

G20 Mobile Maintenance Platform Owner's Manual

www.equiptec.co

Equiptec

Giraffe

Own the high ground



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Disclaimer

Recommended Safety Procedures to be employed by all persons using their Equiptec Adjustable Height Platform (AHP):



Before proceeding to use your AHP, you must consult with the designated Safety Professional or other Responsible Party within your organization prior to attempting any activities contained herein. Your Employer is responsible for your safety at all times and thus all Safety Regulations, Policies and Procedures which have been established by your company take precedence over and supersede any information and guidance contained herein especially as it relates to your personal safety and that of others in proximity to any work being performed. We highly recommend that you review this Owner's Manual with a qualified Safety Professional such as a CSP or equivalent and/or any other supervisory, union or other staff at your site that are responsible for Safety-related matters.

Working at heights considerations:

Equiptec AHP units are designed to make working at height as safe and easy as possible. However, that does not mitigate the fact that working at height still carries the risk of a fall, no matter how small this may seem. Equiptec strongly recommends that ALL users familiarize themselves with all safety points in this Manual, and in particular, wish to emphasize the following:

Users must NOT

- Intentionally rock the device
- Jump off the device
- Step outside the safety cage (unless there is approved and appropriately certified guarding in place)

Users must ALWAYS

- Consult with their designated safety professional or other responsible party within their organization as to the suitability of the device for the intended work
- Engage 3 points of contact when ascending or descending the stairs on the device

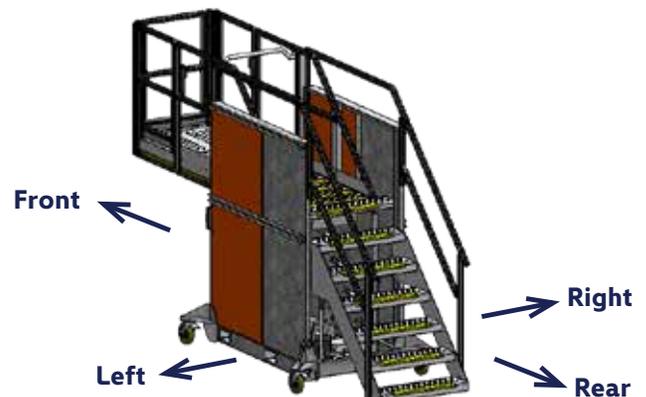
Introduction

The Equiptec Giraffe G20 (G20) is designed to facilitate easy and simple stair access to a variable height platform. It incorporates a large cantilever to allow the platform to be positioned over obstacles, and thus provide a deck that is sturdy, and as ergonomically safe as possible to work from. The G20 has a wide variety of Standard Accessories that can be added to it, and therefore can be Customised in different ways.

A copy of this manual should remain with the G20 at all times. Prior to using the G20, the user should familiarize his/herself fully with the contents, paying particular attention to the safety notes included as it is a mandatory requirement that these are strictly followed.

To avoid confusion, Equiptec stipulates the official orientation of the G20 as follows:

- Front - is the direction you face as you climb the Stairs
- Rear (or Back) - is the opposite to the Front direction
- Left and Right are defined from looking forward i.e. as you would when you climb the stair



Introduction

Regular maintenance as per the maintenance schedule in this manual is also a necessary requirement. Details from these mandatory checks must be submitted to Equiptec via the service checklist form, this can be accessed by scanning the 'scan to service me' QR code located on the stair side support above the hydraulic pump or via the link in the service reminder E-mail. The G20 comes with a 5 year Warranty which can be extended out to a Lifetime Warranty provided every annual and biennial service is done at the required time, and a complete service checklist form has been submitted to Equiptec.

Should the G20 ever be sold, rented out or handed over to any third party for any reason, it is required that a copy of this manual should also be passed over at the same time to ensure the new owner and/or operator is aware of the operational needs, constraints, safety points, and maintenance requirements of the G20 Platform.

Compliance

The G20 units have been tested and confirmed to meet or exceed the strength, stability and all other applicable requirements for the following standards:

- AS 1657 and AS/NZS 1576 (Australia and New Zealand)
- ANSI-ASC A14.7-2011 (USA)
- CSA Z11-12 (Canada)

Assembly

Your G20 is shipped in a consolidated form to facilitate cost efficient freight. Usually, the Assembly of the unit can be performed by the local Distributor, but if it is more practical, or preferred by the client, it may be done by the end user, provided there are competent personnel on site to perform the task. To assemble it ready for use is about 2 to 4 hours, depending on configuration, for two Competent Personnel. Full instructions will come with the Unit for this procedure and can also be found on Equiptec's website at www.equipectec.co/instruction-manuals. Equiptec is available to assist via video conference if required (during regular Business Hours, New Zealand time).

Note: It is a mandatory safety consideration that the G20 is assembled precisely, and when taking on the assembly procedure, it is the new Owner's responsibility to ensure all appropriate Equiptec assembly instruction resources are made fully available and are followed absolutely correctly. If there is any doubt about any aspect, contact Equiptec for advice before proceeding further. It is also a mandatory requirement to submit the required photos and details of the assembly via the warranty registration form on the website, www.equipectec.co. This allows Equiptec staff to check the correct procedure has been followed, and validate the assembly is correct as performed, allowing the terms and conditions of the standard Warranty to take effect.

Warranty

The standard Warranty for a G20 is 5 years. To ensure this warranty is in place, simply go to the Equiptec website (www.equipectec.co) and complete the warranty registration form including the required photos of the Assembly process as stated above. Equiptec will confirm the correct assembly has been achieved (or contact you if they have any questions), that the Unit is registered for the 5 year warranty and it is good to go! This 5 year warranty can be extended to a "Lifetime Warranty" by ensuring that every mandatory service in this manual is performed correctly, at the correct time and that the required photos and information are submitted to Equiptec via the service checklist form (either scan the QR code on the unit or click the link in the reminder E-mail).

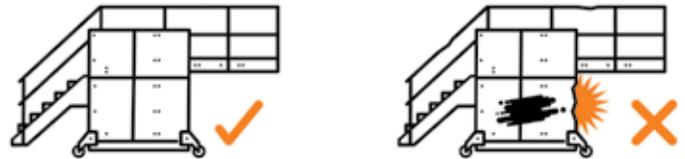
Warranty

Some situations that a G20 could be used in are extremely demanding of the structure of any machine. Therefore it needs to be made clear that the Term "Lifetime Warranty" means the period that the Equipment could reasonably be expected to operate (in the application(s) and environment(s) it is operating in) without fault in material or workmanship if used correctly for its intended purpose and maintained according to the Manufacturers recommendations.

Safety Requirements

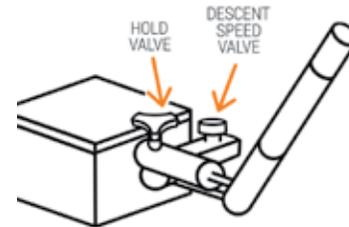
Prior to Use

1. Check the G20 for any damage and/or missing components, and that final site assembly has been correctly completed. Proceed only when the unit is in good and complete condition. And, if it is the first use after assembly, this has been confirmed by the Equiptec team.



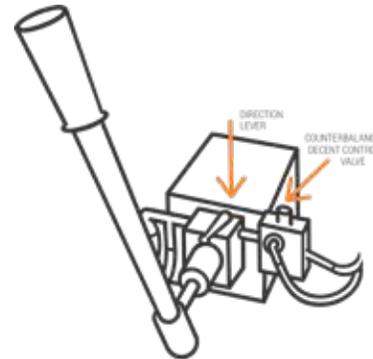
2. Single Action Ram

In addition to the "Hold Valve" (with the Black Plastic knob on top) the Hydraulic raise/lower system on the G20 is fitted with 2 safety valves. The first is a "lock valve" (at the Base of the Cylinder) which will lock the ram in case of any sudden loss of pressure (hose, burst/cut etc.). The second one is an adjustable restrictor valve to control the descent speed of the platform. This is located adjacent to (and on the right-hand side of) the Reservoir, and should be checked and adjusted only if necessary, to allow for a safe lowering speed of the working deck. Refer to instructions to do this on page 15.



Double Action Ram

The Hydraulic raise/lower system on the G20 fitted with 2 safety valves. The first is a "lock valve" (at the Base of the Cylinder) which will lock the ram in case of any sudden loss of pressure (hose, burst/cut etc.). The second one is a counterbalance descent control valve to control the descent speed of the platform. This is located adjacent to (and on the right-hand side of) the Reservoir, and should be checked and adjusted **only** if necessary, to allow for a safe lowering speed of the working deck. Refer to instructions to do this on page 15.

