

# MX21 Mobile Maintenance Platform Owner's Manual

[www.equiptec.co](http://www.equiptec.co)



**Equiptec**

**Monkey**

**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 organisation 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 or any other supervisory 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 organisation 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 Monkey MX21 (MX21) is designed to facilitate easy and simple Step type access to a variable height platform. It incorporates a spacious platform that is sturdy, and as ergonomically safe as possible to work from. The MX21 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 MX21 at all times. Prior to using the MX21, 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 MX21 as follows:

- Front - is the direction you face as you climb the Steps, looking towards the platform
- 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 steps

# 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 unit near the top of the stairs or via the link in the service reminder E-mail. The MX21 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 submitted to Equiptec.

Should the MX21 ever be sold, hired 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 MX21 Platform.

# Compliance

The MX21 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 MX21 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 a 90 minute job for Competent Personnel. Full instructions will come with the Unit for this procedure and can also be found on Equiptec's website at [www.equiptec.co/instruction-manuals](http://www.equiptec.co/instruction-manuals). Equiptec is available to assist via video conference if required (during Business Hours, New Zealand time).

***Note: It is a mandatory safety consideration that the MX21 is assembled precisely, and when undertaking 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.equiptec.co](http://www.equiptec.co). This allows Equiptec staff to check the correct procedure has been followed, and validate the commencement of the standard Warranty.***

# Warranty

The standard Warranty for an MX21 is 5 years. To ensure this warranty is in place, simply go to the Equiptec website ([www.equiptec.co](http://www.equiptec.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).

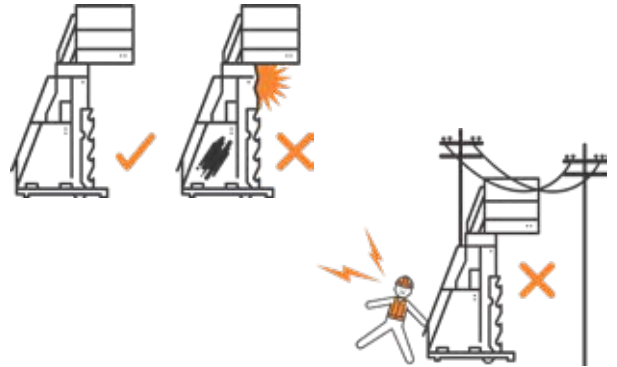
# Warranty

Some situations a MX21 could be used in are extremely demanding of the structure of any machine. Consequently, it needs to be made clear that that the Term "Lifetime Warranty" means the period that the Equipment could reasonably be expected to operate (in the circumstances 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

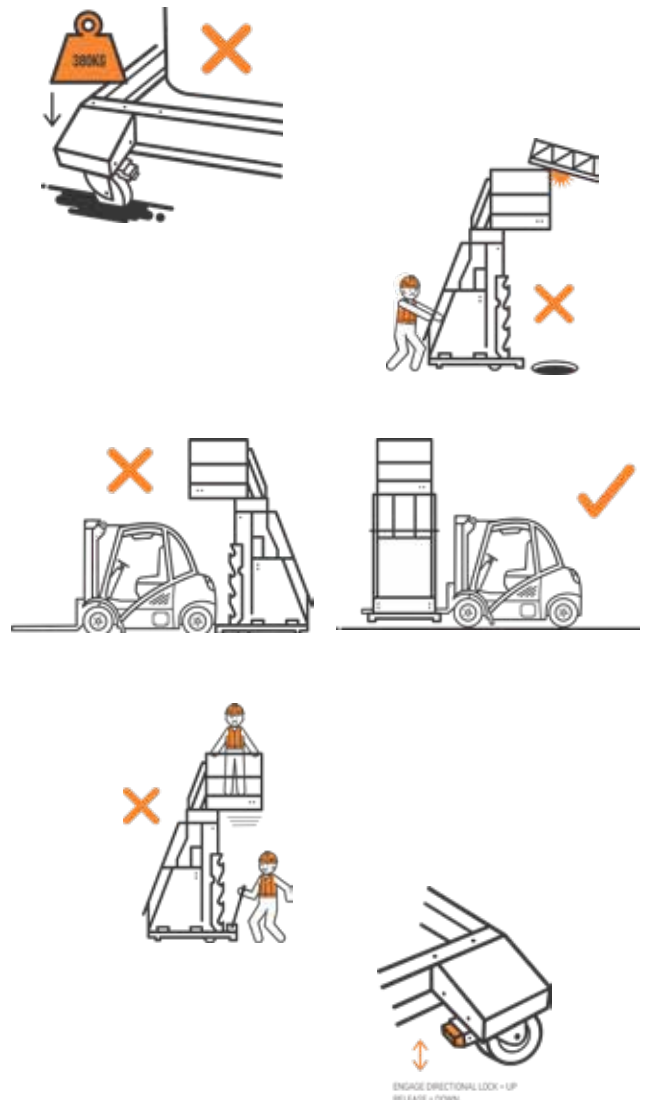
### Prior to Use

1. **Check the MX21 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.**
2. **Warning:** The user must check for all electrical hazards (and contact all appropriate authorities if necessary) in the area before positioning or using the MX21. *The MX21 conducts electricity and offers no electrical protection.*



