



SIDEWINDER SUSPENSION

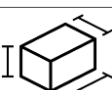
INSTRUCTIONS FOR USE MANUAL



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SYMBOLS

	Identifies products that meet the requirements of Regulation 2017/745 / EU on medical devices		Batch code
	Indicates that a product is a medical device		Catalogue number
	Shows the manufacturer of the medical device		Date of manufacture
	WC20 & ISO7176-19 certified for forward facing use in a motor vehicle		Authorized representative in the European Community
	Product weight (kgs)		Consult instructions for use
	Max User Weight (kgs)		Warnings
	Product Dimensions		



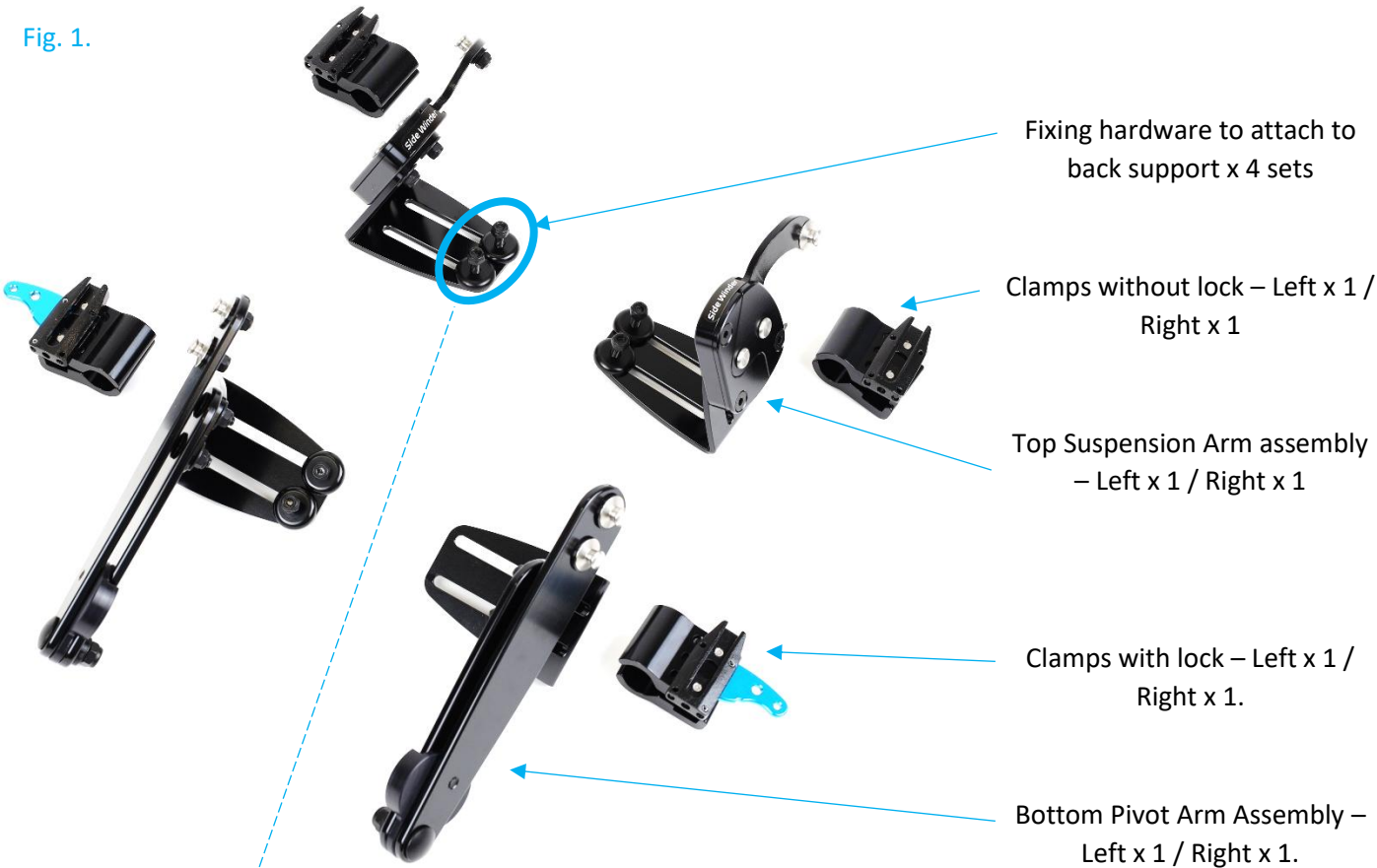
Order code: DBSWSS

WEIGHTS & DIMENSIONS

ITEM			
Sidewinder Suspension Kit	2.48	136	20cm x 25cm x 10cm

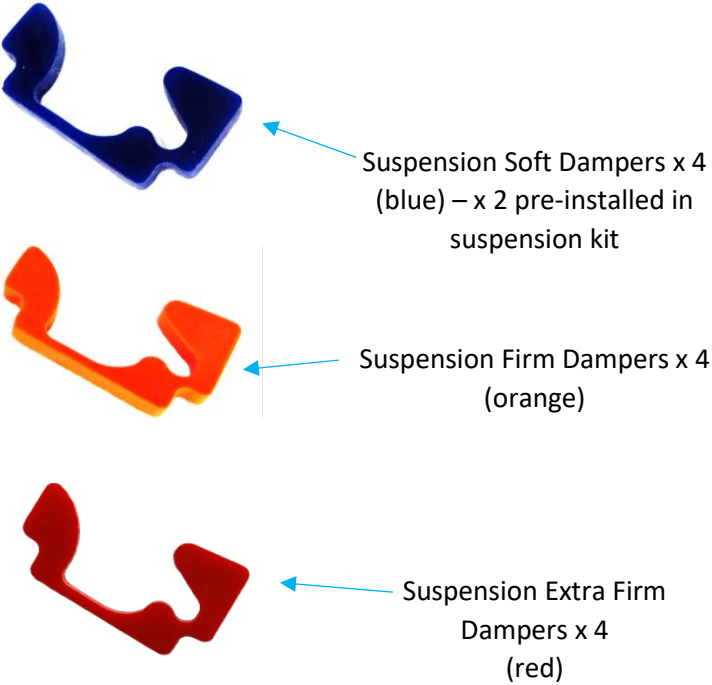
INCLUDED IN THIS PACKAGE

Fig. 1.



Fixing hardware to attach to back support shell (4 sets)

- Nyloc nut x 2
- Coach bolt x 2
- Large washer x 2
- Fixing plate x 1



INTENDED USE

This item is intended as a dynamic back support system to upgrade rigid back supports for persons with disabilities in a wheelchair. If there are any questions about product installation or compatibility with the wheelchairs, ROLAPAL customer service should be consulted.