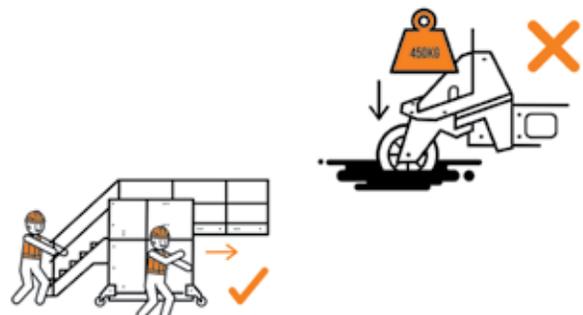


3. **Warning:** The user must check for all electrical hazards (and contact all appropriate authorities if necessary) in the area before positioning or using the G20. ***The G20 conducts electricity and offers no electrical protection.***



Positioning the G20

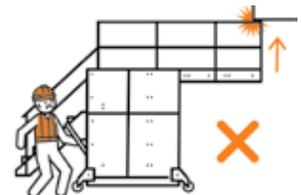
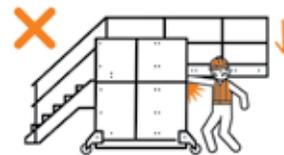
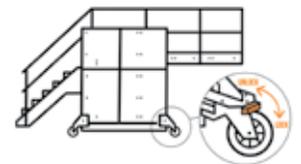
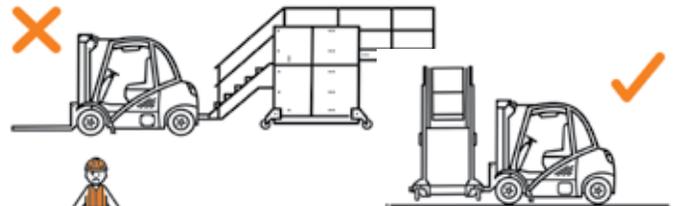
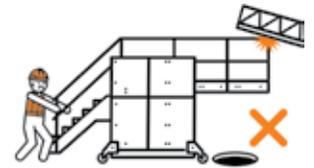
1. Check that the ground surface that the G20 is to be used on is capable of supporting 75% of the combined weight of the G20 and its intended load (allow approximately 1980lb (900kg)) on any 2 of the wheels.
2. The G20 is heavy. For locating the unit at the place where work is to be performed, it is recommended that it is moved by a minimum of 2 people, for both safe control and guidance around possible obstacles on all four sides and above the unit.



Safety Requirements

Positioning the G20

3. Check that the path or route to be followed to the work destination is free from ground or overhead obstructions eg beams, trusses, mezzanine floors, raised manholes, electrical cables, gratings, potholes etc. Note: As stated above the G20 is a metallic object and conducts electricity so at no time must it come near or into the proximity of energized power cables due to shock and arc flash hazards.
4. The standard issue caster wheels are not designed to roll over obstacles. If the surface of the area the G20 is to be moved across is soft, has larger stones, objects or debris in the G20's path, or for any reason the G20 cannot be moved by manual pushing/pulling, it is recommended to move the G20 with a forklift using the forklift pockets provided. The G20 should not be towed or pushed by mechanical means.
5. **Under no circumstances must any personnel be allowed on any part of the G20 while it is either being moved, repositioned or adjusted for height.**
6. Caster swivel directional locks are fitted to at least one of the 2 front standard issue type casters. This will greatly assist and control correct tracking, particularly if being moved longer distances.
7. **The G20 has "pinch points" or areas where crushing could occur. Careful attention must be given to keep well clear of these areas. It is mandatory to keep all limbs/ heads clear of any part of the G20 that is forward of the hydraulic pump handle, when the G20 is being adjusted for height.**
8. Always check that the deck will not collide with any object as it is being raised or lowered. In particular, ensure all personnel are well clear of the G20 when raising or lowering the deck. **Be absolutely sure all personnel are well clear of the G20 when raising or lowering the deck.**



G20 Use

(general points - see also 'Operation')

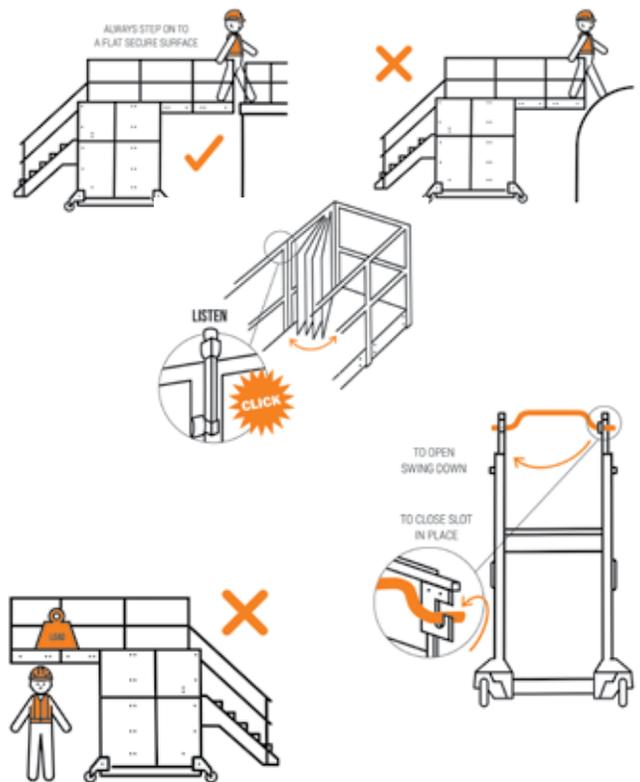
1. **Always ensure** that **all four** caster brakes are effective and locked on at all times (unless it is being moved), especially before any personnel use the G20.
2. Always respect the safe operating limits of the G20. The design load is 660lb (300kg), including a point load of 295lb (135kg), on the platform OR the stair (not concurrently). The G20 has a large cantilever, making this requirement absolutely essential. **Please note that in the case of the optional 'angled deck', 'hammerhead deck' or 'slide out deck' options being fitted, the safe operating limit is reduced.**
3. It is dangerous and therefore forbidden to jump on or onto the G20 platform.
4. Temporary means of gaining additional height (eg using a stepladder or trestle placed on top of the working deck, or any surface) is strictly prohibited at any time.



Safety Requirements

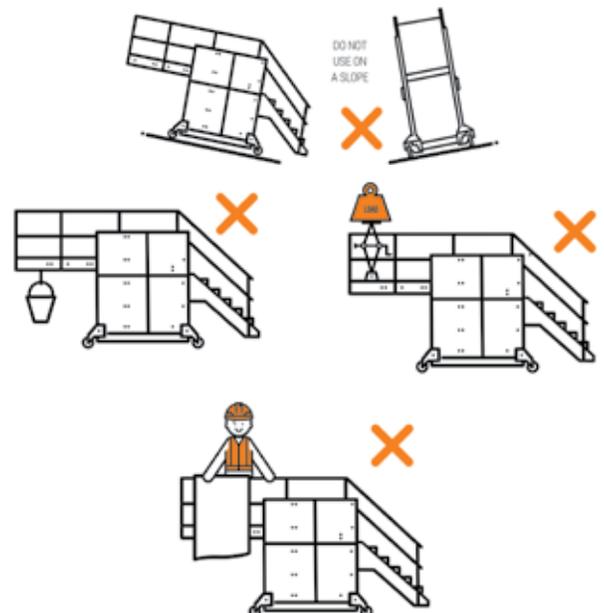
G20 Use (see also 'Operation')

- In its standard configuration, the G20 deck has 3 access gates to facilitate access to/from a work surface if required. These gates must remain shut except when walking through them. Do not use these gates if there is not a flat surface immediately beyond it that has been certified to be of sufficient strength to support your weight and has sufficient, compliant guard railing in place. Always check with a competent party ie safety manager, supervisor or other responsible party if in doubt. The gates must be checked before use. They are spring loaded to shut automatically. Do not use these gates if they do not swing freely throughout their full rotation, and automatically latch securely shut. These gates are lockable, and it is recommended that they remain shut and locked unless "walk through" access is required.
- The G20 is equipped with a Safety Rail at the top of the stairs. This lifts into place freely and is pushed securely into the locking position and once in place can be lifted up and back towards the user to disengage. Ensure this rail is securely in place before proceeding with any work.
- It is prohibited for personnel to be under the G20 work deck when it is loaded and/or elevated.