### Positioning the MX21

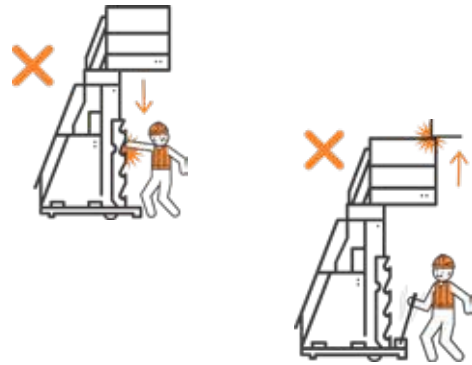
1. Check that the ground surface that the MX21 is to be used on is capable of supporting 75% of the combined weight of the MX21 and its intended load (allow approximately 550kg or 1215 lb) on any 2 of the ground contacts.
2. Check that the course to be followed is free from ground or overhead obstructions eg beams, trusses, mezzanine floors, raised manholes, electrical cables, gratings, potholes etc.
3. The standard issue castor wheels are not designed to roll over obstacles. If the surface of the area the MX21 is to be moved across is soft, has larger stones, objects or debris in the MX21's path, or for any reason the MX21 cannot be moved by manual pushing/pulling, it is recommended to shift the MX21 with a forklift using the forklift pockets provided. The MX21 should not be towed or pushed by mechanical means. An All Terrain option with rubber tyres and Levelling jacks is also available for customers with uneven/rough floor conditions, or outdoor applications (see options available on page 15-16).
4. **Under no circumstances must any personnel or load be allowed on any part of the MX21 whilst it is either being moved, repositioned or adjusted for height.**
5. MX21 Go-Base units have Castor swivel directional locks fitted to at least one of the 2 front castors (this is not applicable to the All Terrain option). Engaging these will greatly assist correct tracking, particularly if being moved longer distances.



# Safety Requirements

## Positioning the MX21

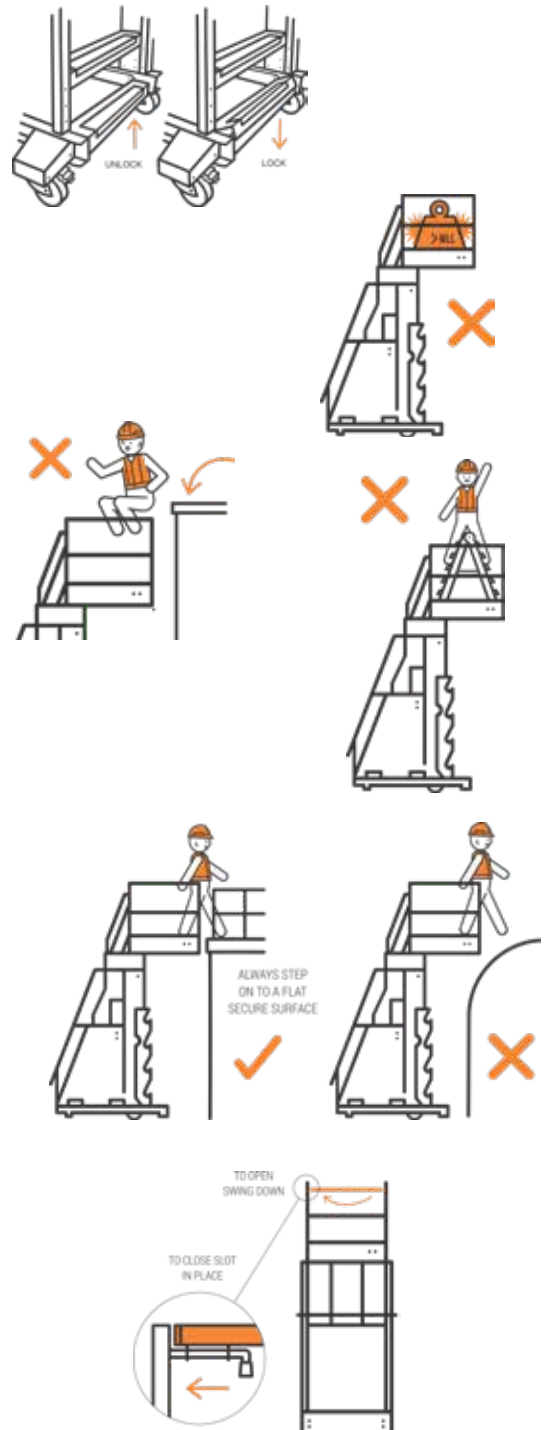
6. The MX21 has “pinch points” or areas where crushing could occur. Careful attention must be given to keep clear of these areas.
7. Always check that the deck will not collide with any object as it is being raised or lowered. In particular, ensure all personnel are well clear of the MX21 when raising or lowering the deck.



## MX21 Use

### (general points - see also 'Operation')

1. On Go-Base variants, **always ensure** that castor brakes are effective and locked on at all times (unless it is being moved), especially before any personnel climb or use the MX21. If fitted with the All Terrain option the manual levelling jacks must be wound down on to a solid surface, and under enough pressure to take the weight off the wheels and level the unit.
2. Always respect the safe operating limits of the MX21. The design load is 250kg (550 lb), including a point load of 135kg (295 lb), on the platform OR the stair (not concurrently). **Please note that in the case of the Extended Cantilever deck option or certain other customised options being fitted, the safe operating limit is reduced.**
3. It is forbidden to jump onto the MX21 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.
5. In its standard configuration, the MX21 deck has an access gate to facilitate access to/from a work surface if required. This gate must remain shut except when walking through it. Do not use the gate 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. The gate must be checked before use. It is spring loaded to shut automatically. Do not use this gate if it does not swing freely throughout its full rotation, and automatically latch securely shut. The gate is lockable, and it is recommended that it remain shut and locked unless “walk through” access is required.
6. The MX21 is equipped with a Safety Rail across the rear of the deck at the top of the stairs. Once on the deck, the user can lift it into place and lock it via the sprung latch under the rail. Simply reverse the procedure to disengage. Ensure this rail is securely in place and the lock engaged before proceeding with any work.



