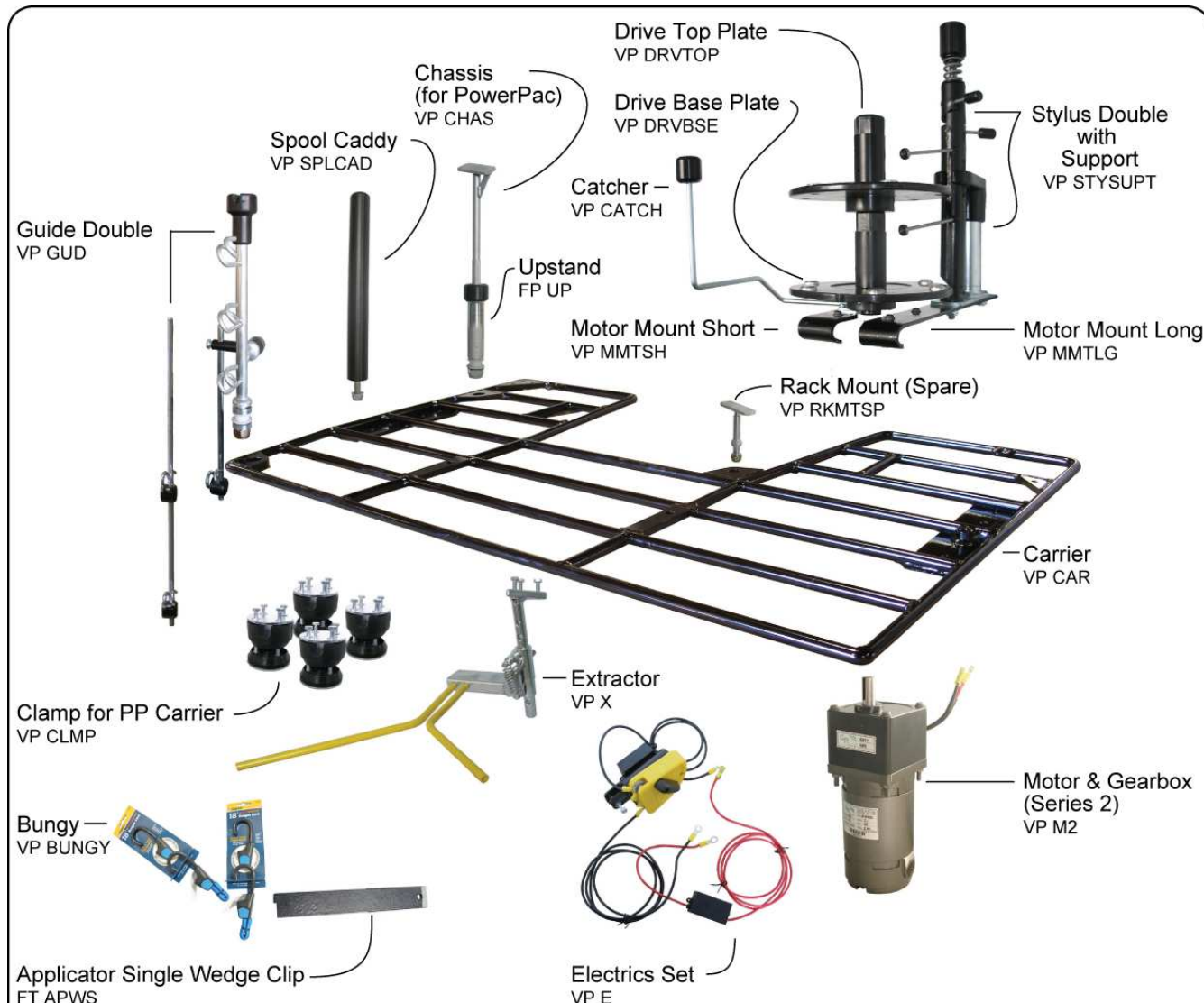


INSTRUCTIONS

PowerPac (VP POWD or VP POWT)

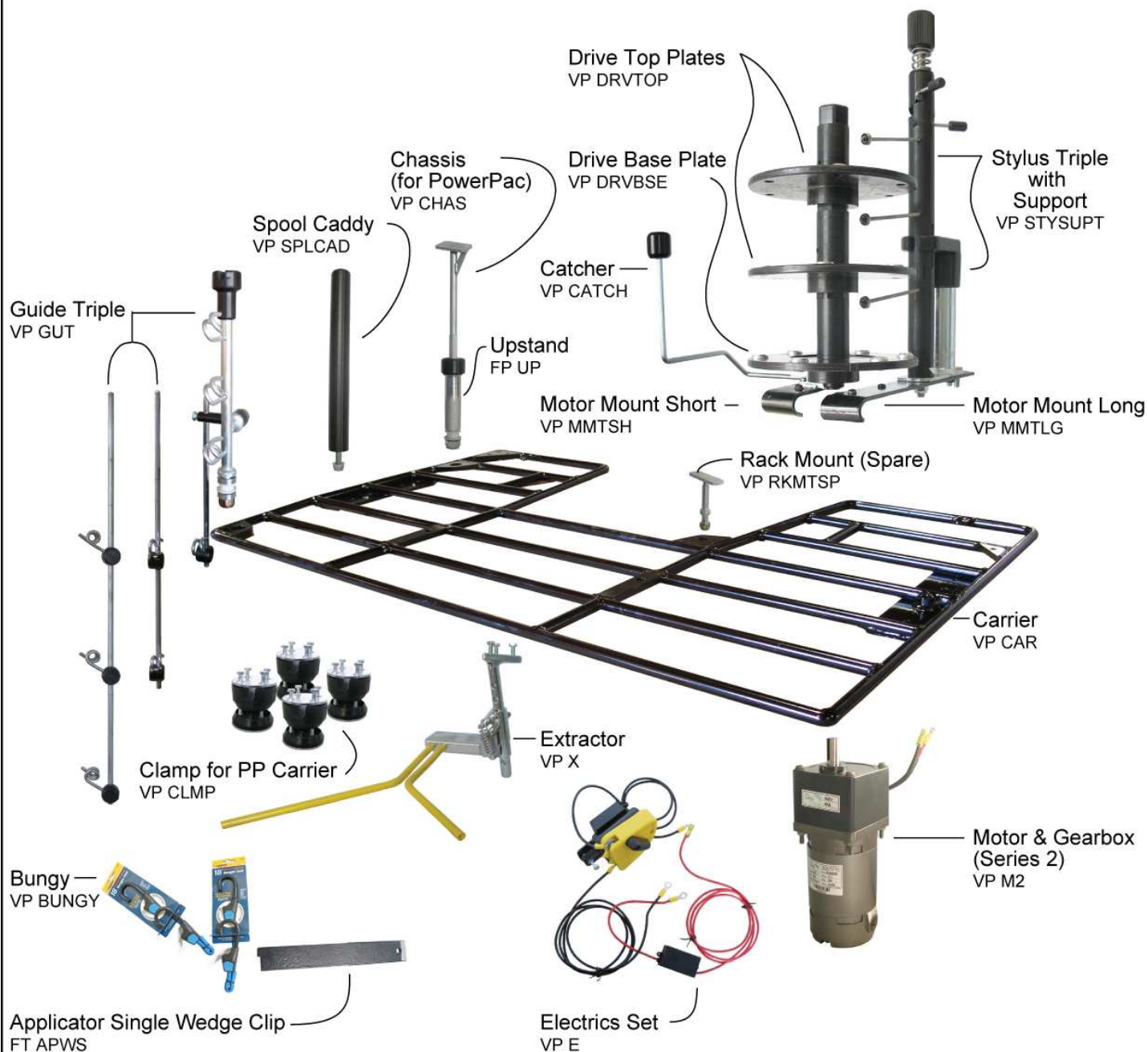
Parts Check: PowerPac Double



	Check ✓
FT APWS Applicator: Wedge Single	1
VP BUNGY Bungy	2
VP CAR Carrier	1
VP CLMP Crush Clamp	4
VP CHAS Chassis (for PowerPac)	1
VP DRVD Drive Double Unit	
VP M2 Motor & Gearbox 500rpm (series 2)	1
VP CATCH Catcher (+2 cap screws M5 x 8)	1
VP MMTLG Motor Long Mount (+M10 x 25 bolt/nut & washer)	1
VP MMTSH Motor Short Mount	1
VP DRVBSE Drive Base Plate	1
VP DRVTOP Drive Top Plate	1
VP E Electrics Set	1