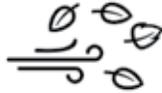
G20 Stability

- If the ground surface is not within 5 degrees of level **do not use the G20!** Reposition your work piece on flat ground.
- The G20 is not designed as a crane. **Do not use the G20 to lift any loads, or as a platform off of which to lower loads to ground (or an other) level.**
- The G20 will offer a large area to wind, and so care needs to be taken when using it in windy conditions. The table on page 6 gives a good indication of wind conditions the G20 can and cannot be used in. Due caution must be given to any circumstances where wind conditions are magnified, eg in long open-ended buildings, between buildings where the wind may have a funneling effect, or where the G20 is positioned close to the corner of a building. Never attach tarpaulins, flags, banners, signs or other coverings to the G20 as this may seriously increase its susceptibility to wind forces.



Safety Requirements

G20 Stability

Wind Description	Speed			Visible Indications	Action Required
	MPH	KPH	Meters / Sec		
Moderate Breeze	13 - 18	20 - 29	5.5 - 7.9	Raises dust and loose paper 	Safe to work on G20
Fresh Breeze	19 - 24	30 - 38	8.0 - 10.7	Small trees in leaf begin to sway 	Stop all work on the G20 and secure all loose items
Strong Breeze	25 +	39 +	10.8 +	Large branches in motion, overhead wires whistle 	Move G20 indoors

Operation

The G20 has a minimum operating temperature and **should not be used in an environment that is colder than -4°F (-20°C).**

The G20 is very simple to operate. In addition to instructions given in the safety section of this manual, the following gives a basic guide to what is required.

1. Move the G20 as close as possible to the workpiece without adjusting the deck height. Being closer allows you to more accurately gauge the height where you will require the deck to be positioned.

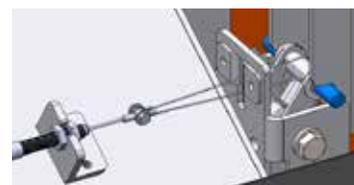
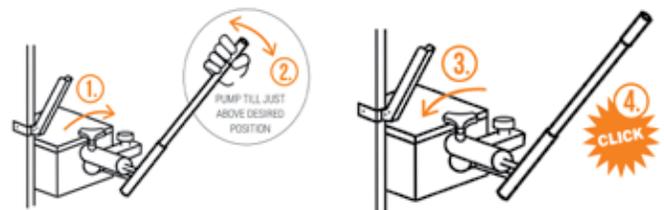
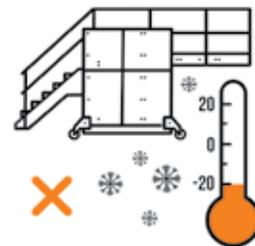
2. Single Action Ram

When adjusting the height of the G20, **follow this sequence** when moving the Platform UP.

Do not force the Pump handle if it is hard to pump. Likewise, do not force the Ratchet Lock Lever if it is hard to disengage. This could be caused by a deck obstruction or debris etc in the mechanism.

Follow this sequence if adjusting the Platform DOWN.

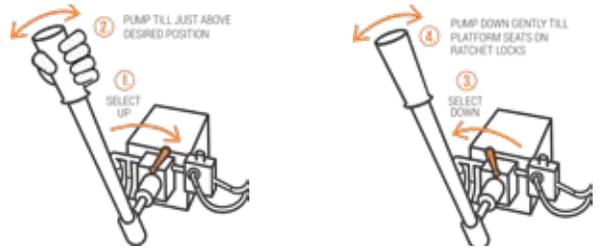
Note that the User must ensure the Ratchet Locks are engaged on both sides before using the unit.



Operation

Double Action Ram

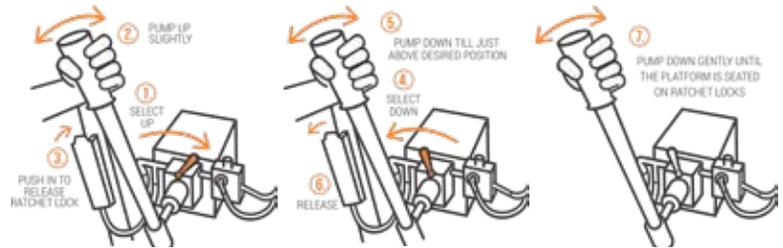
When adjusting the height of the G20, follow this sequence if moving the Platform UP.



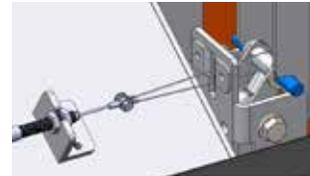
Do not force the Pump handle if it is hard to pump. Likewise, do not force the Ratchet Lock Lever if it is hard to disengage.



Follow this sequence if adjusting the Platform DOWN.



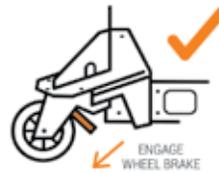
Note that the User must ensure the Ratchet Locks are engaged on both sides before using the unit.



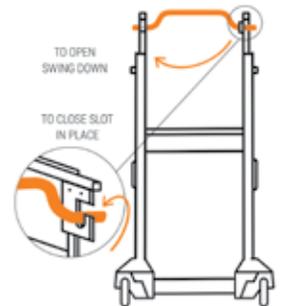
3. Move the G20 into the final position. Check it is within 5 degrees of level and on a sufficiently firm base surface.



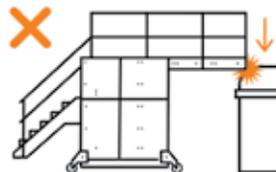
4. Lock all 4 wheel-brakes



5. You may now climb the base stairs, unlatch the deck Safety Rail, proceed on to the work deck, making absolutely sure you position and clise the Safety Rail behind you.



6. Once your work is finished, descend down the stairs to ground level and move the G20 out to a clear area to allow the safe lowering of the deck. See point 2 above on how to lower the deck. Note that the restrictor valve described in the safety section (under "Prior to Use") should be adjusted if the deck descends too fast or too slow.



Maintenance

As with all machinery, particularly those used to support working personnel, a regular maintenance system is required. In the case of the G20, the Manufacturer approved system is very simple, consisting of 6 Monthly, Annual and Biennial service types.

The responsibility for ensuring these services are done correctly rests with the Owner, however, in conjunction with their Warranty, Equiptec offers a reminder service to help ensure these services are completed at the required times. Proof that mandatory servicing has been performed also needs to be submitted to Equiptec via the service checklist form. This form is accessed either by scanning the service QR code on the unit or via the link in the reminder E-mail. Completing all mandatory Annual and Biennial Services, and submitting the required information to Equiptec will upgrade the Warranty to a "Lifetime" Warranty of the Unit (provided that no mandatory services are missed, and that there is no damage etc that adversely affects operation or structural integrity). Equiptec will vet service reports that are correct and complete only, and contact the Owner if they see anything that looks like it needs attention.

While these checks are relatively simple, it is recommended that they are carried out by qualified tradespeople. If the Owner does not wish to carry out any particular service or task themselves, Equiptec may be able to arrange for an authorized Equiptec Distributor to visit the Site and perform these tasks, however, the Distributor may charge for this service.

To assist in identifying Parts, refer to the Exploded Parts drawings on page 12 to 14.

Please note that only genuine Equiptec parts are used if any replacements are required.

Six Monthly Service Inspection (scan the QR code to complete the service checklist form)

1. Conduct a thorough visual check for any damaged/bent components, or loose fastenings.
 - Upload any photos of any damage

Note: Once photos of any damage are uploaded, check with Equiptec before continuing to operate a damaged unit. It must be ascertained if the damage will compromise safety, strength, or the smooth functioning of the G20.
2. Check all handrails are in place and firm. Ensure any components missing/loose are replaced/tightened (to 7.5 ft/lbs / 10Nm).
3. Check the self-closing gates swing open and shut freely, automatically swing shut and lock, and that the lock is effective. Adjust the Lock system if required. Instructions for the adjustment of the lock system can be found at the manufacturers website www.ddtechglobal.com.
4. Check that the caster brake locks and directional locks are functioning correctly. Caster Brakes are occasionally affected by high wear of the Tires. If this is the case, adjust the Brake system as per the following instructions.