# Safety Requirements

## MX21 Use

(general points - see also 'Operation')

7. It is prohibited for personnel to be under the MX21 work deck when it is loaded and/or elevated or at any time when it is being used.

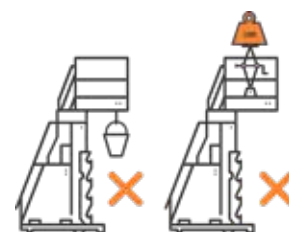


## MX21 Stability

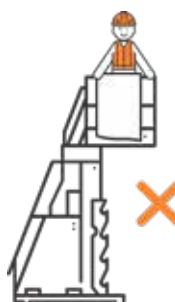
1. If the ground surface is not within 5 degrees of level (or if fitted with the All Terrain option and the Levelling Jacks cannot level the MX21) do not use the MX21. Reposition your work piece on flatter ground.

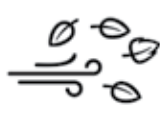




2. The MX21 is not designed as a crane. **Do not use the MX21 to lift any loads, or as a platform to jack loads off.**



3. The MX21 will offer a large area to wind, and so care needs to be taken when using it in windy conditions. The table below gives a good indication of wind conditions the MX21 can and cannot be used in. Due regard must be paid to certain circumstances where wind conditions are magnified, eg in long open-ended buildings, between buildings where the wind may have a funnelling effect, or where the MX21 is positioned close to the corner of a building. Never attach tarpaulins, flags, banners, signs or other coverings to the MX21 as this may seriously increase its susceptibility to wind force.



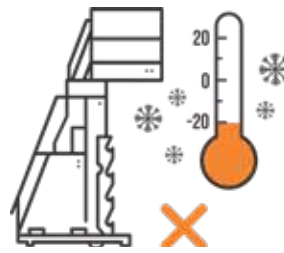
Wind Description	Speed			Visible Indications	Action Required
	MPH	KPH	Metre / Sec		
Moderate Breeze	up to 12	up to 19	up to 5.3	Raises dust and loose paper 	Safe to work on MX21
Fresh Breeze	13 - 24	20 - 38	5.4 - 10.8	Small trees in leaf begin to sway 	Cease to work on the MX21 Lower platform and secure all loose items
Strong Breeze	25 +	39 +	10.9 +	Large branches in motion, overhead wires whistle 	Move MX21 indoors



# Operation

When fitted with the Hydraulic Lift option, the MX21 has a minimum operating temperature and ***should not be used in an environment that is colder than -20°C (-4°F)***.

**The MX21 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 MX21 as close as possible to the work piece without adjusting the deck height. Being closer allows you to more accurately gauge the height you will require the deck to be.

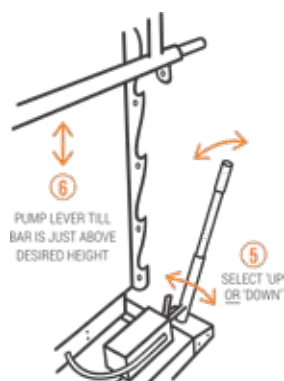
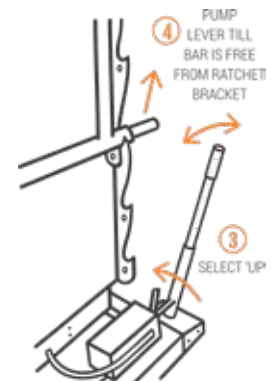
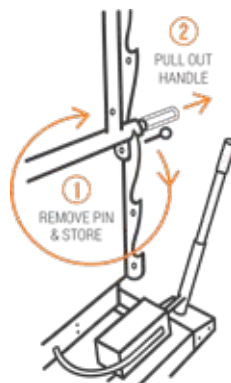
2. When adjusting the height of the MX21

## Without Hydraulic lift option

- Remove the Locking Pins from the Ratchet Handle and secure them in storage position. Now slide the extending handle fully out.
- Lift the Upper Unit slightly to allow the Ratchet Handle to swing out free from the Ratchet
- With the Ratchet Handle, raise OR lower the Unit until it is just above the desired step height. Now push the Ratchet Handle down into the hollow of the Ratchet Bracket at the desired position.
- Reinsert the Locking Pins and push the extending handle back in out of the way

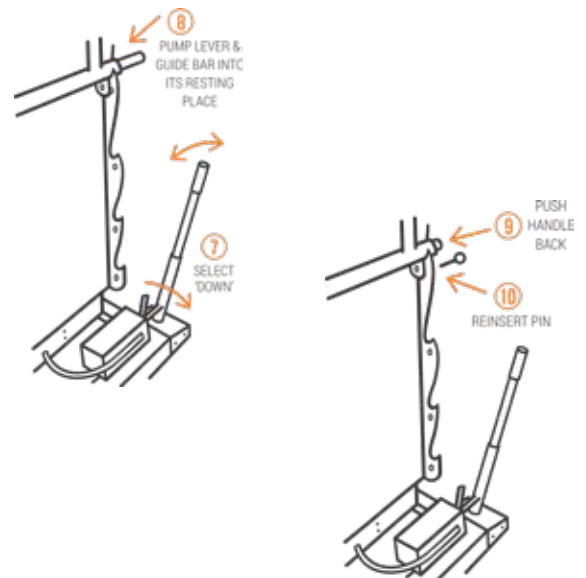
## With Hydraulic lift option

- Remove the Locking Pins from the Ratchet Handle and secure in storage position. Now slide the extending handle fully out.
- Move the Pump flow control lever to “UP” and pump up just enough to allow the Ratchet Handle to swing out free from the Ratchet
- Now select either “UP” or “DOWN” on the Pump flow control lever and, while guiding the Ratchet Handle via the slide-out extending handle, pump until the Ratchet Handle is just above the desired height.



