



REMOTE CARAVAN MOVER
Framework and Motor
Installation Guide

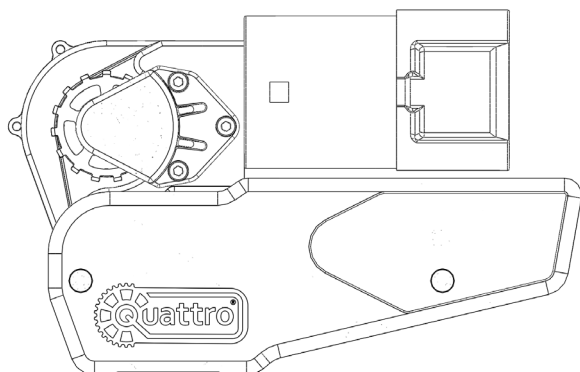
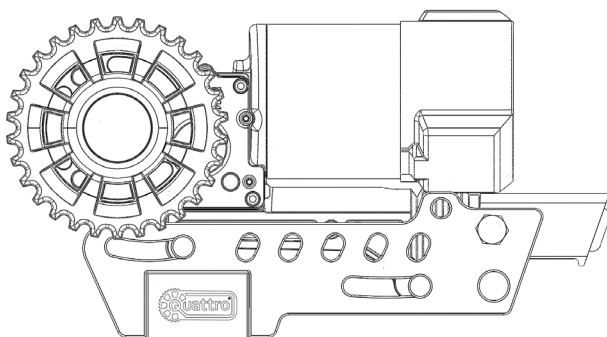
EN

QTR-M006

QUATTRO600 - Diamond

QUATTRO500 - Rhodium

EGO500 - Platinum

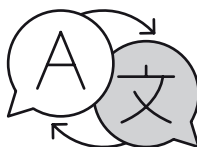


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Document Control

Original Instructions

Manual Reference: QTR-M006

REVISION	DESCRIPTION	ISSUE DATE
-	Original instructions	16/03/2021
01	- Visual amendments - Manual Reference updated, previously: UM 1.3 - Previous PDF: QUATTRO500_600_EGO500_UM_1.3.pdf	17/05/2021

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QUATTRO DIAMOND AUTO - Motor Assembly Instructions (1 of 1)

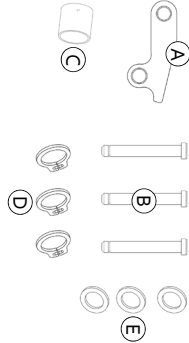
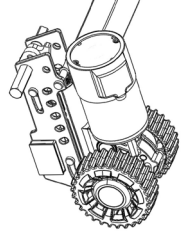
NOTE: Depending on the space available around where the motor movers will be fitted, you may find it easier to fit the framework to the chassis before assembling the motor movers onto the framework. To do this, loosely fit the framework as per the assembly instructions and fit motors before final spacing and torquing of the bolts.

<p style="text-align: right;">Quattro600 Auto Mover Assembly Revision 2</p>	<p style="text-align: right;">1</p> <p>Note: Instructions show nearside framework, offside framework will be a mirror of this. Before beginning installation remove upper packaging bolt (M) and discard.</p>
<p style="text-align: right;">2</p> <p>Align rear framework hole with engagement motor mounting hole by moving the gearbox rearwards in the slots. Fit bolts (A) and torque to 5Nm.</p>	<p style="text-align: right;">3</p> <p>Fit washers (E) on pins (B), and press circclips (D) into the grooves to secure in place.</p>
<p style="text-align: right;">3</p> <p>Pass pins (B) through both the framework slots and gearbox mounting holes.</p>	<p style="text-align: right;">4</p> <p>Lower gearbox onto framework and align the front and rear gearbox mounting holes with the framework engagement slots as shown.</p>
<p style="text-align: right;">4</p> <p>Align rear framework hole with engagement motor mounting hole by moving the gearbox rearwards in the slots. Fit bolts (A) and torque to 5Nm.</p>	<p style="text-align: right;">5</p> <p>Fit washers (E) on pins (B), and press circclips (D) into the grooves to secure in place.</p>

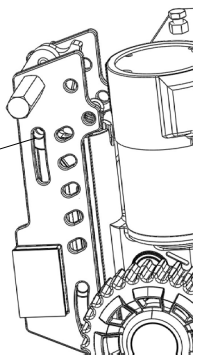
QUATTRO RHODIUM MANUAL - Motor Assembly Instructions (1 of 2)

NOTE: Depending on the space available around where the motor movers will be fitted, you may find it easier to fit the framework to the chassis before assembling the motor movers onto the framework. To do this, loosely fit the framework as per the assembly instructions and fit motors before final spacing and torquing of the bolts.

Quattrosofo
Manual Mover
Assembly
Revision 2

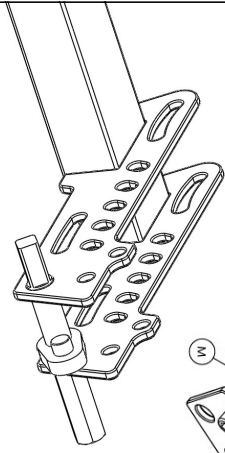


3



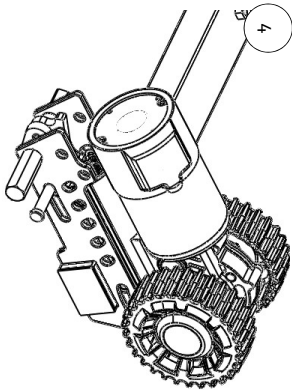
Lower motor onto framework and align rear gearbox mounting hole with rear framework slot.