1. Loosen Lock Nut under Caster Brake release lever
2. Adjust Grub Screw to alter brake tension
3. Re-tighten Lock Nut

Grub Screw

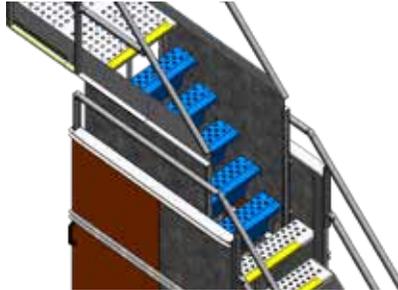
Lock Nut

Continued on next page

Maintenance

Six Monthly Service Inspection (continued)

5. Check for any hydraulic leaks, that the hydraulic pump is functioning correctly, and is secure. If any issues come to light, upload photos and contact Equiptec for advice.
6. Check all floating treads rise/nest correctly and do not catch on anything. Remove/repair any deformation damage that may cause issues.

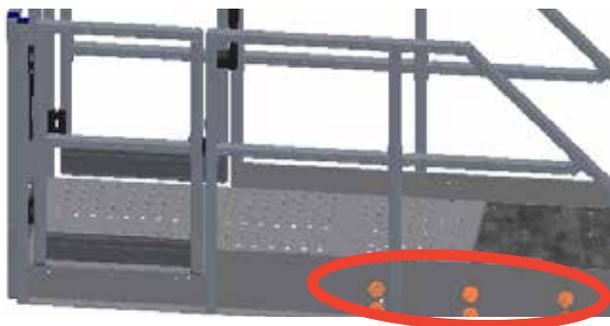


7. Check the Ratchet/Trigger system is functioning correctly. This will include checking the following elements.
 - Trigger Cable Connections are all intact
 - Trigger Cable Lever (by Hand Pump) operates effectively

Note: If issues are discovered, upload photos/description, and contact Equiptec for advice

Annual Service Inspection - Mandatory (scan the QR code to complete the service checklist form)

1. Conduct a thorough clean both inside and out if necessary
2. Attend to all of the 6 Monthly checks plus...
3. Apply the brakes on the front wheels and jack the rear wheels slightly off the ground. Place packing block under Chassis for safety. Check that the rear wheels spin easily (no roughness) and that the swivel turns freely. Check the rear Caster mount bolts, and Caster Bracket mounting bolts, are tight (30 ft/lbs / 40Nm) and secure before lowering the rear wheels and repeating the procedure for the front wheels. (Remember to apply the brakes and chock the rear wheels and place a timber or other Block under the Chassis when jacking the front ones.) If any issues are identified, contact Equiptec for advice.
4. Check all handrail and handrail post bolts are tightened to a maximum of 7.5 ft/lbs (10Nm) and any Bolts that attach to captive nuts are tightened to a maximum of 15 ft/lbs (20Nm).
5. The G20 is not designed for use in corrosive situations. Check all fastenings and all surfaces for any signs of corrosion. If any is found, photograph this and upload the photos to the service checklist form.
6. Check deck side member bolts (as highlighted in Diagram) are tightened to 30 ft/lbs (40Nm).



Continued on next page

Maintenance

Annual Service Inspection - Mandatory (continued)

7. Pump the machine to full height. Before lowering again, check:

- the Hydraulic Ram, fittings and hoses have no leaks, cracks or chafing. If any issues are identified, upload photos and contact Equiptec for advice
- whether the Hydraulic Ram needs bleeding (usually causes a soft “spongy” lift that does not go to full height easily). See Instructions in the Hydraulic System section on page 14

8. Check for any excess movement (either fore/aft or lateral) of the deck when fully elevated. Contact Equiptec for advice if any issues come to light.

9. Check the Hydraulic Oil level by removing the breather on the top of the tank when the Ram is fully retracted (**be careful not to allow any contamination of the oil**). The Oil level should be 2.36” (60mm) below the top of the tank. Add more if necessary but be aware that overfilling will result in spillage via the Tank Breather when the unit is coming down, and underfilling will result in the Ram not being able to reach full extension. **Note that as per the Hydraulic section below, the Oil should be changed at least every 2 years.**

10. Check the unit has a smooth raise/lower action throughout its entire range. Adjust the descent speed if required as per instructions in the “Hydraulic System” section below. If there are any further issues beyond the descent control, contact Equiptec for advice.

11. As per service checklist form instructions upload photos to show the following details:

- Platform pivot bolts as shown



- Upper deck handrailing
- Upper deck gate(s) including rear safety rail
- Any damage that has been sustained by the unit and
- General views from the 4 elevations with the deck at full height

Biennial Service Inspection- Mandatory (scan the QR code to complete the service checklist form)

1. All of the Annual Service checks plus...

2. Lift the G20 onto a solid and safe elevated support. Check thoroughly for the following:

- Any damage, denting or any other structural issues around the Fork Pockets
- Check the Caster Bracket bolts under the Chassis are tight (30 ft/lbs / 40Nm)

Continued on next page

Maintenance

Biennial Service Inspection- Mandatory (continued)

3. Place unit back on to floor. Raise the Deck to full height. Ensure the Ratchet Locks are locked in place and proceed with a systematic check of all fastenings on the inside of the Base and Upper Units. Note the following Torque Settings:

- Ram Mount bolts, Ratchet Trigger Guide Mounting bolts and the Roller Panel Bottom Strut bolts are all tightened to a maximum of 15 ft/lbs (20Nm)
- Base Stair Mount bolts are tightened to a maximum of 7.5 ft/lbs (10Nm)
- Check that the Hydraulic Hoses and Ratchet Cables are tidily routed (away from moving Upper Unit parts) and tied in place properly. Also check the Ram Hose connection is tight, with no leaks.
- Check the condition of all Rollers*

Note: Use a safe platform ladder such as an Equiptec Squirrel to access the Side Panel Top Covers and remove them.

*** Check Roller condition carefully especially if the environment the G20 is operating in is dusty or abrasive in any way. Should the Roller surfaces be roughened, they should be replaced. This involves removing of the complete Upper Unit. Contact Equiptec for instructions on how to perform this procedure**

4. Lower the Deck to just above head height (with Ratchet Locks in place), and check the following:

- Ratchet Ladder rivet fasteners are firm
- All fittings and rivet fasteners under the Deck structure are tight (note that the M12 bolt at the Deck Pivot Point is designed to remain loose and is the only Bolt assembly that is not fully tightened)
- Ram Top Mount bolt is firm (do not over tighten)

5. Pull up each Floating Tread and check:

- For any damage, dirt or debris, clean/remove as necessary
- All rivet fastenings are tight
- Rollers spin freely and evenly

6. Do a final run to check the Ratchet Locks function as they should

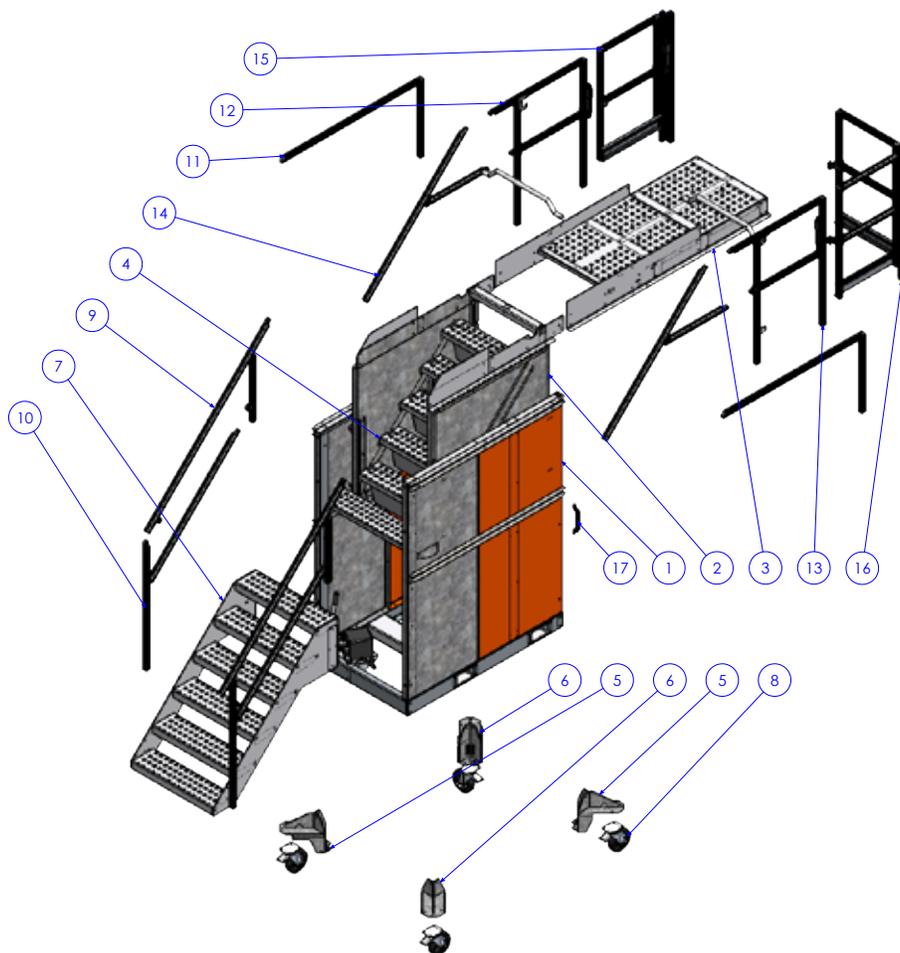
Remember to upload photos of any issues to the service checklist form

Please note that only genuine Equiptec parts are used if any replacements are required.