# Operation

- Next select "DOWN" on the Pump flow control lever and pump the Ratchet Handle down into the hollow of the Ratchet Bracket at the desired position
- Reinsert the Locking Pins and push the extending handle back in out of the way



**CAUTION!** Ensure your hands and all other personnel are kept well clear of the potential pinch points between the ratchet handle and the ratchet brackets on both sides.

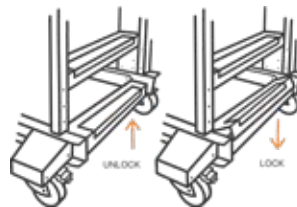
**Do not force the Pump handle if it is hard to pump**

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

3. Move the MX21 into the final position. Check it is within 5 degrees of level and on a sufficiently firm base surface.



4. If Go-Base fitted, ensure the base tread is pushed down to lock all 4 wheel-brakes.



5. If All Terrain option is fitted, ensure the levelling jacks are engaged (taking weight off the wheels), and that the unit is level with the level bubble centered correctly in both directions.



6. You may now climb the MX21, (**WARNING - always face the Steps when ascending or descending**) unlatch the deck Safety Rail, proceed on to the work deck and replace the Safety Rail.



7. Once your work is finished, descend the steps (**WARNING - always face the Steps when ascending or descending**) and move the MX21 out to a clear area to allow the safe lowering of the deck. See point 2 on page 5 on how to lower the deck.

# Maintenance

As with all machinery, particularly those used to support working personnel, a regular maintenance system is required. In the case of the MX21, the Manufacturer approved system is very simple, consisting of 6 Monthly, Annual and Biennial service types.

The responsibility for ensuring these services are done rests with the Owner, however, in conjunction with their Warranty, Equiptec offer a reminder service to help ensure these services are completed in the due times. Mandatory services also need 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 of course that there is no adverse damage etc). Equiptec may vet service reports 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 authorised 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 pages 11-13.

***Please note that it is essential 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 MX21.

2. Check all handrails are in place and firm. Ensure any handrail tube components missing/loose are replaced/tightened to 10 Nm (7.5 ft/lbs).
3. Check the self-closing gate moves freely, automatically swings shut and locks, 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](http://www.ddtechglobal.com).
4. Check that the Back Safety Gate locates and closes easily.
5. If fitted with Go Base, check that the bottom step rotates to effectively activate the Castor Brakes. If there are any issues, check that the connecting bolts at either end of each actuating bar are tightened to 10Nm (7.5 ft/lbs). These must not be loose, but do not overtighten them as this will inhibit the activating action.
6. Check that the castor brake locks, and directional locks or levelling jacks (if fitted) are functioning correctly. Castor Brakes are occasionally affected by high wear of the Tires. If this is the case, adjust the Brake system by turning the Black Adjusting Nut (indicated by the arrow) with a 19mm / 3/4" Spanner, to increase the pressure on the Tyre.



7. If fitted with All Terrain system, check that the Tyres are in good condition, and that the Jacks all function correctly.

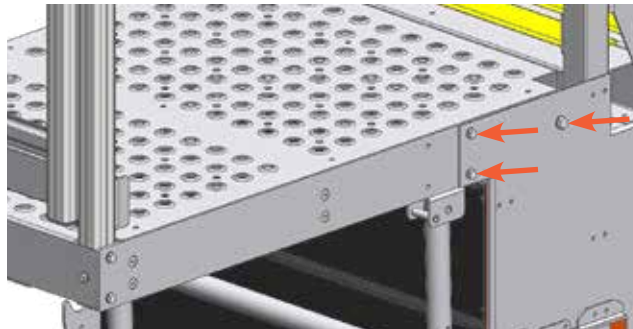
# Maintenance

## Six Monthly Service Inspection (continued)

8. If fitted with hydraulic lift, 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.
9. Check all floating treads rise/nest correctly and do not catch on anything. Remove/repair any deformation damage that may cause issues.

## 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. Using a Forklift, elevate the unit so that the wheels are just off the ground (say 6mm or 1/4"). Place packing block under Chassis for safety. Check that the rear wheels spin easily (no roughness) and that the swivel turns freely. Remove the Castor Bracket covers (if fitted) and check the Castor mount bolts, and Castor Bracket mounting bolts, are tight (40 Nm or 30ft/lbs) and secure before lowering the Unit. If any issues are identified, contact Equiptec for advice.
4. Check all handrail and handrail post bolts are tightened to a maximum of 10 Nm (7.5 ft/lbs) and any Bolts fitted to captive nuts are tightened to a maximum of 20 Nm (15 ft/lbs).
5. The MX21 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 40 Nm (30 ft/lbs).



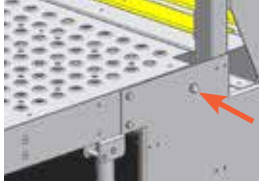
7. If fitted with hydraulic lift, pump the machine to full height. Before lowering again, check:
  - that the hoses have no leaks, cracks or chafing. If any issues are identified, upload photos and contact Equiptec for advice
  - whether the Hydraulic Ram needs bleeding (usually causes a soft "spongy" lift that does not go to full height easily). See Instructions in the Hydraulic System section on page 14
8. Check 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 approximately 60mm (2.36") below the top of the tank. Add more if necessary (note recommended oil brands/types on page 14) 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.**
9. 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.