Indication: Partially or permanently non-ambulatory limited to a sitting position

Contra-indication: None

CAUTION - RISKS IDENTIFIED

- Impingement Risk – Keep hands away from moving parts when operating.
- Fully read the instructions before installing the Sidewinder Suspension system.
- Loose or missing fixings hardware - Do not use if attachment screws / nuts are loose or missing. Risk of causing injury to the user.
- The Sidewinder suspension system must be installed by a qualified therapist or seating technician.
- Lock of for Travel – the system must be locked when travelling in a motor vehicle, risk of falling from the wheelchair causing injury to the occupant or other occupants in the vehicle.
- Always ensure the lock tabs on the clamps are in their locked position when using.
- Do not modify Dreamline items as this may affect the strength or integrity of that item making it a potential safety risk to the occupant.
- This item can be positioned in many ways, use common sense when setting it up for the best long-term use to the occupant.

REPORTING OF INCIDENTS

All serious incidents occurring in relation to the product must be reported to ROLAPAL Ltd and your competent authority!

DISCLAIMER

Because of the infinite adjustability of the cushion, Rolapal accepts no responsibility for the therapeutic outcome for the occupant. This is the responsibility of the prescribing seating therapist or technician.

REUSABILITY

The product is basically suitable for reuse. The reuse handover takes place after the product has been checked by the specialist trade.

SPECIAL STORAGE/HANDLING CONDITIONS

Do not store in environments above 50°. Do not store close to roofs to avoid heat. If not in use, please store in dust free environments.

PRODUCT LIFE EXPECTANCY

This item is expected to last between 2 – 5 years under normal use but this can change dramatically between users depending on the length of time in use, environment & weight of the user etc.

END OF LIFE RECYCLING

At the end of its useful life the item can be dismantled. All metal components can be recycled. the dampers & plastic shrouds can be discarded in general waste.

GUARANTEE

The Dreamline Sidewinder Suspension system is manufactured to a very high standard and carries a guarantee against defects in materials and craftsmanship for a period of 18 months under normal use.

Any item found to be defective will be repaired or replaced at the discretion of Rolapal Ltd.

Goods must be returned to Rolapal Ltd for assessment and the new repaired or replaced item will be sent free of charge.

This guarantee does not cover items which are damaged from general “wear and tear”, misuse or negligence.



TRANSPORTATION WARNINGS

1. When transporting occupants on their wheelchair in a motor vehicle with a Sidewinder Suspension system fitted, ensure the Travel Lock is activated on both sides (left & right). Fig. 2
2. When transporting occupants on their wheelchairs inside motor vehicles, Dreamline Wheelchair Seating is designed only for use with wheelchair frames that have been successfully crash tested to the frontal-impact requirements of RESNA WC-42012, Section 19.
3. When used as a seat for the occupant inside a motor vehicle, Dreamline Wheelchair Seating must only be used on wheelchair frames that provide four securement points and pelvic belt anchor points that conform to the requirements of RESNA WC-4:2012, Section 19.
4. When the Dreamline seating system is used for occupancy inside a motor vehicle, it is designed specifically for wheelchairs that are forward facing inside the motor vehicle.
5. When the Dreamline Seating system is used for occupancy inside a motor vehicle it must only be used in accordance with the wheelchair manufacturer's instructions.
6. Back supports with adjustable recline angles should not be tilted back more than 30 degrees to the vertical during travel in vehicles unless necessary for the medical & postural needs of the occupant.
7. If the back support must be adjusted to an angle that is greater than 30 degrees to the vertical during travel in a motor vehicle, the upper shoulder belt anchor point should be adjusted rearward to maintain belt contact with the wheelchair occupant's shoulder and chest.
8. Wheelchair mounted rigid trays that are not specifically designed for use during travel in motor vehicles should be...
 - a. Removed and secured separately in the vehicle, or
 - b. Secured to the wheelchair so they will not break free in a crash and
 - i. Be positioned with a gap of at least 75mm (3") between the back edge of the tray and the wheelchair occupant's abdomen and/or chest so as not to interfere with proper belt restraint use, and
 - ii. Have energy absorbing padding placed between the back edge of the tray and the wheelchair occupant.
9. The use of a postural pelvic belt attached to the wheelchair base or seat frame is encouraged during travel, but these belts should be positioned so they don't interfere with the proper positioning of crashworthy belt restraints, and they should not be relied on for occupant protection in crash situations unless the postural belt has been designed to comply with, and perform to, the requirements of 4.6, 5.2, and 5.3 of RESNA WC-4:2012, Section 19 (i.e. with WC19).
10. People who use wheelchairs should transfer to the vehicle seat and use the vehicle installed occupant-restraint systems when this is feasible.
11. There must be sufficient clear space around the wheelchair for the wheelchair occupant and other occupants inside the vehicle to remain safe during travel. Recommendations are made (Fig 6, 7) for Head Height (HHT) and rear space of 450mm from the users back with a Frontal Clear Zone (FCZ) of 650mm with pelvic / upper torso restraint or 950mm if there is only a pelvic restraint. This may not be achievable for wheelchair seated drivers. Wheelchair seated drivers must comply with the modified vehicle and transport approved restraint manufacturer's instructions.
12. Carbon Fibre back support shells (Pro series & Ignite Carbon series) have not been crash-tested & are not recommended for use as a seat support in motor vehicles.

LOCK-OFF FOR TRAVEL

The Dreamline Suspension System “travel lock levers” must be activated before entering a vehicle.

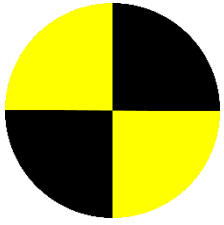
Fig. 2.



Push the back support forward on the wheelchair frame to activate the travel locks. This must be done individually to both the left & right sides.

NOTE:

It is also recommended to use the travel locks if the seat is tilted beyond 30 degrees. At this point the main weight of the user is transferred from the cushion to the back support & the suspension will be less effective & may reduce its effective useful lifespan.



TRANSPORTATION INSTRUCTIONS

The following components have all been tested & are both WC20 & ISO7176-19 certified for forward facing transportation with an occupant in a motor vehicle; Quick-release Seat Pan, All Dreamline Cushions, Dreamline Contour, Support, S3 & STX Back supports, Quick-release swing-down Hip guides & Arm Supports, Swing-down Pommel, both fixed & Swing-away laterals & Dreamline Axis Head Supports, Sidewinder Suspension System.

