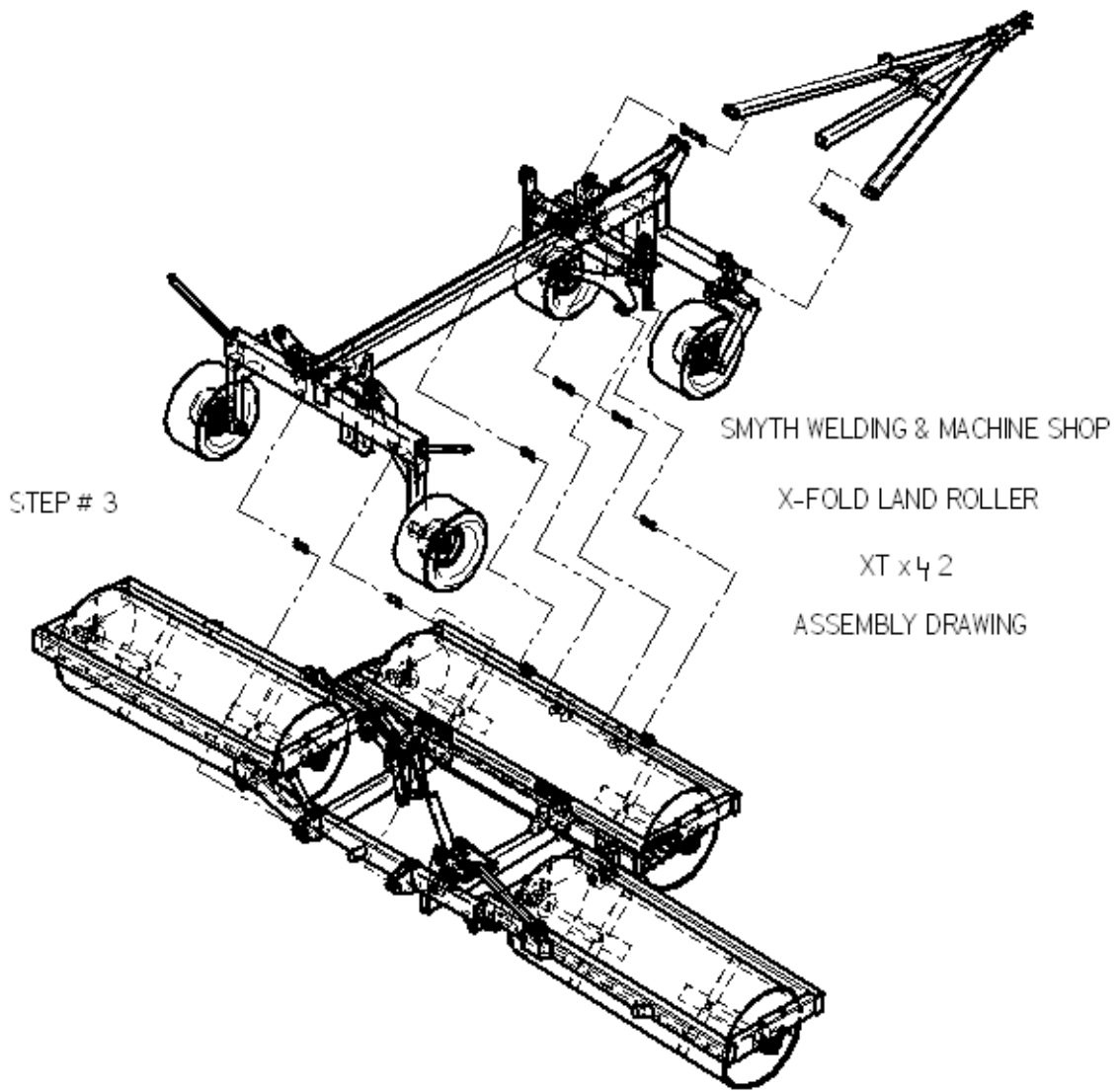
Assembly Drawing XT

SMYTH WELDING & MACHINE SHOP



SMYTH WELDING & MACHINE SHOP



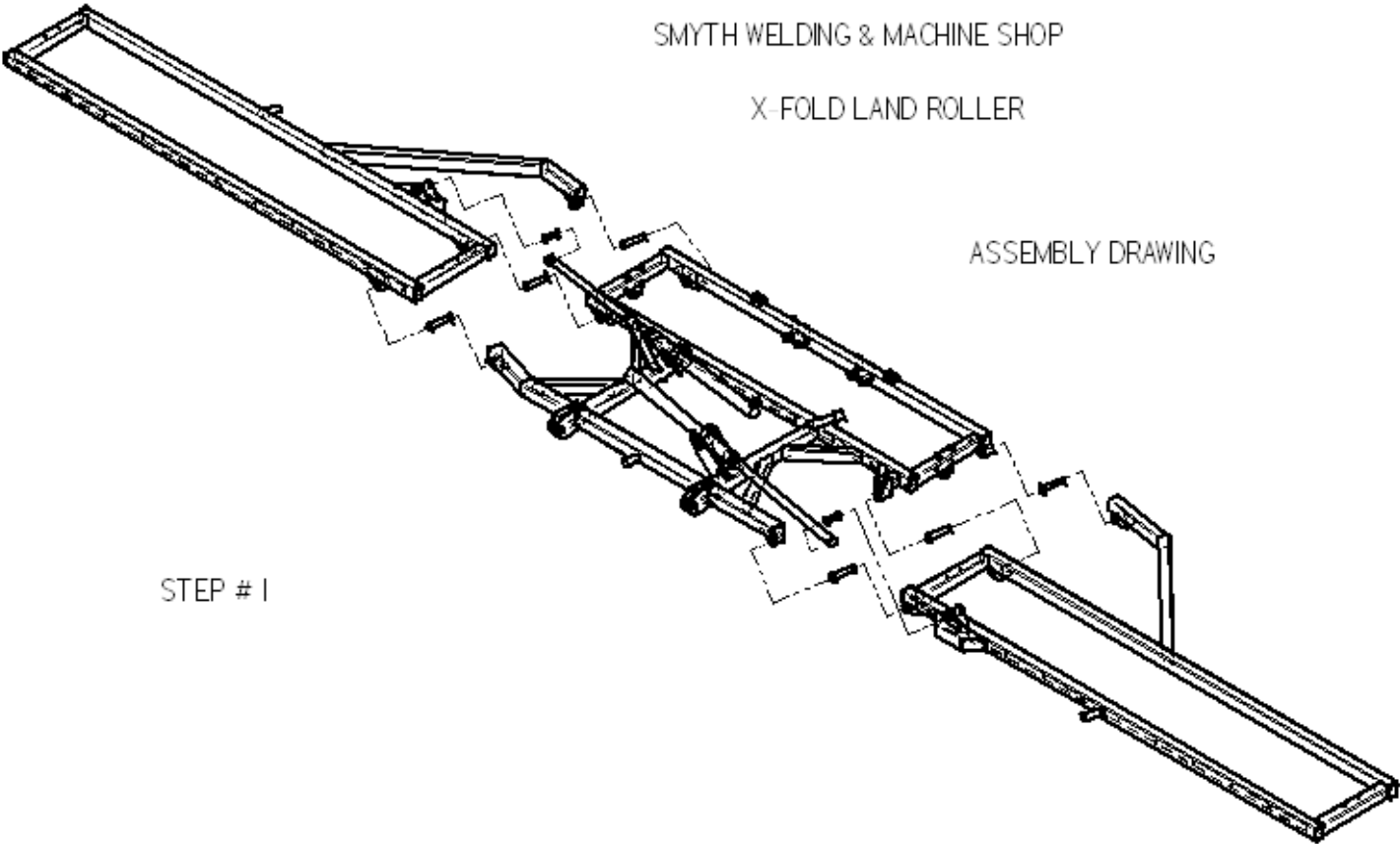


XS Assembly Drawing

SMYTH WELDING & MACHINE SHOP

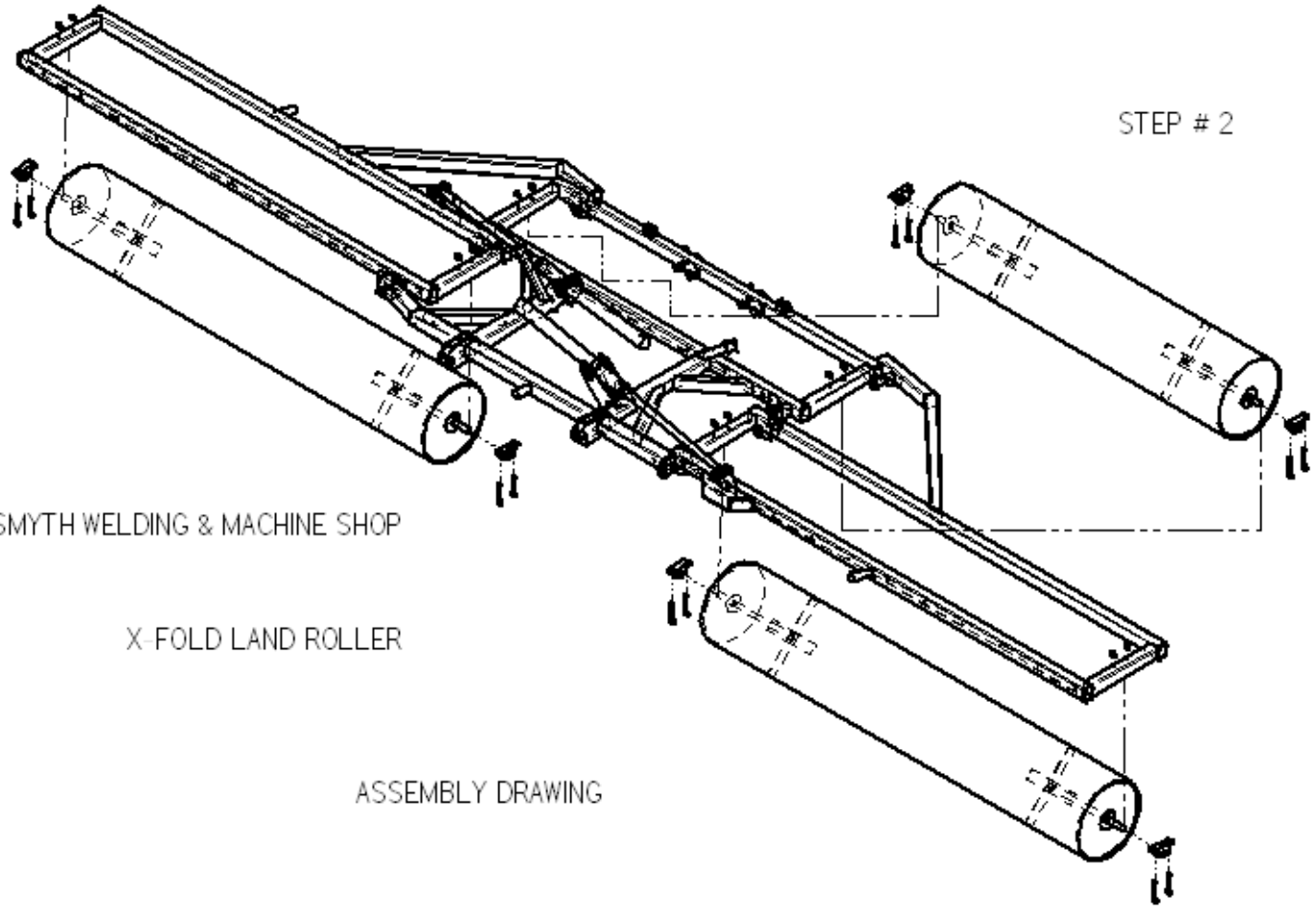
X-FOLD LAND ROLLER

ASSEMBLY DRAWING



STEP # 1

STEP # 2

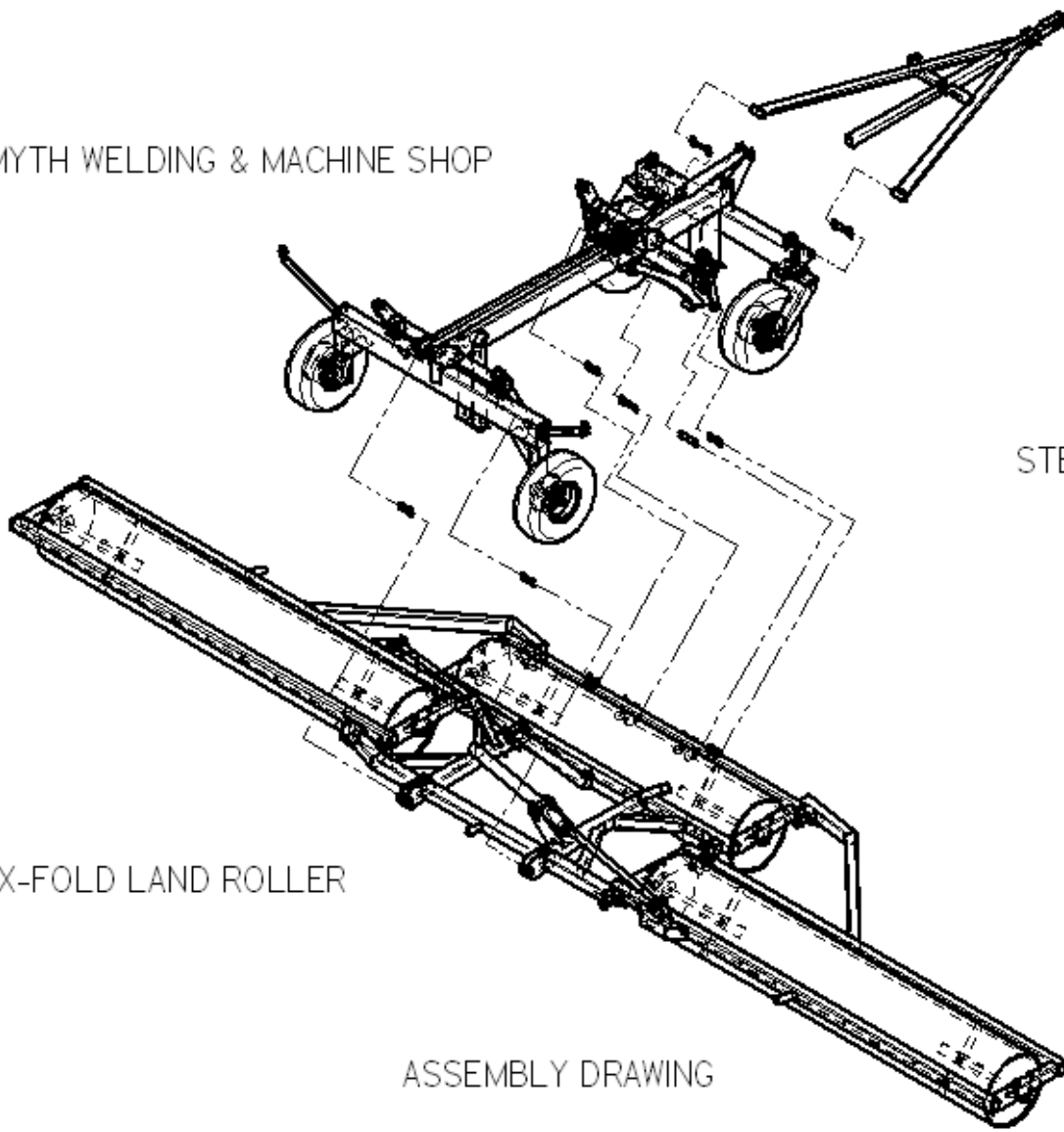


SMYTH WELDING & MACHINE SHOP

X-FOLD LAND ROLLER

ASSEMBLY DRAWING

SMYTH WELDING & MACHINE SHOP

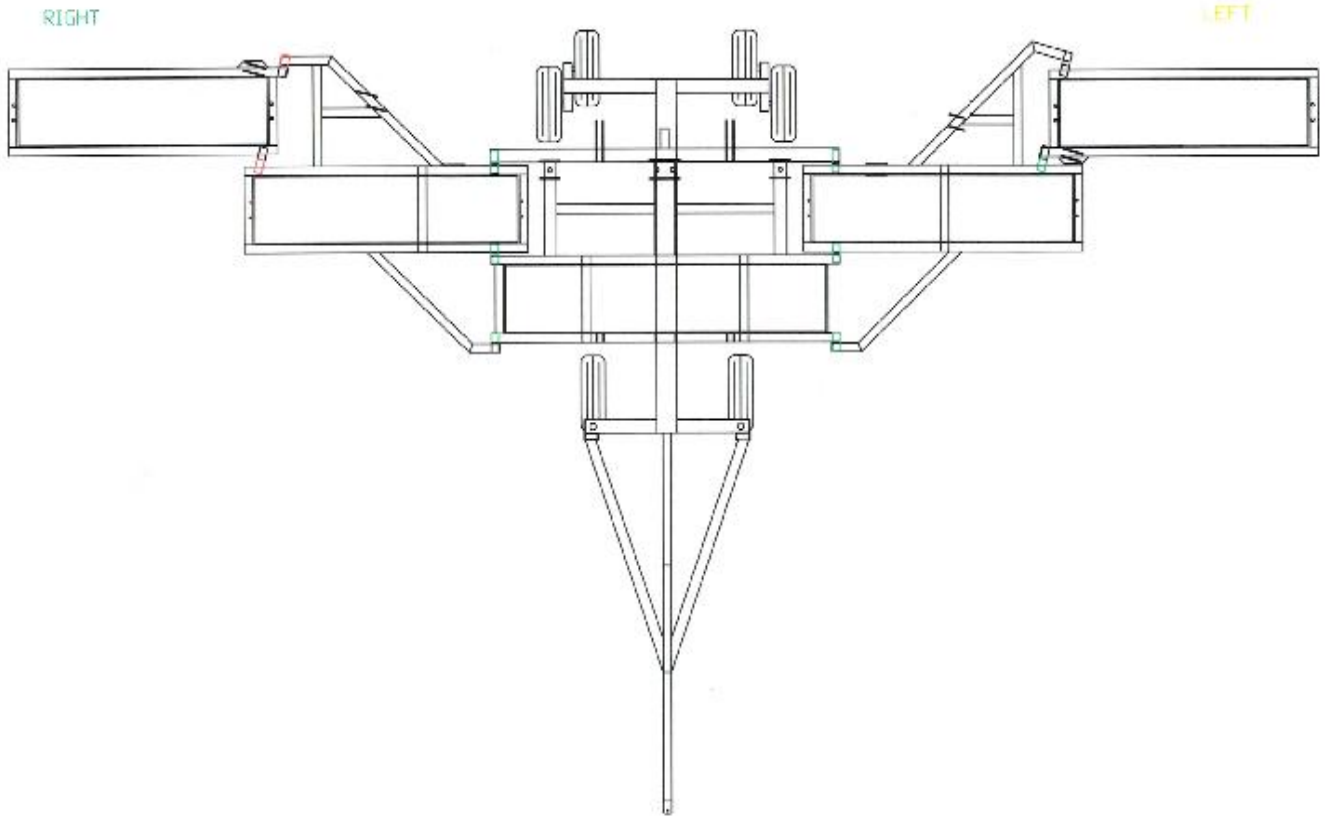


STEP # 3

X-FOLD LAND ROLLER

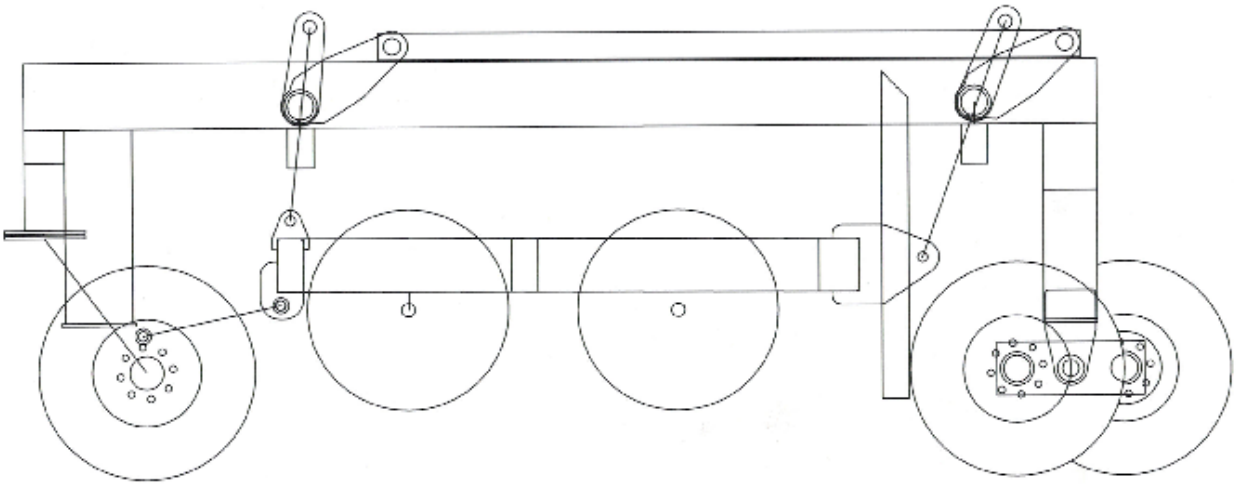
ASSEMBLY DRAWING

DF Assembly Drawing 1



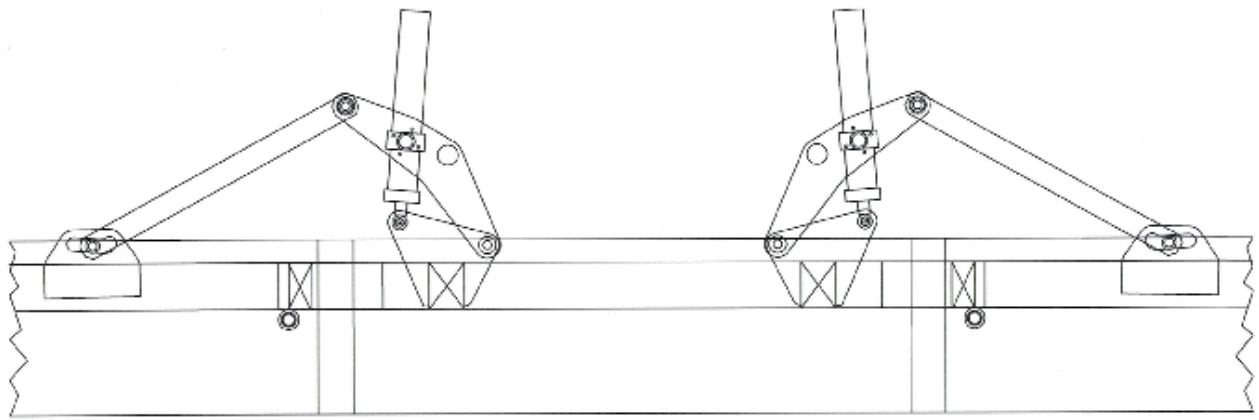
