



GTX

**OPERATIONS AND
MAINTENANCE MANUAL
FOR MILLER SYSTEM**



INTRODUCTION

This manual outlines Miller's recommended operating and maintenance procedures for your GTX quick hitch to ensure operations are performed safely and meet industry standards. All machine operators should be fully trained on the operational procedures of the hitch before use and should fully comply with the guidance provided by Miller.

The operations manual outlines periodic maintenance and safety critical checks which should be followed to ensure trouble free use and long operating life of your Miller hitch.

As an important component within the excavator system, due care and adherence to these checks should be taken at all times during operation, service and planned maintenance in order to respect the risk to personnel and costly damage to assets.

This guide should be made available for reference to all operators before working with our GTX quick hitch. It can also be viewed on our website at www.millergroundbreaking.com.

If you have any doubts, or enquiries relating to your Miller GTX quick hitch, please get in touch with our Customer Support Team on +44 (0)1670 707 272 or email aftersales@millergroundbreaking.com and we will get back to you as soon as possible.

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DECLARATION OF CONFORMITY

As a world leader in quick hitch design and manufacture, below is a list of all standards where our quick hitch is compliant.

For further information or questions related to standards, please contact the Miller Customer Support Team on +44 (0)1670 707 272.

DECLARATION OF CONFORMITY FOR MILLER QUICK HITCHES

These standards include:

ISO 13031: 2016 / AS 13031: 2023	Earth-Moving Machinery – Quick Couplers Safety
EN 474-5: 2022	Earth-Moving Machinery — Safety. Part 5: Requirements for Hydraulic Excavators
EN ISO 12100: 2010	Safety of Machinery – Risk Assessment
EN ISO 12100: 2010	Safety of Machinery – Basic Concepts, General Principles for Design
BS EN ISO 9001: 2015	Manufactured Under ISO9001: 2015 Registered Quality Management System
NSW SafeWork WC01783: Revised June 2015	Supplying, Installing and Using Quick Hitches on Excavators or Backhoes

Miller declares the supply/manufacture of the GTX range is in conformity with the Machinery Directive 2006/42/EC, part A of Annex VII and the following standards:

Products which comply with these standards include:

- **Miller Powerlatch** Twinlocking Quick Hitch suitable for 3.5 tonne – 50 tonne excavators
- **Miller Powerlatch** Tilt Powerlatch Tilting Quick Hitch offers 180-degree tilt for 3.5 tonne - 20 tonne excavators
- **Miller GTS** Hydraulic Quick Hitch for 1 tonne - 6 tonne compact excavators
- **Miller GTX** Hydraulic Quick Hitch suitable for excavators from 8 tonne - 50 tonne
- **Miller GT Tilt** Compact Quick Hitch suitable for 1 tonne – 6 tonne mini excavators.

1.2 WORKING SAFELY WITH HITCHES

The following advice is provided to prevent injury to you or your personnel. It is important that only trained personnel operate and maintain the hitch following all safety regulations, procedures and precautions.

GENERAL SAFETY INFORMATION

Throughout the manual, safety warnings have been used. The below key identifies the nature of the warnings.

SYMBOLS		
WARNING		This symbol is used to indicate where injury or death is very likely to occur unless proper precautions are taken.
IMPORTANT		This symbol is used to highlight important safety information.

PPE REQUIREMENTS

**WARNING:** Do not wear loose fitting clothing, dangling jewellery or anything that could potentially catch on controls or moving parts of the machine. Long hair should also be tied back.

**IMPORTANT:** Please refer to onsite regulations for specific PPE requirements.

Personal Protective Equipment (PPE) should always be worn as a minimum requirement when operating or servicing a hitch or machine, Miller recommends the following is worn when operating or carrying out maintenance of the hitch.:

- ⁂ Hard hat
- ⁂ Hi vis jacket
- ⁂ Safety glasses
- ⁂ Safety boots - S3 rated or above
- ⁂ ISO Level E Cut resistant work gloves.



WARNINGS

COMPRESSED GAS



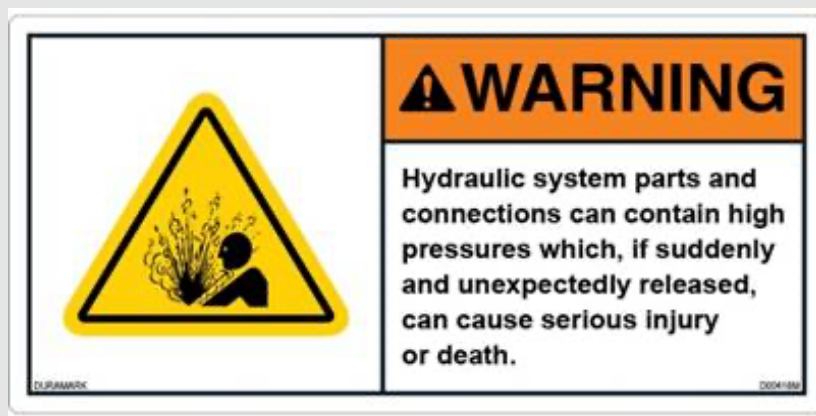
The GTX hitch hydro-pneumatic cylinder contains compressed gas and should not be disassembled or tampered with during the functional life of the quick hitch.

The Miller hydraulic hydro-pneumatic cylinder (RAM) is designed to be tamper-proof, disassembly should only be performed by Miller technical support. If you have any issues, please contact Miller for support.

All hydro-pneumatic cylinders on our GTX's (distributed post Sept 2024) will have this safety decal present on the hydro-pneumatic cylinder itself. Decals are also available free of charge to apply to hydro-pneumatic cylinders bought pre Sept 2024. Contact Miller for more information.

For any end of life support, refer to section 6.

HYDRAULIC FLUID



Never use your hands to search for hydraulic fluid leaks, use a piece of paper or cardboard. Escaping fluid under pressure can be invisible and can penetrate the skin and cause serious injury. If affected, seek medical attention.

WARNINGS

Hitch CONDITION



A defective hitch could injure you or others.

Never operate a hitch that is defective. Refer to section 4 for daily checks.

CONTROL SWITCH USAGE

The quick hitch control switch should only be in use when attaching or releasing attachments. When the control switch is engaged, the in-cab buzzer will sound. The sound and frequency may vary depending on OEM.

When not in operation, ensure the control switch is turned off. This ensures that the quick hitch control valve is not energised unnecessarily for extended periods of time. Incorrect usage will lead to a decrease in lifespan of the equipment.

TESTING

GAS STRUT



The GTX hydro-pneumatic cylinder utilises a gas strut (spring) which is a self-contained unit that requires no periodic maintenance or service beyond being kept clean and dry.

Repair of gas strut is not possible and gas struts should be replaced directly.