# Maintenance

## Annual Service Inspection - Mandatory (continued)

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

- Platform pivot bolts as shown



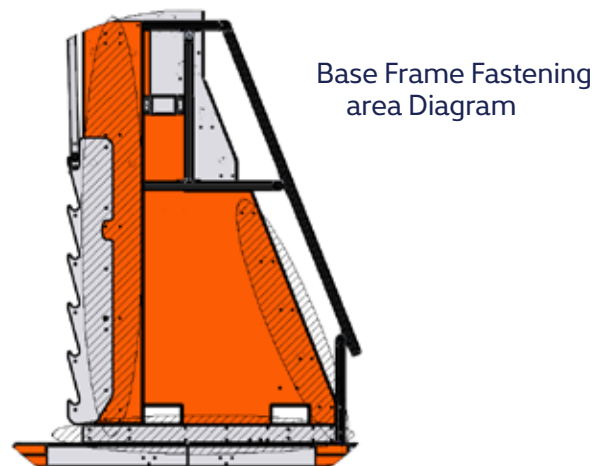
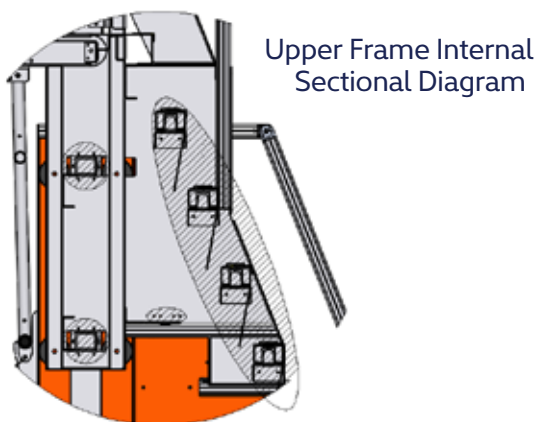
- Upper deck handrailing
- Upper deck gate(s) including rear safety rail
- Any damage that has been sustained by the unit and
- General views from the 4 elevations with the deck at full height

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

*Please note that it is essential that only genuine Equiptec parts are used if any replacements are required.*

## 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 MX21 onto a solid and safe elevated support. Check thoroughly for any damage, denting or any other structural issues around the Fork Pockets. Upload photos of any damage to the service checklist.
3. Place unit back on to floor carefully. Raise the Deck to full height. Ensure the Ratchet handle is locked in place and proceed with a systematic full fastening check both inside and out. This should include checking all Bolts are tight (take care not to overtighten any Bolts going through Handrails – these should be tightened to a maximum of 10Nm or 7.5 ft/lbs) and that there are no loose Rivets. Include any accessory fitted and pay particular attention to the shaded areas in the diagrams below:



4. Lower the Deck to just above head height (with Ratchet Lock in place), and check all fittings and rivet fastenings under the Deck structure are tight. When checking the Ram Top Mount bolt ensure it is tightened to no more than 10Nm (7.5 ft/lbs) to allow the Ram to pivot

Note If you find loose Rivets, or a loose Fastening that you are unsure how to tighten contact Equiptec for advice.

# Maintenance

## Biennial Service Inspection - Mandatory (continued)

5. Check all Rollers are firm and check the condition of the Rollers. Ensure the **Roller condition is checked carefully especially if the environment the MX21 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.**
  
6. Pull up each Floating Tread and check:
  - For any damage, dirt or debris, clean/remove as necessary
  - All rivet fastenings are tight
  - Rollers on catch brackets spin freely and evenly
  
7. Hydraulic Checks (if Hydraulic option is fitted):
  - Hydraulic Pump Mount bolts are tight; Hydraulic Hoses and Ratchet Cables are tidily routed (away from moving Upper Unit parts) and tied in place properly
  - Ram Base Mount Bolt is tightened (no more than 10Nm or 7.5 ft/lbs to allow the Ram to pivot)
  - Ram Hose connection is tight