DF Assembly Drawing 2

DF TANDEM AXLE MONO FRAME



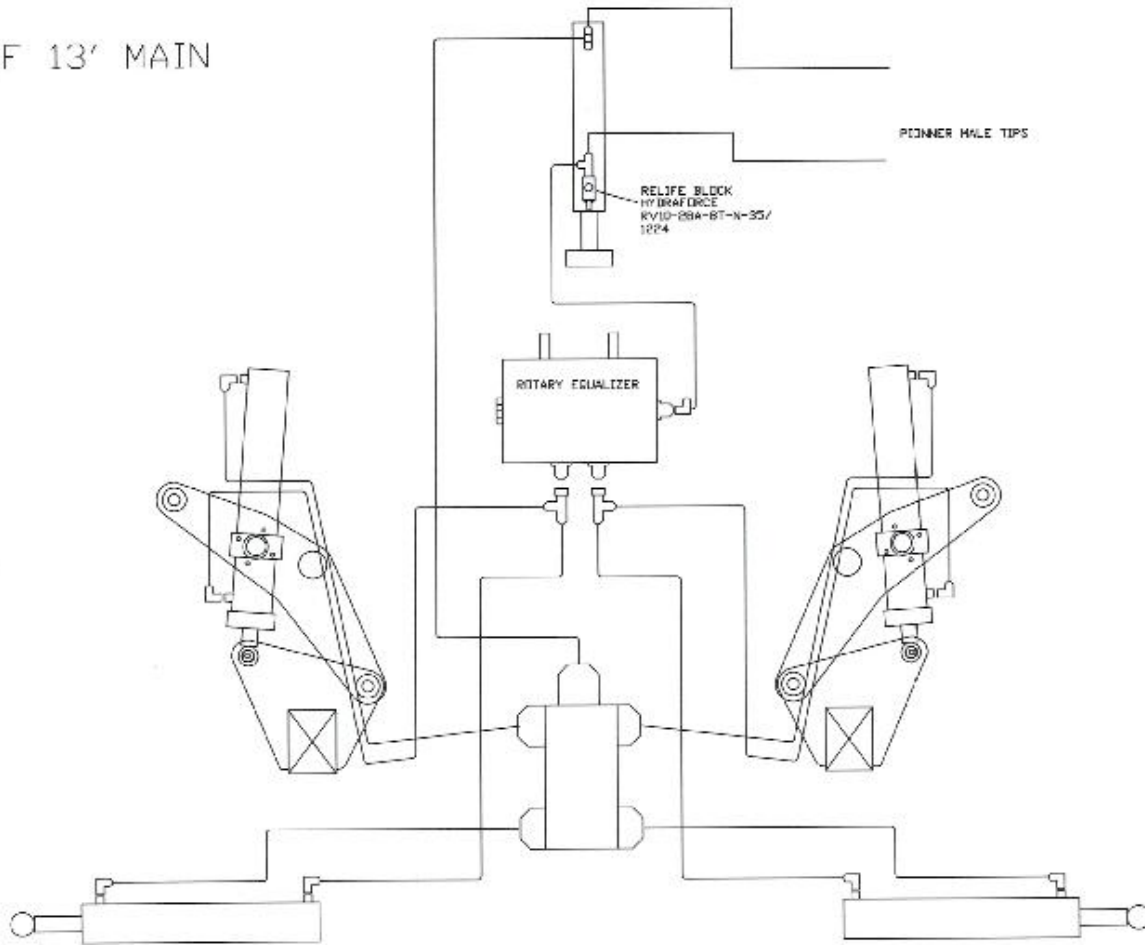
DF Assembly Drawing 3

MAIN CYLINDER ASSEMBLY



DF Assembly Drawing 4

DF 13' MAIN



Prior to Operation

Safety Information for Land Rollers

- Read and understand Operators Manual before using machine.
- Tractor size-minimum of 2 hp per foot of roller width
- Ensure all safety devices and shields in place before using machine
- Keep hands, feet, hair and clothing clear from moving parts
- Turn off power supply, set parking brake and wait for all moving parts to stop before serving machine
- Lower Land Roller into field position, chock tires to prevent movement and relieve any pressure from hydraulic system before serving machine.
- After initial assembly of the land Roller, inspect the entire machine to ensure all fasteners are secure.
- Check all grease fittings and grease machine
- Check that tires are properly inflated.

Unfold from Transport to Field Position

- Land roller must be hooked to tractor prior to raising or lowering wings
- Tractor and land Roller must be in a firm level area clear of people and objects to unfold
- Un-hook auto locks, if supplied
- Do not allow any person to stand near the Land Roller when folding or unfolding
- Do not raise or lower land roller when implement is moving.
- Activate the lift cylinder hydraulic valve. Lower the machine completely to the ground; fully retract lift cylinders so wheels rise off the ground. Lower wings first for X-fold models only.

Fold from Field to Transport Position

- Land roller must be hooked to tractor prior to raising or lowering wings
- Do not allow any person to stand near the Land Roller when folding or unfolding
- Do not raise or lower land roller when implement is moving.
- Do not attempt to raise machine to transport position if dirt or mud has built up on rollers, or if the weight has been increased by other means
- Activate the lift cylinder hydraulic valve raising wings off the ground.