Dreamline Wheelchair Seating fully complies with RESNA WC-4:202, Section 20 & when used with a wheelchair frame which complies with RESNA WC-4:2012, Section 19 if used as a transportation device for an occupant in a motor vehicle.

Dreamline Wheelchair Seating has been designed to accommodate the proper use of vehicle anchored belt restraints with a rating of 16 out of 16 & pass level of A+ (Excellent): a) ease of properly positioning vehicle anchored belt restraints on the wheelchair passenger & b) the degree to which proper positioning of the belt restraints can be achieved.

1. The pelvic belt transport approved restraint should be worn low across the front of the pelvis near the junctions of the pelvis and thighs.
2. The angle of the transport approved pelvic belt restraint should be between 30 degrees to 75 degrees relative to the horizontal and ideally between 45 degrees to 75 degrees to the horizontal as shown in Fig 3.
3. The transport approved belt restraint buckle of three-point belt restraints should be placed in contact with the occupant's body and away from wheelchair components & should not be routed outside of the wheelchair wheels or over the wheelchair arm supports (Fig 4,5).
4. The junction of the shoulder belt & the pelvic belt of the transport approved three-point belt restraint should be located near the hip opposite the shoulder over which the diagonal belt crosses and not near the midline of the occupant (Fig 5).
5. Upper torso transport approved belt restraints should fit directly over, and in contact with, the middle of the shoulder (Fig 5)
6. Transport approved belt restraints should be adjusted to fit as snugly as possible, consistent with user comfort.
7. Transport approved belt restraints should not be worn twisted in a manner that reduces the area of contact of the belt webbing with the occupant.

ISO 16840-4

Dreamline Wheelchair Seating has been tested to comply with the requirements of ISO16840-4.

Dreamline Wheelchair Seating will only comply if the corresponding wheelchair frame complies with the requirements of ISO7176-19. The frame must include anchorage points which comply with the requirements of ISO7176-19. Dreamline Wheelchair Seating have been designed and tested for forward facing travel in a motor vehicle. Dreamline Wheelchair seating will only comply if the corresponding wheelchair tie-down & occupant restraint system (WTORS) complies with ISO 10542-1.

Fig.3

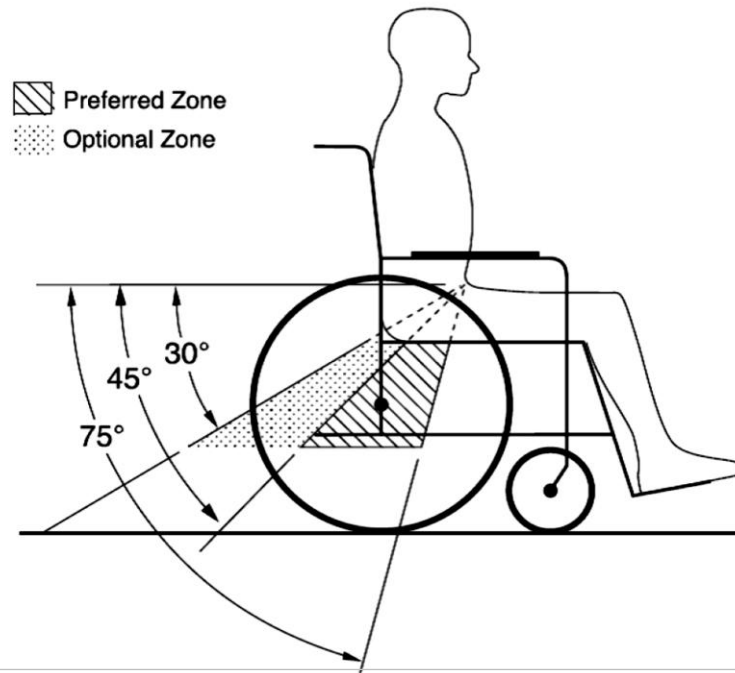


Fig.4



Fig.5

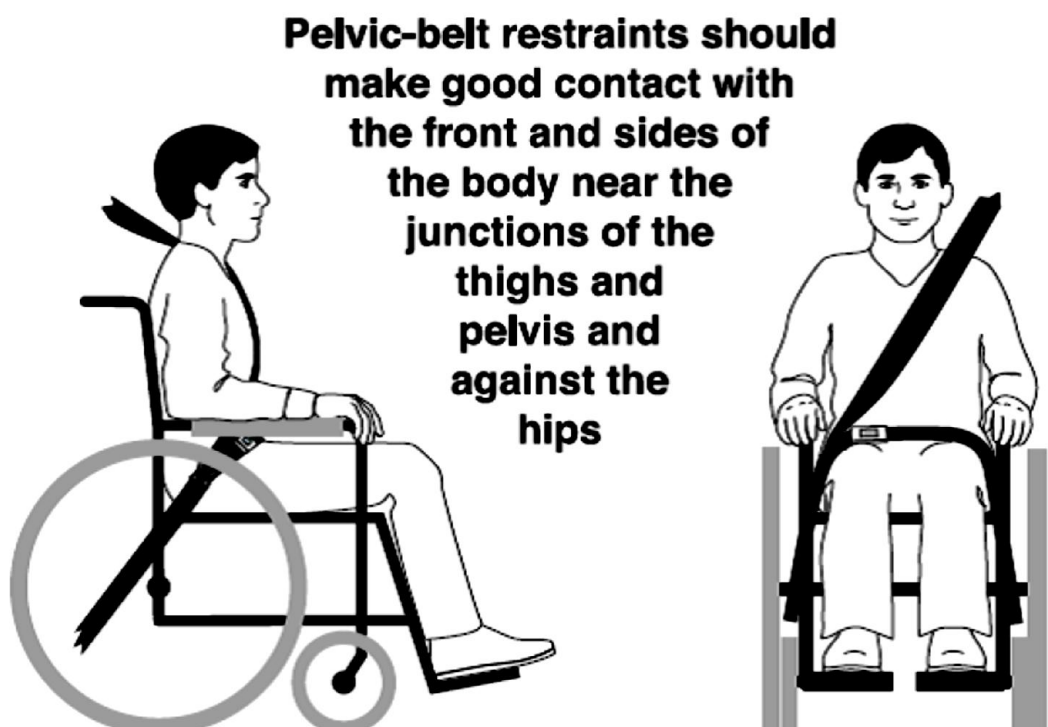
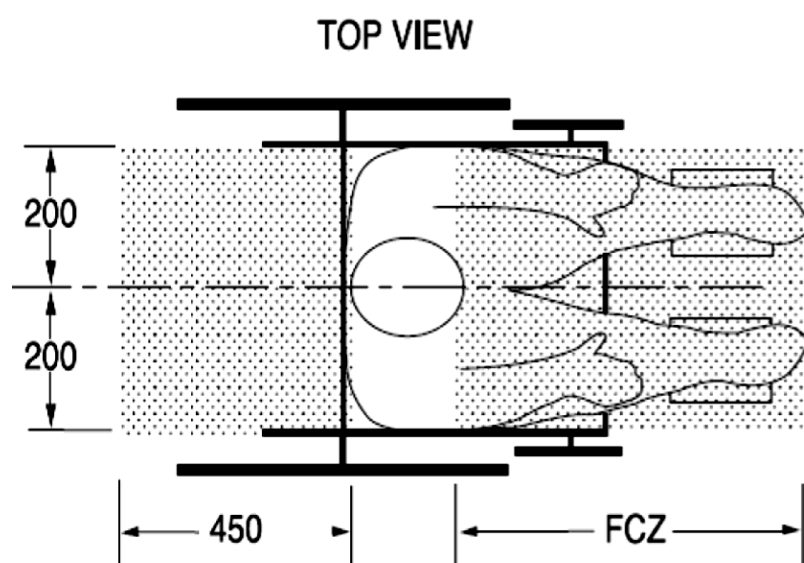