Please refer to routine check in section 4.1. for further advice and support.

The gas strut is an ISO compliant component in the hydro-pneumatic cylinder.



2.1 GTX PRODUCT OVERVIEW

The following section provides a description of the internal mechanisms and functionality of the GTX hitch.

Miller quick hitches have been designed to facilitate the easy changeover of standard buckets and work tools. The hitch can operate with a variety of machine manufacturers within the same size range.

Hydro-pneumatic cylinder

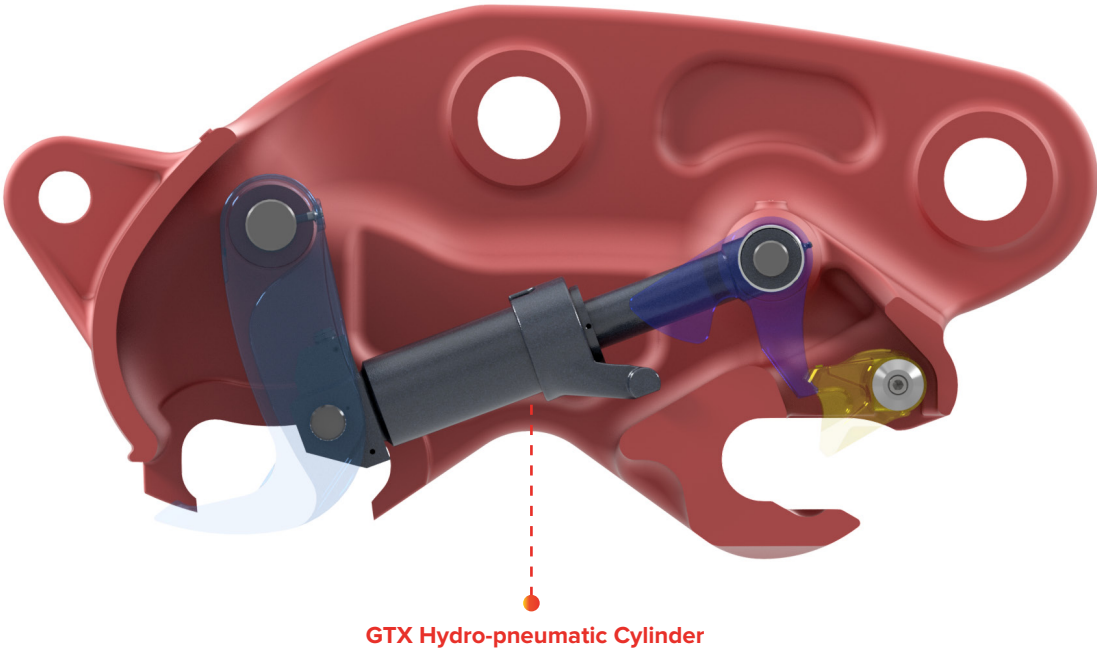
GTX hydro-pneumatic cylinders share a common design:

- Headstock oriented towards the hook.
- Actuates the hook through its full range of motion.
- Barrel extension actuates the latch actuator at the end of its retraction process.
- Fitted with a check valve.

PORTS

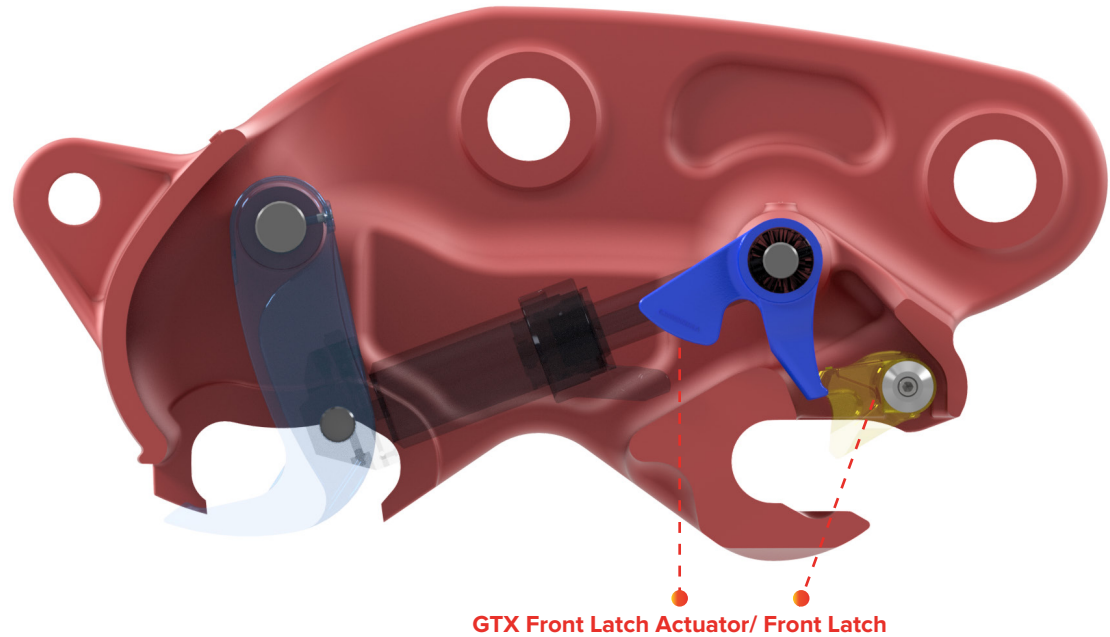
RANGE	PORT A (EXTENSION)	PORT B (RETRACTION)
R3	9/16-18 UNF	7/16-20 UNF
R4	9/16-18 UNF	7/16-20 UNF
R5	9/16-18 UNF	7/16-20 UNF
R6	9/16-18 UNF	7/16-20 UNF
R7	9/16-18 UNF	7/16-20 UNF
R8	9/16-18 UNF	7/16-20 UNF
R9	9/16-18 UNF	7/16-20 UNF