	Check ✓
VP GUD Guide Double	
VP GUPRM Guide Primary (incl Union & Poly Chopper)	1
VP GUARMS Guide Side Arm Single	1
VP GUARMD Guide Side Arm Double	1
VP RKMTSP Rack Mount Spare (+M16 Nyloc Nut 1.5 pitch)	
VP SPLCAD Spool Caddy	1
VP STYSUPT Stylus Double with Support	1
FP UP Upstand	1
VP X Extractor	
VP XMTA Extractor Mount (+3 M8x25 bolts)	1
VP XMTPINX Extractor Mount Tapered Pin	1
VP XFKA Extractor Fork (pivoting device fitted)	1

Parts Check: PowerPac Triple



	Check ✓
FT APWS Applicator: Wedge Single	1
VP BUNGY Bungy	2
VP CAR Carrier	1
VP CLMP Crush Clamp	4
VP CHAS Chassis (for PowerPac)	1
VP DRVT Drive Triple Unit	
VP M2 Motor & Gearbox 500rpm (series 2)	1
VP CATCH Catcher (+2 cap screws M5 x 8)	1
VP MMTLG Motor Long Mount (+M10 x 25 bolt/nut & washer)	1
VP MMTSH Motor Short Mount	1
VP DRVBASE Drive Base Plate	1
VP DRVTOP Drive Top Plate	2
VP E Electrics Set	1

	Check ✓
VP GUT Guide Triple	
VP GUPRM Guide Primary (incl Union & Poly Chopper)	1
VP GUARMS Guide Side Arm Single	1
VP GUARMD Guide Side Arm Double	1
VP GUARMT Guide Side Arm Triple	1
VP RKMTSP Rack Mount Spare (+M16 Nyloc Nut 1.5 pitch)	1
VP SPLCAD Spool Caddy	1
VP STYSUPT Stylus Triple with Support	1
FP UP Upright	1
VP X Extractor	
VP XMTA Extractor Mount (+3 M8x25 bolts)	1
VP XMTPINX Extractor Mount Tapered Pin	1
VP XFKA Extractor Fork (pivoting device fitted)	1

Example Layout



Safety

Kiwitech have tried to eliminate all the sharp edges of the PowerPac to lessen injury should operators fall forward on the quad. Always use Racks with a Latch and ensure the Latch is engaged when not fencing.

Use the footbrake when sitting and fencing side saddle! When planting a post with the right foot put the left foot on the footbrake to prevent accidental 'take off' (this also lessens the chance of getting a shock as the handbrake will earth you out more effectively).

Watch the Kiwitech Temporary Fence DVD and practice the correct Tread-in "clip on" technique. This technique enables operators to clip Tread-ins on without looking at the action, keeping the focus forward of the quad on the terrain ahead - where it should be! It also ensures the polywire is kept safely away from the operator if fencing with "live" wires.

If the quad has a thumb throttle it helps to twist it down a little making it easier for the fencer to operate using the palm of his/her hand. Take care when leaning forward over quads fitted with a thumb throttle. It is very easy to trigger the throttle unexpectedly. If the quad has a twist throttle ensure the throttle is kept lubricated so that it never sticks.

Avoid fencing on significant slopes. If in doubt, drive the quad normally and walk back to plant Tread-ins. Do not allow any person under 16 years of age operate the PowerPac.

Drive the quad at safe speeds while fencing and practice quad safety at all times.

First Time Users

For first time users of the PowerPac it is highly recommended that you first practice erecting and dismantling a one wire fence. Sitting side saddle and operating the accelerator with the left hand takes a little bit of practice and usually the first two times are slow going (novice operators often drive too slow). Starting with one wire at this usually slow speed will lessen the burden on the PowerPac Motor when winding in. It would definitely pay, when winding in, to set the Stylus Operating Mode to "Free Running" position. When the quad is stationary for more than a few seconds turn the motor off!

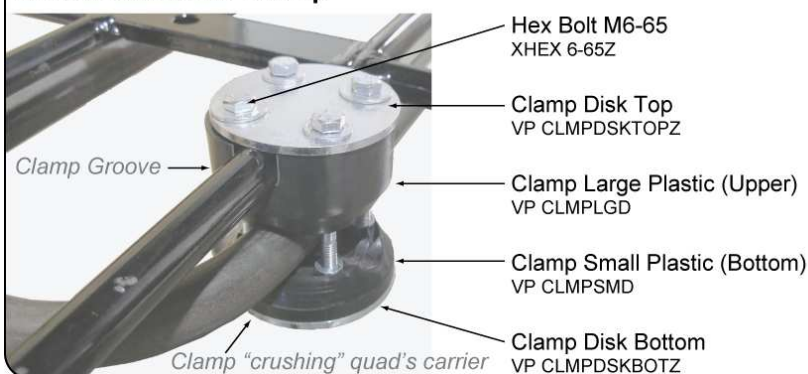
NOTE: Brand new Drive Plates need a little running in during which time wire tension should be kept low and quad speed up when winding in (quad speed down when running out wire). Turn the motor off if not moving!

Carrier Clamping Down

NOTE: If you have purchased a Vehicle Fender Kit (VF KIT or VF KITPP) then fit this first.

1. Lay the bare PowerPac Carrier on top of the quad's own carrier right side up. If standing in front of the quad, there should be a plate with three holes in it (for Extractor attachment) welded into the left, rear corner of the carrier. The Carrier must be clamped down in four places.
2. Line up one of the front most horizontal PowerPac Carrier bars (usually the second bar from the front) with the quad's carrier front most horizontal bar (as pictured at the bottom of this page). Ensure the PowerPac Carrier is centred properly and there is minimum front overhang (allow sufficient clearance for the Motor).
3. To prevent movement of the PowerPac Carrier when in use, two Clamps should be placed where the PowerPac and quad carrier bars run parallel together (e.g. front two Clamps pictured) and two should be placed where the bars cross each other (e.g. rear two Clamps pictured).
4. The Top Large Plastic piece of a PowerPac Clamp has a groove running through the centre which clicks onto any bar of the PowerPac Carrier. After deciding on clamping positions, click on each Large Plastic Clamp piece underneath the PowerPac Carrier and line up everything again.
5. Position the rest of the Clamp pieces and bolt into place following best practice (described below). Sometimes you need to force the Clamp Bottom Disk and Plastic underneath the quad's carrier when space is tight. Once bolted the clamp squeezes up significantly reducing this interference.

PowerPac Carrier Clamp



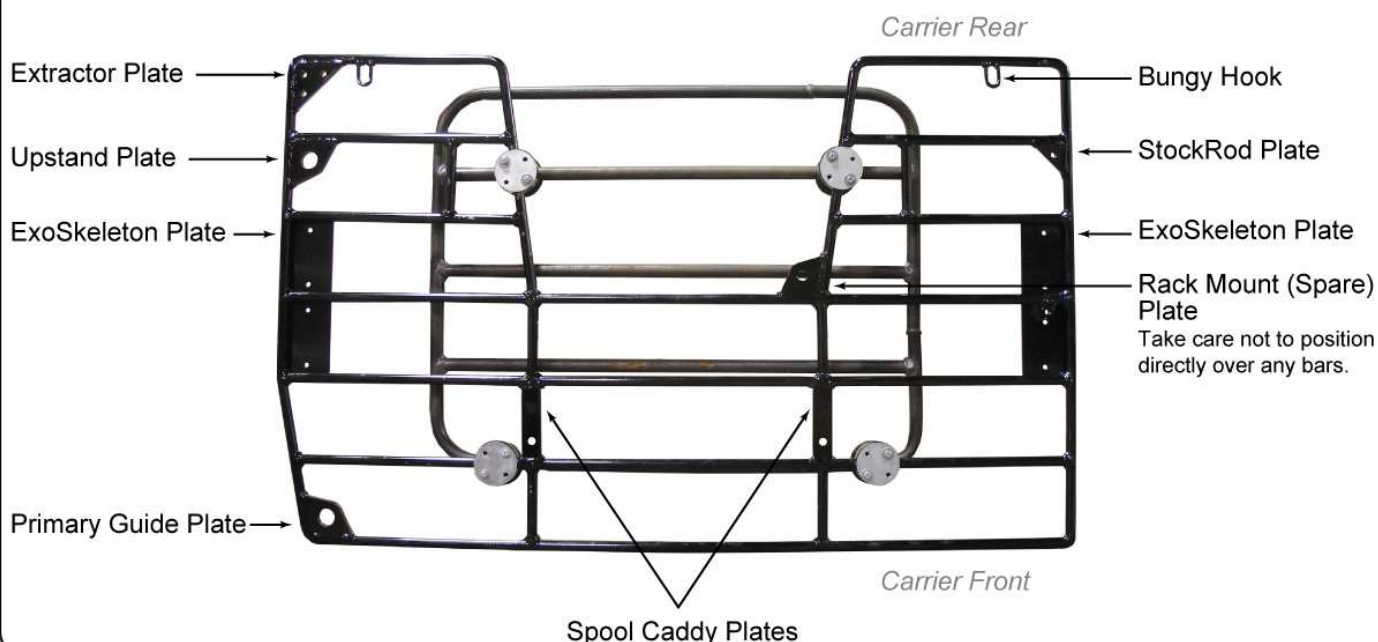
NOTE:

- Ensure the Spare Rack Mount Plate is not directly over any of the quad's carrier bars.
- **The PowerPac Motor must not sit against any bodywork when fitted** (constant knocking/vibration will damage the internal magnets). Keep overhang to a minimum but factor in enough for the Motor.

Best Bolting Practice:

Start by screwing in two bolts diagonally opposite each other (do not tighten) then move to another clamp and do the same thing until every clamp has two bolts in (as pictured below). At this point it would be a good time to test your Carrier positioning (see PowerPac Carrier Positioning Test below). Finish by screwing in all remaining bolts loosely, then tighten all.

PowerPac Carrier Placed on Quad's Carrier



PowerPac Carrier Positioning Test:

Fit the Upstand and tighten the nyloc nut so that you can just twist the Upstand under some force (when in motion the Upstand/Rack should not be twisting freely)!

Put the Chassis into the Upstand and slot on a Rack.

Sitting side saddle, on the right hand side of the quad seat, it should be a comfortable reach to the top of the Rack.

If you are reaching uncomfortably far then you have probably clamped the PowerPac carrier too forward of the quad (too much overhang). See if the carrier can be repositioned closer.

NOTE: PowerPac Clamps will need tightening after a couple of days as they crush up significantly.

Drive Unit Attachment

Attachment of a Pre-Assembled Unit

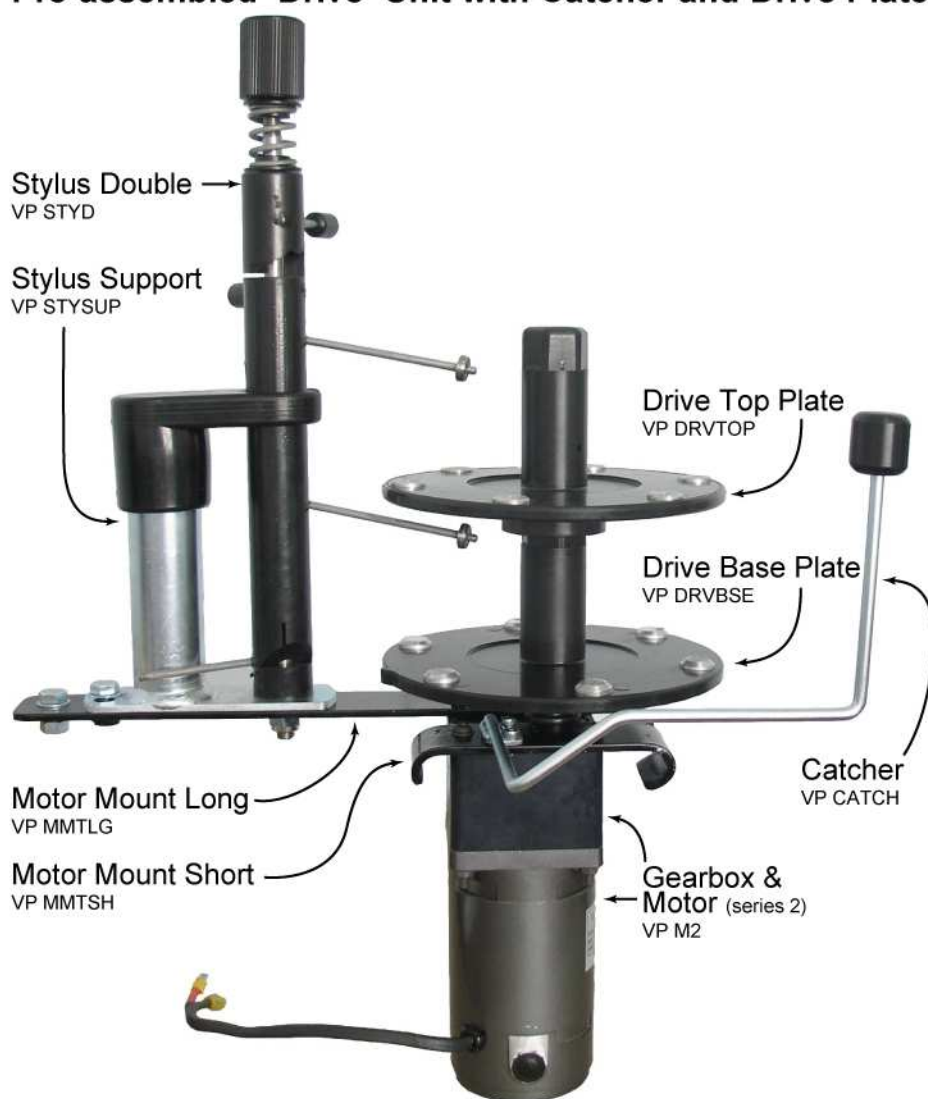
The Stylus, Stylus Support, Mounting Plates and Motor are usually sold pre-assembled and set to factory specification.

NOTE: Never separate the Stylus from the Stylus Support. The Stylus Support has an indexing ball bearing that is held in place by the Stylus Plastic Middle. The indexing ball will drop out if the Stylus is pulled away and putting the two units back together again is fiddly.

'Clip' the curled ends of the two Motor Mounting Plates onto the right side of the PowerPac Carrier's front bar (view taken when standing in front of the quad). The Long Motor Mount must line up directly over the ExoSkeleton Plate in order to pass the Mount's 10mm bolt through the hole provided in the ExoSkeleton plate.

Sometimes snapping on the Motor Mounts can be a struggle, if so, use force (e.g. use a block of wood to hit the clips into place).