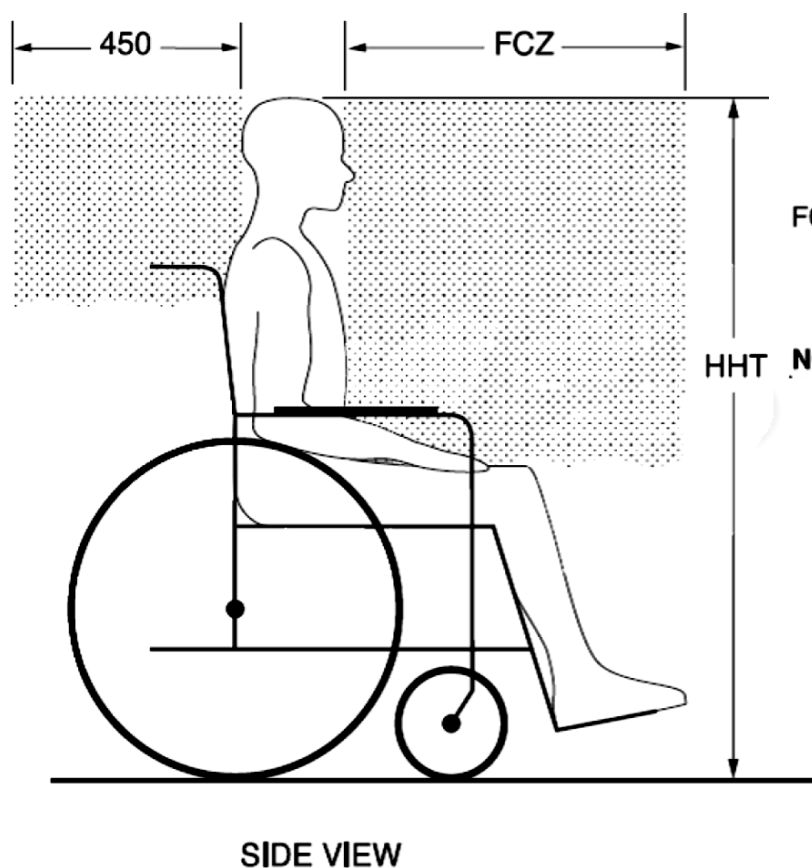
Fig.6



NOTES: The rear clear zone is measured from the rearmost point on an occupant's head. The front clear zone is measured from the frontmost point on an occupant's head.

Seated head height (HHT) ranges from about 1200 mm for a small adult female to about 1550 mm for a tall adult male.

Fig.7



FCZ = 650 mm with upper torso restraint
= 950 mm with only pelvic restraint

NOTE: It is strongly recommended that both pelvic and upper-torso belts be used.

Recommended forward and rearward clear zones for wheelchair-seated occupants

NOTE The frontal clear zone may not be achievable for wheelchair-seated drivers.