Transporting

- Follow steps required to fold land roller from Field to Transport position
- Tow at a safe speed. Use caution when turning corners or meeting traffic.
- Use safety chain between tractor drawbar and implement when transporting on public roads
- Use safety lights when transporting on a public road
- Be aware of any overhead powers lines or any other overhead objects

Un-Hooking

- Ensure the land roller is fully in field position or transport position and not between the two
- Tractor and land roller must be in a firm level area
- Chock implement to prevent any movement after hitch pin is removed
- Position jack and extend to desired height.
- Remove hitch pin, disconnect hydraulic hose, wiring harness and safety chains.

Maintenance

- Turn off power supply, set parking brake and wait for all moving parts to stop before serving machine.
- Lower Land Roller into field position, chock tires to prevent movement and relieve any pressure from hydraulic system before serving machine.
- Grease wing and hitch pivots.
- Check Hydraulic system for leaks.
- Check wheel nuts and torque to the recommended amount of 115-125 ft pounds of torque for all models.
- Check tire pressure and wheel bearings.
- Check tightness all hardware.
- Grease roller bearings.
- Replace any damaged or worn parts.

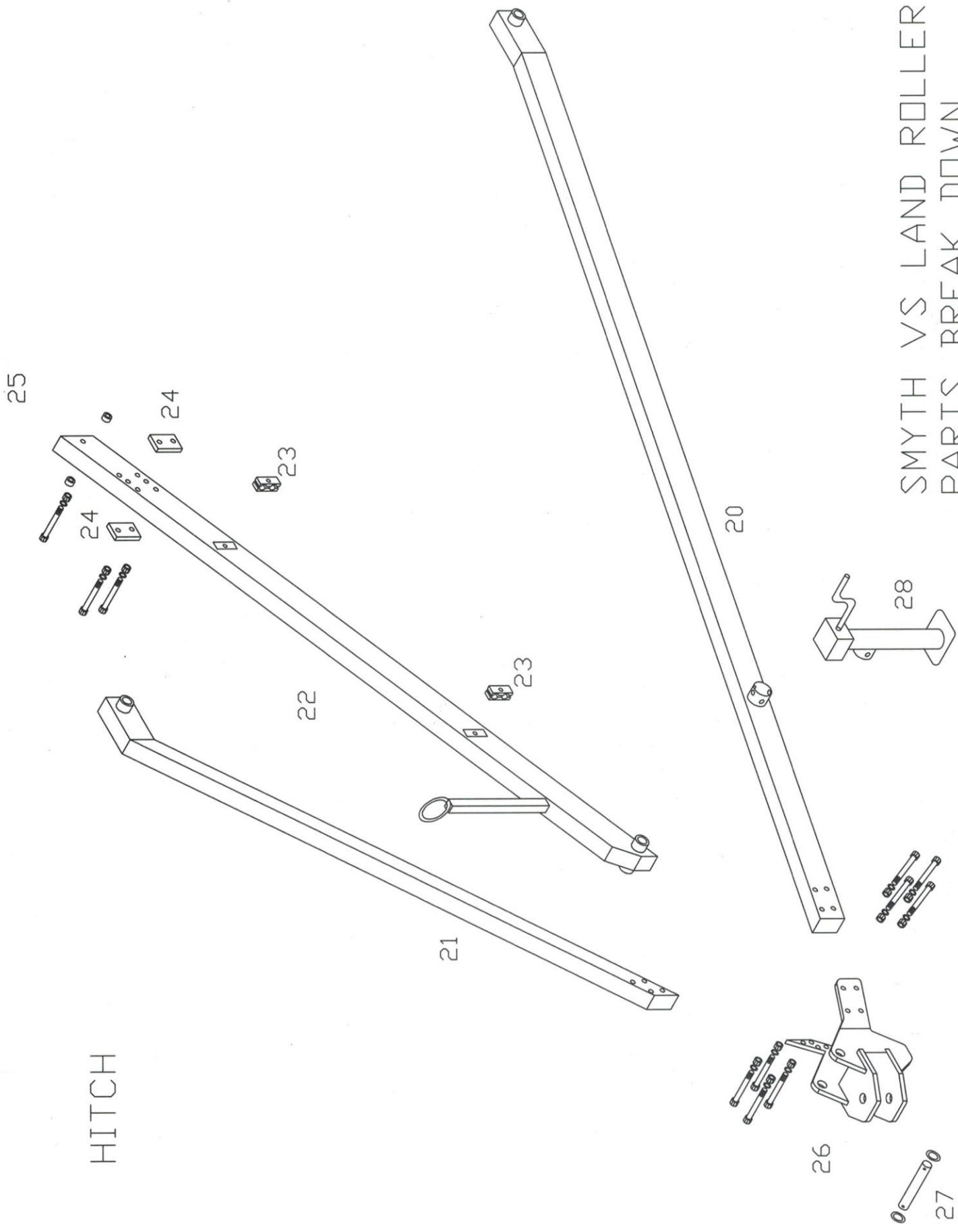
Storage

- Ensure the land roller is fully in field position or transport position and not between the two.
- Tractor and land Roller must be in a firm level area.
- Chock implement to prevent any movement after hitch pin is removed.
- Position jack and extend to desired height.
- Remove hitch pin, disconnect hydraulic hose, wiring harness and safety chains.
- Remove any excess dirt and grease from Land Roller.
- Grease all fittings.