1



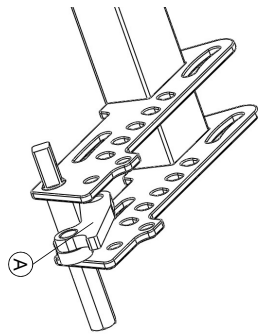
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4



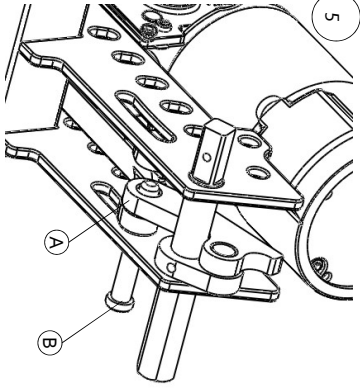
Partially pass pin (B) through slot and gearbox mounting hole.

2



Fit engagement arm (A) onto engagement teardrop piece.

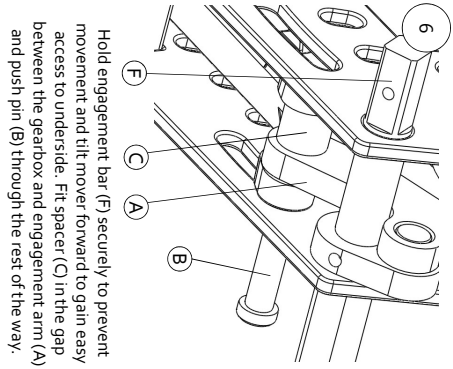
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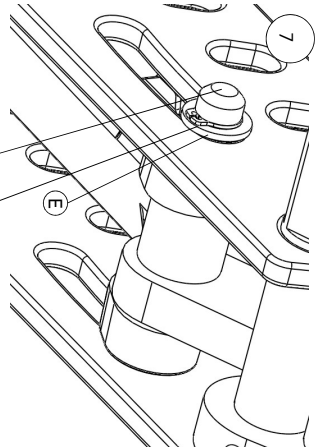
Align pin with hole in engagement arm (A) and partially pass pin (B) through, leaving space for the spacer (C).

QUATTRO RHODIUM MANUAL - Motor Assembly Instructions (2 of 2)

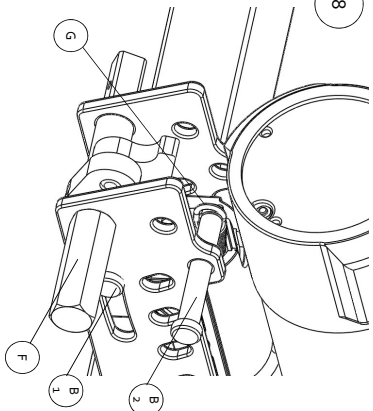
NOTE: Depending on the space available around where the motor movers will be fitted, you may find it easier to fit the framework to the chassis before assembling the motor movers onto the framework. To do this, loosely fit the framework as per the assembly instructions and fit motors before final spacing and torquing of the bolts.



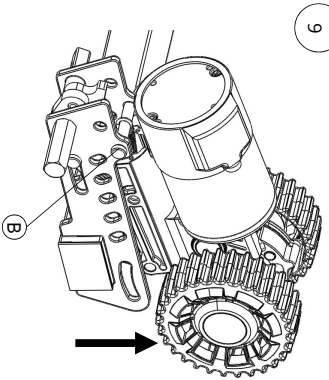
Hold engagement bar (F) securely to prevent movement and tilt mover forward to gain easy access to underside. Fit spacer (C) in the gap between the gearbox and engagement arm (A) and push pin (B) through the rest of the way.



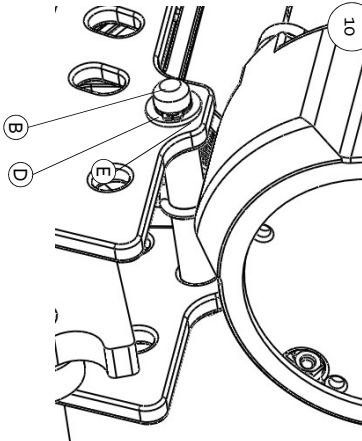
Fit washer (E) and then circlip (D) into the groove on the pin (B).



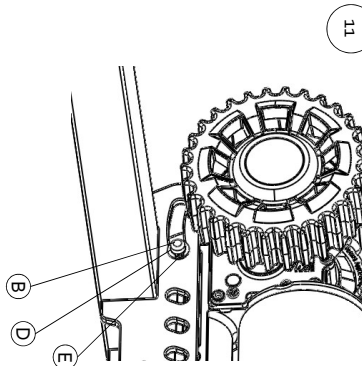
Hand turn engagement bar (F) anticlockwise to ensure pin (B₁) is forced to the rear of the slot. Hold the spring (G) in one hand and pass pin (B₂) through the Framework hole and hook the end of the spring over the end of pin (B).



Fit gearbox back to release spring tension to allow pin (B) to be passed the rest of the way through the framework.



Fit washer (E) and then circlip (D) into the groove on the pin (B).



Pass final pin (B) through front framework slot and gearbox front mounting hole. Fit washer (E) and circlip (D).