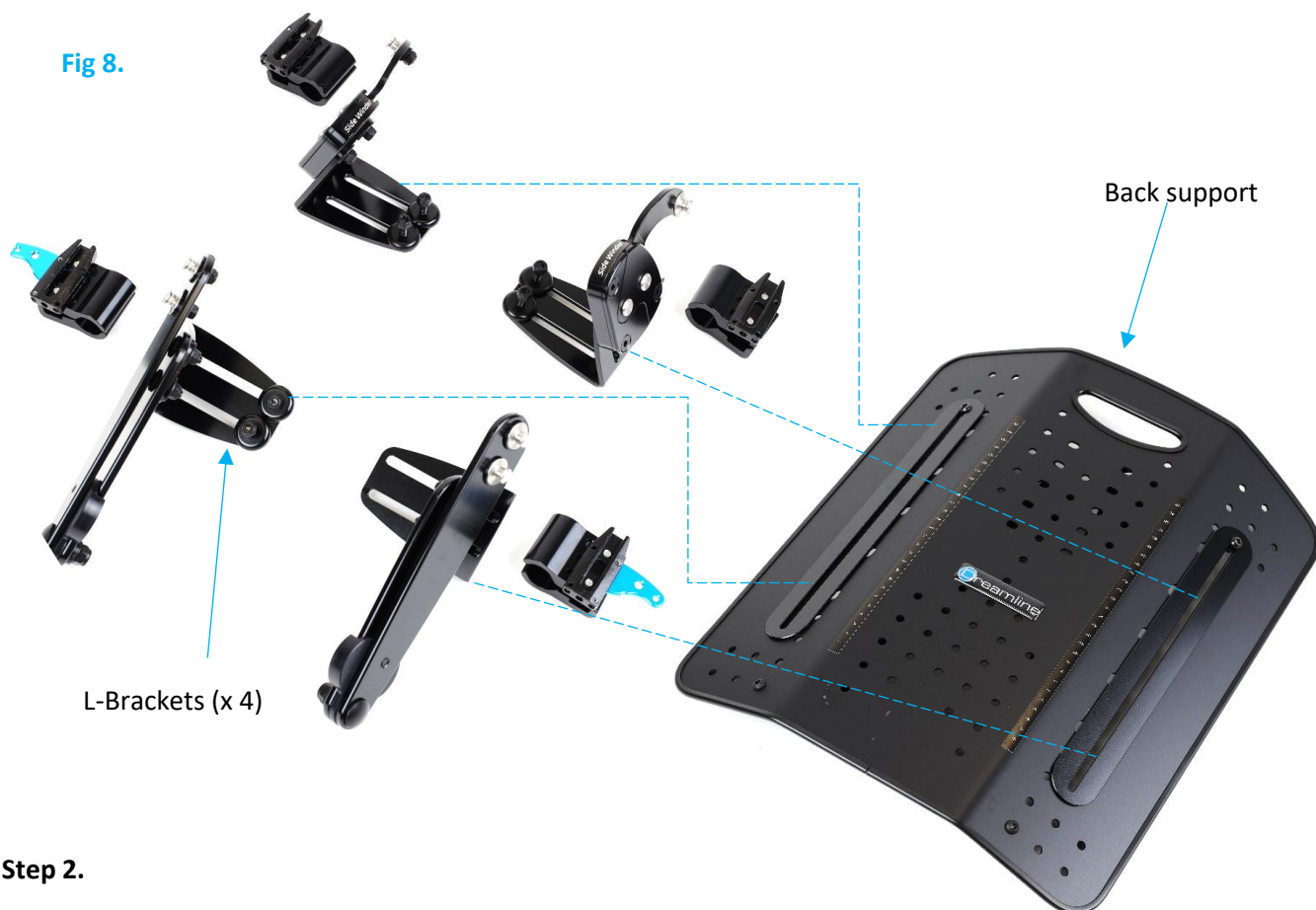
INSTALLATION INSTRUCTIONS

BEFORE YOU BEGIN

The Sidewinder Suspension System is designed to fit to most Dreamline Wheelchair Back Supports however, there may be instances where the Dreamline back support is too small to accommodate the required 4-point attachment brackets. Check there is enough length in the back support shell attachment slots to accommodate the brackets

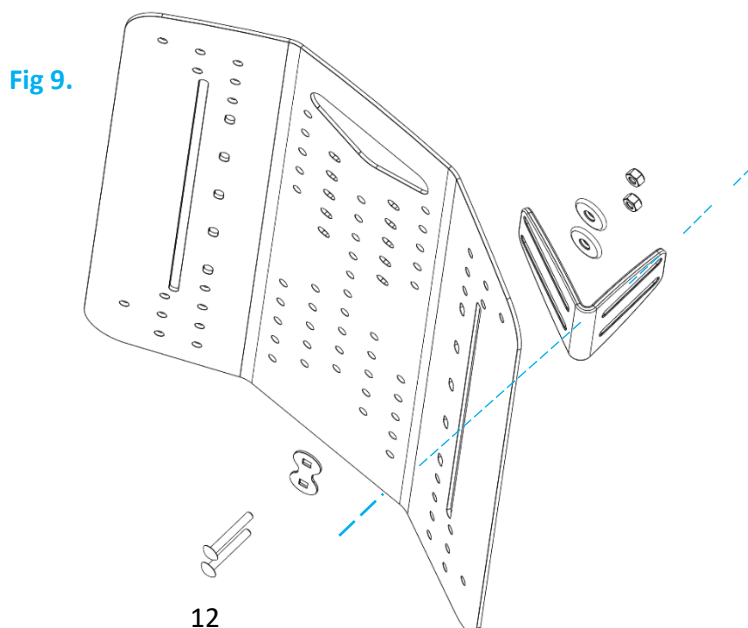
STEP 1.

Remove the existing Dreamline back support from the wheelchair complete with its clamps. Remove the back support squab and hardware from the shell as below Fig.8.



Step 2.

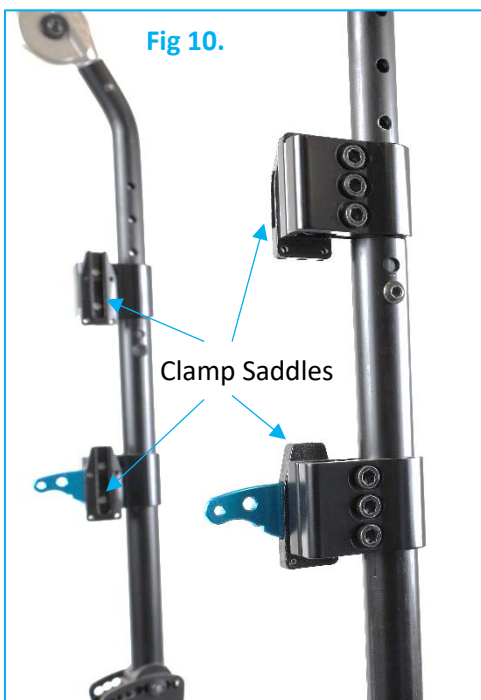
Attach the pre-assembled Sidewinder Suspension L-brackets to the utility slots on the back support shell as shown (Fig.8,9) with the hardware loosely attached to each L-bracket.



Step 3.

Attach the Clamps to the wheelchair frame.

1. Temporarily hold the back support in position to over the wheelchair frame to determine the preferred height to place the back support clamps on the wheelchair frame.
2. Back support clamps may be attached to the front or rear of the wheelchair frame, but the clamp saddles (Fig.10) must always be stationed on the inside of the wheelchair frame with the open portion of the saddle always facing upwards with the blue lock tab facing rearwards (Fig 10). The saddle attaches to the back support clamp by means 2 screws on the inside of the clamp which can be removed with a 4mm Allen Key to change their orientation in view of achieving the different fore or aft set-up modes (for this, the saddles will need to be removed from the clamps and rotated). The left & right saddles must be parallel with each other and attached to the wheelchair frame at the same heights (Fig 1).
3. (Fig.11) The Bottom clamps should be positioned so the suspension pivot (Fig.11) is level with the bottom of the back support, the clamp locks are used to retain the back support onto the wheelchair frame. The top clamps are spaced so the pin in the top arm is stationed mid-way in the saddle (Fig.12). This is essential as the suspension travel causes this pin to lower itself in the saddle during motion.
4. Once all 4 clamps are positioned as desired on the wheelchair frame & they are parallel with each other & at the same height, fully tighten all 3 cap screws on each clamp using a 5mm Allen Key to firmly secure it to the wheelchair frame. Tighten the screws over & over until fully tight.



