MINI GRAPPLES
OWNER'S MANUAL

MIGR: MINI GRAPPLE, MOGR: MULTI ONE MINI GRAPPLE
MIGB: MINI GRAPPLE BUCKET

Owner _____

Date Purchased _____/_____/_____

Model # MIGR, MOGR, MIGB

SERIAL #_____

Revision 5 - 11/20 **MAN-MIGR/MOGR/MIGB**

Phone: 800-899-3580
Fax: 920-349-3081

Berlon Industries, LLC
331 Riverview Dr., Hustisford, WI 53034

TABLE OF CONTENTS

PREFACE.....3
General Comments, Before Operation, Safety Alert Symbol, Parts and Service, Sound and Vibration.

SAFETY PRECAUTIONS
SAFETY STATEMENTS.....4
GENERAL SAFETY PRECAUTIONS.....4
EQUIPMENT SAFETY PRECAUTIONS.....6

INSTALLATION AND OPERATION
Assembly, Attaching, Warning.....7
Detaching.....7
Operation.....7

MAINTENANCE
Main Pivot Grease Fitting.....8

DECALS
Importance & Replacing Safety Decals.....8

REPLACEMENT PARTS
Items #, Parts Name, & Parts Number.....9

HYDRAULIC HOSE DIAGRAMS.....10

SPECIFICATIONS
Item size and weight.....11

WARRANTY AND REGISTRATION
Product Warranty and Registration.....12

PREFACE

GENERAL COMMENTS

Congratulations on the purchase of your new product! This product was carefully designed and manufactured to give you many years of dependable service. Limited maintenance (mainly cleaning and lubricating) is required to keep it in top working condition. Always observe all maintenance procedures and safety precautions in this manual. Also be aware of any safety decals located on the product and on any equipment on which the attachment is mounted.

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with its contents.

WARNING: Never allow anyone to operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual. When parking the machine, always choose hard level ground and set the parking brake prior to exiting the machine so the unit cannot roll.

Unless noted otherwise, right and left sides are determined from the operator's control position when facing forward.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer to obtain further assistance. Keep this manual available for reference. Provide the manual to any new owners and/or operators.

SAFETY ALERT SYMBOL

<u>WARNING</u>: This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of potential hazards that can cause serious injury or death. Be sure to read all warnings carefully, they are included for your safety and for the safety of others working with you.

PARTS AND SERVICE

Use only manufacturer replacement parts. Aftermarket or substitute parts may not meet the required standards.

Record the model number of your unit on the cover of this manual. This will assist our parts department to insure that you receive the proper parts for your particular product.

SOUND AND SERVICE

Sound pressure levels and vibration data for this attachment are influenced by many different parameters: some items are listed below (not inclusive):

- prime mover type, age, condition, with or without cab enclosure and configuration
- operator training, behavior, stress level
- job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is not possible to get precise machine and operator sound pressure levels or vibration levels for this attachment.

SAFETY STATEMENT

THIS SYMBOL BY ITSELF OR WITH THE WORD "WARNING" IN THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS THAT ARE VITAL TO YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

DANGER — **THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.**

WARNING — **THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.**

CAUTION — **THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY.**

NOTICE — **NOTICE IS USED TO ADDRESS PRACTICES NOT RELATED TO PHYSICAL INJURY.**

GENERAL SAFETY PRECAUTIONS

WARNING!

READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL.**

READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow best work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions, and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact **including ROPS/FOPS (Roll Over/ Fall Off Protection System).** Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn or hard to read.
Contact Berlon or your dealer if you need to replace decals.

GENERAL SAFETY PRECAUTIONS

WARNING!

DO NOT MODIFY MACHINE OR ATTACHMENTS

Modifications of the attachment may weaken the structural integrity or impair the function, life expectancy, performance or safety of the attachment. If repairs are needed use only the manufacturer's original parts following manufacturer's instructions.

WARNING!

LOWER OR SUPPORT RAISED EQUIPMENT

Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or on solid material. Lower booms and attachments to the ground before leaving the cab or operator's station.

WARNING!

PROTECT AGAINST FLYING DEBRIS

Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

WARNING!