VS Parts Breakdown

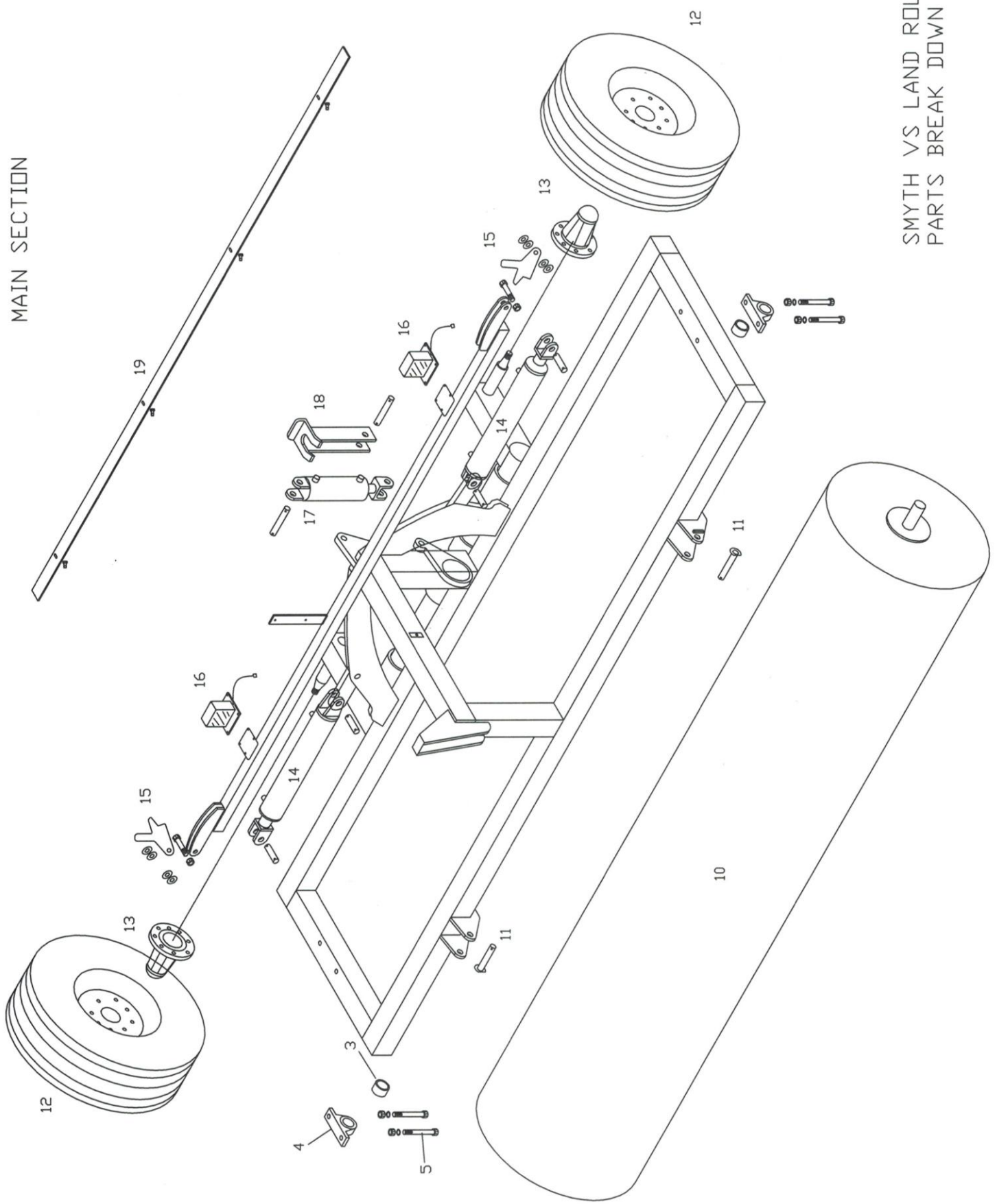
- 1-Wing Drum
- 2-Scraper & Hardware
- 3-Spacer
- 4-Bearing
- 5-Bearing Bolts
- 6-Right/Left Wing
- 7-Wing Hinge Pin
- 8-Machine Washer
- 9-Roll Pins
- 10-Main Drum
- 11-Hitch Pins
- 12-Wheel Assembly
- 13-Hub Assembly
- 14-Wing Cylinders
- 15-Auto Latch & Hardware
- 16-Lights
- 17-Lift Cylinders
- 18-Lift Lock up
- 19-Scraper & Hardware
- 20-Left Hitch Arm
- 21-Right Hitch Arm
- 22-Center Hitch Arm
- 23-Hose Clamps
- 24-Stoppers & Hardware
- 25-Stopper Bushings & Hardware
- 26-Hitch Clevis Assembly & Hardware
- 27-Center Hitch Pin
- 28-Jack Stand

