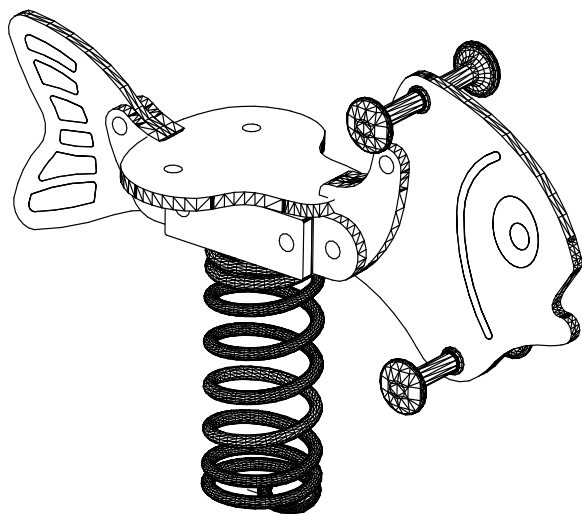




INSTALLATION INSTRUCTIONS
POLYNESIA SPRINGERS
SPCAT,SPBIK,SPCAR,SPHIP & SPFIS



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1 SPECIFICATIONS

REFERENCE		SPCAT	SPBIK	SPCAR (DISCONTINUED)	SPHIP	SPFIS
OVERALL HEIGHT (H)	m	0.71/0.61*	0.72/0.62*	0.73/0.63*	0.70/0.60*	0.71/0.61*
SEAT HEIGHT (h)	m	0.50/0.40*				
LENGTH (L)	m	0.93	1.00	1.21	1.06	1.01
WIDTH (W)	m	0.34				
WEIGHT	kg	36				
HEAVIEST PART	kg	23				
LARGEST PART L x W x H	m	0.60 x 0.60 x 0.50				
CONCRETE	m ³	0.05/0.07 *				
MINIMUM SPACE L x W x H	m	3.40 x 2.75 x 3.00				
MAXIMUM FREEFALL HEIGHT	m	0.50 / 0.40*				
FALLING SPACE AREA	m ²	6				
IMPACT AREA (WET POUR)	m ²	5				
RUBBER TILES 1m x 1m		5				
LOOSE FILL AREA (SAND/BARK)	m ²	7				
MANHOURS	hr	2				
MANPOWER		2				
CONSTRUCTIONAL SPACE	m	3 x 3				

* The second figure refers to loose-fill installations

***NOTE:** All dimensions in metres.

Concrete mix is recommended at:
 1 part cement;
 2 parts sand;
 4 parts aggregate;
 by volume with 20mm aggregate
 (20 N/mm² min compressive strength)

The freefall height of the springers is less than 0.6m and therefore in accordance with EN1176 it does not strictly require impact absorbing surfacing which has been fully tested to EN1177. However, if they are being installed on hard surfaces such as concrete or tarmac, we recommend that a minimum surfacing area as indicated in the chart above is specified to enhance the safety of its provision. If they are being provided on a grass surface, a suitable level of maintenance will be required to ensure the impact attenuation properties are not significantly reduced.

NOTE: FIGS 1 & 2. Generally, it is recommended that loose fill surfaces are installed to a depth of 300mm. However with certain loose fill materials, a greater depth may be required. This will need to be determined by allowing 100mm for dispersal in addition to the thickness required to achieve the required critical fall height.

Constructional Space (shown in the above table) is the approximate working area required to layout and assemble the equipment.

For the safe operation of this equipment it must be installed on horizontal ground with the required minimum space.

Tools: Plumblines, 5m tape measure, Spirit level, Torque wrench, 5/16" Socket, 2-off 17mm AF Sockets & Drivers, M10 Torx tool (Supplied with unit).

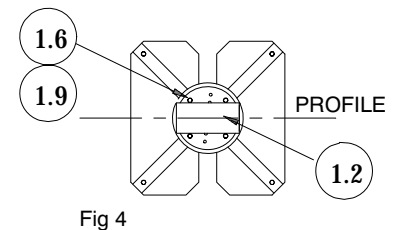
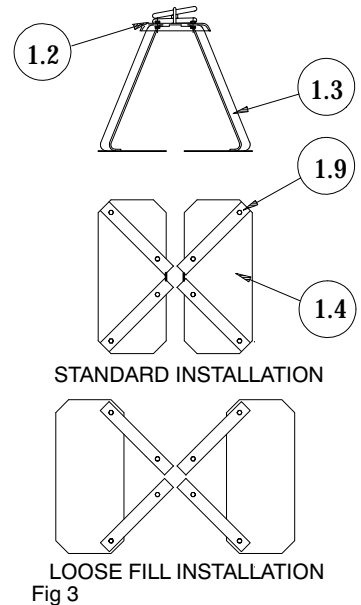
Minimum Personal Protective Equipment: Gloves, Armoured boots & Protective goggles.