Maintenance

Giraffe G20 Parts Diagrams

Complete Unit Parts Diagram

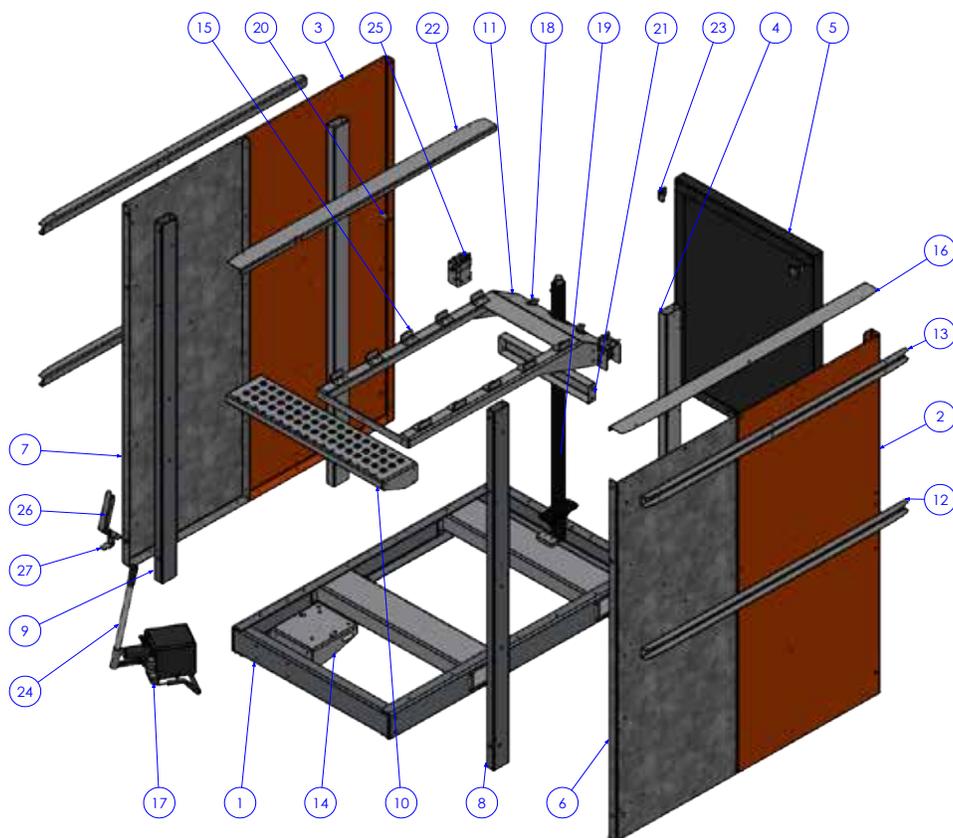


No.	Product Code	Description	Qty	No.	Product Code	Description	Qty
1	n/a	G20 Base Unit Assembly	1	10	9840177 - 51	G20 Stair Mid Rail Assembly	2
2	n/a	G20 Roller Panel Assembly	1	11	9840177 - 52	G20 Platform Handrail Assembly	2
3	n/a	G20 Upper Platform Assembly	1	12	9840177 - 54	G20 Platform LH Handrail Assembly	1
4	9840146 - 10	G20 Floating Tread Assembly	5	13	9840177 - 55	G20 Platform RH Handrail Assembly	1
5	9840100 - 10	G20 Castor Bracket - LH	2	14	9840177 - 53	G20 Upper Platform Stair Handrail Assembly	2
6	9840100 - 11	G20 Castor Bracket - RH	2	15	9840177 - 56	G20 Left Corner Post + Gate Assembly	1
7	n/a	G20 Stair Assembly	1	16	9840177 - 57	G20 Right Corner Post + Gates Assembly	1
8	300241	200mm Castor - Giraffe	4	17	9840211	G20 Guide Handle	2
9	9840177 - 50	G20 Stair Handrail Assembly	2				

Maintenance

Giraffe G20 Parts Diagrams

Base Unit Parts Diagram

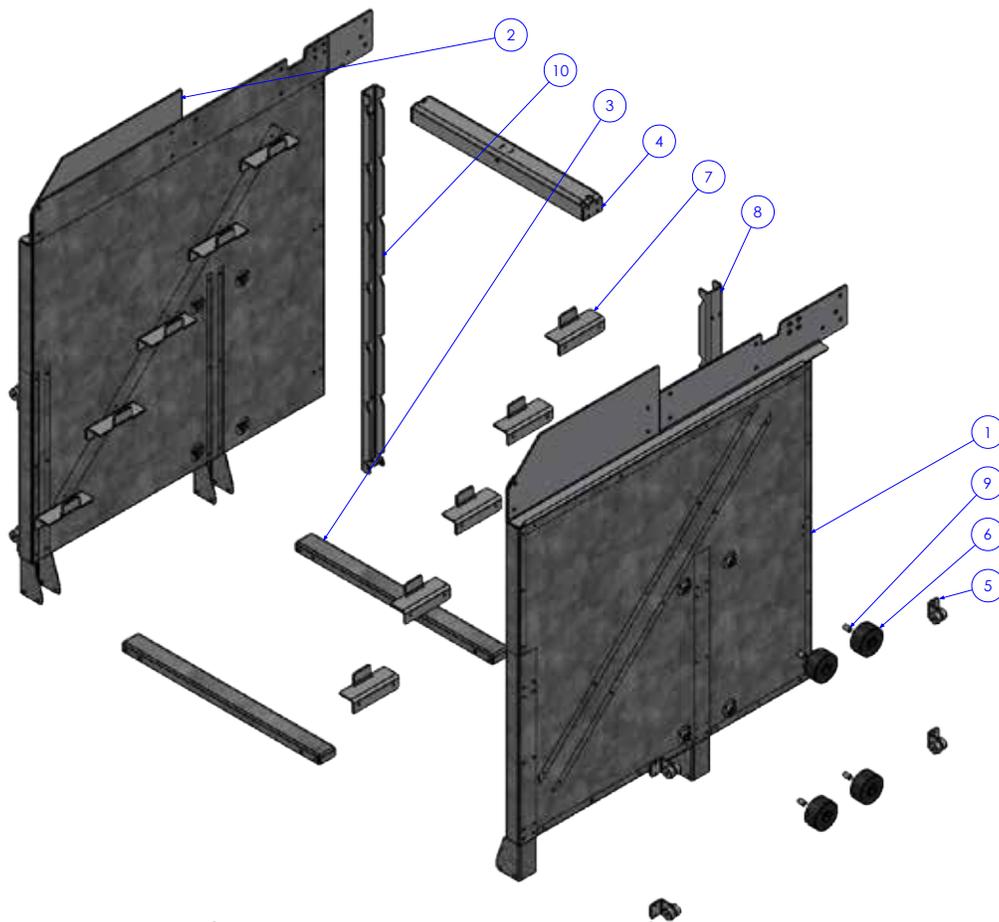


No.	Product Code	Description	Qty	No.	Product Code	Description	Qty
1	9840101 - 10	G20 Chassis Assembly	1	15	9840143	G20 Floating Tread Guide	10
2	9840117	G20 Front Side Panel RH	1	16	9840163	G20 Top Cover RH	1
3	9840116	G20 Front Side Panel LH	1	17	9840111 - 01	G20 Hydraulic Tank	1
4	9840112	G20 Roller Mast	2	18	9840129	G20 Tube Mount Bracket	2
5	9840120	G20 Front Panel	1	19	9840110	G20 Ram	1
6	9840119	G20 Rear Side Panel RH	1	20	9840122	G20 Front Panel Crush Tube	2
7	9840118	G20 Rear Side Panel LH	1	21	9840142	G20 Landing Rail Cross Member	1
8	9840114	G20 Rear Mast RH	1	22	9840162	G20 Top Cover LH	1
9	9840113	G20 Rear Mast LH	1	23	9840121	G20 Front Panel Corner Support	2
10	9840126	G20 Top Fixed Tread	1	24	9840111 - 04	AHP Hydraulic Pump Handle	1
11	9840141	G20 Landing Rail	1	25	9840155 - 10	G20 Trigger Wire Guide Assembly	2
12	9840127	G20 Mid Horizontal Strut	2	26	9840152 - 10	G20 Trigger Lever Assembly	1
13	9840128	G20 Top Horizontal Strut	2	27	9840109 - 10	G20 Trigger Wire Bracket Assembly	1
14	9840108	G20 Pump Mount Bracket	1				