END OF LIFE DISPOSAL

Upon completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (metals, rubber, plastic, etc.). Follow all local, state, and federal regulations for recycling as well as for disposal of fluids.

EXPOSURE TO CRYSTILLINE SILICA DUST

It is recommended to use dust suppression, dust collection and personal protective equipment during the operation of any attachment that may cause high levels of dust (sweeping, grinding, etc.).

CALIFORNIA PROP 65 WARNING

This product may contain a chemical known to the state of California to cause cancer, birth defects or other reproductive harm. www.p65warnings.ca.gov

WARNING!

SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.
- Prior to welding/repairing product, sand paint off area to be welded and wear proper safety equipment such as safety glasses and an approved respirator. Wait until part is cool to touch up paint.

WARNING!

USE CAUTION WITH HYDRAULIC FLUID PRESSURE

Hydraulic fluid under pressure can penetrate the skin causing serious injury or death. Leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime mover's operator manual for instructions on connecting, disconnecting, and inspecting hydraulic hoses and fittings.

- Keep unprotected body parts as far away as possible from a leak.
- Wear safety glasses or face shield, gloves, and protective clothing covering arms and legs when searching for and repairing hydraulic leaks.
- Use a piece of wood, cardboard or similar to search for leaks instead of feeling or looking for it with your hands.
- If injured by hydraulic fluid, see medical assistance immediately. Skin or flesh injected with hydraulic fluid can quickly become septic or cause disabilities.

WARNING!

SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operator's position.
- Never leave equipment unattended with the engine running, or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

EQUIPMENT SAFETY PRECAUTIONS

WATCH OUT FOR UTILITIES

Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as, any other hazard you may encounter.

WARNING!

OPERATING THE UNIT

- Do not exceed the lifting capacity of your prime mover.
- Operate only from the operator's station.
- When traveling on rough terrain, reduce speed to avoid "bouncing". Loss of steering may result.
- When operating on slopes, drive up and down, not across. Avoid steep hillside operation, which could cause the prime mover to overturn.
- Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- Before exiting the prime mover, lower the attachment to the ground, apply the brakes, turn off the prime mover's engine and remove the key.
- Do not lock the auxiliary hydraulics of your prime mover in the "ON" position.
- Do not use the top of this product as a step. Under certain conditions this area can be slippery.

WARNING!

TRANSPORTING THE UNIT

- When transporting on a trailer: Secure attachment using tie down accessories that are capable of maintaining attachment stability.
- When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.
- Do not drive close to ditches, excavations, etc., as a cave in could result causing serious injury or death.

INSTALLATION AND OPERATION

ATTACHING

Install attachment by following the instructions in your loader operator's manual for installation of an attachment. The attachment includes a hydraulic cylinder and 2 hoses attached. Standard models use male/female flat faced couplers. Multi-One models use a single connector that secures both hoses (see hose diagram and replacement parts list).

WARNING!

MAKE SURE THAT THE ATTACHMENT IS SECURELY LATCHED TO THE ATTACHMENT MECHANISM OF YOUR LOADER. FAILURE TO DO SO COULD RESULT IN ATTACHMENT SEPARATION WHICH COULD LEAD TO SERIOUS INJURY OR DEATH.

DETACHING

With your machine on level ground, lower the arms of the loader making sure that the attachment is on the ground. Follow the loader operator's manual instructions for removing an attachment.

OPERATION

- Run the loader's engine at idle to engage the hydraulic cylinders that move the grapple arms.
- Increase engine rpm to desired operating speed.
- Reduce rpm to idle before disengaging remote hydraulics.
- Open the grapples to empty the bucket or to approach load.
- When bucket is empty tip bucket forward to allow cutting edge to touch ground and drive forward to pile of material to fill bucket.
- Close grapples to secure load.
- Always travel straight up or down and incline, keeping the load uphill from the prime mover.
- Always keep the weight of the load centered in the bucket (this may not be the center of the load's length).
- Minimize how much of the load overhangs the sides of the bucket in order to prevent tipping of the prime loader.
- DO NOT drive with load more than 6" (150mm) off the ground in order to ensure loader stability.
- DO NOT use grapple claws to crush debris or break logs, etc.
- DO NOT use to pick up round bales.
- Berlon Industries, LLC is not responsible for damages to product or other due to misuse of attachment.