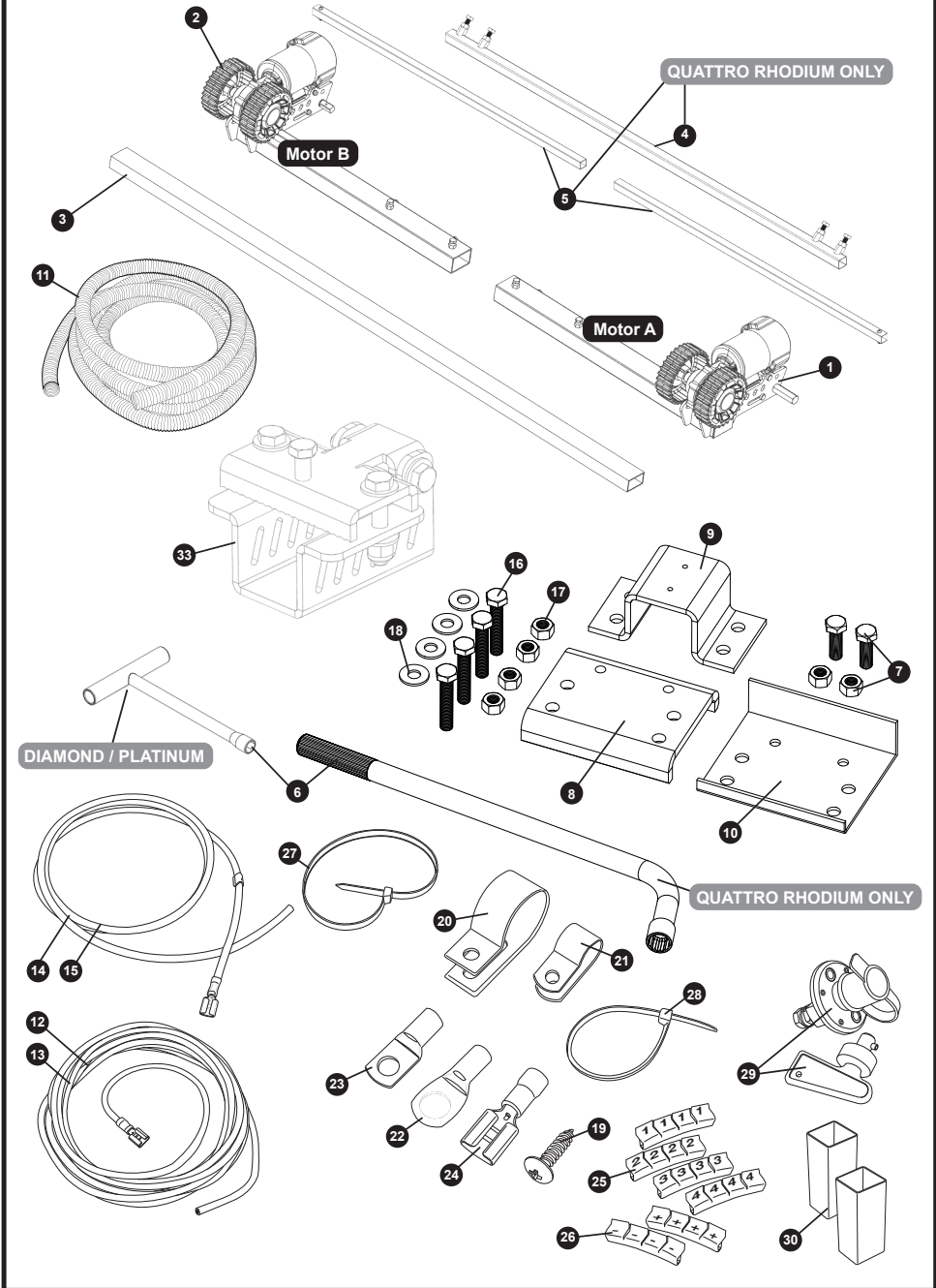
Package Contents (Fig.A)

REF.	QTY	DESCRIPTION
1	1	Motor Unit (A)
2	1	Motor Unit (B)
3	1	Main Cross Bar
4	1	Actuation Centre Bar (Rhodium Only)
5	2	Actuation Insert Bars (Rhodium Only)
6	1	Engagement Tool (Rhodium Only)
7	2	Classic Stop Bolts & Nuts (2 pairs)*
8	2	Upper Classic Clamp Plate*
9	2	Classic U Plate*
10	2	Lower Classic Clamp Plate*
11	1	Convolute Cable Trunking
12	2	Positive (+) Red Motor Cable
13	2	Negative (-) Black Motor Cable
14	1	Positive (+) Red Battery Cable
15	1	Negative (-) Black Battery Cable
16	8	Classic Clamp Bolts - M10x55*
17	8	Classic Clamp Nyloc Nuts M10*
18	8	Classic Clamp Washers 10mmØ*
19	20	P-Clip Screws - M4x15
20	10	Cable Trunking P-Clips 19.2mm
21	10	Cable P-Clips 10.4mm
22	4	Motor Terminal Connector
23	2	Battery Terminal Connector
24	6	Cable Spade Connectors
25	8	Motorside Framework Bolts
26	3	Cable Polarity Markers (+,-)
27	4	Motor Unit Cable Ties 8x400
28	10	Cable Ties 2x70
29	1	Power Isolation Switch + Key + Fixings
30	2	Roller Distance 20mm Spacers
31	1	User Manual (not illustrated)
32	4	Diamond Engagement Bolts (not illustrated)
33	2	Shark Clamp Mounting System*



*Depending on model, either Classic Clamp or Shark Clamp will be supplied.