Top clamp (without lock)

Bottom Clamp (with lock)

Suspension Pivot

Pivot point to be Level
with bottom of back

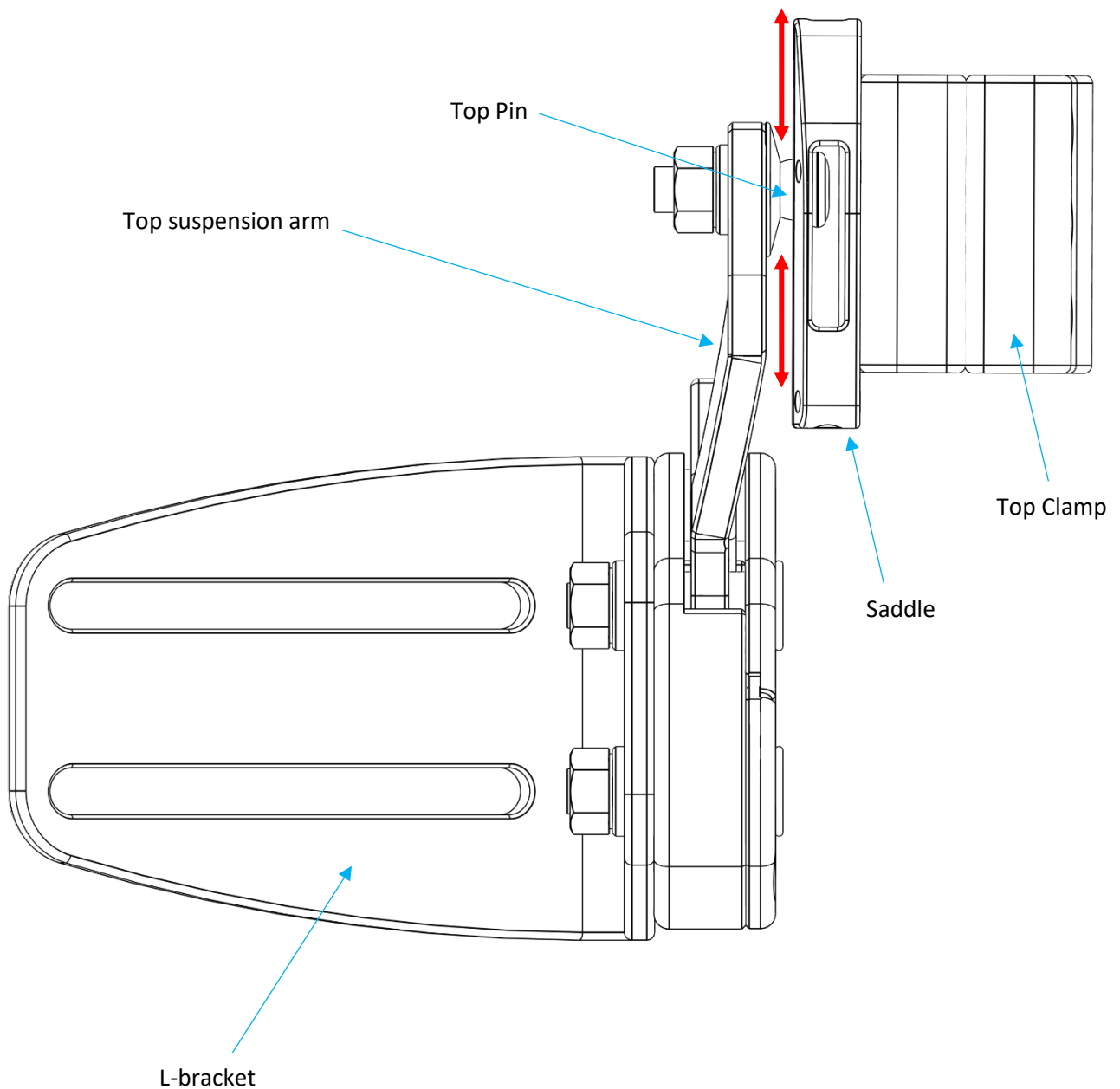
Fig 11.



IMPORTANT NOTE

1. The top clamps must be positioned so that the top pin located on the top suspension arm (Fig.12) is stationed mid-height inside the saddle slot (**not at the bottom**). This is essential as the suspension travel causes this pin to lower itself in the saddle during motion.

Fig 12.



STEP 4.

Adjusting the resistance & travel of the suspension.

The Sidewinder Suspension System is not designed to be “springy” but to offer resistance, helping reduce strain on the occupant & wheelchair frame from extension thrust, rocking, head banging etc.

The resistance can be altered two ways.

1. By means of selecting the “soft” or “firm” Damper Pads (Fig.13). The pads are easily changeable at any stage by the following steps.
 - a. Lock off the suspension (Fig.2)
 - b. Unscrew & remove the Cover Plate on the Top Suspension Arm Housing using a 4mm Allen Key Fig.13.
 - c. Lift out the installed pad and press into place the other pad. The soft pad (blue) and the firm pad (orange).
 - d. Reinstall the cover plate & tighten screws.
2. By raising or lowering the top suspension arm assembly altering the distance between the top Pin & the pivot point (Fig.14). As the distance becomes greater between the top suspension arm & pivot the resistance becomes greater. Ensure screws & nuts are fully tightened after changing.

Fig 13.