HITCH



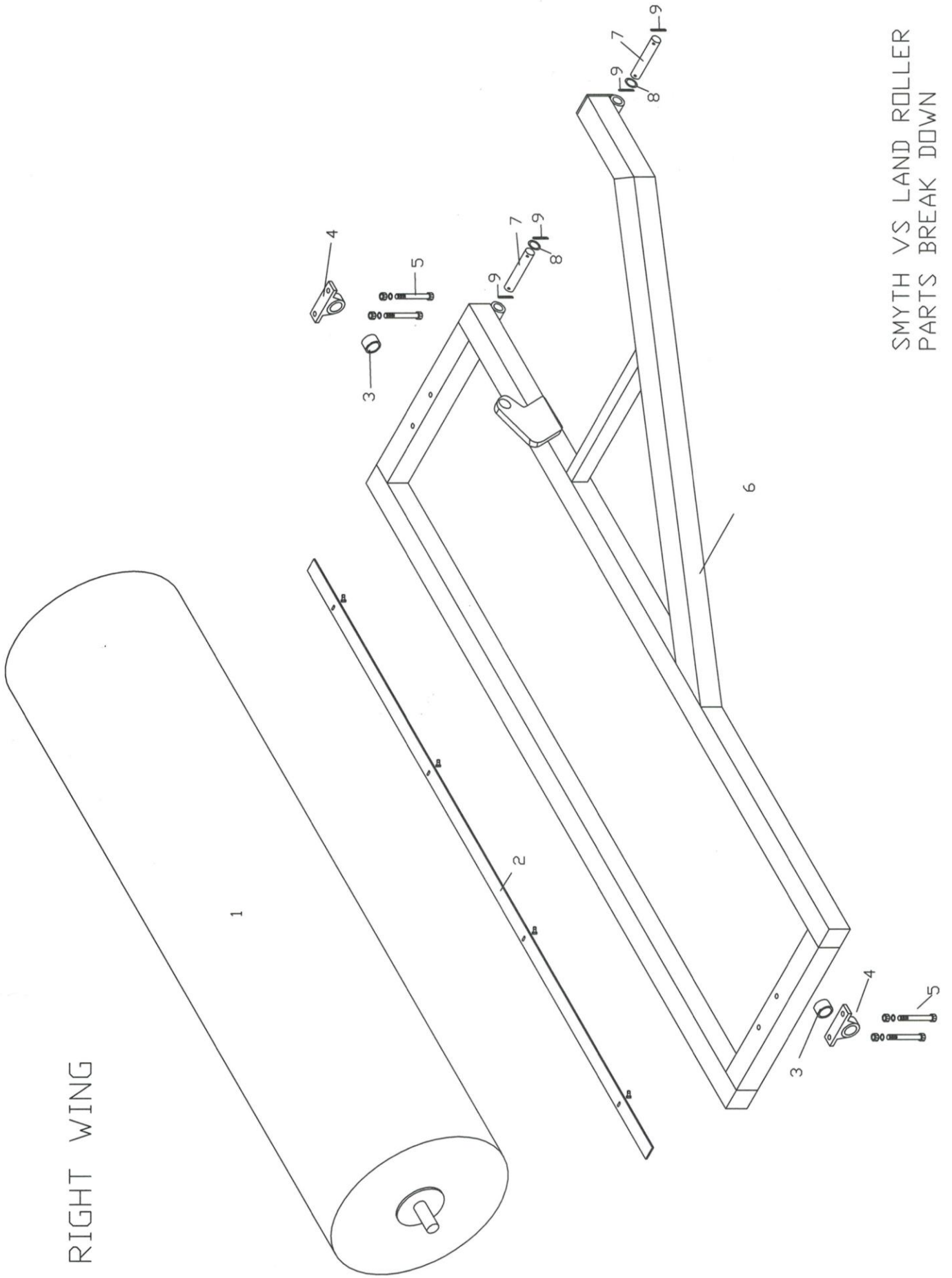
SMYTH VS LAND ROLLER
PARTS BREAK DOWN

MAIN SECTION



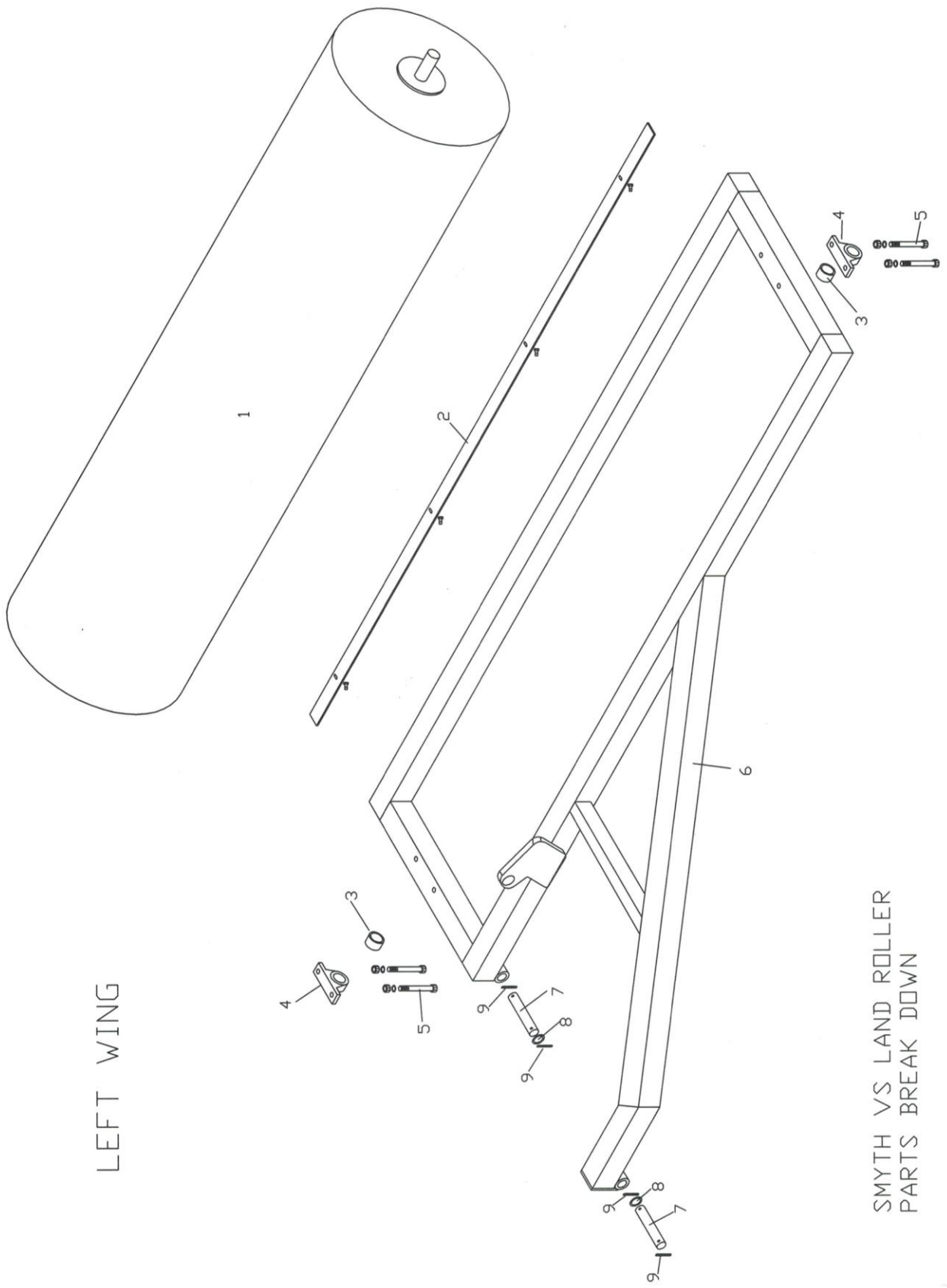
SMYTH VS LAND ROLLER
PARTS BREAK DOWN

RIGHT WING



SMYTH VS LAND ROLLER
PARTS BREAK DOWN

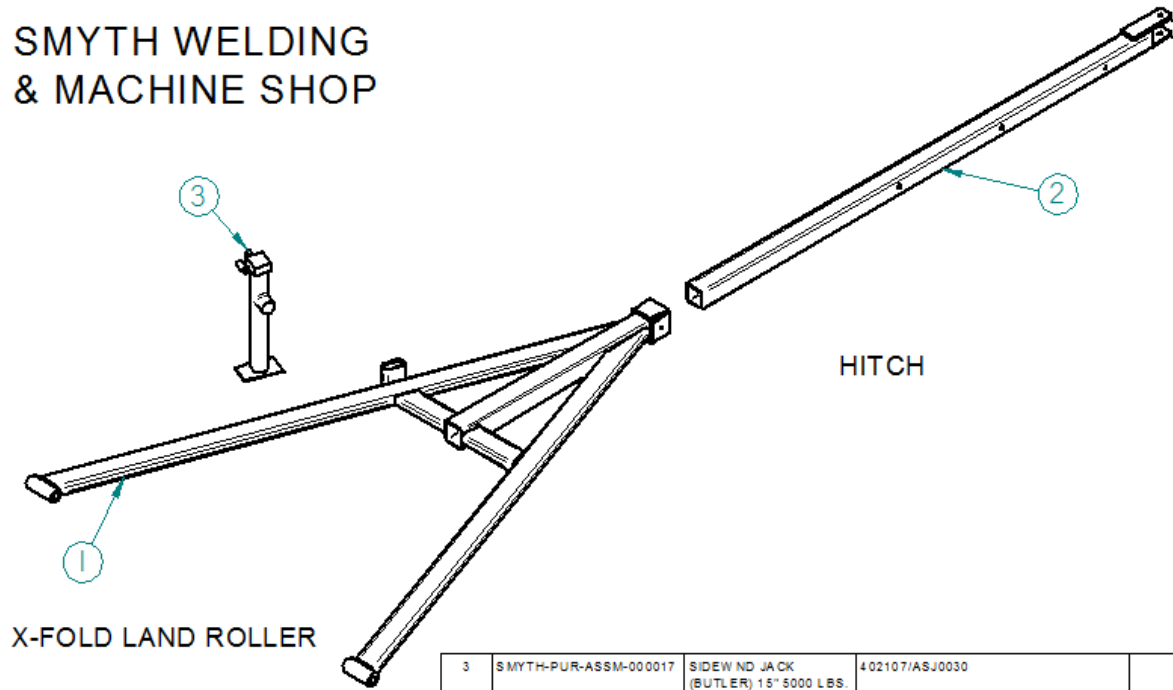
LEFT WING



SMYTH VS LAND ROLLER
PARTS BREAK DOWN

X-Fold Parts Break down

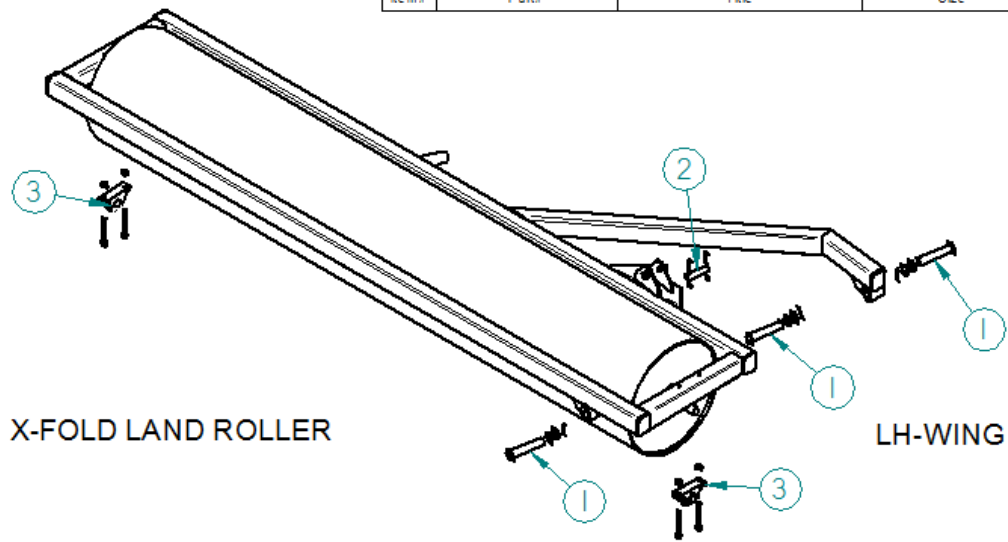
SMYTH WELDING
& MACHINE SHOP



3	SMYTH-PUR-ASSM-000017	SIDEW ND JACK (BUTLER) 15" 5000 LBS.	4 02107/ASJ0030		1
2	SMYTH-MAN-ASSM-000013	HITCH	SEE DETAIL DWG.		1
1	SMYTH-MAN-ASSM-000012	TO NG UE	SEE DETAIL DWG S.		1
Item#	Part#	Title	Size	Material	Qty

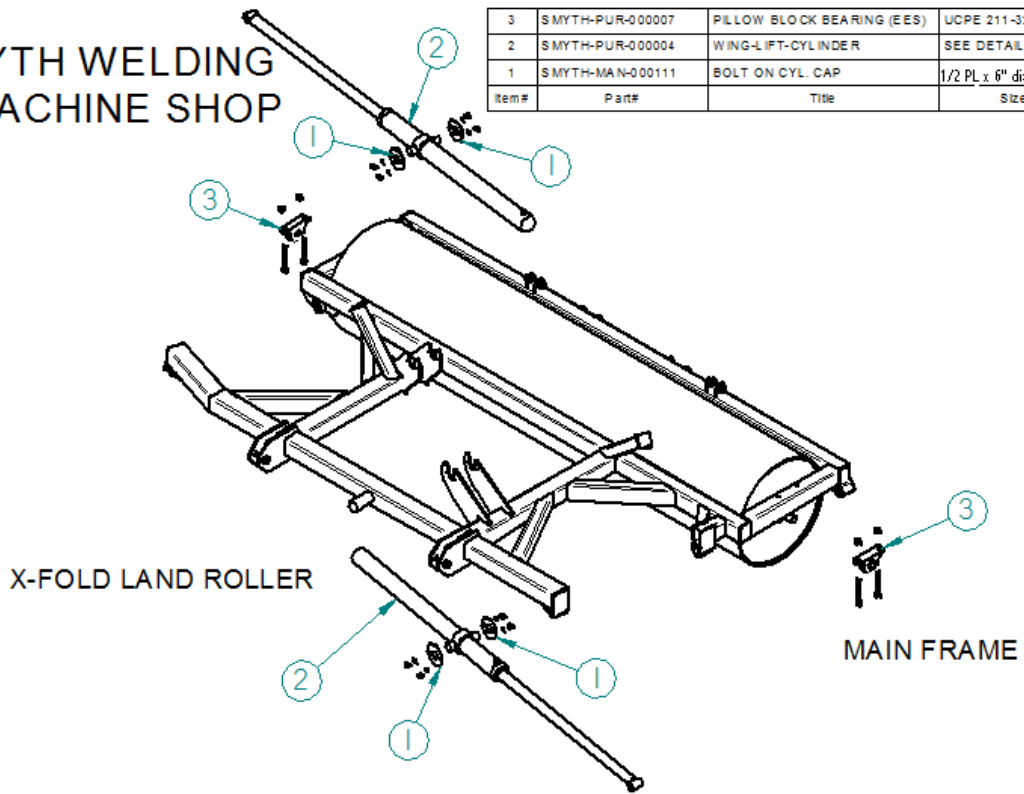
SMYTH WELDING & MACHINE SHOP

3	SMYTH-PUR-000007	PILLOW BLOCK BEARING (EES)	UCPE 211-32	PUR.	2