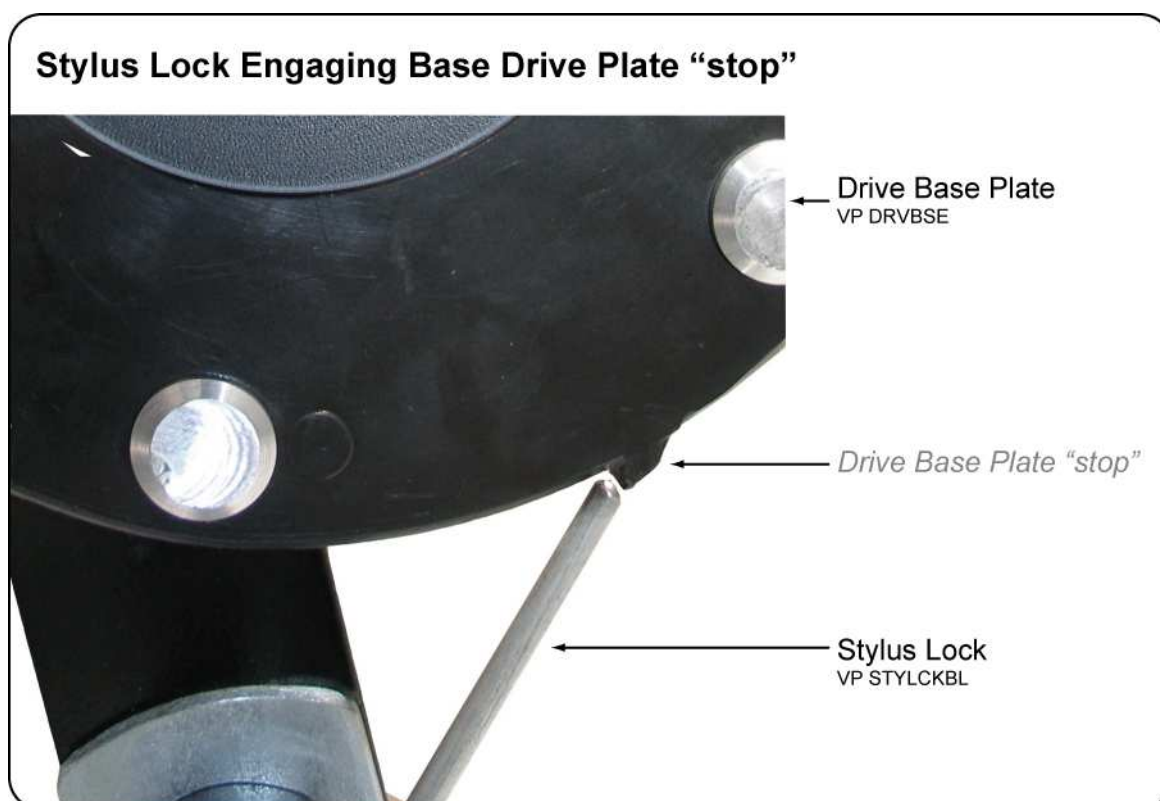
Pre-assembled 'Drive' Unit with Catcher and Drive Plates



Assembly of Drive Unit if in Parts

If the Drive Unit is in pieces (e.g. part replacement after an 'incident'):

1. Remove the four top bolts from the Motor's Gearbox and re-screw in, loosely, through both Motor Mounting Plates (ensure correct orientation of the motor – should be as pictured above with cables to the back). Attach the Catcher to the Motor Short Mount.
2. "Clip" the rounded ends of the Motor Mounting Plates onto the edge of the PowerPac Carrier and secure the Long Mount with its 10mm bolt through the ExoSkeleton Plate. Tighten all bolts once Mounts and Motor are square.
3. Mount the Stylus Support leaving the Support Bolt loose (do not screw tight as the Support may need to swivel to the left or right slightly to get the best line up in Step 5).
4. Mount the Stylus and click into the Support (loosely do up the Stylus bolt).
5. Push the Base Drive Plate onto the motor shaft (the shaft should be greased first) - this is a lock/key fit so take care to line up the Drive Plate properly (this fit can be tight to start with).
6. Turn the Stylus to "on" position (see Stylus Operation instructions below). Stylus Roller Arms must be pointing as close as possible to the centre of the Drive Plate shafts in order for best operation (you may need to swivel the Stylus Support left or right a little to help "line up"). Tighten the Stylus and Support bolts a little, then test alignment by turning on the PowerPac Motor (with Spools on the Drive Plates). Make any alignment adjustments so Stylus Arms remain centred when the PowerPac Motor is on and tighten bolts securely.
7. Turn the Stylus to "locked" position. Rotate the Base Drive Plate until the "stop" either contacts or is in alignment with the Stylus Lock (see below). Adjust the Stylus Lock length in or out of the Stylus until the end is just rubbing on the Base Drive Plate rim.



Stylus with Support (VP STYSUPD or VP STYSUPT)

Part Supply

Most parts of the Stylus are replaceable. Take care to order for the right Stylus (Double or Triple).

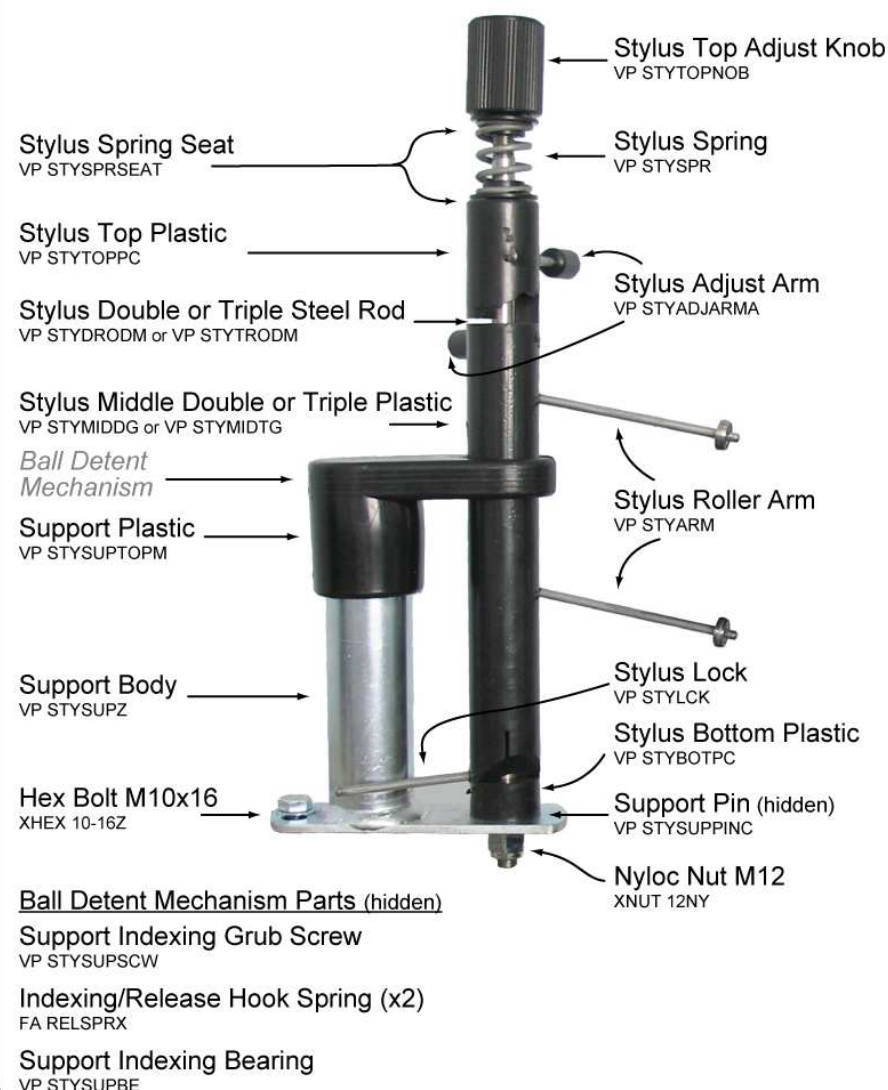
Roller Arms may need replacement after a year of heavy use. Knock out old arms from the hole in the back of the Plastic Middle with a 4mm punch and tap in new arms.

Operation Modes

The detent grooves in the Stylus Middle Plastic help lock the Stylus for three modes of operation. Use the Adjust Arm on the Middle Plastic to turn to:

- 1) **'On'** position: Roller Arms are sitting on top of Spool/s pointing to Spool centre/s applying downward force increasing the torque transmitted from the Drive Plates to the Spool.
- 2) **'Free Running'** position: One turn of the Plastic Middle anticlockwise. Neither Rollers nor Stylus Lock are engaged. Minimal torque with the least threat of burning out the drive plate and/or overworking the Motor. The Stylus Arms are clear for Spool mounting/demounting.
- 3) **'Locked'** position: One further turn of the Plastic Middle anticlockwise. The lock **MUST** be engaged when running out more than 1 polywire as it stops Spools from overrunning - creating a birds nest!