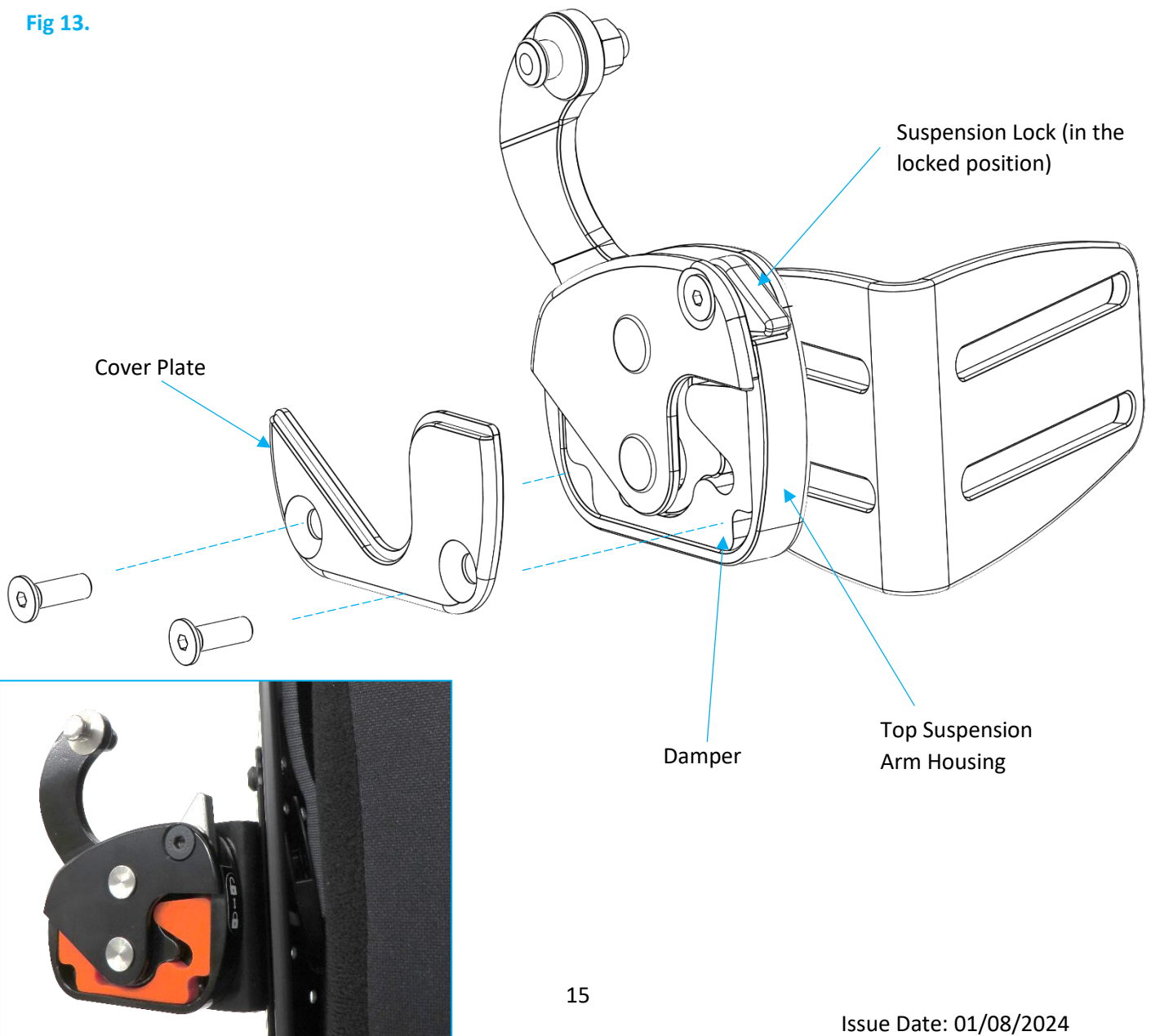
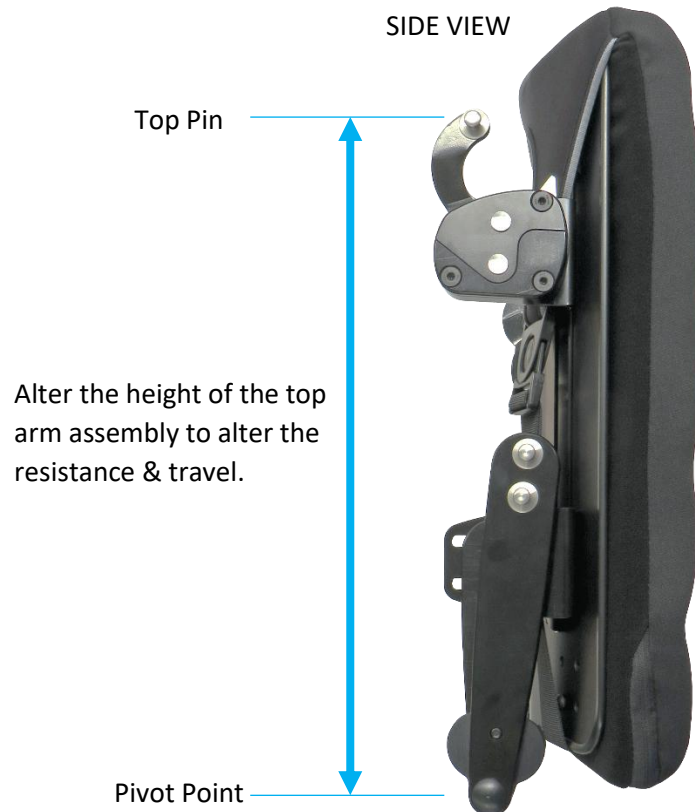


Fig 14.



STEP 5. Attaching the Back support to the clamps:

1. With the screws attaching the L-brackets to the back support loosened, slide the L-brackets on the back support (circled in blue - Fig 15, 16) so the pins (circled in green – fig 15) insert into the saddles on the clamps then press the blue lock lever on the bottom saddles downwards to lock in position (Fig 16.).
2. Move the back support shell laterally and up / down to centralise it between the clamps and position it at the correct height as desired then tighten the eight nyloc nuts (circled in blue – Fig 16) using a 10mm spanner to lock the height & width settings of the back support.

Fig 15.