VERMEER MINI SKID STEERS

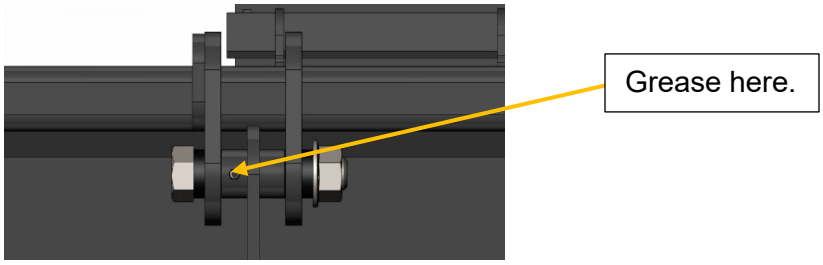
- Vermeer mini skid steer models with decal shown are designed for use with this attachment. There may be some machine models approved without this symbol. The list of machines, authorized when this manual was published are: CTX50, S450TX, CTX100 AND CTX160. Contact your Vermeer dealer or visit www.vermeer.com for the latest chart of authorized attachments. The mini skid steer manufacturer must authorize use of this attachment.

REGULAR MAINTENANCE

Regular maintenance includes the greasing of the machine in 2 locations (One per each claw pivot). The locations are highlighted by yellow grease decals.

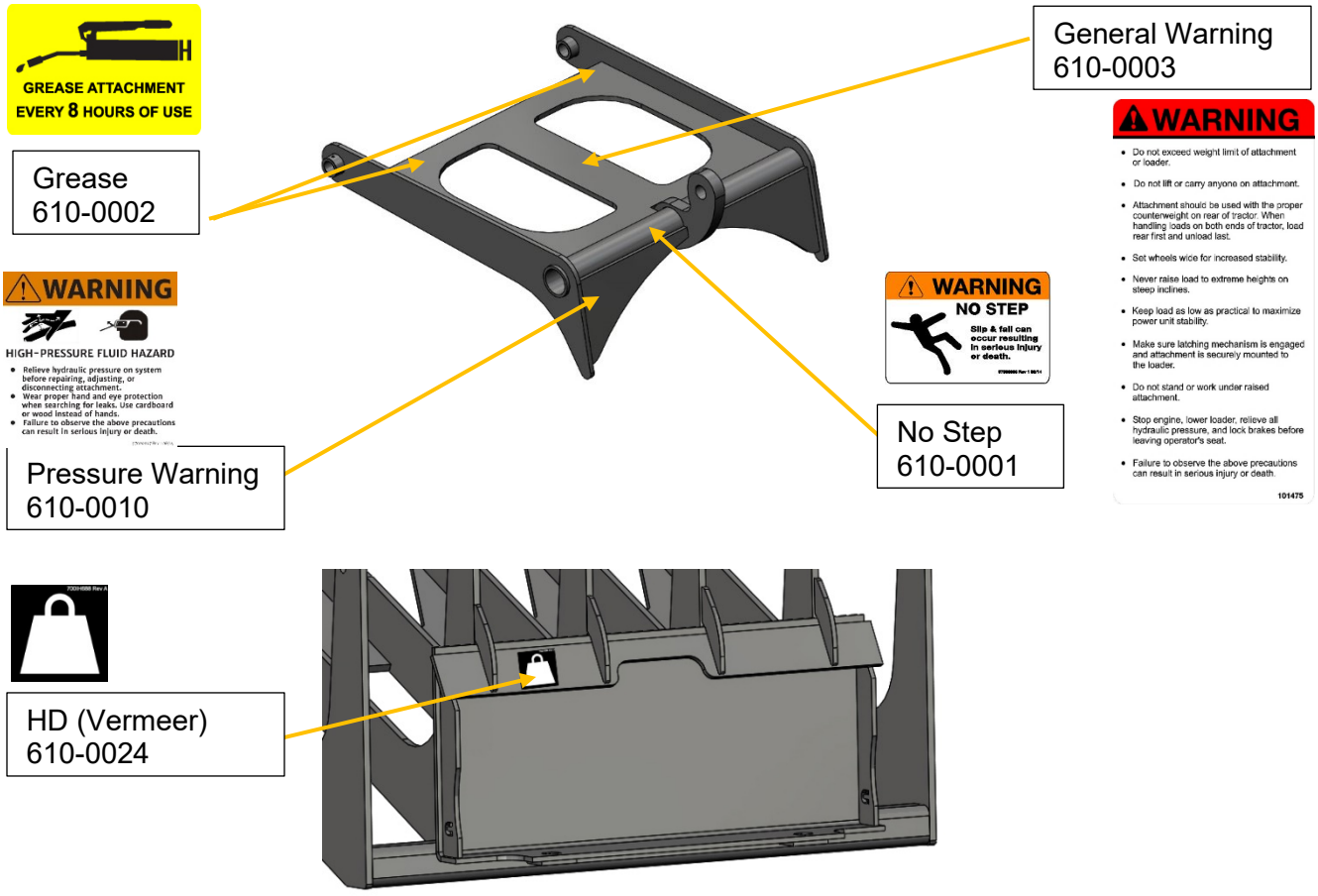
Inspect the unit for damage such as a bent or scratched cylinder shaft, or bent claw. Do not use if cylinder shaft is bent.