Maintenance

Giraffe G20 Parts Diagrams

Roller Panel Parts Diagram



No.	Product Code	Description	Qty	No.	Product Code	Description	Qty
1	9840132 - 10	G20 Roller Inner Panel Assembly LH	1	6	9840115	AHP Nylon Mast Roller	8
2	9840133 - 10	G20 Roller Inner Panel Assembly RH	1	7	9840144	G20 Floating Tread Support	10
3	9840137	G20 Roller Panel Bottom Strut	2	8	9840149	G20 Ratchet Ladder - left	1
4	9840136	G20 Roller Panel Upper Strut	1	9	9840175	AHP Roller Bush	8
5	9840140	G20 Side Support Roller Bracket	8	10	9840149	G20 Ratchet Ladder - right	1

Maintenance

Hydraulic System

Hydraulic Oil

The Oil used in the G20 hydraulic system is standard ISO 46 hydraulic oil. Brand equivalents are shown here.

Supplier	Product Name	Supplier	Product Name
Atlantic	Hy Lube Hydraulic Fluid ISO 46	Mobil	DTE 25
BP	Batran 46	Penrite	Indus Pro Hydraulic 46
Caltex	Rando HD 46	Prolube	Hyplex 46
Castrol	Hyspin H46	Shell	Tellus 52 M 46, Tellus 52 MX 46
Fuchs	Renolin B Plus 46	Total	Azolla ZS 46
Gulf Western	Superdraulic 46	Valvoline	Ultramax 46
Hitec	Hydraulic 46		

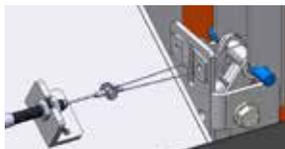
The recommended interval of change is 2 years. It may require changing sooner in certain circumstances. Factors that would affect this include being used in a dusty or high humidity environment or high humidity. Cracked seals or Oil contamination will also necessitate an Oil change. **NOTE** that when changing the Oil, it is also recommended to replace the Tank Breather fitting at the same time.

Bleeding the Ram

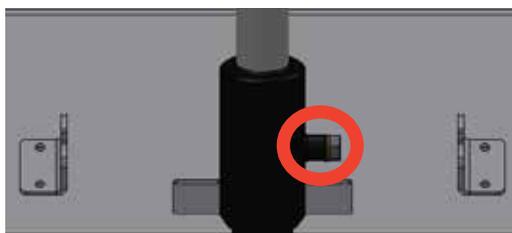
If the Ram movement becomes inconsistent, "spongy" or does not lift to the full height, it is likely that air has gotten into the system and needs to be bled out. To bleed the Ram, follow these simple steps...

Single Action Ram

1. Pump the Ram up as high as it will go. Then pump the handle *slightly* more to ensure the oil is under pressure.
2. Make sure the Platform is supported by engaged triggers, or some other external support system.



3. Move to the Front of the unit and locate the Bleed Valve that is near the top of the Ram, just above the Landing rail "apron" as illustrated.



4. Have a rag ready to absorb any excess Oil. Place the rag under the Bleed Valve, covering the immediate surrounding area, but leaving the Valve plug nut accessible.
5. Using a 3/4" (19mm) Wrench, "crack" open the nut very slowly. As you gradually unwind the nut, you should hear air escaping, or may see frothy Oil coming out. There may also be some "spatters" of Oil/Air but keep unwinding slowly till you see just Oil coming through.

Maintenance

Hydraulic System

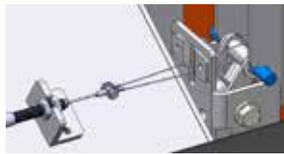
Bleeding the Ram (continued)

Single Action Ram (continued)

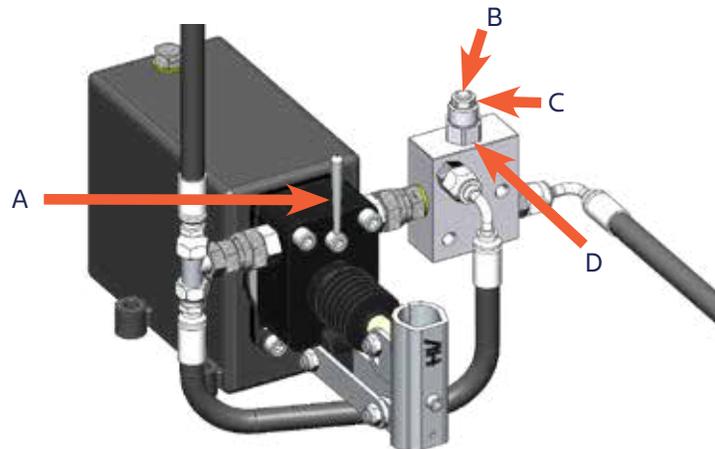
6. Close the Valve nut immediately and tighten.
7. Check again to see if the Operation of the Ram has improved. If there are still some issues, repeat the procedure until all air has been bled from the system, and the Ram is performing normally.

Double Action Ram

1. Pump the Ram up as high as it will go. Pump the handle slightly more to ensure the oil is under pressure.
2. Make sure the Platform is supported by engaged triggers, or some other external support system.



3. Locate the bleed nut (D) at the base of the adjusting Allen Key Grub Screw.



4. Have a rag ready to absorb any excess Oil. Place the rag under the Bleed Valve, covering the immediate surrounding area, but leaving the Valve plug nut accessible.
5. Using a 23mm (7/8") Spanner, "crack" open the nut very slowly. As you gradually unwind the nut, you should hear air escaping, or may see frothy Oil coming out. There may also be some "spatters" of Oil/Air but keep unwinding slowly till you see just Oil coming through.
6. Close the Valve nut immediately and tighten.
7. Check again to see if the Operation of the Ram has improved. If there is still some issues, repeat the procedure until all air has been bled from the system, and the Ram is performing normally.

Maintenance

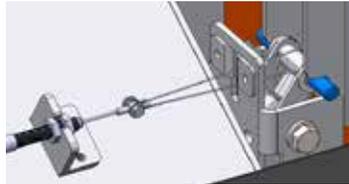
Hydraulic System

Descent Speed Adjustment

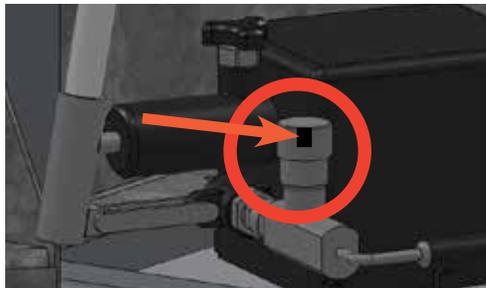
Single Action Ram

The Hydraulic system has a valve to control the speed of the descent of the Platform. This will be factory set at an optimal speed that is both practical and safe. This should not need any alteration, but if for any reason further adjustment is required, the procedure is as follows...

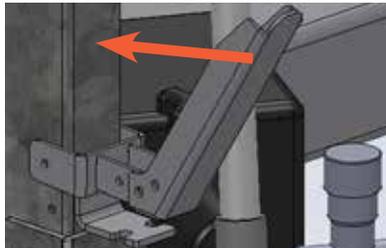
1. Pump the Ram up to full height.
2. Make sure the Platform is supported by engaged triggers, or some other external support system.