Stylus and Stylus Support Parts



Operation Modes

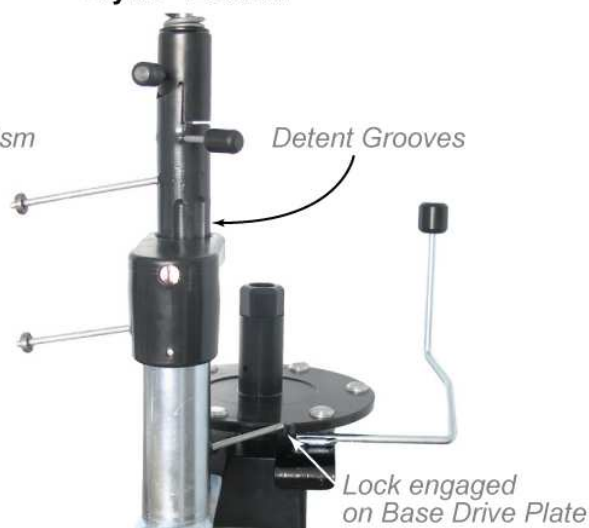
Stylus "On"



Stylus "Free Running"



Stylus "Locked"



Operation Torque

The Knob on top of the Stylus is a torque adjuster wound to factory spec (you should not need to alter this). The Top Plastic piece of the Stylus has an Adjusting Arm that you can use to turn through three torque modes - normal, medium and heavy (where there is a lot of resistance e.g. for stand still pulling of 400m through dense, tall grass). On medium and heavy use the Stylus Arms push down harder on the Spools as the Stylus Spring coils tighter.

NOTE IMPORTANT: DO NOT OVERWORK YOUR POWERPAC DRIVE SYSTEM

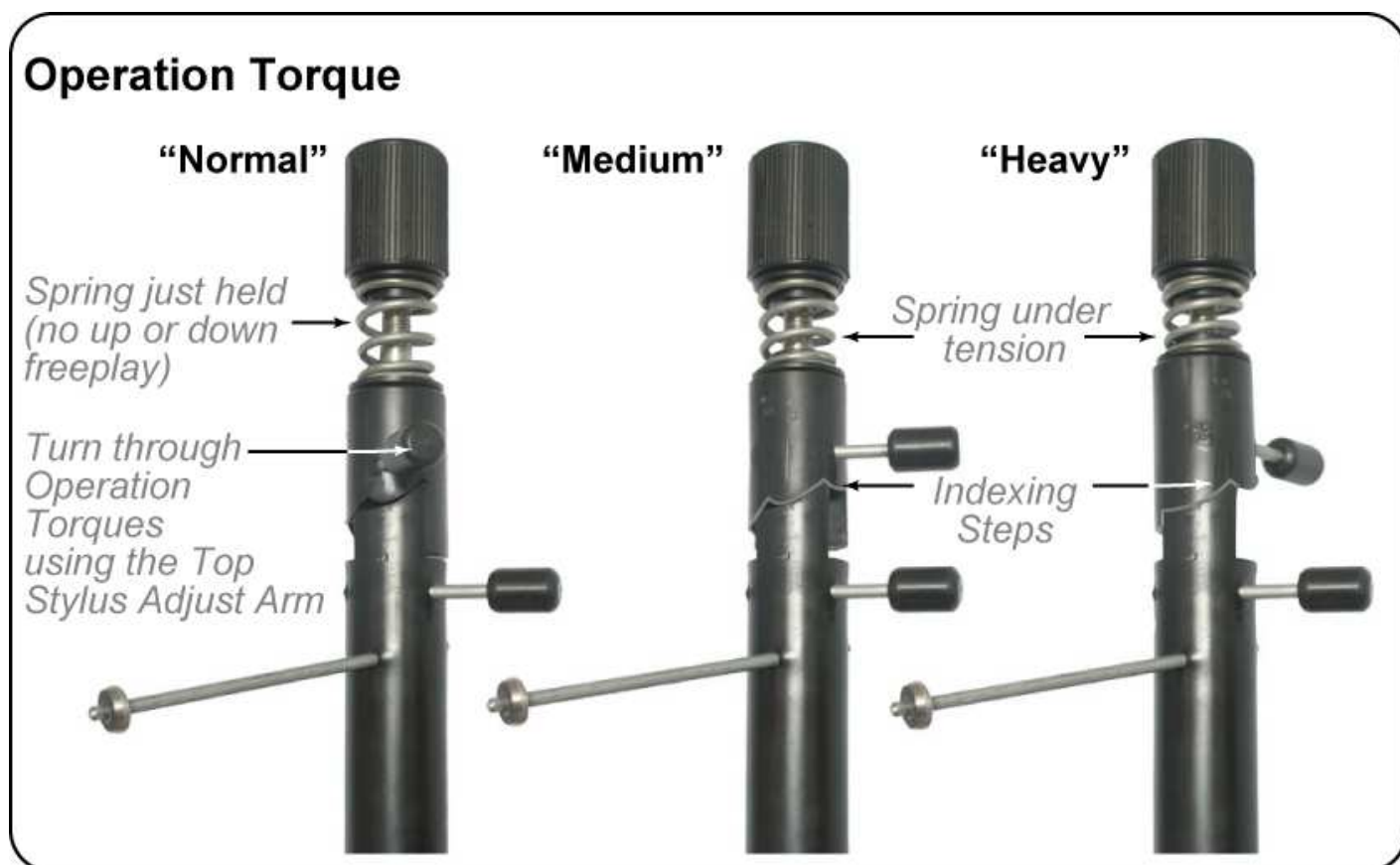
- Most users work with 'normal' torque. The other two modes tend to be for exceptional use only.
- If the circuit breaker is cutting out stopping the PowerPac Motor and/or you are finding plastic swarf around the Drive Base Plate shaft and/or the edges of your Spool are curving out then you are using too much pressure for the job.
- If you are going very slow (e.g. a first time user), turn the stylus to the 'Free Running' position (so rollers are not on the spool).
- **If polywire is seriously snagged OR you need to hop off the quad to pick up something either turn off the PowerPac or set the Stylus in 'Free Running' position.**
- Be aware that the motor is working hardest when the spools are full, when 2 or 3 spools are in use and when you are travelling slowly.

Testing of the Operation Torque:

Place a Spool onto the Base Drive Plate and turn the Stylus to 'on' position. Pull out the start of the polywire and hold onto it then turn on the motor. Still holding onto the polywire, use the other hand to turn through the operation torques. Just like moving through the gears in car there should be a sound change. If there is no apparent change in sound/pressure on the spools ensure the top Knob is set correctly.

Correct Top Adjust Knob Setting:

On the 'normal' use operation torque setting the Stylus Spring should 'just' be held in position (no up or down free-play).



Stylus Support

The Stylus Support locks the Stylus in place for each mode of operation and keeps the Stylus vertical. Without it the pressures involved in the winding operation would push the Stylus back, off vertical, lessening the amount of Stylus Roller Arm down force on the Spools resulting in a weaker winding system.

Motor (VP M2)

The output of the PowerPac motor is 200 Watts. Draw down on the quad battery can be significant so, using the PowerPac without the quad running should be kept to a minimum.

Depending on use, the Motor may need servicing at some point. Most mechanics can service the motor using parts from a "Motor Fix Kit (VP M2FIXKIT)" we can supply - some motor parts cannot be sourced in New Zealand (e.g. Brush Caps, Carbon Brushes and Brush Holders). Alternatively, for New Zealand customers only, Kiwitech will service PowerPac motors and provide a 'loan' motor that can be used in the interim. Labour and only the parts required are charged.

Motor Wear Signs

- Turning the Drive Base Plate by hand feels rough and there is unusual resistance.
- The motor is winding slower than usual
- A lot of undue heat coming off the motor
- Excessive current draw causing the circuit breaker to trip out often.

NOTE IMPORTANT:

*The PowerPac electric motor can draw as much as 30 amps for short durations. If the motor has some bearing or other damage, current loading may exceed alternator capabilities which could cause damage especially if the alternator's cooling is impaired for some reason (e.g. low oil level). **To mitigate this risk it is strongly recommended to run an identical auxiliary battery in parallel with the original.***

Drive Base Plate (VP DRVBSE) and Drive Top Plate (VP DRVTOP)

Spools must always run CLOCKWISE on Drive Plates (e.g. pulling the end of the polywire results in the Spool turning clockwise).

New Drive Plates need a little "running in". For the first couple of uses keep wire tension low and quad speed up when winding in.

A lot of heat can be generated from the friction between Spools and Drive Plates. Over time the metal buttons will gradually wear down resulting in ineffectual winding due to too much spool slip.