Inspect for leaking hydraulic lines and fittings. Do not use until leaks are repaired.



DECALS

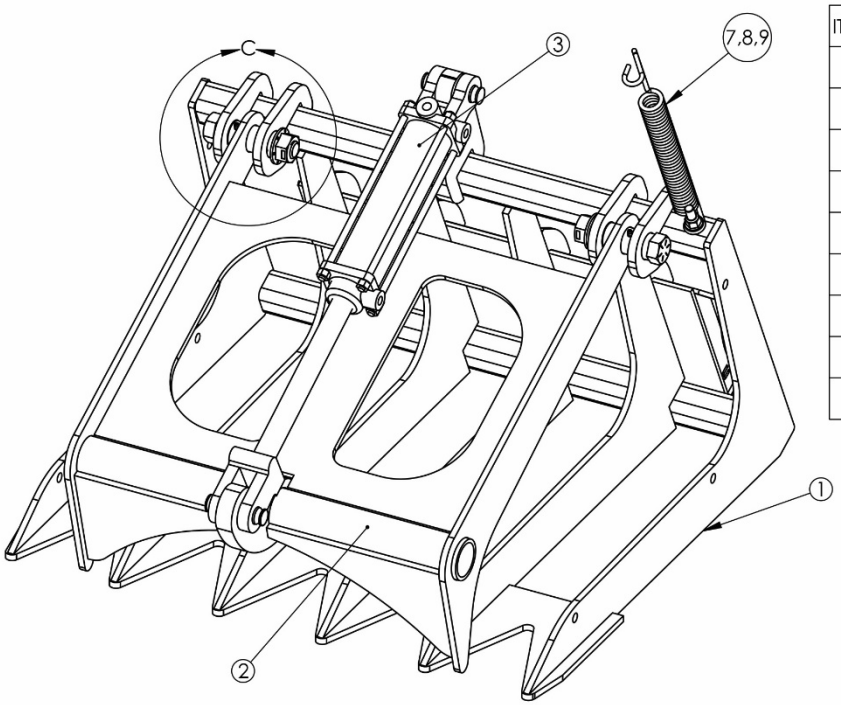
IMPORTANT: Keep all safety decals clean and legible. Replace all missing, illegible, or damaged safety decals. When replacing parts with safety decals attached, the safety decals must also be replaced. Safety decals are available, free of charge, from your local dealer or Berlon Industries, LLC.



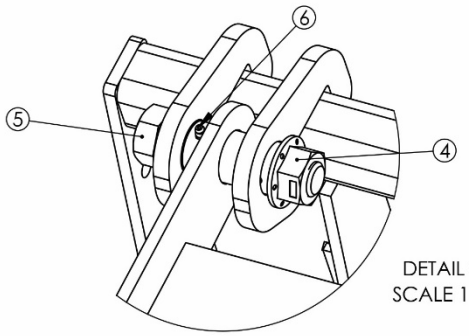
REPLACING SAFETY DECALS: Clean the area of application with nonflammable solvent, then wash the same area with soap and water. Allow the surface to fully dry. Remove the backing from the safety decal, exposing the adhesive surface. Apply the safety decal to the position shown in the diagram above

and smooth out any bubbles.