3. Unlock the small Allen Key Set Screw in the side of the Valve Knob.



4. Turn this Valve completely shut (as far as it will go in the clockwise direction).
5. Activate the Trigger Rods by pushing the Lever against the Rear Panel as shown.



6. Release the Main Hold valve to lower the Ram. The Ram should not move if the Speed Control Valve is completely shut.
7. Slowly open the Speed Control Valve and the deck will start to come down. The further you open the Speed Control Valve, the faster the deck will lower.
8. When the desired speed is reached, shut of the Main Hold Valve, and lock the Speed Control Valve position using the small Allen Key Set Screw in the side of the Valve Knob.

Maintenance

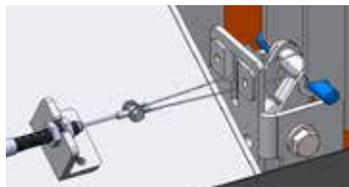
Hydraulic System

Descent Speed Adjustment (continued)

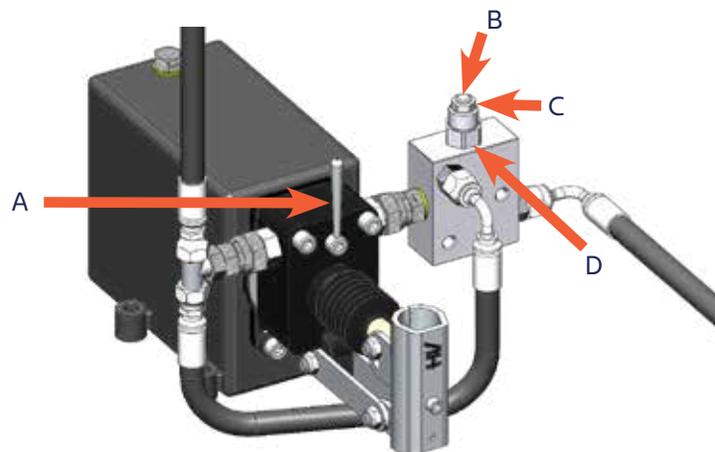
Double Action Ram

The Hydraulic system has a valve to ensure the unit must be pumped down, rather than free fall. This should not need any alteration, but if for any reason further adjustment is required, the procedure is as follows...

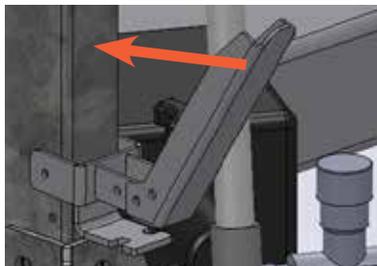
1. Ensure the hydraulic system has been bled (refer to page 15). Then pump the Ram up to full height (just above the highest lock position).
2. Make sure the Platform is supported by engaged triggers, or some other external support system.



3. Unlock the small Allen Key Grub Screw on the top of the Valve block (B) by releasing the Lock Nut (C).



4. Activate the Trigger Rods by pushing the Lever against the Rear Panel as shown.



5. Move the Direction Lever (A) to the left to lower the Ram.
6. If the Ram/deck does not lower, wind the Allen Key Grub Screw (B) out until the Ram/deck starts to descend.
7. As the Ram/deck descends, tighten the Allen Key Grub Screw (B) until the Ram/deck stops descending.
8. Hold the Allen Key Grub Screw (B) position and Tighten the Lock Nut (C).
9. The unit should now require pumping down.

Maintenance

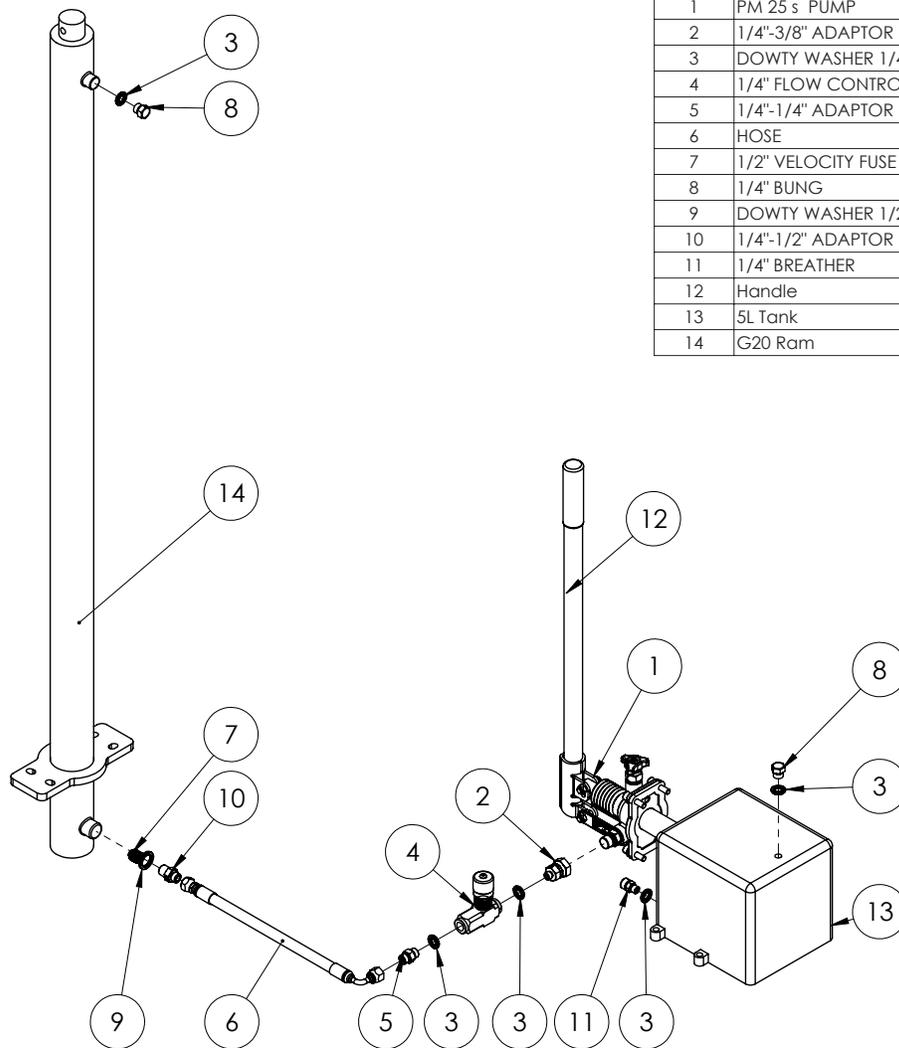
Hydraulic System

Hydraulic System Parts Identification

Single Action Ram

The system is relatively simple. See hydraulic system general assembly below.

ITEM NO.	DESCRIPTION	PART NO.	Default/QTY.
1	PM 25 s PUMP		1
2	1/4"-3/8" ADAPTOR	AC-0406	1
3	DOWTY WASHER 1/4" DO4	2002600	5
4	1/4" FLOW CONTROL VALVE WITH CHECK	VRFU9001	1
5	1/4"-1/4" ADAPTOR	BB-0404	1
6	HOSE	HH-E TECH	1
7	1/2" VELOCITY FUSE	9009480	1
8	1/4" BUNG	B-04	2
9	DOWTY WASHER 1/2" DO8	2002602	1
10	1/4"-1/2" ADAPTOR	BB-0408	1
11	1/4" BREATHER	2002646	1
12	Handle		1
13	5L Tank	5L Tank	1
14	G20 Ram	GA 0054	1