GTX Hydro-pneumatic cylinder Ports



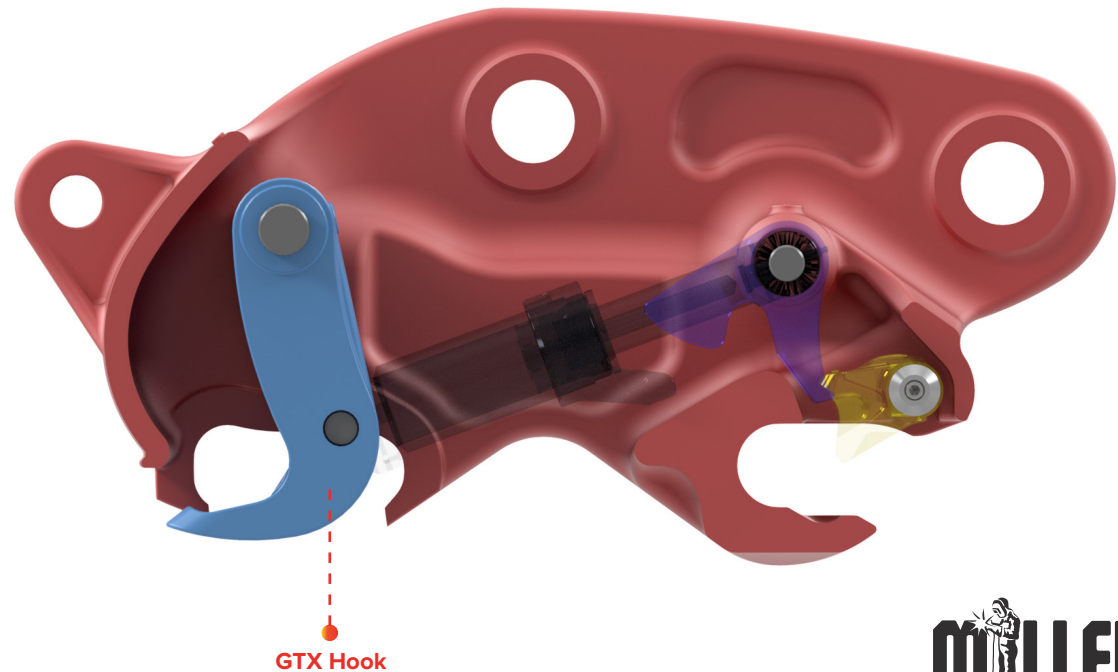
FRONT LATCH / LATCH ACTUATOR

- GTX front latches are mounted in the front of the hitch.
- A torsion unit spring locates the latch in a neutral position.
- The latch can rotate $\sim 30^\circ$ in either direction, but will spring back to its neutral position.
- The latch actuator is free moving, and serves to optimise the point at which the hydro-pneumatic cylinder actuates the front latch between open and closed position.

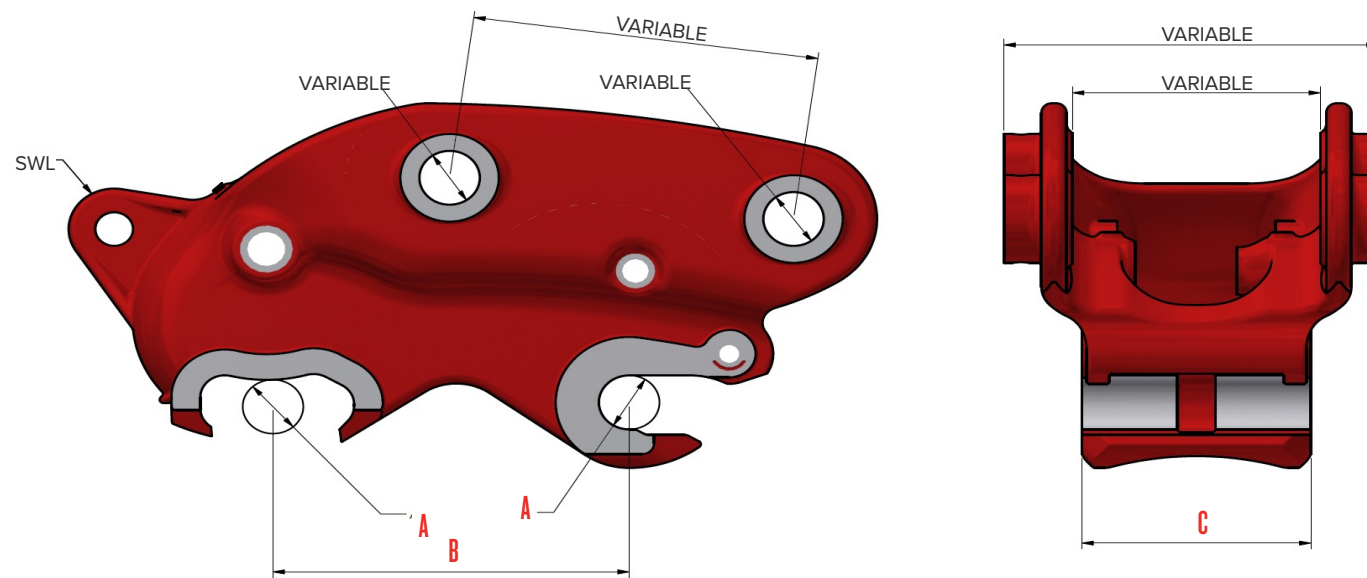


HOOK

- GTX hooks pivot on the frame.
- They are moved directly by the hydro-pneumatic cylinder.



2.2 GTX WEIGHTS AND DIMENSIONS



2.2 GTX WEIGHTS AND DIMENSIONS

GTX RANGE	"A" PICKUP DIAMETER (MM)"	"B" PICKUP RANGE (MM)"	"C" JAW WIDTH (MM)"	LIFTING EYE SWL (KG)	HITCH MASS (KG)
R3	50	273-312	164	5,000	91
	60	290-315			
R4	60	345-415	216	13,000	185
	65	355-420			
R5	70	370-465	272	13,000	264
	80	385-470			
R6	80	430-520	302	16,000	330
R7	80	440-510	321	20,000	439
	90	450-520			
R8	90	480-590	340	25,000	586
	100	495-595			
R9	100	525-625	396	30,000	795
	110	538-630			

3.1 ATTACH PROCEDURE FOR MILLER SYSTEM



WARNING: Do not try to release or change the attachment near any persons or in any area that may result in an accident or injury occurring. The switch should be in the attach or closed position at all times, except during attachment changeovers.



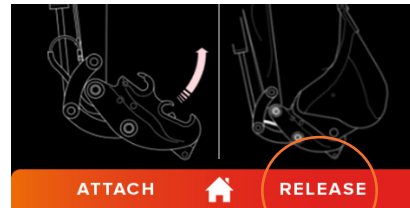
WARNING: If attachment pins have not been correctly engaged the hook must not be retracted. This could force the attachment to be unintentionally released from the hitch.



IMPORTANT: This guide is based on Miller's ISO switch instructions. For non-Miller systems, please refer to OEM specific manual for further support.

* For minor daily service checks refer page 20.

STEP 1



- Place hitch in the curled/crowded position. Activate switch to release/open position (buzzer will sound).
- Hold the bucket crowd lever for approx. 5 - 8 seconds to allow the hook to fully retract.
- Visually inspect to check the hook is fully retracted.