REPLACEMENT PARTS : MIGR/MOGR

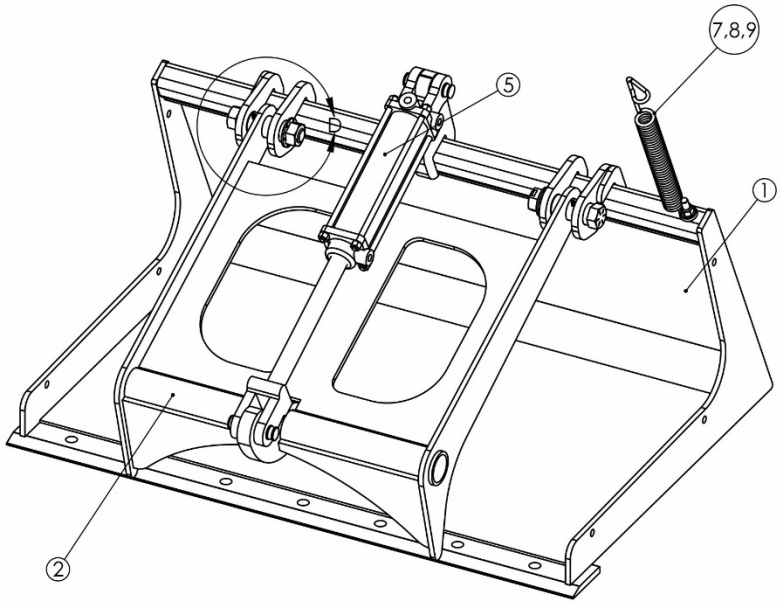


ITEM	PART #	DESCRIPTION	QTY.
1	MIGR FRAME	MIGR FRAME	1
2	103-0203	MIGR CLAW	1
3	580-0007	2508 CYLINDER	1
4	510-0084	1-8 LOCK NUT DIST THREAD	2
5	510-0081	1-8 x 4.75" HHCS GR8	2
6	510-0031	GREASE ZERK 1/4-28 SAE LT	2
7	570-0009	Hose Saver Spring	1
8	510-0300	1/2 SAE FW	1
9	510-0220	1/2-13 NYLOCK	1