Fig.A



Technical Reference Diagrams

Fig.1

RHODIUM MANUAL

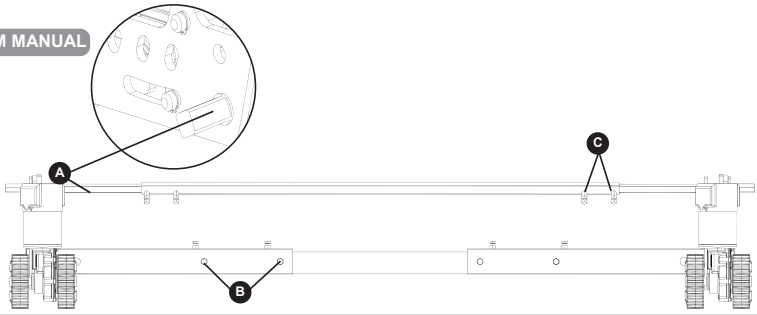


Fig.2

RHODIUM MANUAL

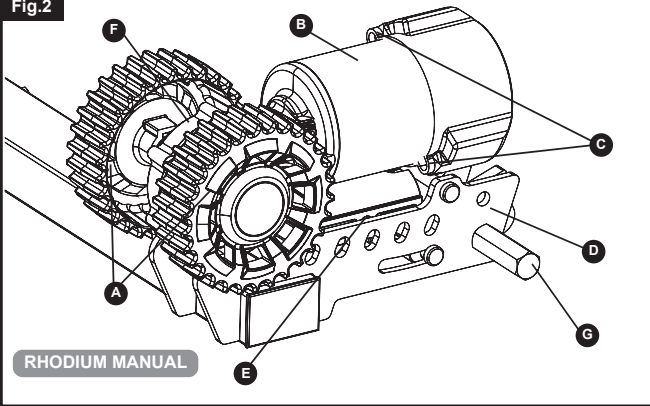
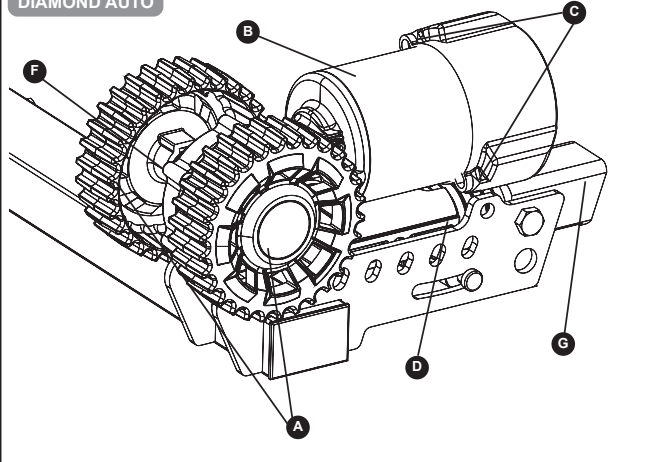
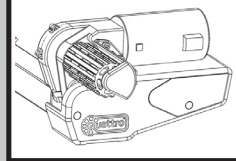


Fig.3

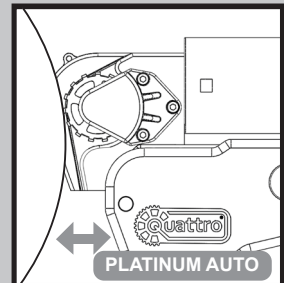
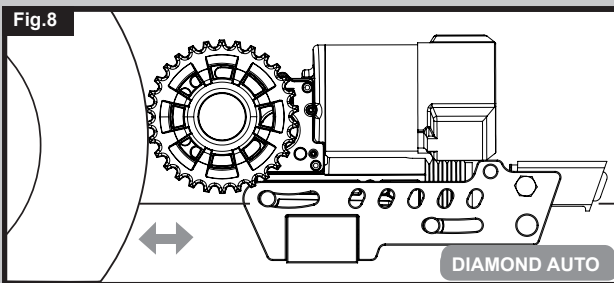
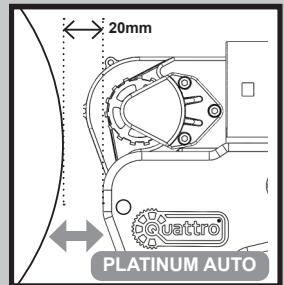
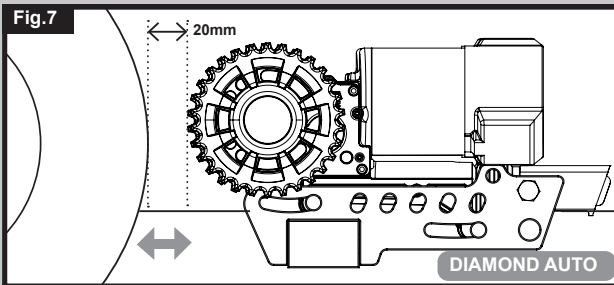
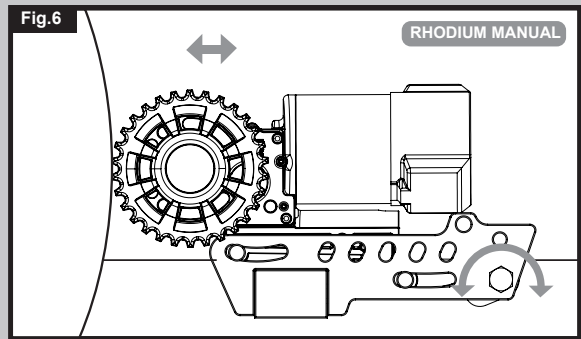
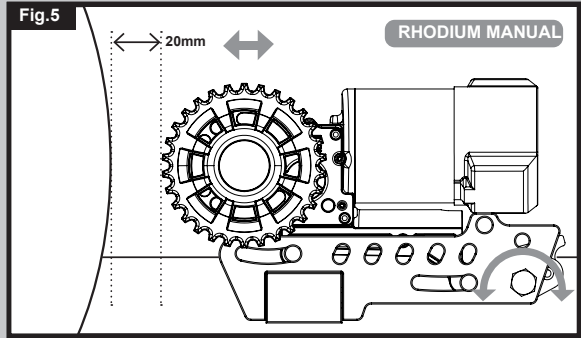
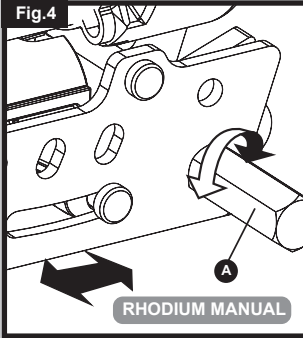
DIAMOND AUTO