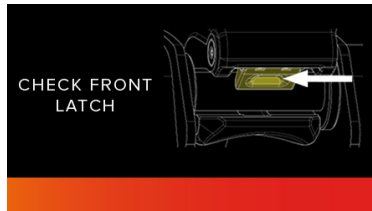
STEP 2



- Ensure the rear hook and the front latch are fully retracted before attempting to engage the attachment*.
- Move the hitch to engage with the front pin of the attachment.

*It may be necessary to raise the boom slightly to achieve clean rotation for larger attachments.

STEP 3



- Once the hitch is engaged with the front pin – ensuring it is off the ground first – FULLY curl/ crowd the hitch.
- Operate the in-cab switch system and hold the lever down for 5 – 8 seconds giving max pressure to the hydro-pneumatic cylinder, allowing the hook to fully close and the front latch to fully engage.
- Visually inspect that the front latch 'yellow' is in place in the closed position.

STEP 4



- To ensure that the attachment pins are securely held by the hitch, apply pressure to the attachment by rotating it against the ground and away from the machine before operating. This is often referred to as a 'Bump Test'.
- If bump test fails, revert to step 1 and start the process again. Once all steps have been completed and the bump test is successful, the machine is ready to begin operating.

3.2 RELEASE PROCEDURE FOR MILLER SYSTEM



WARNING: Do not try to release or change attachment near any persons or in any area that may result in an accident or injury occurring. The switch should always be in the attach or on position, except during attachment changeovers. The switch cannot be engaged so there is no chance of accidental release.



IMPORTANT: If the hitch has been attached to the front pin whilst in the locked position, the front latch will not allow the attachment to be released. This is a fail-safe safety feature. In the event of a failure, the attachment will be held by the front latch on the front jaw. In this eventuality, slowly rotate the hitch to fully crowded position, begin the unlocking procedure and gently engage crowd lever slowing the hydraulic release. The attachment can now be safely released.

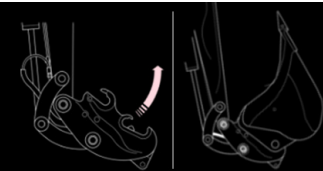
* For minor daily service checks refer page 20.

STEP 1



WARNING

IS THE AREA CLEAR OF ALL PERSONNEL?



ATTACH



RELEASE

- Place the hitch into the fully curled/crowded position. Switch the hitch operating switch to the release/open position (The in-cab buzzer will sound). Hold the bucket crowd lever for approx. 5 - 8 seconds to allow the hook to fully retract. If the hook is in sight, visually inspect to check the hook is fully retracted.

STEP 2



WARNING
COUPLER DISENGAGING

HOLD BUCKET
CROWD LEVER



- Slowly place the attachment on the floor rotating the hitch simultaneously until hitch can be fully, and safely, released from the attachment.

STEP 3



UNCURL
ATTACHMENT
AND PLACE
ON GROUND



CONTACT



+44(0) 1670 707 272
@millergroundbreaking
millergroundbreaking.com



- Release hitch away from the attachments.

3.3 LIFTING GUIDES

Where an excavator/backhoe is regarded as lifting equipment, it requires thorough examination by a competent person at least every 12 months*. (See LOLER (1998) PUWER (1998) Regulation 9).

Front end loaders, not modified or adapted for lifting operations, do not require thorough examination under LOLER (1998) PUWER (1998), but still require regular inspection under PUWER which will be to a similar standard. If the loader is used for object handling it will require thorough examination under LOLER (1998) PUWER (1998) at least every twelve months.

Where a quick hitch is permanently mounted on an excavator then the thorough examination for the excavator will also cover the quick hitch. If the quick hitch is moved from one machine to the other it is classed as an accessory and should be thoroughly examined every six months.

Slings, loose hooks, chain slings, polyester slings, shackles etc are classed as lifting accessories and must be thorough examined every six months. Buckets with integrated hooks/lifting eyes are also classed as lifting accessories and should be inspected every six months.

Lifting Capacity

GTX MODEL	LIFTING EYE RATING
R3	5 tonne
R4	13 tonne
R5	13 tonne
R6	16 tonne
R7	20 tonne
R8	25 tonne
R9	30 tonne

! **IMPORTANT:** When lifting, always use the correctly rated shackle and lifting equipment.

The hitch has an integral and certified lifting eye, the Safe Working Load (SWL) of which can be found stamped into the hitch frame (on lifting eye). Do not lift over the SWL limit of the hitch. The lifting capability of the machine should also be checked prior to lifting. Lift with the hitch in a vertical position.

3.4 GUIDE TO USING DEMOLITION TOOLS

Miller hitches are compatible with hydraulic breakers, various attachments, and work tools, depending on pin spread and weight.



WARNING: Do not use any tool that is not in the correct tonnage class, i.e. that is larger than that specified by the machine manufacturers. When operating a breaker you must always use it in the vertical position whenever possible. Never use the breaker as a lever. If using other attachments, the same procedure applies.



WARNING: If the hitch is fitted with a hydraulic breaker, it should not be used for long periods without a periodic inspection of all working parts. If the hydraulic breaker must be used continuously for long periods of time Miller recommends the hitch should be removed and the breaker mounted directly to the machine, as this will help prolong the life of the hitch and reduce the chance of spike pressures damaging the hitch and parts of the system.



IMPORTANT: Take a breaker or compacter off once operations are performed, preferably every day and store in correct manner suggested by manufacturer. It is recommended the hitch holds a breaker or compacter for a maximum of two hours between inspections. The hitch hydro-pneumatic cylinder should also be repressurised by fully crowding the attachment and holding the lever down for 5-8 seconds to ensure you gain full machine working pressure in the hydro-pneumatic cylinder. This will increase performance and health of the hitch ensuring maximum hitch hold and force is achieved during operations.



3.5 INCORRECT HITCH USE

The following information highlights some of the operating bad practices that occur in the field. This is not fully exhaustive and for illustration purposes only. Miller strongly advises against these practices and recommends that the hitch should only be used as outlined in the operating instructions

! IMPORTANT: If in doubt, or you have any questions at all, speak to Miller directly.

INCORRECT USE OF Hitch TO PICK UP AND MOVE



- Moving attachments by front pin only.



- Using hook only to lift attachments.

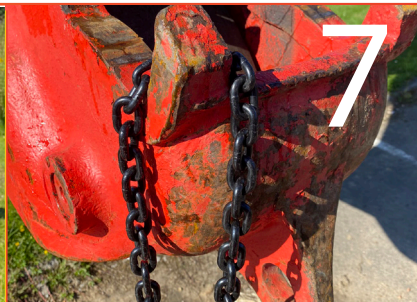


- Nipping or jamming the rear pin with the hook.

INCORRECT USE OF Hitch TO PICK UP PRODUCTS USING CHAINS OR SLINGS



- Using the jaw to pick up items with chains.