2	SMYTH-MAN-000132	PIN (WING-LIFT)	1-1/2"DIA. x 6-1/8"LG.	CR STEEL	1
1	SMYTH-MAN-000123	PIN	2"DIA. x 9-1/2"LG.	CR STEEL	3
Item#	Part#	Title	Size	Material	Qty



SMYTH WELDING
& MACHINE SHOP

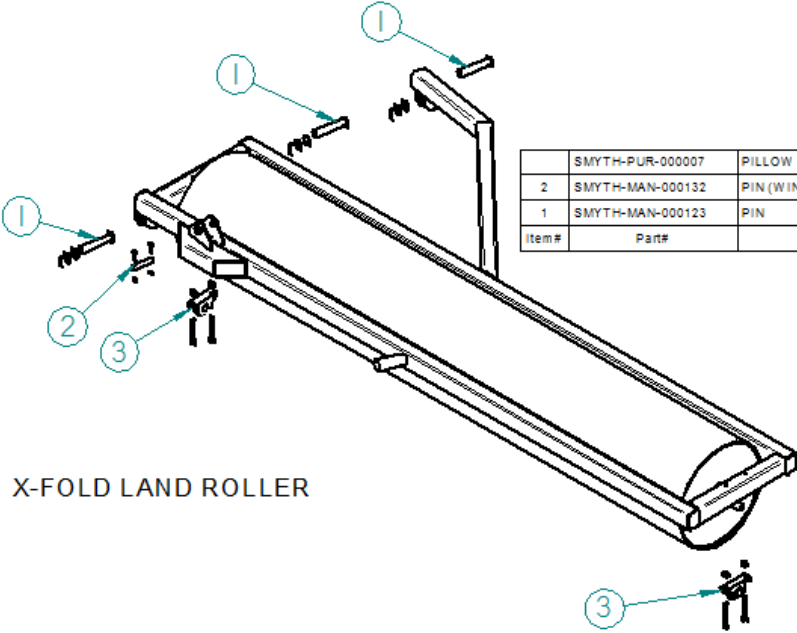
3	SMYTH-PUR-000007	PILLOW BLOCK BEARING (EES)	UCPE 211-32	PUR.	2
2	SMYTH-PUR-000004	WING-LIFT-CYLINDER	SEE DETAIL DWG.	PUR.	2
1	SMYTH-MAN-000111	BOLT ON CYL. CAP	1/2 PL x 6" dia	STEEL	4
Item#	Part#	Title	Size	Material	Qty



X-FOLD LAND ROLLER

MAIN FRAME

SMYTH WELDING & MACHINE SHOP



	SMYTH-PUR-000007	PILLOW BLOCK BEARING (EES)	UCPE 211-32	PUR.	2
2	SMYTH-MAN-000132	PIN (WING-LIFT)	1-1/2" DIA. x 6-1/8" LG.	CR STEEL	1
1	SMYTH-MAN-000123	PIN	2" DIA. x 9-1/2" LG.	CR STEEL	3
Item#	Part#	Title	Size	Material	Qty

X-FOLD LAND ROLLER

RH WING