Overheating of the Drive Plates (particular the Drive Base Plate) can occur when the drive unit is in the "locked" position and wire is run out at very high speed (e.g. if few or no Tread-ins are used). Overheating is more of a threat on very hot days. In extreme cases, serious overwork of Drive Plates may result in the buttons actually popping out (e.g. attempting to wind in high-tensile wire – NOT what the PowerPac was designed for).

NOTE:

- *Keep the underside of the Base Drive Plate (the key fit) greased. This way if the polywire accidentally wraps underneath the Base Drive Plate it is an easier job to lift off the plate and fix the problem.*
- *If there is difficulty in pulling off the Drive Base Plate, pry/lever it off with a flat head instrument from underneath DO NOT PERSIST in trying to pull the edges up with brute force as the plate is plastic and can warp.*

Catcher (VP CATCH)

The Catcher helps guide the polywire onto the Spool when winding up. Without it the polywire will more likely wrap under the Base Drive Plate resulting in a birds nest.

Electrics (VP E)

Housed in the Circuit Breaker Unit is a 30 Amp auto reset circuit breaker. If the circuit breaker ever cuts out wait a bit then try turning the PowerPac on again.

If the circuit breaker keeps cutting out it may be due to either:

- Continuous overworking of the PowerPac Motor (check Torque Pressure setting is set to “Normal” and use the “Free Running” Stylus operation mode) or
- The PowerPac Motor Gearbox might have an internal fault or
- The Circuit Breaker is faulty.

Behind the yellow Switch is a Snubber Unit. The Snubber Unit houses a circuit that diffuses any excess current left in the system after the quad is turned off.

Both units are boxed and sealed with silicone to prevent water from entering.

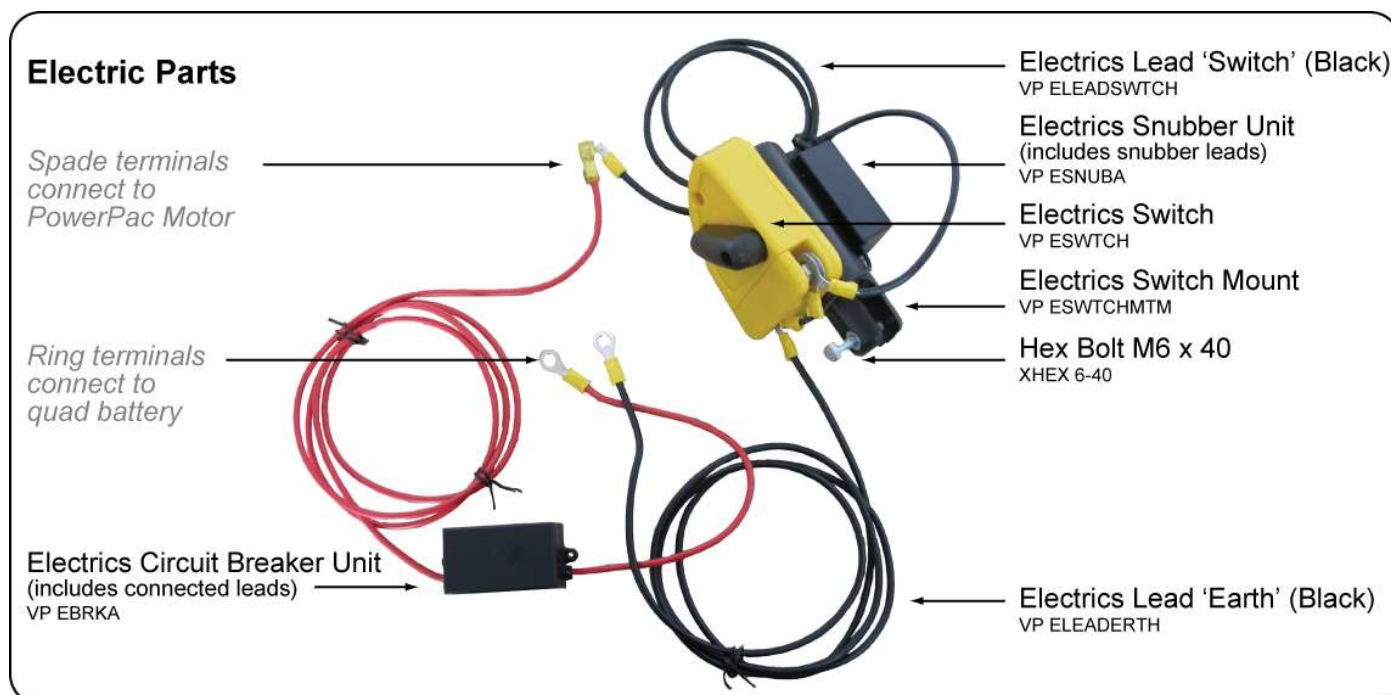
Installation Instruction

1. Mount the yellow Switch unit so it is close at hand on the right side of the quad (view taken if sitting on the quad).
2. The black lead with the ring terminal coming from the Switch (the "Earth Lead") must be pushed under the plastic bodywork and appear again alongside the quad's battery. Connect the ring terminal of this lead to the negative terminal of the battery.

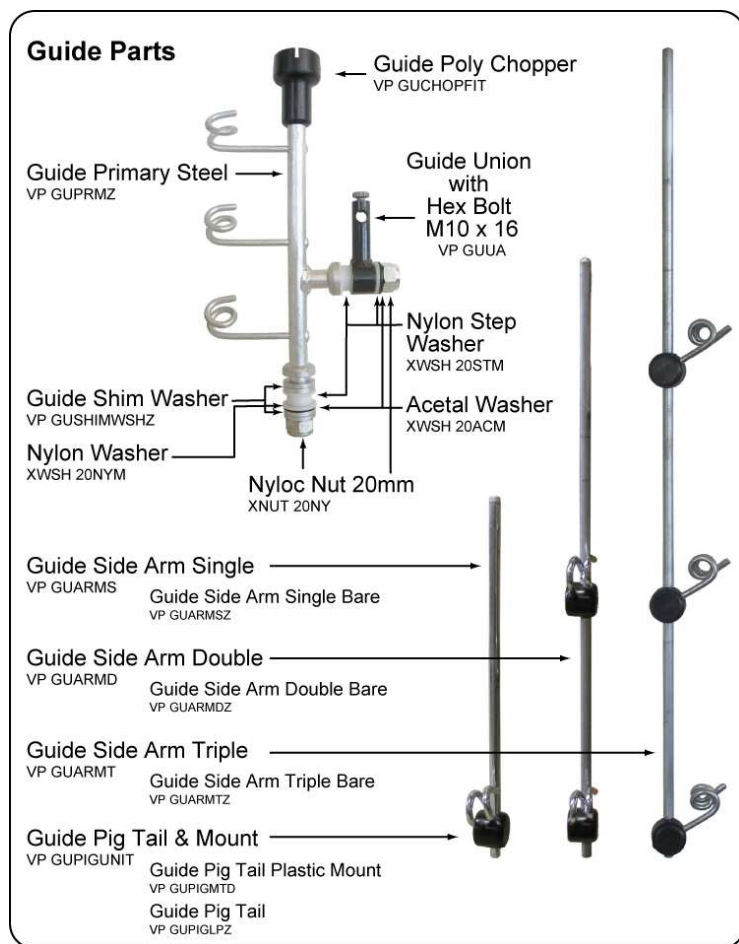
NOTE: DO NOT connect the black Earth Lead (ring terminal end) to the quad frame. Connect it directly to the battery! The amperage draw of the PowerPac Motor is significant and requires a more consistent and reliable circuit.

3. Find a spot for the Circuit Breaker Unit to sit in permanently near the battery and connect the lead with a ring terminal to the positive terminal.
4. Pass the long red lead from the Circuit Breaker Unit (under the quad bodywork on the left hand side of the quad so that it re-emerges close to the PowerPac Motor and connect.
5. Take the other black lead from the yellow Switch (the "Lead Switch) and connect to the PowerPac Motor. Secure this lead by tying it on the PowerPac Carrier (e.g. cable ties make a tidy job of it).
6. Turn on the yellow PowerPac Motor Switch and check the Motor Gearbox shaft is turning anticlockwise.