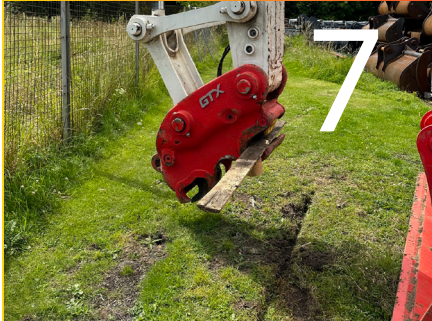


- Using the corner of the jaw to pick up items with chains.



- Using the hook to pick up items with chains.

USING THE JAW AS A LIFTING TOOL OR HAMMER



- Moving items held in the jaw.



- Using jaw or hook to hammer products into the ground.



- Do not use hitch to move obstacles out of the surrounding area.

INCORRECT USE OF THE LIFTING EYE



- When the bucket is still attached it is not possible to see the shackle and what is happening to the chain.

4.1 MINOR DAILY SERVICE CHECKS

To ensure that your quick hitch works safely and to maximise the efficiency of your equipment, it is imperative that it is properly maintained in accordance with the following service guidelines.

Hitches are used in arduous conditions and accurate inspection checks should be regularly performed on a daily basis when all parts are clean and free of any dirt or debris. Miller recommends all checks are recorded in a log book.

Failure to follow maintenance will invalidate your warranty.

WARNING: The GTX hitch hydro-pneumatic cylinder contains compressed gas and should never be disassembled or tampered with. WARNING: Ensure that the correct maintenance checks are carried out on a regular basis to prevent endangering lives and causing significant financial cost implications.	
ISO COMPLIANCE CHECKS	
GAS STRUT CHECK	To ensure the gas strut maintains pneumatic pressure to prevent the hitch opening in hydraulic failure, perform the following: With no attachment on the hitch: - Fully curl hitch into safe release position; - Unlock the hitch using the in-cab system then turn the machine off; - The hydro-pneumatic cylinder should close, acting in the same manner as closing the hitch with hydraulic pressure. This will test if there is gas in the hydro-pneumatic cylinder and will force the hitch to close; - If it does not close, reset, and try again. In the event of hydraulic failure, your hitch should remain closed. Cease operation and call Miller.
CYLINDER OPERATIONAL CHECK	- As part of ISO compliance checks, it is important to check the hydraulic hydro-pneumatic cylinder is fully operational. To do so: - Open and close the hydro-pneumatic cylinder using the in-cab switch or the Miller Mate system to check that it is working correctly. - If the hydro-pneumatic cylinder does not perform correctly, reset, and try again. If it still does not function as it should do, contact Miller.
SOUND FUNCTION CHECK	Check that the in-cab switch/buzzer is sounding.

HYDRAULIC CHECKS

OIL LEAK CHECK

- Check for oil leaks, and if there is evidence of this, do not operate the machine.
- Identify the source, if leak is present, re-tighten suspect fitting and re-check if leak is still present.
 - If identified that it is the hose integrity causing the leak, or the source is unidentified, please call Miller directly.

HYDRAULIC SYSTEM CHECK

Check the general condition of the hydraulic hoses, fittings and hydraulic system. If any are damaged, these should be replaced by only competent and trained personnel.

VISUAL CHECKS

MECHANICAL ANOMOLIES CHECK

Check the hitch for mechanical anomalies such as fractured, deformed and faulty components. Replacement of any parts should be carried out by competent and trained personnel or or alternatively contact Miller customer services to arrange field engineer support.

MECHANICAL INTEGRITY CHECK

Check the OEM machine pins, locking bolts and nuts are securely in place. If required, re-tighten to the required torque, in accordance with OEM guidelines, using the correct size spanner. Replace any bolts or nuts that have been damaged.



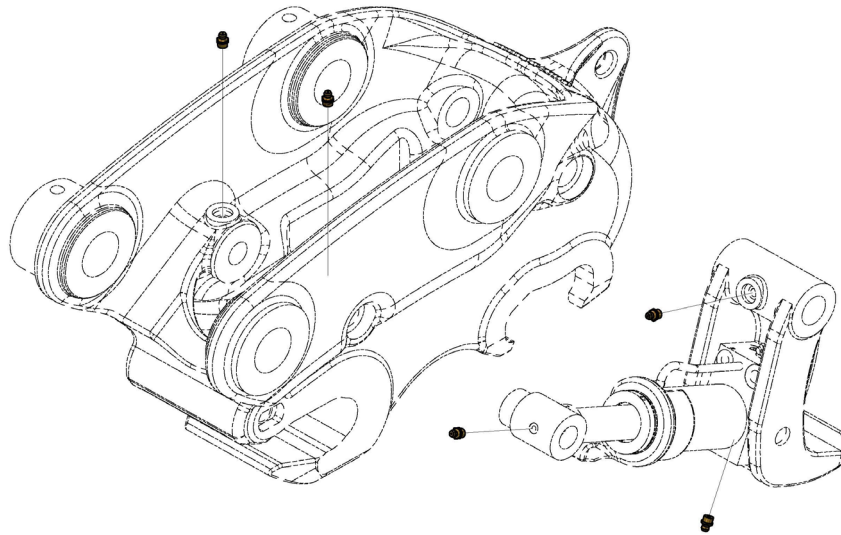
PHYSICAL CHECKS

GREASING AND BOLT TORQUING CHECK

Ensure the hitch has been greased using EP2 High Load Lithium Grease.

- It is recommended an operator carries this out before or after every shift.
- Bolts should regularly be retorqued, refer to the torque chart on page 28 for the latch boss torque requirement for each GTX model.

The diagram below highlights greasing points:



FRONT LATCH POSITIONAL CHECK

As part of ongoing operations ensure that the front latch protrudes correctly from the frame when in the engaged position, and remains flush in the frame recess when in the release position. If it does not, check for unseen debris. If there is nothing evident, call Miller for support.

4.2 MAJOR HITCH MAINTENANCE AND OVERHAUL

The GTX has been designed for longevity. In order to ensure your hitch is fully functional, achieving maximum productivity and product lifespan, it is recommended that the following checks are carried out on a weekly basis.



WARNING: The GTX hitch hydro-pneumatic cylinder contains compressed gas and should never be disassembled or tampered with.



WARNING: Assembly and disassembly of a hitch should only be completed by fully competent and trained personnel.



IMPORTANT: Miller recommends using lifting aids as part of the assembly and disassembly process.



IMPORTANT: Nord-lock washers can only be used once for each assembly, once removed, they will need to be replaced.

PHYSICAL CHECKS

Hitch BORE CHECK

Check OEM machine pins are not loose in the hitch bores. These will naturally wear over time and operation, as such, it is important to check their integrity as part of ongoing maintenance checks.