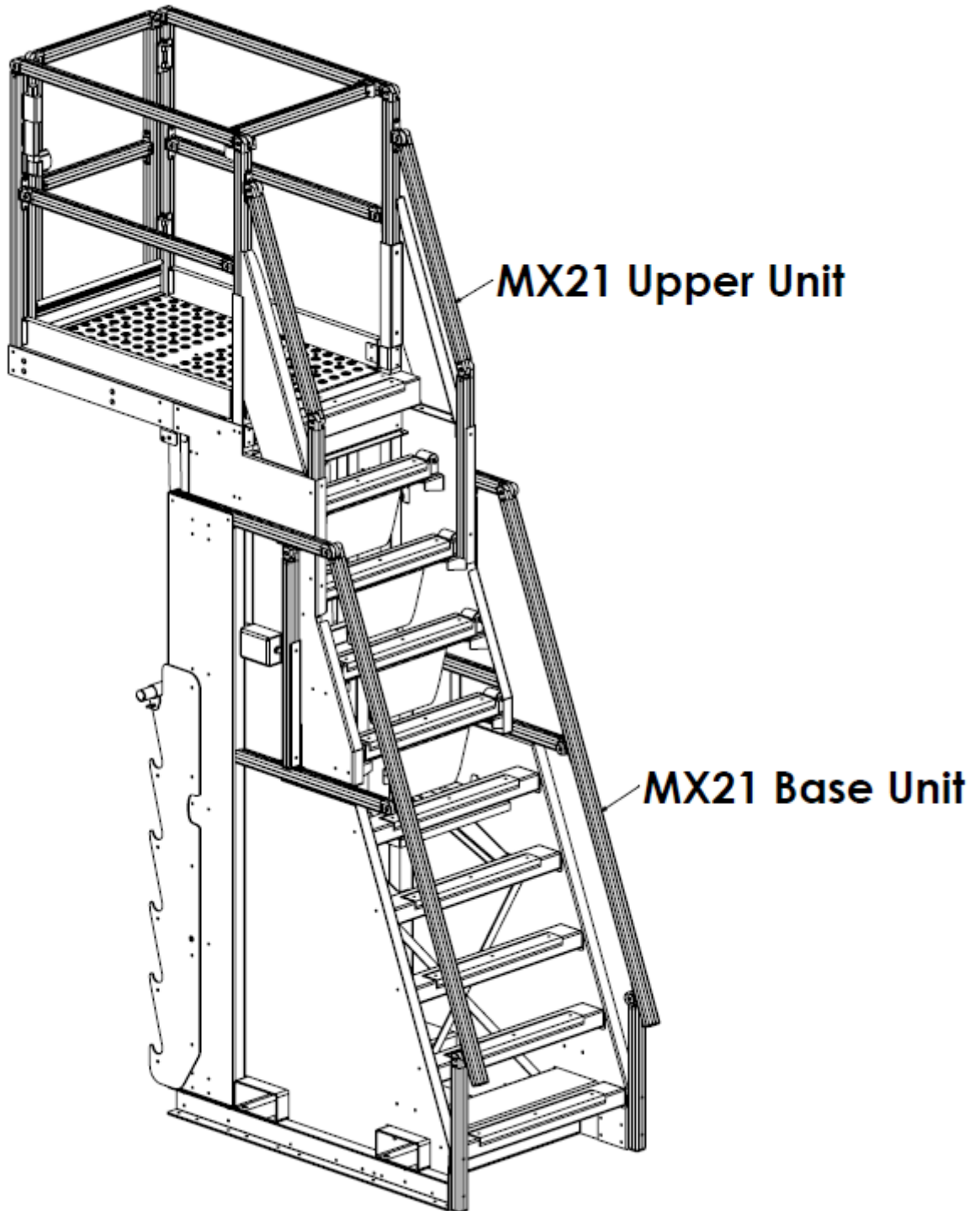
**Remember to upload photos of any issues to the service checklist form**