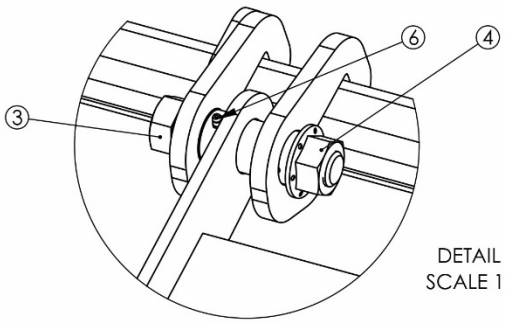


DETAIL C
SCALE 1 : 4

REPLACEMENT PARTS : MIGB



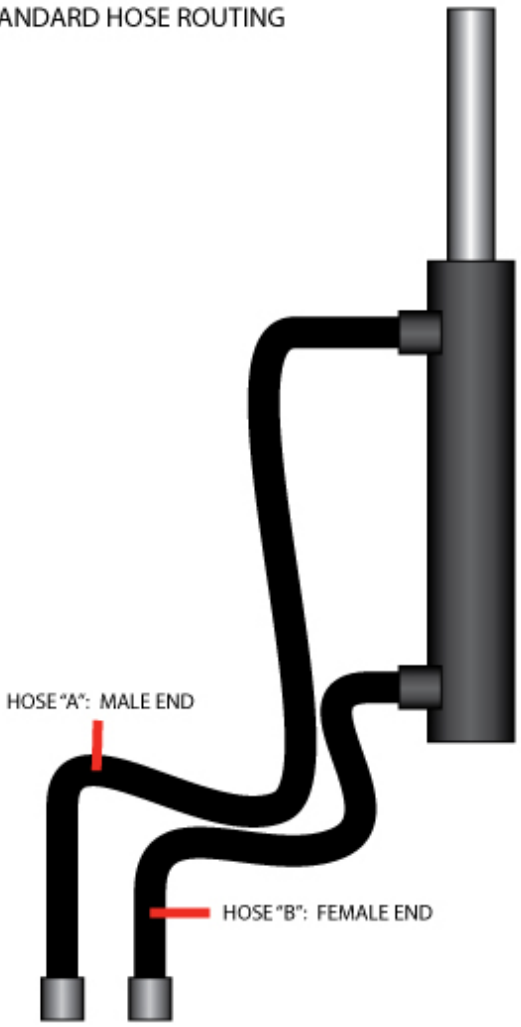
ITEM	PART #	DESCRIPTION	QTY.
1	103-0212	MIGB BODY 42	1
2	103-0203	MIGR CLAW	1
3	510-0081	1-8 x 4.75" HHCS GR8	2
4	510-0084	1-8 LOCK NUT DIST THREAD	2
5	580-0007	2508 CYLINDER	1
6	510-0031	GREASE ZERK 1/4-28 SAE LT	2
7	570-0009	Hose Saver Spring	1
8	510-0300	1/2 SAE FW	1
9	510-0220	1/2-13 NYLOCK	1



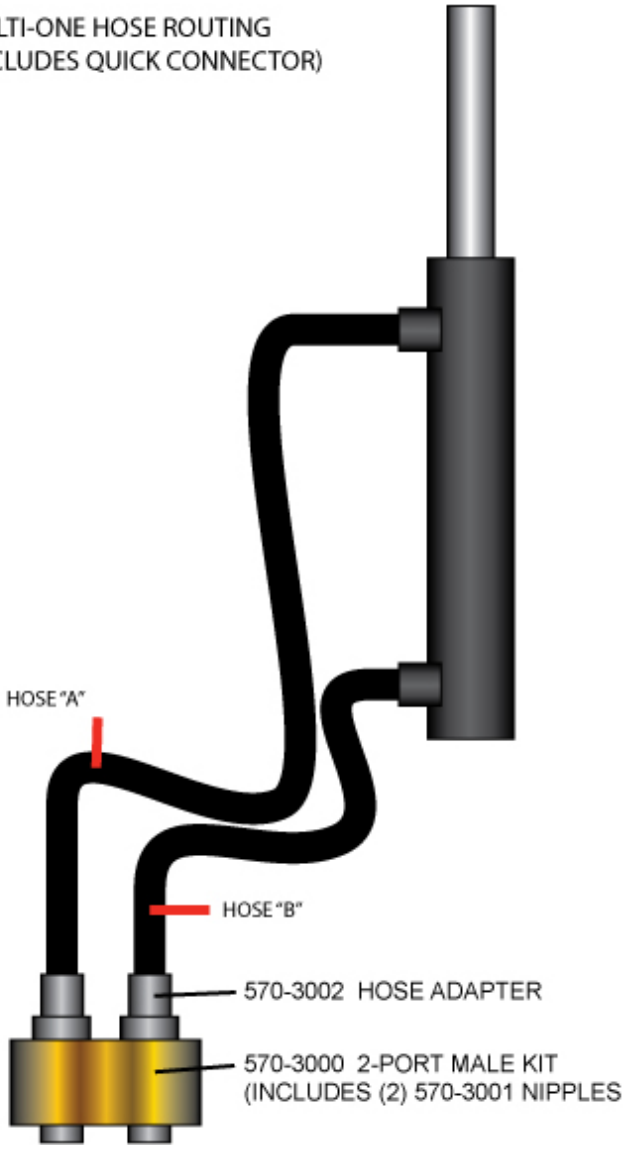
DETAIL D
SCALE 1 : 4

HOSE ROUTING DIAGRAMS

STANDARD HOSE ROUTING



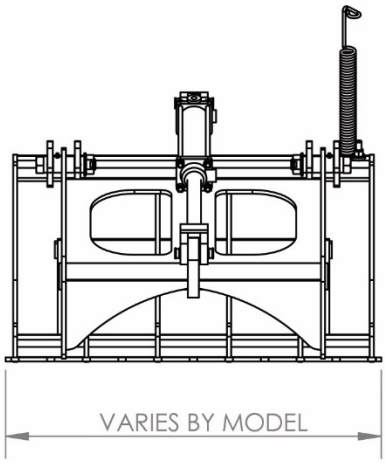
MULTI-ONE HOSE ROUTING
(INCLUDES QUICK CONNECTOR)