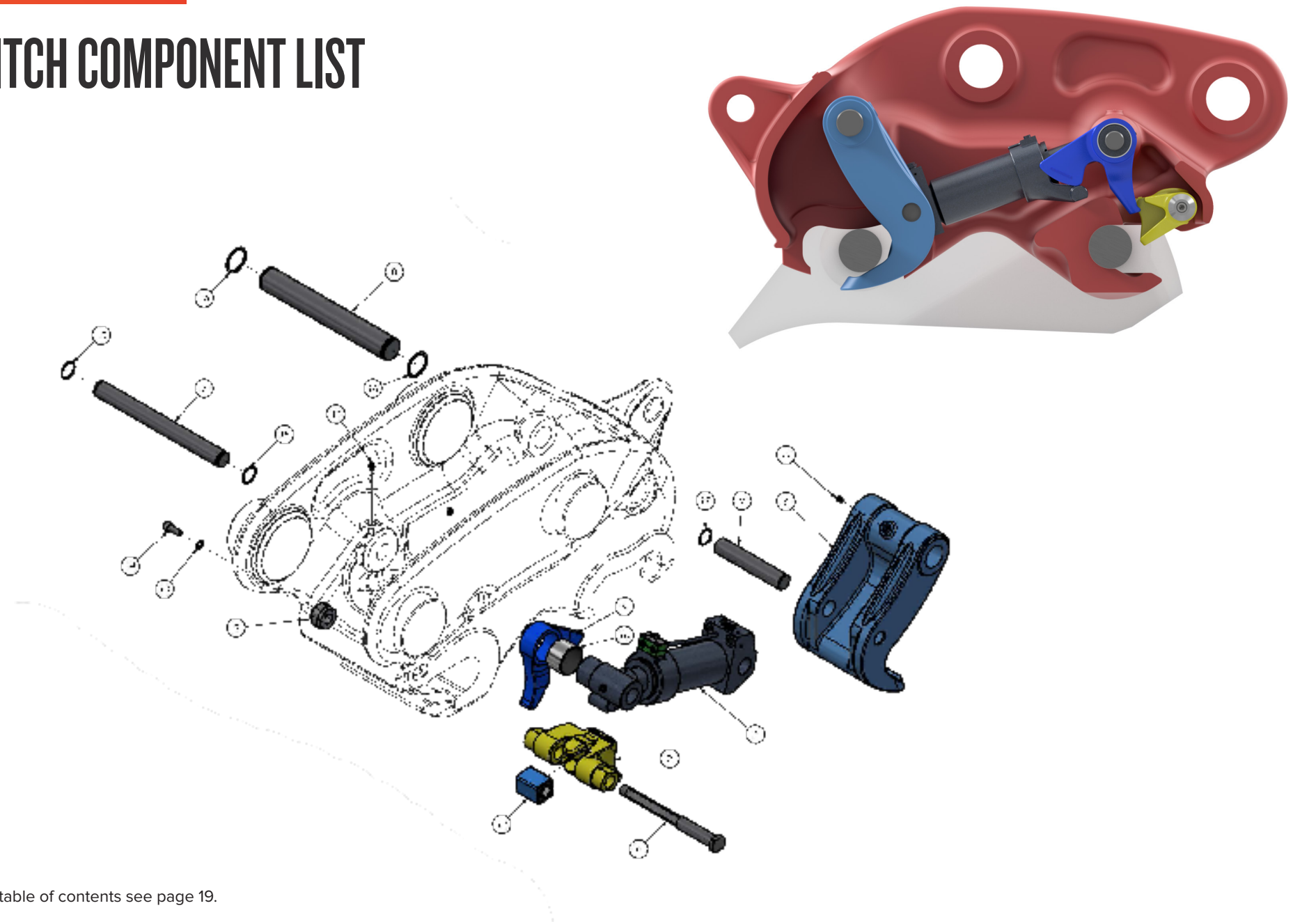
WORN PARTS CHECK

Naturally parts will wear over time. If components are no longer maintaining tolerance, an overhaul may be required which should be performed by competent and trained personnel. For further support, contact Miller.

Refer to the component lists on page 25 for spare part information.



4.3 HITCH COMPONENT LIST



For table of contents see page 19.

Component Breakdown

ITEM	QTY	DESCRIPTION	"CS REFERENCE (REPLACE XX WITH RANGE)"
1	1	 HYDRO-PNEUMATIC CYLINDER	GTX-XX-CY
2	1	 FRONT LATCH	GTX-XX-FL
3	1	 HOOK	GTX-XX-HK
4	1	 LATCH ACTUATOR	GTX-XX-LA
5	1	LATCH BOSS	GTX-XX-LB
6	1	FRONT LATCH PIN	GTX-XX-PFL
7	1	CYLINDER PIN	GTX-XX-PCY
8	1	HOOK PIN	GTX-XX-PHK
9	1	HOOK-CYLINDER PIN	GTX-XX-PHC
10	1	LATCH ACTUATOR BUSH	GTX-XX-LAB
11	3	GREASE NIPPLE	GTX-XX-GN
12	1	 TORSION UNIT	GTX-XX-RO
13	1	FRONT LATCH NL WASHER	GTX-XX-FLW
14	1	FRONT LATCH CAP SCREW	GTX-XX-FLB
15	2	CYLINDER PIN RETAINING RING	GTX-XX-SPA
16	2	HOOK PIN RETAINING RING	GTX-XX-SPB
17	1	HOOK INTERNAL RETAINING RING	GTX-XX-SPH

e.g. CS reference for HOOK for Range 6 GTX Hitch (GTVV~~R~~6D1A): GTX-~~R~~6-HK

Please provide the Customer Support (CS) Reference Part Number to our Customer Support Team in order to obtain the corresponding manufacturing part number.

Replacement Parts

Miller recommends that you fit genuine replacement parts. For advice or to order parts contact Miller on +44 (0)1670 707 272 or email aftersales@millergroundbreaking.com, quoting the hitch serial number, or the hitch reference part number.

Failure to use genuine replacement parts will invalidate warranty and may render the hitch unsafe to use.

Refer to Appendix A for schematic on standard hydraulic/ electrical operation.



4.4 HITCH DISASSEMBLY

In the event of hitch damage or a discreet component being damaged and replacement parts are required, the following steps outline the assembly and disassembly procedure, which is classed as major servicing of the hitch.



WARNING: The GTX hitch hydro-pneumatic cylinder contains compressed gas and should never be disassembled or tampered with.



WARNING: Assembly and disassembly of a hitch should only be completed by fully competent and trained personnel.



IMPORTANT: Miller recommends using lifting aids as part of the assembly and disassembly process.



IMPORTANT: Nord-lock washers can only be used once for each assembly, once removed, they will need to be replaced.