NOTE: All leads are made from 44 amp cable. Do not 'doctor in' cables with a lesser specification (i.e. only replace with an equivalent or greater specification cable).



Guide Double (VP GUD) and Guide Triple (VP GUT)



Primary Guide Height

To achieve a nice even 'wrap' on Spools, when using the PowerPac, the Primary Guide must be mounted at the right height. Four metal shim washers come with the Primary Guide to aid in altering Guide height. Normally, 2 washers are needed but, over time carrier distortion may call for adjustment.

To set the right height:

1. Put one Spool on the Drive Base Plate and run out a decent straight length of Polywire (approximately 100m).
2. Set-up the polywire for winding in (loop it through the Primary Guide lower pigtail and the Single Side Arm pigtail). Ensure the quad and PowerPac are facing the length of polywire laid out.
3. With the quad in a stand still position (still running to avoid running the battery flat) turn on the motor and observe the wrap as it forms on the Spool. If the wrap is uneven (e.g. plenty on the bottom and only a small amount at the top of the spool) play around by adding or taking away height from the Primary Guide using the Shim Washers.
4. Test until a nice even wrap results.

Guide Side Arm Height

Attach the Guide Side Arm of choice and adjust so the pigtail unit/s is/are at least 100mm below the Single Wedge Clip/s of the Kiwitech Tread-ins in use. Make sure the Side Arm is screwed on tight, once set to the right height, otherwise it will get lost in transit. Take care not to over tighten though - some users have managed to shear the bolt head off (apply anti seize paste on the thread every year or two).

Guide Parts

The white Nylon Step Washers allow the Primary Guide and Guide Union to turn under some force once the Nyloc Nut is tightened.

Always use a black Acetal Washer next to the Nyloc Nut. Without it the Nylon Washers will crush up.

Never pry Nylon Washers off otherwise they will distort. Instead hit against a section of polypipe sitting on the circumference of the washers where possible. In the case of the Step Washer next to the Guide Union twisting off may be the only option or try dry heating the unit (in the oven). Drying out the Nylon will cause all measurements to shrink.

Guide Chopper

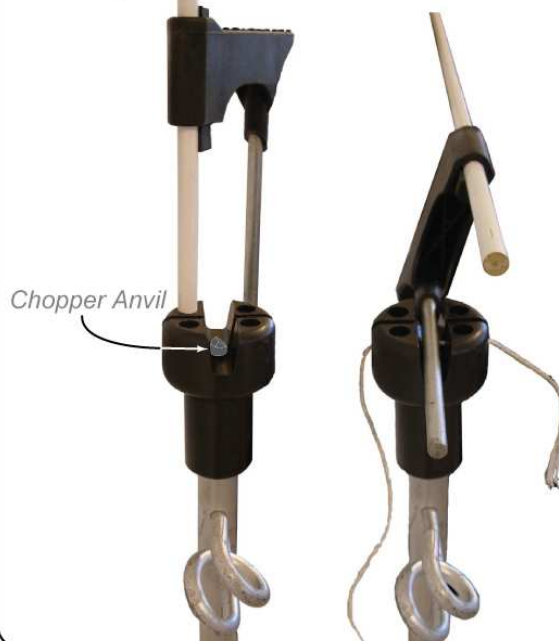
The Guide Chopper has four 9mm post stages (see below). These stages come in handy when assembling or adjusting Tread-in parts.

Pulling polywire tight across the Chopper Anvil and whacking the steel pin of a Tread-in Pedal a couple of times against the anvil successfully cuts polywire.

Guide Chopper Uses

Post Stage

Polywire Chopper



NOTE: Try to be consistent with Tread-in assembly. Wedge Clips should be at approximately the same height from one Tread-in to the next.

Guide Positioning: Single Wire

When running out a single polywire just rest the wire on the shank of the bottom Primary Guide Pigtail (no feeding through any pigtails necessary).

Before winding in a single polywire feed the wire through the bottom Primary Guide Pigtail AND the Side Arm Pigtail. The Primary Guide and Side Arm Pigtails should be facing forward and the Side Arm should be vertical. Ensure the polywire is on the inside of the Catcher.

Guide Positioning: Double or Triple Wire

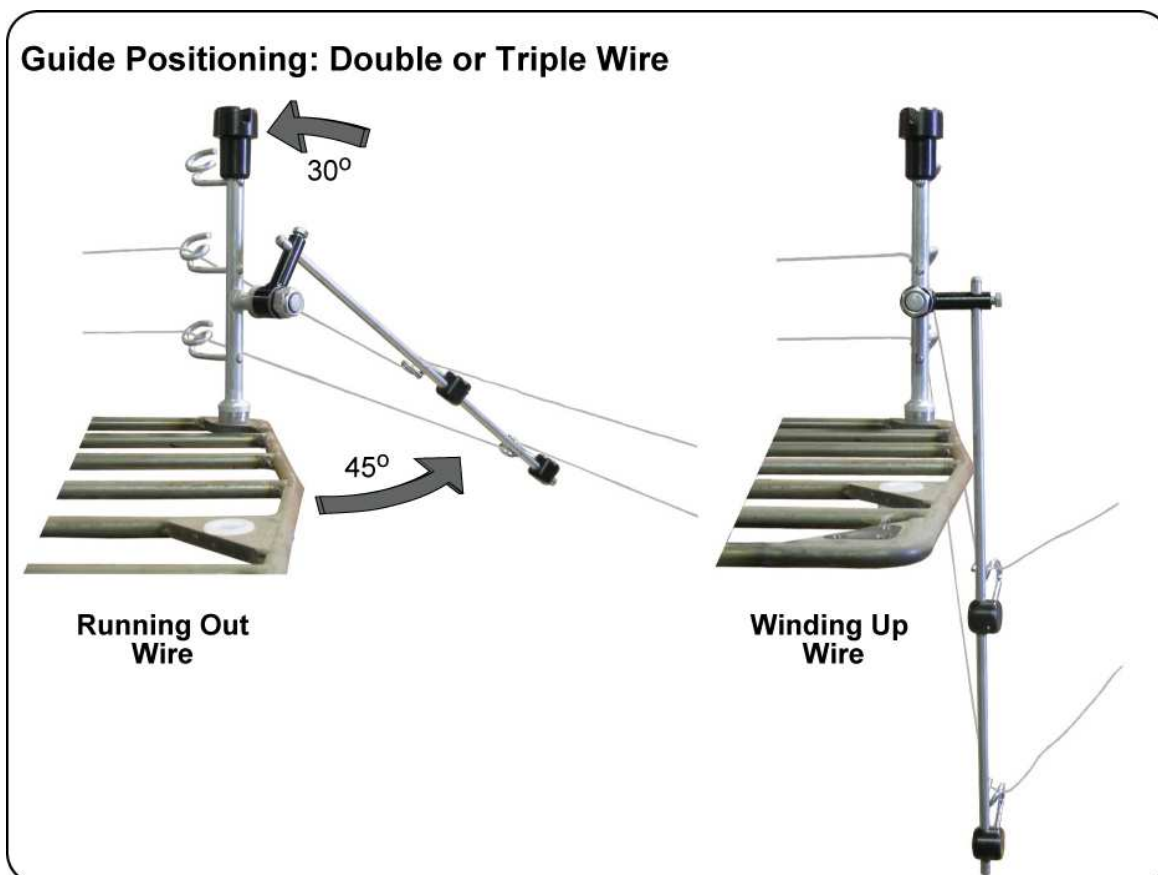
When running out more than a single polywire ensure each wire is looped into its corresponding Pigtail on both the Primary Guide and Side Arm Guide (as pictured). Turning the Primary Guide anticlockwise by about 30° helps increase the space when bringing down Tread-ins from the Rack to “clip on” position. The Guide Side Arm must be lifted up about 45° from vertical. Experiment with what set-up feels most comfortable.

NOTE IMPORTANT: When running out more than one polywire ensure the Stylus Operation Mode is set to “Lock”. The Stylus lock must be engaged with the Base Drive Plate to prevent Spool from overrunning (creating a birds nest) when the quad slows or comes to a stop.