PLATINUM AUTO



Technical Reference Diagrams



Technical Reference Diagrams

Fig.9

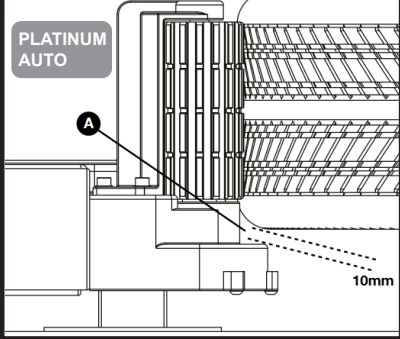


Fig.10.1

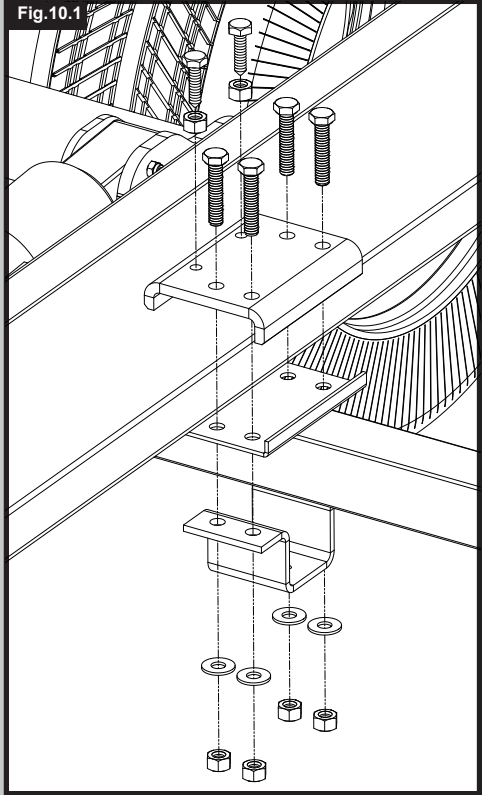


Fig.10.2

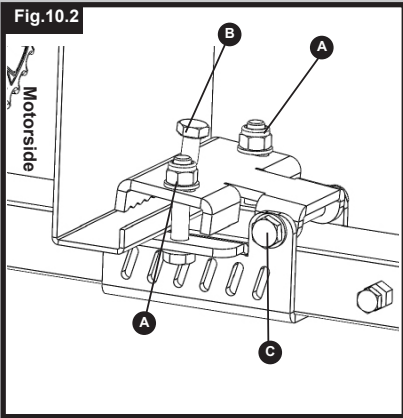


Fig.11

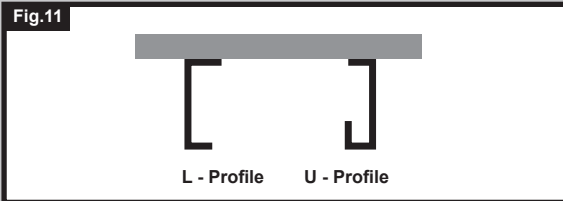


Fig.13

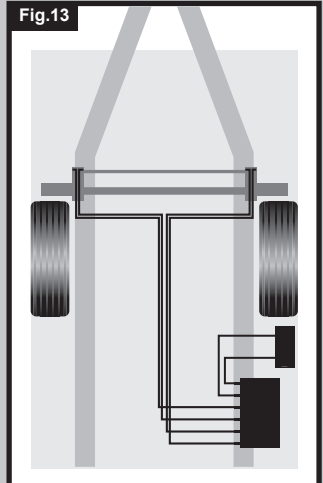
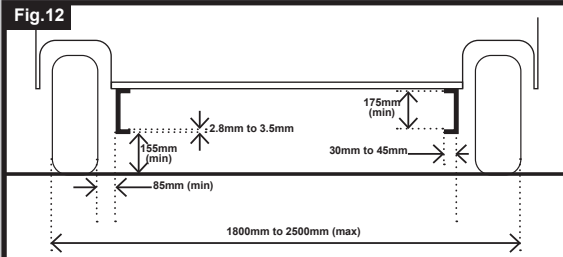