***Please note that it is essential that only genuine Equiptec parts are used if any replacements are required.***

# Maintenance

## Monkey MX21 Parts Diagrams

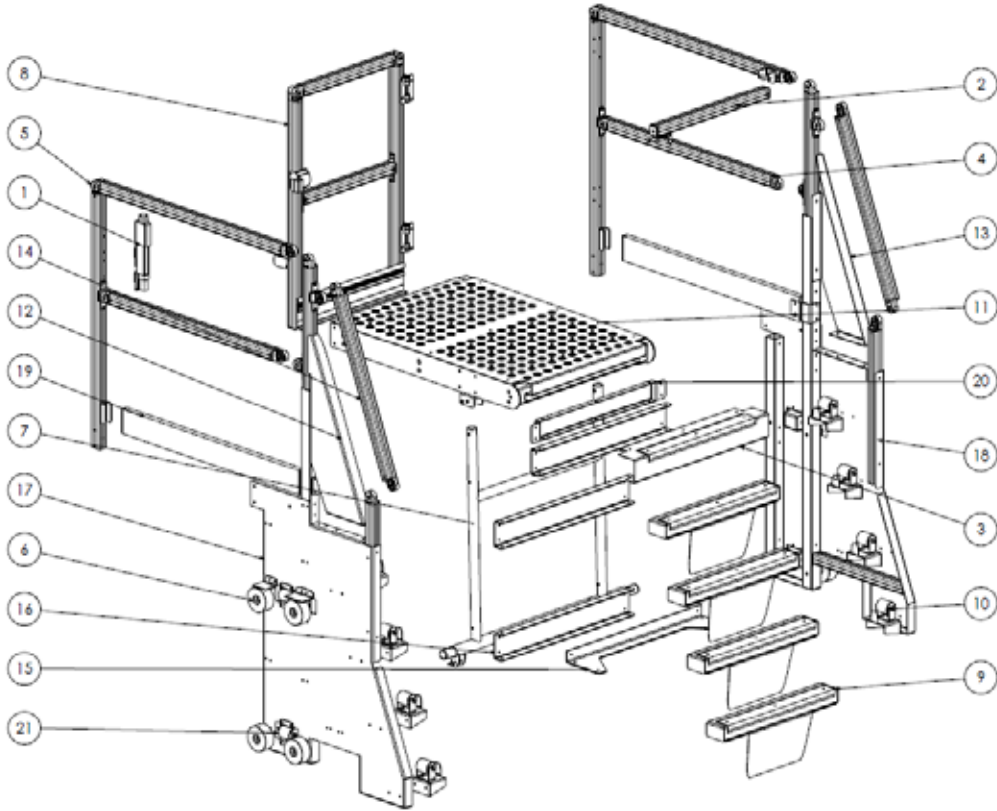
### Complete Unit Parts Diagram



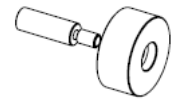
# Maintenance

## Monkey MX21 Parts Diagrams continued

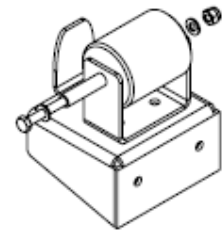
### Upper Unit Parts Diagram



6 - Mast Roller Assembly



10 - Floating Tread Support Assembly



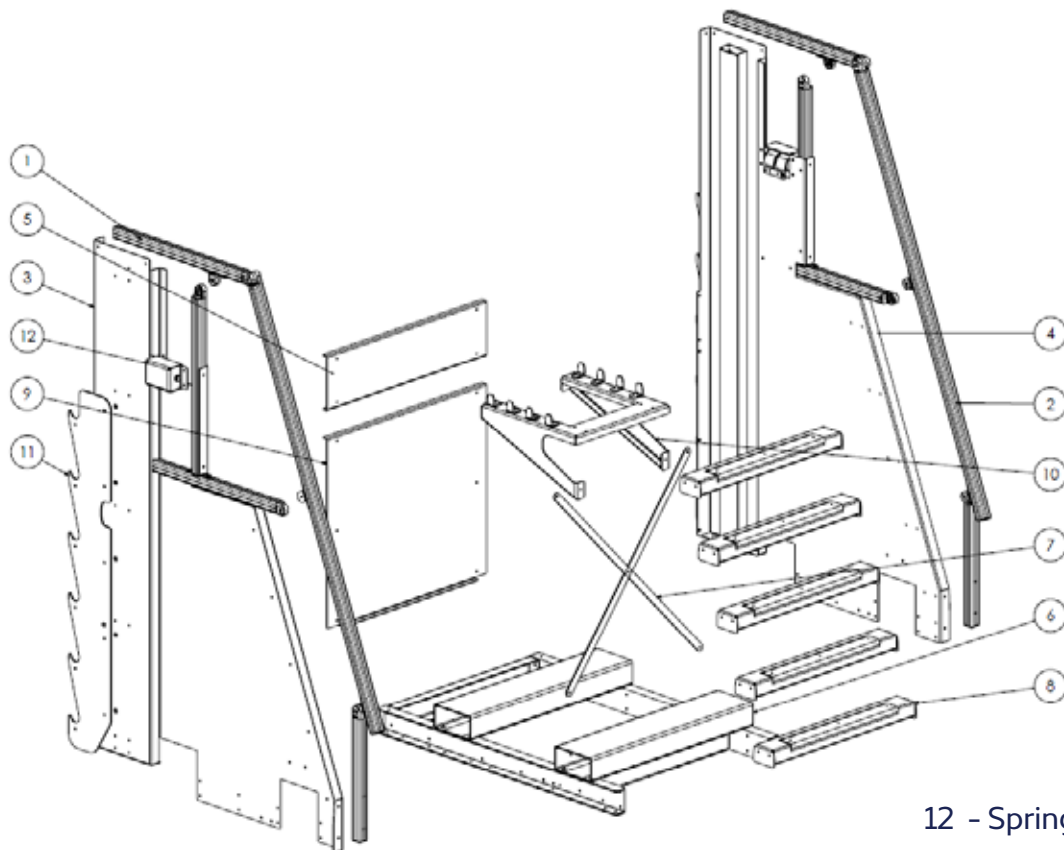
No.	Product Code	Description	No.	Product Code	Description
1	9810233	AHP Gate Lock	12	9870142	MX21 Upper Side Cover LH
2	9870177 - 01	MX21 Rear Gate Assembly	13	9870143	MX21 Upper Side Cover RH
3	9870113 - 01	MX21 Top Step Assembly	14	9870164 - 01	MX21 Upper Stair Handrail Assembly
4	9870166 - 01	MX21 Platform Handrail Assembly RH	15	9870124	MX21 Upper Bottom Cross Member
5	9870165 - 01	MX21 Platform Handrail Assembly LH	16	9870123	MX21 Upper Mid Cross Member
6	9870144 - 01	MX21 Mast Roller Assembly	17	9870118 - 02	MX21 Upper Side Panel Assembly LH
7	9870180	MX21 Height Adjusting Handle	18	9870119 - 02	MX21 Upper Side Panel Assembly RH
8	9870172 - 01	MX21 Gate Assembly	19	9870168 - 01	MX21 Toeboard Assembly
9	9870135 - 02	MX21 Floating Tread w Nosing	20	9870122	MX21 Upper Unit Top Cross Member
10	9870132- 02	MX21 Floating Tread Support Assembly	21	9870118 - 03	MX21 Side Roller Assembly
11	9870141 - 01	MX21 Platform Deck Assembly			



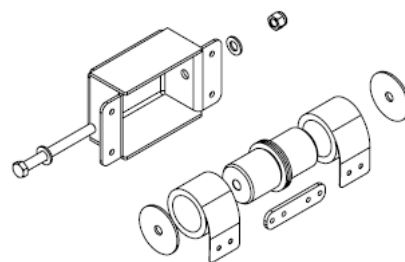
# Maintenance

## Monkey MX21 Parts Diagrams continued

### Base Unit Parts Diagram



12 - Spring Assembly



No.	Product Code	Description	No.	Product Code	Description
1	9870156 - 01	MX21 Base Handrail Assembly LH	7	9870114	MX21 Cross Brace
2	9870157 - 01	MX21 Base Handrail Assembly RH	8	9870112 - 02	MX21 Fixed Tread w Nosing
3	9870109 - 01	MX21 Side Panel Assembly LH	9	9870111	MX21 Front Panel
4	9870110 - 01	MX21 Side Panel Assembly RH	10	9870130 - 02	MX21 Landing Rail Assembly
5	9870191	MX21 Base Unit Cross Member	11	9870115	MX21 Sawtooth Bracket
6	9870101 - 01	MX21 Chassis Assembly	12	9870116 - 02	MX21 Spring Assembly

# Maintenance

## Hydraulic System (if fitted)

### Hydraulic Oil

The Oil used in the MX21 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 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 got into the system and needs to be bled out. To bleed the Ram, follow these simple steps.