When winding in multi-wire fences loop each polywire through its two Pigtails (Primary Guide and Side Arm). Ensure all Pigtails are facing forward and, especially when working with three wires, have the side arm positioned vertical or even titled slightly toward the quad tyre. This way when the quad is in motion the Side Arm follows the wheel closely and is less likely to hit a bump.

NOTE:

- In order to prevent knotted polywire from entangling with the Pigtails of the Guide use reef knots when fixing breaks and keep just a little length on the ends (~3cm).
- In order for the Guide Side Arm to effectively unclip the Polywire from the Wedge Clips of Tread-ins, the Tread-ins on the fence line must all face the same direction (i.e. Wedge Clip Body Lugs must face towards the quad as it travels up the fence line). If the fence is straight and was erected using anyone of the Kiwitech Pac tools all the Wedge Clips should be facing the right way when the time comes to dismantle the fence.

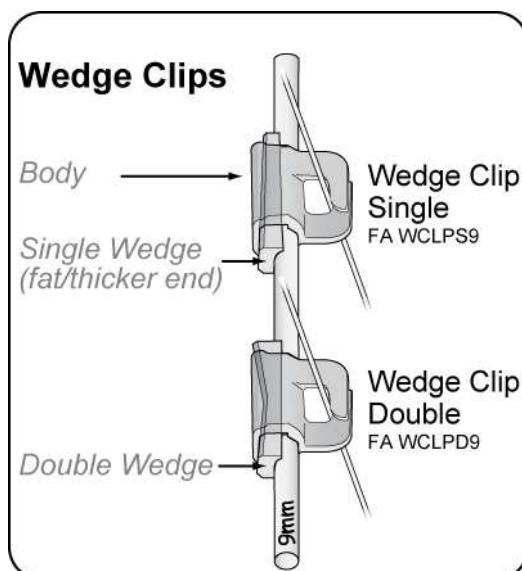


Extractor (VP X)

The PowerPac Extractor is designed to pull out Tread-ins that employ a Single Wedge Clip at the top of each Tread-in (as opposed to a Double Wedge Clip - the alternative Tread-in clip choice).

The PowerPac Extractor Arms (set at the right height) help guide the top of a Tread-in into the Extractor "throat" catching the top clip from underneath. As the quad moves forward the clip/Tread-in is pulled up and out of the ground. To prevent the Single Wedge Clip from popping off from the force the fatter/thicker end of the Wedge should always be at the bottom of the clip assembly. The Extractor Arm spacing is set to catch the Wedge (not the Body of the Clip) placing all upwards pressure on the fat part of the Wedge forcing it into the Clip Body - "locking" the clip tighter. In extremely hard ground it would pay to "extract" slower than usual - the wrench to get Tread-ins out of hard ground can put some strain on the quad.

NOTE: If you find the Wedge Clips are popping off Tread-ins during the extraction action and the Wedge Clips are correctly orientated, inspect the throat of the Extractor Fork (the distance between the two arms). It may be that the throat has opened and the Clip Body is being forced up (and off) instead of the fat part of the Wedge. Try closing up the gap by rotating the tube. If the yellow plastic Fork covering is badly damaged, replace it. The yellow plastic is 1/2" N12 "Ledalon" Nylon Tube (Kiwitech can supply this tubing). Heat the tube in hot water and soap the Extractor Fork arms before pushing the tube on.



Extractor Fork Fitting and Height Adjustment

1. Fix the Extractor Mount to the PowerPac Carrier and plant a Tread-in into the ground in front of it.
2. Adjust the height of the Extractor Fork so that it will catch the Tread-in approximately 100mm under the Single Wedge Clip at the top of the Tread-in and lock firmly into place using the Tapered Pin.

NOTE:

- To start with the Extractor Fork throat/Tread-in fit might be tight and getting the Tread-in out may require a bit of effort. This fit will soon loosen up. If the tines of the extractor spread or become bent they can be restored by bending them with the Fork Body held tightly in a vice.
- Always stow away the Extractor Fork when not picking up temporary fences to prevent accidental catching of high-tensile steel wires when crossing (for those quads with fender kits fitted).

Extractor Parts

Extractor Fork Parts (VP XFA)

Extractor Fork Body

VP XFKZ

Extractor Fork Tube Short

VP XFKTUBESH

Extractor Fork Tube Long

VP XFKTUBELGC

Extractor Pivot Spring

VP XPIVSPRB

Extractor Pivot

VP XPIVZ

Extractor Pivot Pin

VP XPIVPINZ

E Clip 9mm

XE 9

Extractor Mount

(includes 3 Hex Bolts M8 x 25)
VP XMTA

Extractor Mount
Tapered Pin

VP XMTPINX

Extractor Fork

VP XFA

Fork Throat

Maintenance Summary

Every day shake the carrier to check that mounting bolts on the quad's own carrier are not loose (damage will quickly occur if they are loose).

If PowerPac Clamps are new, tighten them after the first couple of days and again a week later. Clamps will crush up more over time so check and tighten every couple of months.

Keep the Motor Shaft lubricated (greased) so the Drive Base Plate can be lifted off with relative ease should the polywire ever wrap around the motor shaft instead of the Spool!

Once a year loosen nuts and apply anti-seize paste - a great product for the harsh conditions a PowerPac withstands daily (e.g. the wet, animal waste, mud and hot sun).

Try to keep the motor in good condition. Check for signs of wear and service sooner rather than later (see "Motor (VP M2)" section). The motor will last longer if it is not overworked repeatedly. Try not to immerse it in water too often (e.g. refrain from driving through rivers/creeks/mud pools etc).

If the Upright or Primary Guide does not twist under force anymore check the condition of the Nylon and Acetal Washers - replace if necessary. The Upright or Primary Guide bottoms might also have slight rusting, if so, clean them up using a wire brush.

The weight of the PowerPac is considerable and heavy/hard quad users may find their quad carriers (now mostly constructed from furniture tube) fracturing in places. These operators should consider investing in a Kiwitech Exoskeleton (VE KIT) or upgrading their Fender to a Fender for PowerPac use (VF KITPP).

Always pack Tread-ins in the Rack evenly on both sides to avoid Rack distortion (this is more likely on hot days as the Rack plastic becomes more ductile). If the Tread-ins are shaking out when the Latch is on and the Rack is packed evenly, then the Rack has probably warped a little and will need pulling back into symmetry - use a vice.

If the yellow plastic tubing covering the metal Rack uprights gets damaged, replace the tubing (otherwise the UV paint coating on Tread-ins will get scratched off). Soften the new yellow tubes in boiled water and soap up the metal forks to aid fitting.

NOTE: You can buy ANY spare part for the PowerPac.

Fence Hardware

The PowerPac is designed to work only with Kiwitech Tread-ins and Spools.

Kiwitech recommend fencing with a maximum polywire length of 400m on Spools.

It is possible to fit up to 500m of polywire on a Spool, but, Spool life span may be comprised. A greater/tighter wrap pressure can result when winding in 500m and spools may split in half (along the weld seam).

Always order Tread-ins with Single Wedges as the top most Wedge Clip on a Tread-in must use a Single Wedge. The top most clip must be assembled such that the fat end of the Wedge is at the bottom of the Wedge Clip (this is a different orientation from all other Kiwitech temporary and permanent fencing instruction where it is recommended that the fat end must be at the top of the Wedge Clip). When the Extractor picks up the Tread-in it catches and pushes up on the Wedge, forcing the fat end of Wedge into the Body of the Wedge Clip locking the clip firmly in place. If the Wedge were reversed the Wedge Clip would probably pop off the Tread-in.

The other (bottom) clips of a Tread-in should be assembled such that the fat end of the Wedge is at the top. Normally sideways and up pressure is the greatest for a clip (down pressure is small and finite in comparison). Orientating the fat part of the Wedge at the top of the Wedge Clip will force a tighter lock when it is most required (e.g. an animal pushing into the fence exerting sideways and up wire pressure on the Wedge Clip).

The strongest fence is a straight fence. A straight fence is also the easiest to put up and take down with a PowerPac as all Tread-ins can face the same direction. If putting up a fence that has a lot of bends in it you will need to change the planting orientation of some Tread-ins in order to keep the polywire clipped in under tension (it is possible for the polywire to pop out of a clip if the polywire is hard up against the Clip Body Lugs).