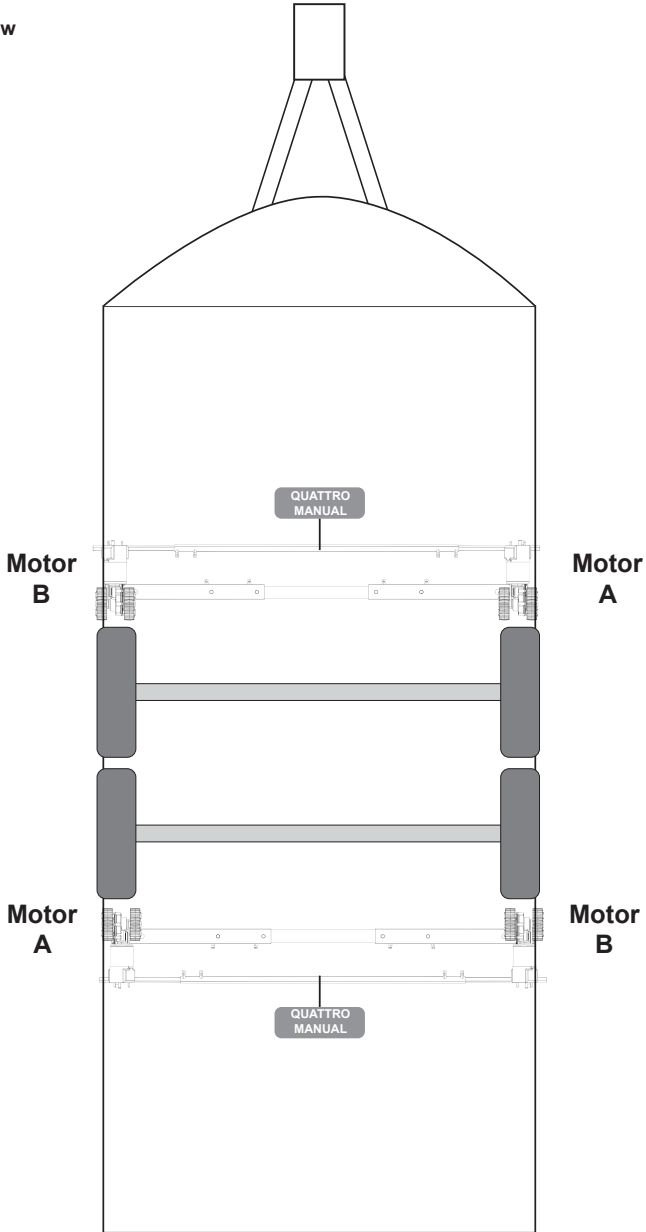
Fig.12



Technical Reference Diagrams

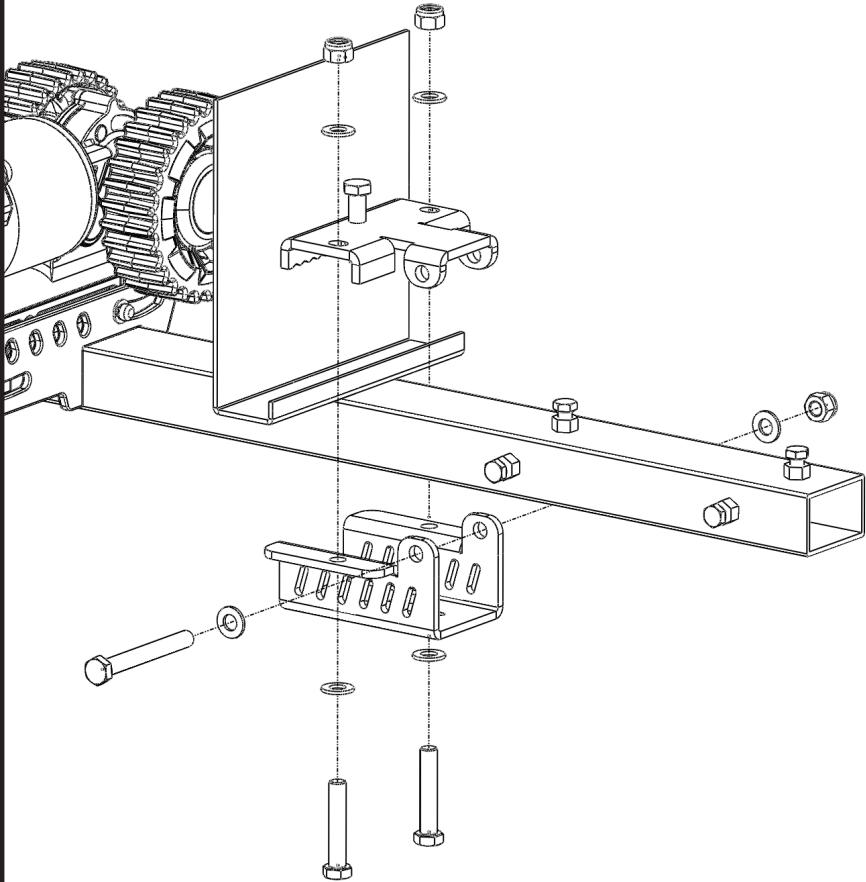
Fig.14

Overhead View



Technical Reference Diagrams

Fig.15



Introduction

Thank you for choosing this caravan mover. This product has been produced according to very high standards and has undergone careful quality control procedures. Simply by using the remote control you can move your caravan effortlessly into any position required within operating guidelines.

Before proceeding with installation and starting to use the mover, please read this manual very carefully and be aware of all the safety instructions! The owner of the caravan will always be responsible for correct use. Keep this manual inside your caravan for future reference.

This User Manual covers three models of Caravan Mover: Model No. QUATTRO500, Model No. QUATTRO600 and Model No. EGO500; any installation or operational differences between the two models are detailed where appropriate.

The caravan movers consist of two 12V motor-powered rollers, a 12V electronic control box and a remote control. To function, the motor-powered rollers must be engaged against the tyres of your caravan. The supplied cross actuation device (QUATTRO500 ONLY) enables you to engage both rollers at the same time from one side of your caravan. Once this is done, the mover is ready for operation. The remote control will allow you to move your caravan in any direction.

Fitting Guidelines

The chassis clamps provided are suitable for fitment onto most standard caravan chassis that have an L-shape or U-shape profile. Please refer to Fig.11 & Fig.12 for reference on dimensions and clearances BEFORE you proceed any further with installation. If your chassis has different dimensions to those shown in Fig.12 then various chassis clamp adapters are available to suit the majority of UK and Continental caravans; please refer to the section entitled 'Optional Fitting Adapters'.

Specification

Model Name	QUATTRO DIAMOND / RHODIUM	QUATTRO PLATINUM
Operational Voltage	12 Volt DC	12 Volt DC
Minimum Width (caravan/trailer)	1800mm	1800mm
Maximum Width (caravan/trailer)	2400mm	2500mm
Power Source (caravan leisure battery)	12V	12V

Installation - Safety Guidelines



Read this User Manual carefully before installation and use. Failure to comply with these rules could result in serious injury or damage to property.

Before starting installation of the caravan mover:

DO check that the caravan is disconnected from the battery supply and the mains electrical supply.

DO only use adapters and accessories that are supplied or recommended by the manufacturer.

DO check that the tyres are not over worn (fitting to new or nearly new tyres is the best option).

DO make sure that the tyre-pressures are correct to the manufacturer's recommendation.

DO make sure the chassis is in good condition without any damage and is free from rust, dirt etc.

DO stop work immediately if you are in doubt about the assembly or any procedures and consult one of our engineers.

DO locate the battery isolation switch to be accessible at all times when parking and moving the caravan.

DO NOT remove, change or alter any parts of the chassis, axle, suspension or brake mechanism.

DO NOT operate the unit if you are under the influence of drugs, alcohol or medication that could impair your ability to use the equipment safely.



These instructions are for general guidance. Installation procedures may vary depending on caravan type.