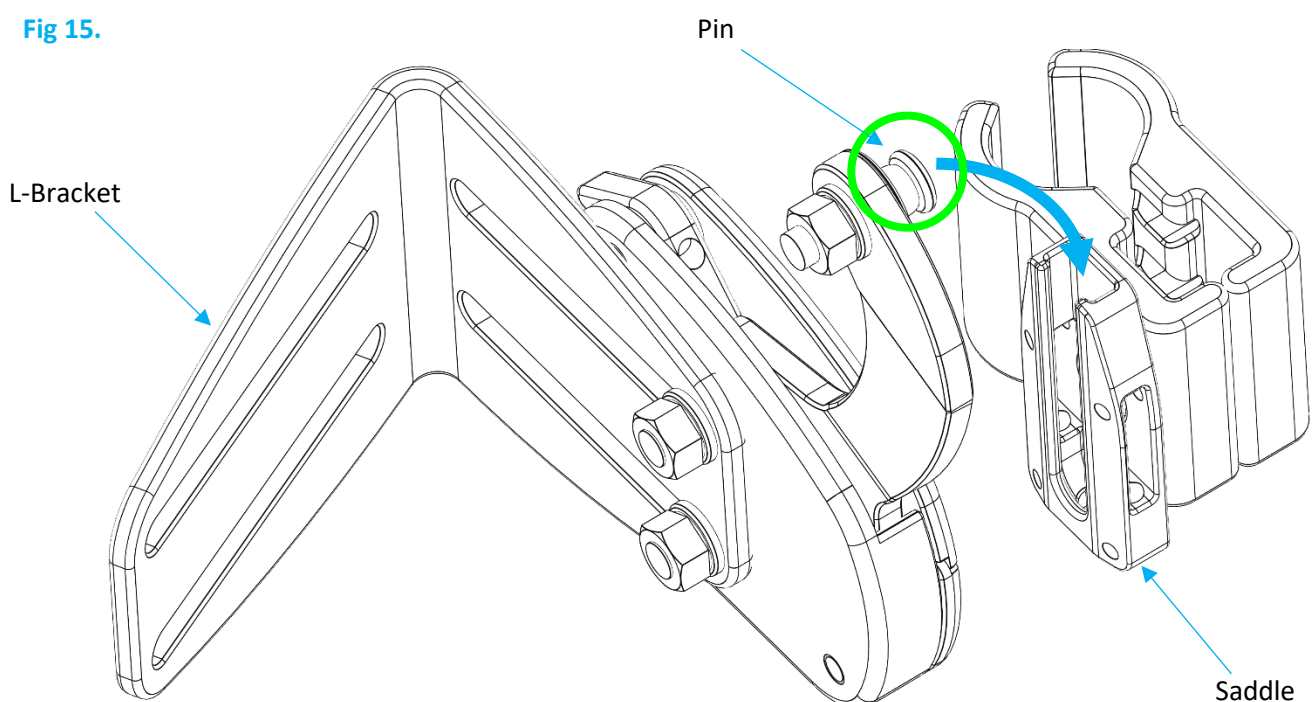
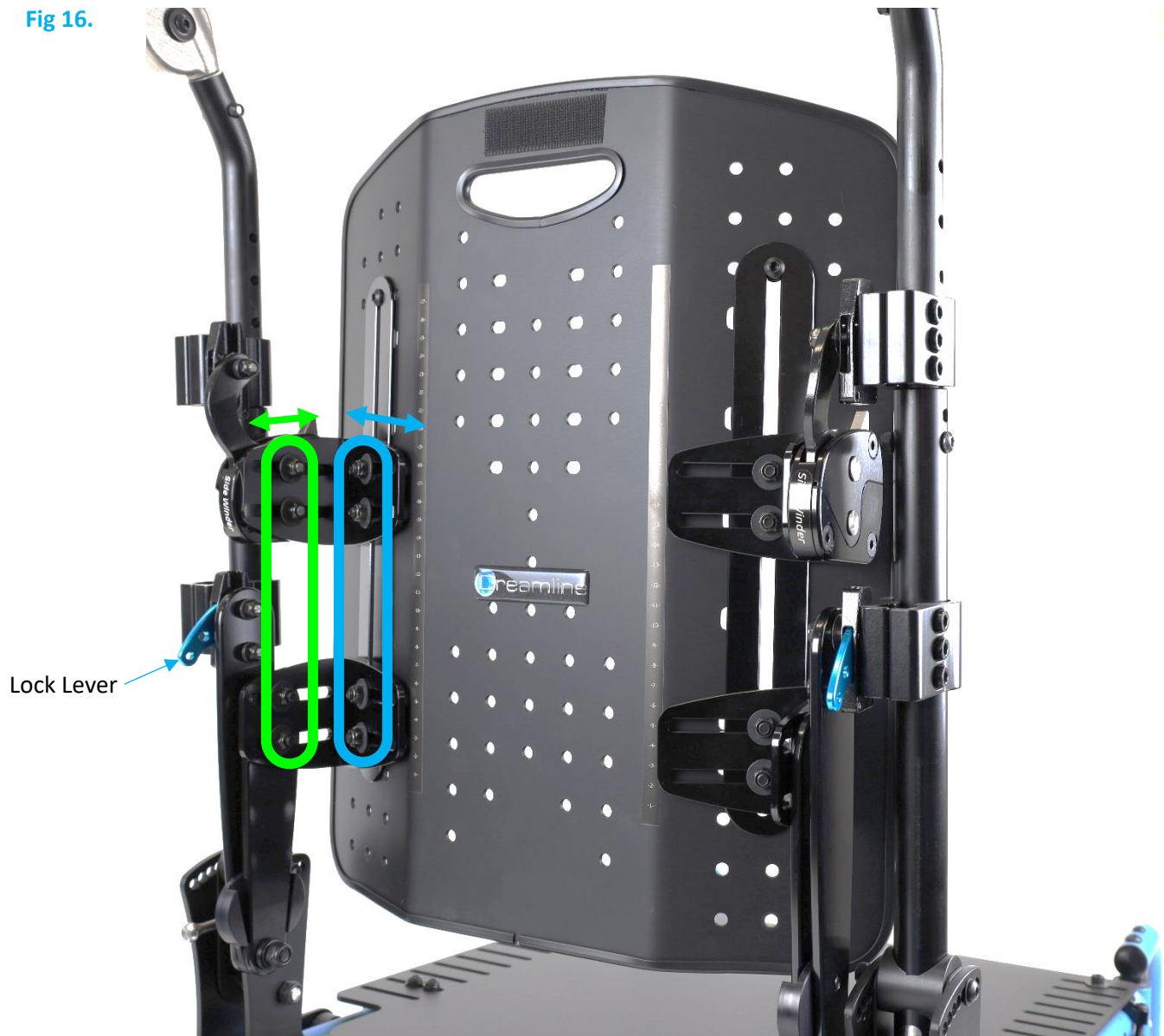


Fig 16.



STEP 6. Setting the Back support depth & Angle:

1. The back support depth and angle are adjusted by using a 10mm spanner to loosen the 4 nyloc nuts on each side which hold the back support pins in position on each L-bracket (circled in green – Fig 16).
2. Once the screws are loosened, move the back support forward / backwards and set the tilt angle then tighten the two Nyloc nuts on each L-bracket to secure in place again

Operating the back support quick-release mechanism:

To fit the back support onto the wheelchair frame, insert the bottom pins first then locate the top pins into their corresponding saddles on the back support clamps, then press the blue lock lever (fig.16) downwards until it “clicks” to lock.

To release, lift the blue lock lever upwards until it “clicks” in position and lift the back support off.

Operating the Sidewinder Suspension

Push the back support forward & press down the “travel lock levers” to lock the back support when travelling in a motor Vehicle or when tilted beyond 30 degrees (fig.2 – page 6).

Lift the levers on each side for the Suspension to function again properly.

MAINTENANCE

Perform weekly checks on the back support & wheelchair frame to ensure the back support attaches correctly to the wheelchair frame, no parts are loose, broken or missing, or slipped out of position. If any component appears to be faulty, stop using the back support immediately & contact your seating therapist or technician. Keep mechanisms clean and free from dust.

The dampers are a wear & tear item taking the force of the user & can compress with time after extensive use. Check the operation of these at least twice a year & replace them with the spare set provided if the resistance has faded.

Dreamline

WHEELCHAIR SEATING



Posture adaptive

Pressure reactive

Performance effective

Ignite

SPLASH

Dreamline
WHEELCHAIR SEATING

Woven Air

snooza



Quality Assurance

Rolapal Ltd is an ISO 9001, 14001 & 45001 certified company!



WHEELCHAIR SEATING

by

ROLAPAL



Dr Dreamline

Check out our "How to"
Videos Pages



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