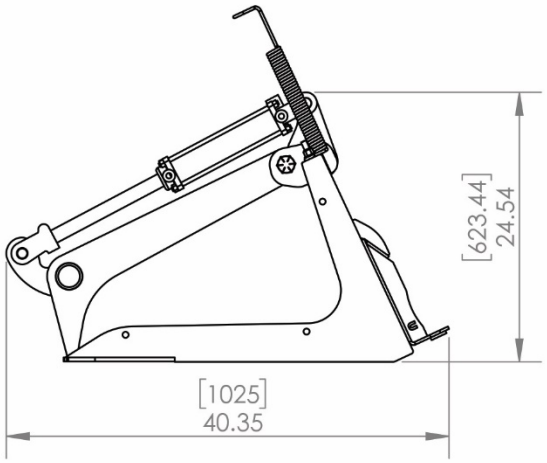


SPECIFICATIONS

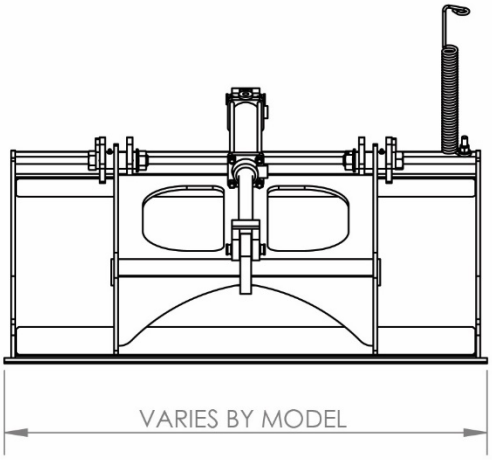
	MIGR/MOGR	MIGB
WEIGHT	260-351 LB (118-159 KG)	280-370 LB (127-168 KG)
GRAPPLE OPENING	36” (914)	36” (914)
HYDRAULIC CYLINDER	3000PSI MAX	3000PSI MAX
MAX CAPACITY (DO NOT EXCEED PRIME MOVER CAPACITY)	1600 LB (726 KG)	1600 LB (726 KG)

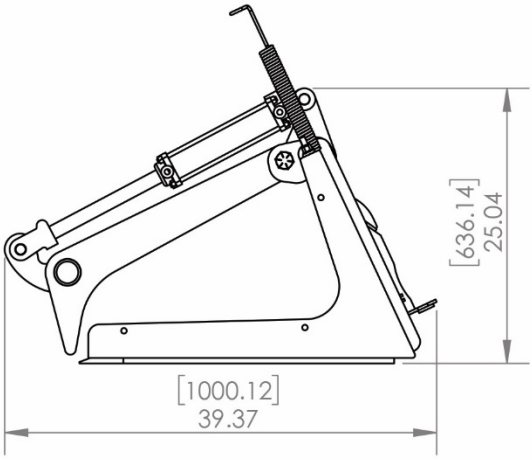
MIGR/MOGR





MIGB





WARRANTY

MANUFACTURER'S LIMITED WARRANTY
Berlon Industries' manufactured products are warranted to the original purchaser. To provide you with the most current warranty information, Berlon Industries' Warranty, Warranty Claim Form are located on the Berlon Industries website: www.berlon.com/warranty.

PRODUCT REGISTRATION

REGISTERING BERLON PRODUCT
Upon receipt of your Berlon Industries product please register it online: www.berlon.com/product-registration.

Be sure to have the product's model name and serial number which is found on the serial tag located on the back of the product. Information entered is solely for warranty usage only, is kept confidential, and is not shared with any other parties.