Use appropriate support! Working under a vehicle without appropriate support is extremely dangerous. If you are fitting the mover system yourself, it is advisable that the installation is conducted by two people, as the mover will need to be raised up to the bottom of the caravan's chassis before the clamps can be installed.



Remember to complete the product registration form with the serial numbers of each motor assembly prior to fitting (see details within the Guarantee section of this manual).



If with your particular model of mover the motors are not pre-assembled onto the framework, please follow assembly manual supplied in the motor packaging.

Installation - Mechanical Components

Place the caravan on a hard, level surface. The use of a lifting ramp or an assembly pit is ideal for access and personal safety.

Clean the area of your chassis where you need to mount all components to ensure a good fitting.

Unpack all the components and check for the presence of all parts (see Package Contents List).

Make sure the caravan is prepared for installation. Check before installation that important areas, such as drains/spare tyre etc. do not cause any obstruction to the function of the mover.

Ensure both rollers are in the DISENGAGED position (Fig.5 or Fig.7), as the unit will not fit correctly otherwise.

Installation - Classic Clamp System (Fig.10.1)

Loosely assemble motor framework side (1), motor framework side (2) and main cross bar (3) (see Fig.1). The nuts (Fig.1B) on the cross bar (3) must be no more than finger-tight at this stage.

Place the assembly (Fig.1) loosely under the caravan. In principle, the unit should be fitted in front of the caravan road wheels, but if fitting in this position is not possible, it is permissible to fit it to the rear of the wheels by rotating the whole assembly by 180° degrees.

Loosely fit the two clamping assemblies to the chassis (see Fig.10.1) and attach using the bolts, nuts and washers (16,17,18) provided in the installation kit. Nuts must be no more than finger-tight.

Quattro Rhodium Mover with Manual Engagement:

Assemble the parts of the cross actuation bar (4 & 5) and connect them to the motor units (1 & 2) with the nyloc nut and bolt (in bag of bolts) onto the cross actuation bar-connectors (see Fig.1A). Nuts must be no more than finger-tight at this stage.

Make sure that the Main Cross Bar (3) and the Cross Actuation Centre Bar (4) are positioned in the middle of the caravan/mover (the centre of the bar is marked).

With the main assembly loosely fitted onto the chassis, slide the whole assembly along the chassis until the rollers (Fig.2A or Fig.4A) are 20mm away from the surface of the centre of each tyre (Fig.5 or Fig.7). Two 20mm spacers (30) are provided.



It is vitally important that each roller is at exactly the same distance away from the tyre. The whole assembly must be parallel to the caravan/trailer axle.

Ideally, align the roller(s) with the centre of each tyre, if clearances permit. Quattro Platinum: When positioning, always ensure there is at least 10mm of clearance between the gearbox and the tyre (Fig 9). Quattro Diamond/Rhodium: If the roller widths exceed that of the tyre, ensure that the outer roller is aligned with the outer wall of the tyre. Overhang on the inside wall of the tyre is acceptable on thinner tyres, and will not affect function or grip. If there is an obstruction preventing the rollers from being mounted centrally, then moving the mover inboard to suit is acceptable as long as at least one roller makes full contact on the tyre with the second (inner) roller making partial contact.

continued...

Installation - Classic Clamp System (Fig.10.1) cont.

Fully tighten the four nylock nuts (17) on both clamping assemblies (Fig.10.1) to a torque setting of 40 ft lbs/55Nm, then the four bolts (Fig.1B) on the Main Cross Bar (3) and the four bolts (Fig.1C) on Cross Actuation assembly (4 & 5) to a torque setting of 9ft lbs/12Nm. Re-check the distance of 20mm from the rollers to the tyres and if necessary, loosen the bolts and re-adjust the position of the assembly. Once satisfied with the position of the assembly, fit and tighten the Chassis Stop Nuts & Bolts (7) , one pair in each of the Upper Classic Clamp Plates (see Fig.10.1). Tighten to a torque setting of 40 ft lbs/55Nm. The Stop Bolts grip the lip of the chassis and help prevent the mover from sliding along the chassis. The main mechanical components have now been installed.

Installation - Quick-fit Shark Clamp System (Fig.10.2)

Loosely assemble the main cross bar (3) inside motor framework side (1) and motor framework side (2) (see Fig.1). The nuts/bolts (Fig.1B) on motor framework (1&2), must be no more than finger-tight at this stage.

Place the assembly (Fig.1) loosely under the caravan. In principle, the unit should be fitted in front of the caravan road wheels, but if fitting in this position is not possible, it is permissible to fit it to the rear of the wheels by rotating the whole assembly by 180° degrees.

Typically the Shark Clamp will be pre-assembled onto the motorsides for ease of fitting, but if the clamps have been purchased separately or are not pre-assembled, they should be assembled onto the framework as shown in (Fig.15). Before attempting to install the mover onto your caravan chassis ensure that the pinch bolts (Fig.10.2B) are removed and put safely to the side.

In turn, open each jaw to its widest position (loosen nuts if required) and hang the motorside framework onto the chassis. If the caravan chassis is a tall U profile, the nuts (Fig.10.2B) may need to be removed first to allow the jaws to be opened wide enough.

Loosen the crossbar nuts/bolts (Fig.1B) and adjust the lateral position of each motorside so that the rollers are central to the tyre, or as close to the centre as possible, ensuring 10mm of space is left between the tyre and gearbox for the Quattro Platinum (Fig.9). After adjusting ensure the clamps haven't moved out of position by holding the framework motorside firmly, while reaching round and pushing the clamps outwards until the fastening bolts and chassis are within 1-2mm of each other. Once happy with the overall width of the mover system, tighten crossbar nuts/bolts (Fig.1B) to 9ft lbs/12Nm to set the width.