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 engaging the ratchet handle, 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 Barrel 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 Hose nut accessible.
5. Using a 19mm (3/4") 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 till all air has been bled from the system, and the Ram is performing normally. This procedure may need to be repeated several times as air can get trapped in hydraulic systems, but it will usually make its way to the highest point in the system as the system is worked.

# Optional Accessories

Many optional extras are available for the MX21. These options can be added as a single option, or combined in various combinations to create various "configurations". Check the assembly instructions to see all of the approved configurations that can be achieved. The options can all be retrofitted relatively simply, but Equiptec recommend these tasks are undertaken by an Engineering Tradesperson. The instructions for fitting each type are in the MX21 Assembly Instruction manual which is 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.

Options available include...

## Go-Base

This option provides a 4-wheel subbase that allows easy maneuvering over hard stand floors. The front castors are fitted with directional locks that provide easy guidance over long distances but can be disengaged very quickly if movement in a lateral direction is required. Braking is easily activated by simply standing on the bottom step which pivots down and locks all four wheel brakes simultaneously. This option adds 250mm (9.8") to all platform heights.



## Four Step Sub Chassis

A full sub chassis giving the standard MX21 a four-step (1000mm or 39.3") addition to all platform heights.



## Hydraulic Kit

Allows effortless raising and lowering of the Deck. Note, the system is "double acting" and so must be pumped both going up and coming down.



## Extended Cantilever

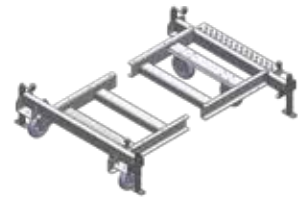
This option gives an extra 1.0m (39.3") of cantilever, resulting in a total of 1.2m (47.2") cantilever. Note that this option requires the fitting of Counterweights, and that the load capacity of the whole MX21 is reduced to 150kg (330lb) when this unit is installed.



# Optional Accessories

## All Terrain Kit

This pack will give better rolling capability over rough surfaces and higher clearance under the chassis. The JACKS act as a brake and **MUST BE ENGAGED WITH A SOLID SURFACE AND UNDER A SMALL AMOUNT OF PRESSURE** to ensure the unit will not move when it is being used. The tyres are solid rubber so there is no risk of flat tyres. With this option, the front wheels do not castor, they only wheel straight, so the unit needs more room to manoeuvre.



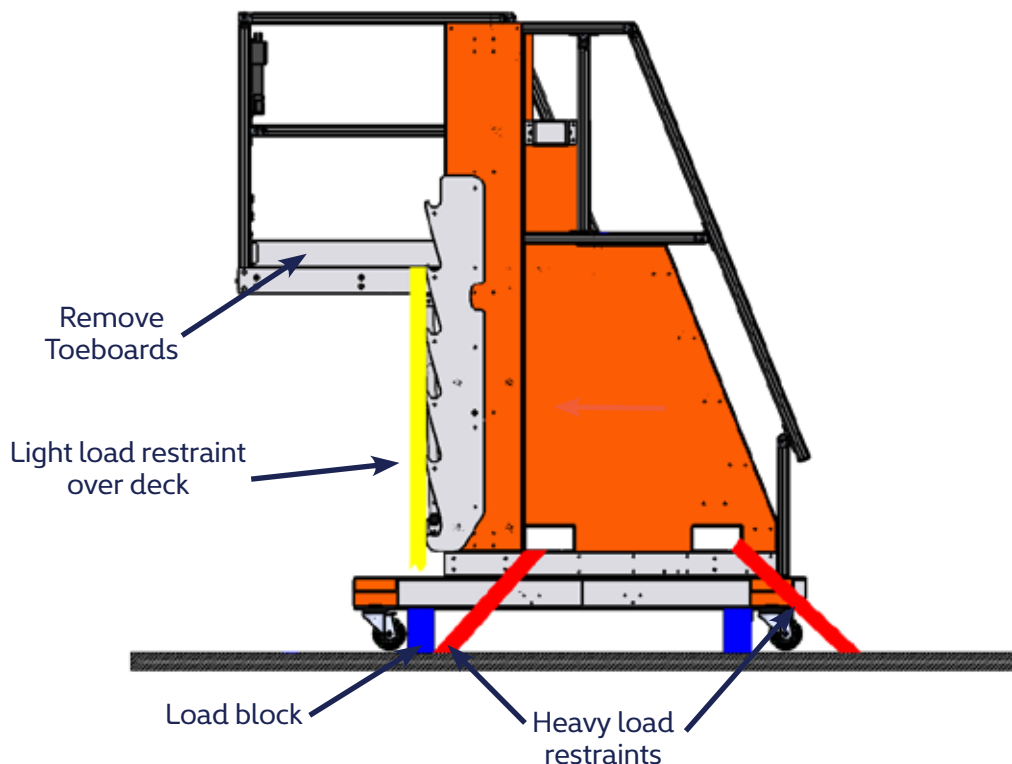
## Transport

When transporting the MX21 in its fully made up form, it is mandatory to ensure the following:

- The MX21 is completely lowered
- The unit is supported under chassis within 100mm (4") in from the Castor 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 transporters deck to avoid any damage to the Chassis or wheel units.***
- The Castor Brakes are activated.
- All the floating treads and deck toeboards are removed and packed separately.

Tie the MX21 down as per the following diagram. Note that the coloured bands show the recommended path, position and angle of the load restraints (yellow is a light restraint, red is a heavy restraint).

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



# Transport



No tie downs in  
this area

**NOTE:** If your MX21 is fitted with Step Extensions, the same principles are applied, i.e. do not allow the Castors 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 strops 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 ioperable and is not covered under warranty.

# Notes

# Contact details

## Manufacturer



The Equiptec Monkey MX21 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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