The following tools are recommended for disassembly and assembly of the couplers.

RECOMMENDED TOOL LIST:

Hammer
Drift punch set
Hexagonal socket set/keys
Internal spirolox retaining removal tool
External spirolox retaining removal tool
Torque wrench

RECOMMENDED LUBRICANT LIST

Copper Anti-seize paste (Aerosol)*
EP2 High Load Lithium Grease*

*Refer to COSHH regulations of products before use.

STEP 1



- Remove hydro-pneumatic cylinder / hook pin retaining rings (refer to page 24 items 15 and 16 of components list) using the external retaining ring removal tool.

STEP 2



- Tap out cylinder pin (7) and hook pin (8) using the drift set and hammer.

STEP 3



- Tap out hook pin (8) using the drift set and hammer.

WARNING: The GTX hitch hydro-pneumatic cylinder contains compressed gas and should never be disassembled or tampered with.

STEP 4



- Remove the hook internal retaining ring (17) and hook cylinder pin (9) from the hook (3) to separate the hook (3) and latch actuator (4) from the GTX hitch cylinder (1). Then tap out hook pin using the drift set and hammer.

STEP 5



- Remove the front latch cap screw (14) and front latch Nord-Lock washer (13) using the correct hexagonal key or bit and proceed to remove front latch pin (6) by tapping a small drift pin through the centre of the latch boss (5). Rotate front latch to remove from underside of frame.

STEP 6



- The image represents the disassembled parts breakdown, which includes coupler cylinder (1), hook (3), actuator (4), front latch (2), four pins and fastenings.

4.5 HITCH ASSEMBLY

! IMPORTANT: Miller recommends using lifting aids as part of the assembly and disassembly process.

! IMPORTANT: Nord-lock washers can only be used once for each assembly, once removed, they will need to be replaced.

Torque Chart

GTX MODEL	LATCH BOSS TORQUE
R3	43 Nm
R4	85 Nm
R5	146 Nm
R6	146 Nm
R7	146 Nm
R8	146 Nm
R9	146 Nm

STEP 1



Refer to 4.4 Step 1 for full tool list. The image above showcases the parts required pre-assembly. This includes GTX Hitch Hydro-pneumatic cylinder (1), hook (3), latch actuator (4), front latch (2), all 4 pins and corresponding fasteners.

STEP 2



Tap the hook-hydro-pneumatic cylinder pin (9) into the bottom of the hook (3) using the drift set and hammer, and fit the hook internal retaining ring (17).

STEP 3



Manually attach the latch actuator (4) to the end of the hitch hydro-pneumatic cylinder (1) to complete the hook/hydro-pneumatic cylinder assembly.

STEP 4



Insert the front latch (2) with contained torsion unit (12) into the shoulder slot of the frame jaw from below, and insert front latch pin (6).

STEP 5



- Apply copper paste to the full length of the front latch cap screw (14) thread. Insert using front latch Nord-Lock washer (13) into the latch boss (5). Ensure the washers are in the correct configuration. Use the torque wrench and hexagonal set to apply torque to the correct value.

STEP 6



- Using lifting aid to lower the hook/hydro-pneumatic cylinder assembly inside the rear of the hitch, and insert the hook pin (8)

STEP 7



- Line up the rod-end of the hook/hydro-pneumatic cylinder assembly (ensuring the latch actuator (4) is still fitted) with the front hydro-pneumatic cylinder bore, and insert the hydro-pneumatic cylinder pin (7). Gently tap the pin into the bore using a hammer.



- Fit the remaining hydro-pneumatic cylinder / hook pin retaining rings (15-16) to the corresponding pins using the external retaining ring tool.

5.0 WARRANTY

The warranty period is 36 months for the hitch frame and 12 months for internals or 2,000 hours from date of delivery, whichever is the sooner. The warranty period is 12 months for all installation kits, solenoids and Miller Mates.

Limitation of Liability

Miller shall not be liable for or in respect of:

1. Repair or replacement of (i) any normal wearing parts, (ii) any ageing or deterioration caused by foreign substances or by exposure to the natural elements or (iii) any consumable items, such as oil, grease, filters etc.
2. Any cost of repairs, alterations or replacements made without official Miller authorisation.
3. Any warranted product which has been subjected to:-

(a) Misuse, improper operation or misapplication, including but not limited to operation beyond the rated capacity expressly prohibited by the manufacturer of the prime moving machine, as shown in the operator's manual or rated capacity chart furnished with the prime moving machine. (b) Neglect, including but not limited to (i) improper maintenance and storage, (ii) use of the product while any parts are loose, broken or out of order. (c) Accident.
(d) Improper or unauthorised installation, adjustment, repair or alteration, including but not limited to (i) adjustment or assembly procedures not recommended or authorised in the User Guide manual. (ii) use of unauthorised parts or attachments, (iii) unauthorised modification or alteration.

Miller shall be liable only for repair or replacement of parts as described under

warranty, and Miller shall not be liable, whether under breach of warranty, negligence or strict liability, for any other injury, loss, damage or expenses, whether direct or consequential, including but not limited to loss of use, income, profit or production, increased cost of operation, or spoilage of or damage to material.

Alterations

Miller reserves the right to make alterations or modifications to their products and literature at any time, which in their opinion may improve the performance and efficiency of the product. Miller shall not be obliged to make such alterations or modifications to products already in service.

The foregoing warranty is exclusively and in lieu of all other warranties, including warranties concerning merchantability or fitness for a particular purpose, which are expressly disclaimed, whether written, oral, express or implied. Miller assumes no other obligations or responsibility with respect to the products whatsoever, and no employee or representative is authorized to change or extend this warranty in any way or grant any other warranty whatsoever. If in doubt please contact Miller for free advice and assistance, please find contact details on back cover.

Warranty Claims

In the event of any warranty claim, the following information must be provided to the Seller: (i) Serial No., (ii) hours worked, (iii) host machine model and hours worked, (iv) working environment/application, (v) failure details including photographic evidence and (vi) general overview of the concern and how the failure occurred.

6.0 PRODUCT END OF LIFE MANAGEMENT

Miller Attachment Products

Due to the metallic materials used in the manufacture of Millers attachments. The GTX frame and hook are 100% recyclable. However, there are some factors which need to be considered regarding safe disposal dependant on the product:

Miller Products Which Use Nitrogen Gas

Where nitrogen gas is used in Miller Hitch Hydro-pneumatic cylinders, safe disposal should include releasing the gas from the hydro-pneumatic cylinder in a safe manner and, where safe and practical, removing the valve assembly from the hydro-pneumatic cylinder housing in order to disable unfit for future use as a gas hydro-pneumatic cylinder. **This should be done by a specialist. Please contact Miller's Customer Support Team.**

Miller Hydraulic Products

Although Miller ships all its hydraulic products in a dry condition. Miller would like to highlight the following to you as a responsible customer of our products on usage, maintenance and end of life disposal regarding Hydraulic oil:

- Waste oil storage and disposal for business
- Waste mineral oil fuels, lubricants and allied products are deemed to be hazardous waste and regulatory control of these rests with the devolved Governments.