Slide the whole assembly along the chassis until the rollers (Fig.2A or Fig.4A) are 20mm away from the surface of the centre each tyre (Fig.5 or Fig.7). Two 20mm spacers (30) are provided. Fully tighten the clamp bolts (Fig.10.2A) on both clamping assemblies to a torque setting of 40 ft lbs/55Nm. When tightening one clamp bolt, the other may loosen slightly so it may take several passes to get both bolts fully torqued on each clamp. A tip is to do all clamp bolts up until there is a strong resistance before torquing fully.

Insert pinch bolt (Fig.10.2B) and tighten to a torque setting of 18 ft lbs/25Nm, ensuring while doing this, that the retaining nut is at the highest position. Once the bolt is secure, tighten the retaining nut. Finally tighten the pivot bolt (Fig.10.2.C) to 9ft lbs/12Nm.

Installation - Electrical/Electronic Components

Please refer to manual supplied with electronics for wiring installation, operation instructions and troubleshooting.

Alternatively, for Smart Electronics visit www.purpleline.co.uk/qtr-m005
or for Basic Electronics visit www.purpleline.co.uk/qtr-m003

Operation and Maintenance



It is possible to position the caravan's hitch exactly over a stationary car's tow ball using the mover. But please be very careful!



Hitch the caravan in the normal way ready for towing.



Release the rollers from the caravan's tyres. You cannot tow the caravan with the Mover engaged! Make sure that both rollers are fully disengaged!



Trying to drive away with the mover still engaged, will damage the mover, your caravan tyres and strain your tow vehicle!

To prevent the battery from becoming totally discharged during long periods of inactivity it must be disconnected and recharged before using again.

Please check regularly that the rollers of the drive units are free of any dirt, or debris that may have been picked up from the road. Any further maintenance is not required.

Please check regularly the distance between the rollers and the tyres. In the neutral (fully disengaged) position this must be 20mm.

When your caravan is stored for an extended period of time (over winter for example) it is recommended to remove the leisure battery from the caravan. Make sure you keep it charged to ensure it is in good condition the next time you want to use it.

Once a year have your caravan mover maintained and visually inspected. This inspection must include all the bolt/nut connections, the cables and electrical connections and lubrication of movable parts/joints.



In case of any failures or problems, please contact your Caravan Mover supplier.

Product Registration

Please register your Quattro® caravan mover online within 14 days of purchase. Registration is quick and simple, go to www.purpleline.co.uk/product-registration. Please retain your original purchase receipt.

Please fill-in the Serial Numbers + additional information and retain this manual for future reference. The serial numbers can be found on the product label on each of the motor sections. The serial number can be up to 18 digits long. Please make a note of your serial numbers in the section below for future reference. The serial numbers will be required for product registration.

Motor Serial No.	<input type="text"/>
	<input type="text"/>
Date of Purchase	<input type="text"/>
Name of Dealer	<input type="text"/>

Guarantee

Quattro® caravan mover systems are provided with a UK parts only warranty for a period of 7-years which includes the first 12 months statutory, plus an additional 6 years extended warranty. Please note that the extended 6year warranty is only offered if Product Registration is completed and returned within 14 days from the date of purchase. Any warranty claims must be directed through the place of purchase with a proof of purchase provided. Warranty cover is limited to products within UK mainland only.

Within the seven year period, the manufacturer will, at their sole discretion, replace or repair any parts that have failed if deemed to be due to a manufacturing defect.

The manufacturer does not take responsibility for any consequential loss whatsoever.

Upon inspection, components that are missing when checked against the packing contents list must be reported to the place of purchase within 5 working days.

This warranty cover is available only to the original purchaser of the product and is non-transferable.

What is not covered:

- Normal wear and tear.
- Damage that is deemed to be due to customer misuse or neglect.
- The cost of repair following accidental damage, abuse of product or deliberate tampering.
- Warranty is not offered for any type of trade or commercial usage.
- As a result of the recall or modification of all equipment in a model range.
- Force Majeure e.g. Damage caused by extraordinary events or circumstance beyond anyone's control.
- Damage as a consequence of water ingress.
- Carriage or any additional charges incurred including travel or labour.
- Caravan electrics, including fuses, plugs, batteries, wiring connections and looms. Scratches, dents, paintwork and cosmetic trim.
- Damage as a result of incorrect installation and/or disregard to manufacturers fitting instructions.
- Cover will not be given to any part or component which is out of manufacture or no longer available.
- Cover will not be given if the product has been modified in any way.
- Damage occurring as a result of the product being used outside manufacturer's load recommendations.

Contact Information

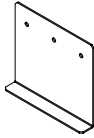
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Notes

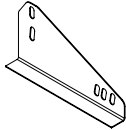
Optional Fitting Adapters

Additional chassis clamp adapters shown below are available for purchase:



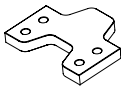
Low Profile Chassis Adapter Plates (Part No. CM-029)

If your chassis frame height is less than 140mm these plates must be fitted to lower the assembly to provide the correct height of 185mm. Drilling of your chassis may be required. Note: In some countries, the installation must be checked by a professional technician in order to adhere to local regulations.



Narrow Gauge Chassis Adapters (Part No. CM-030)

These plates must be utilised if you have an AL-KO Vario III/AV chassis which has a frame thickness of less than 2.8mm. These must be positioned behind the axle using pre-drilled holes already available on the chassis; so your mover must be fitted behind the axle.



16mm Spacers - 1 pair (Part No. CM-028/Q)

Use spacers to lower the mover assembly if your chassis has a frame height of between 140 to 185mm. A maximum of 3 sets of spacers can be utilised to achieve correct frame height of 185mm. A set of extended clamp bolts must be used in conjunction with these spacers (Part No. CM-031).

[For use with Classic Clamp only.]



Set of 8 M10 x 100 Bolts (Part No. CM-031)

Set of 8 extended clamp bolts for use with 16mm spacers.

[For use with Classic Clamp only.]

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Photographs & diagrams for illustration purposes only. Actual product may differ slightly. All weights & dimensions are approximate. The manufacturer reserves the right to change product specification without prior notice. E & OE.