Maintenance

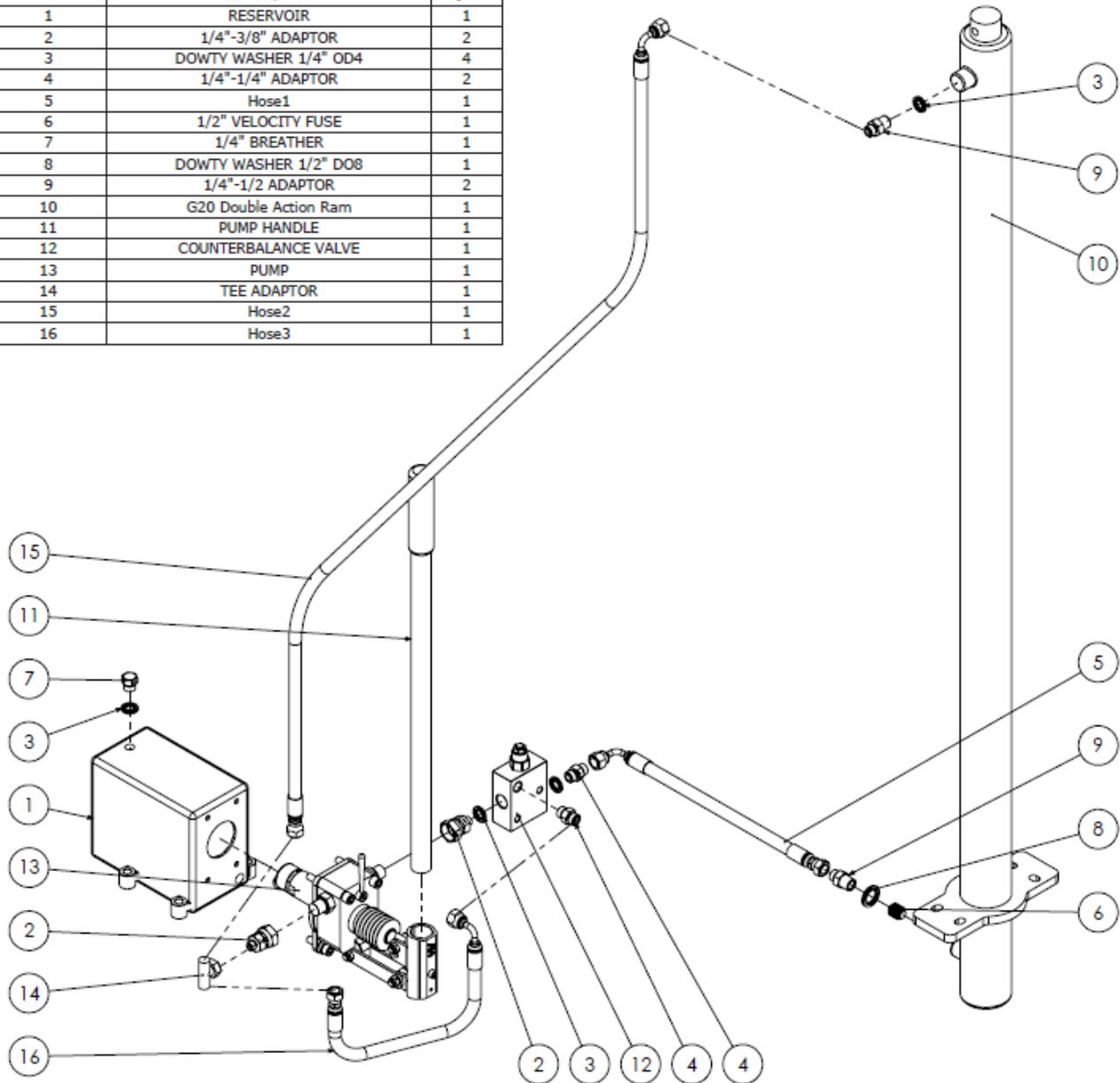
Hydraulic System

Hydraulic System Parts Identification

Double Action Ram

The system is relatively simple. See hydraulic system general assembly below.

ITEM NO.	Description	QTY.
1	RESERVOIR	1
2	1/4"-3/8" ADAPTOR	2
3	DOWTY WASHER 1/4" OD4	4
4	1/4"-1/4" ADAPTOR	2
5	Hose1	1
6	1/2" VELOCITY FUSE	1
7	1/4" BREATHER	1
8	DOWTY WASHER 1/2" DO8	1
9	1/4"-1/2 ADAPTOR	2
10	G20 Double Action Ram	1
11	PUMP HANDLE	1
12	COUNTERBALANCE VALVE	1
13	PUMP	1
14	TEE ADAPTOR	1
15	Hose2	1
16	Hose3	1



Optional Accessories

Many optional extras are available for the G20. They can all be retrofitted relatively simply, but Equiptec recommends these tasks are undertaken by an Engineering based or otherwise qualified Tradesperson. The instructions for installing each type are all downloadable from the Equiptec website, and Equiptec remains available to assist via Video Conference if required. If in doubt, do not hesitate to contact Equiptec for advice.

Installation/Operation instructions for optional equipment is supplied with the said equipment.

Options available include...

One Step Extension

Taller Single Step height caster brackets paired with the additional Single Step module on the base stair gives the standard G20 a single step (8.85" / 225mm) addition to all platform heights.



Two Step Extension

Similar to the One Step Extension, taller Double Step height caster brackets paired with additional Double Step module on the base stair gives the standard G20 a double step (17.7" / 450mm) addition to all platform heights.



Four Step Sub Chassis

This is a full sub chassis giving the standard G20 a four-step (35.4" / 900mm) addition to all platform heights.



Eight Step Sub Chassis

This is a full sub chassis, including a landing (to meet the AS/NZS standards requirements) give the standard G20 an eight-step (70.86" / 1800mm) addition to all platform heights.



Optional Accessories

Hammerhead Deck

This option gives a wider deck at the front. With 5.9' (1.8m) of room it allows 2 people to comfortably work alongside each other. The Hammerhead Deck also offers the ability to remove gates on either, or both sides, giving unimpeded access to a 5.9' (1.8m) wide workface. Note that the load capacity of the whole G20 is reduced to 440lb (200kg) when this unit is installed



Angled Deck

Turns at right angles to the main deck, allowing the user to reach 3.28' (1.0m) out over obstacles while the G20 is parallel to that object. The same accessory can be installed on either left or right hand side. Note that the load capacity of the whole G20 is reduced to 300lb (150kg) when this unit is installed.



Slide Out Deck

This option gives an extra 4.59' (1.4m) of cantilever, resulting in a total of 9.51' (2.9m) cantilever reach. Note that the load capacity of the whole G20 is reduced to 300lb (150kg) when this unit is installed.



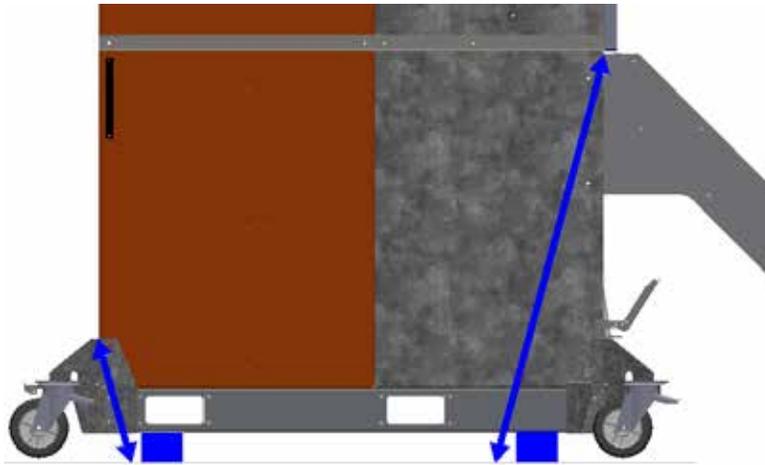
Transport

When transporting the G20 in its fully built configuration, it is mandatory to ensure the following:

- The G20 work deck is in its completely lowered position
- The unit is supported on its chassis frails only, a minimum of 4" (100mm) in from the Caster Brackets at either end, and at a height that allows the wheels to swivel freely (See blue squares depicting packers in diagram below).
It is very important that the wheels are not in contact with the trailer or truck bed to avoid any damage to the wheel units.
- The Caster Brakes are fully locked
- All the floating treads (stair members which move freely up and down as the unit is raised and lowered are either tied down or removed.

Tie the G20 down as per the following diagram. Note that the arrows show the recommended path, position and angle of the tiedown straps.

- ***Do NOT use handrails as tie down anchors***
- ***Corner protectors are recommended to protect tiedown straps from chafing***



NOTE: If your G20 is fitted with 1 or 2 Step Extensions, it is recommended that these are removed for transport. When 4 or 8 Step Chassis Extensions are fitted, the same principles are applied, ie do not allow the Casters to touch the deck (use bolsters each end as above), tie the Chassis down on similar angles as shown in the above diagram (to prevent fore/aft movement), and ensure the tie down straps are only putting pressure on strong structural members of the Chassis Extension.

Failure to follow the above steps can result in damage to the unit making it inoperable and is not covered under warranty.

Contact details

Manufacturer



The Equiptec Giraffe G20 is manufactured in New Zealand by Equiptec. Please contact us and one of our team will be very happy to assist in your enquiry.

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