General advice on Hazardous Waste oil storage and its subsequent movement for recovery or disposal is given at www.gov.uk/dispose-hazardous-waste/overview.

More specific guidance on oil storage of waste for commercial and business streams is available at www.gov.uk/managing-your-waste-an-overview/storage.

For guidelines outside the UK; applicable country rules on the disposal of Hazardous Waste Oils should be reviewed for relevant information, rules and regulations.



IMPORTANT: Disassembly or tampering with the GTX hitch hydro-pneumatic cylinder is not permitted.

Disassembly of GTX hitch hydro-pneumatic cylinder shall only be performed by a qualified Miller engineer or an engineer trained and certified by Miller to carry out this operation.

If any issue or fault is experienced with the GTX hitch hydro-pneumatic cylinder, please contact Miller for the relevant technical support. If there is any evidence of disassembly or tampering of the product after fault inspection by a Miller appointed engineer, the product warranty conditions, and any associated liability will be deemed null and void.

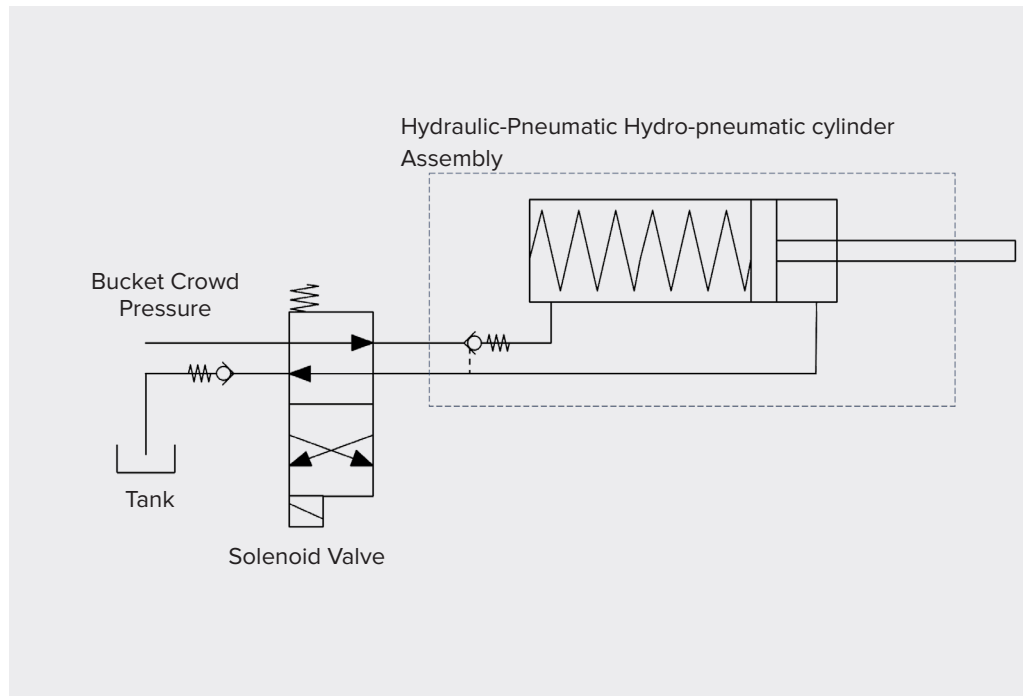


7.0 APPENDICES

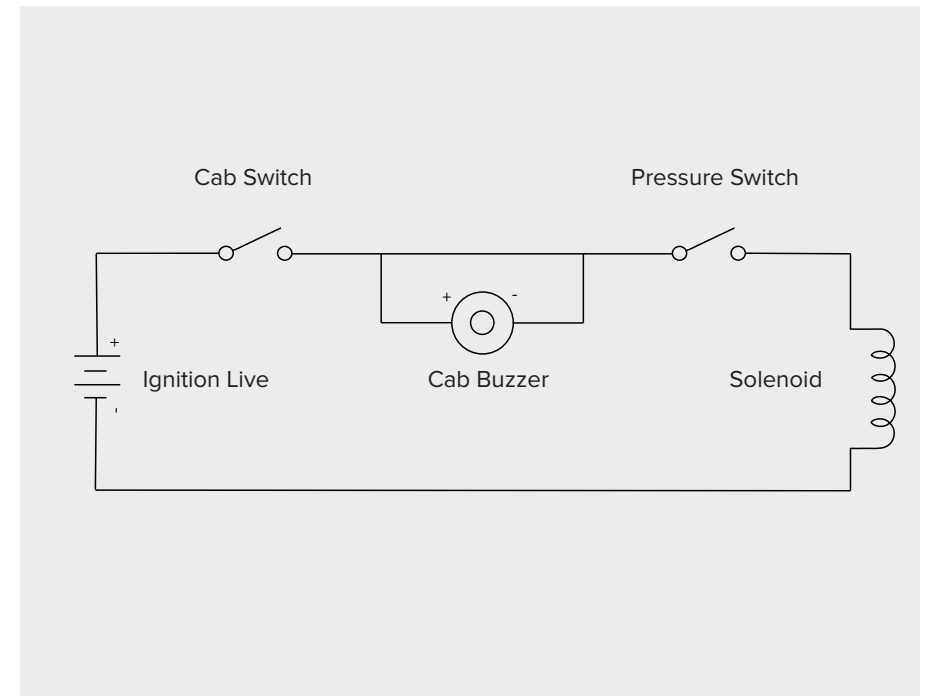
7.1 Appendix A - Standard Hydraulic/Electrical Operation

The following diagrams outline the standard hydraulic and electrical operation of the GTX hitch.

Hydraulic Schematic



Electrical Schematic



For further information on electrical and hose installation, please refer to the Miller GTX installation guide. A hard copy should be available in-cab, or please refer to www.millergroundbreaking.com and download the guide.

8.0 COPYRIGHT

The operations and maintenance manual for the GTX hitch is subject to change and can be done so without notice. It should not be reproduced – neither electronic nor printed – without consent from Miller.

Should you require any additional copies of the manual, please get in touch with Miller Customer Support Team on +44 (0)1670 707 272.

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9.0 REVISIONS

Revision Number	Revision Description	Approved	Date
02	Initial release	CL/DA	16/09/2024

Our operations and maintenance manuals may be subject to revision.

For the latest version of the guide, please visit

www.millergroundbreaking.com.

GTX

OPERATIONS AND MAINTENANCE MANUAL

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