3 INSTALLATION & ASSY PROCEDURES

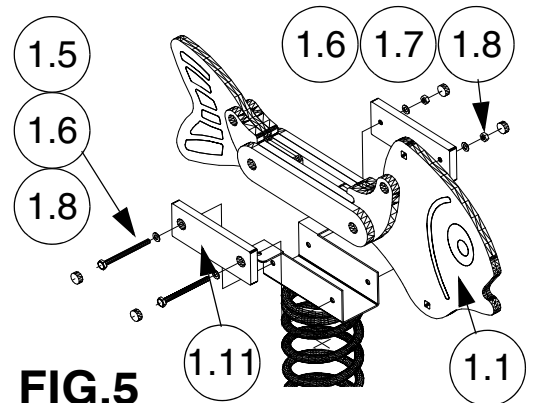
PRE-INSTALLATION INSPECTION :

Inspect all parts for damage (that may have occurred during transportation & storage). Finish Coatings, if found to be damaged these should be made good before erection. Any damaged or missing parts must be replaced.

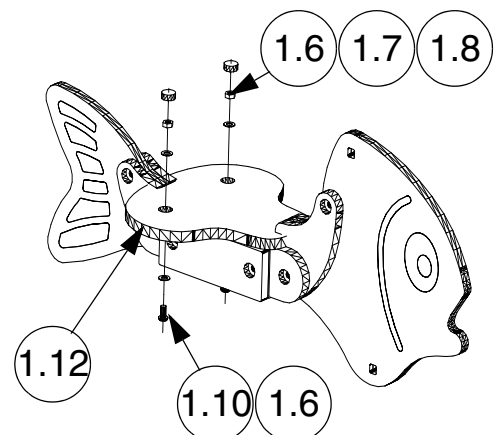
- i) Warn the public of the risk of injury, by placing signs and fencing the surrounding area, before commencing installation.
- ii) Note if the installation is 'standard' or 'loose fill', then assemble the base supports (1.3) to the base plates (1.4) the appropriate way round using 4-off Torx bolts (1.9) and fully secure. (Fig 3).
- iii) Align the base sub-assy onto the spring sub-assy (1.2) in the angular position shown in Fig 4.
- iv) Assemble the spring sub-assy onto the base sub-assy using 4-off Torx bolts (1.9) and washers (1.6). Tighten Torx bolts to a torque setting between 40-43 Nm (30-32 lbf ft). (Fig 4).
- v) Position the unit, mark out the foundation holes (Figs 1 & 2). Place the unit to one side and excavate the holes. If applicable refer to the site plan for unit location.
- vi) Place the unit into the hole, then level and square the unit. Pour concrete into the hole to a minimum thickness of 100mm (Figs 1 & 2). Allow to cure before continuing (Recommended initial curing time is 48 hours minimum).



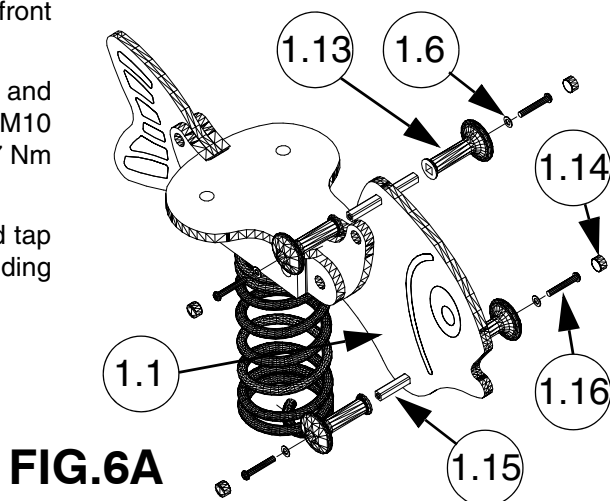
- vii) Backfill the hole with earth to the required level, taking into account any 'impact absorbing surfacing requirements' (Figs 1 & 2). Refer to separate instructions if applicable.
- viii) Place body sub-assy (1.1) onto spring & base sub-assy. Align holes. Place bolt (1.5) thro' plain washer (1.6) and outer poly cover with c'bore facing outermost (1.11) & feed thro' spring sub assy & body sub assy. Fit washer (1.6) & nut (1.7). Tighten bolts to a torque setting between 24-27 Nm (18-20 lbf ft). (Fig 5).



- ix) Place the seat (1.12) into position, tucking front of seat into slot on profile. From underside, place bolt (1.10) thro' plain washer (1.6) & feed thro' holes in spring sub-assy & seat holes. Fit washer (1.6) and nut (1.7). Tighten bolts to a torque setting between 24-27 Nm (18-20 lbf ft). (Fig 6).
- x) Tap plastic cap (1.8) into recess on both sides of body & seat top face, ensuring they finish flush with the surrounding plastic surface with no sharp edges.



- xi) Place locators (item 1.15) into the rectangular holes in front profile of the profile assembly (item 1.1). (FIG.6A).
- xii) Slide handles (item 1.13) onto locators (item 1.15) and secure with M10 x 65 resistorx bolts (item 1.16) and M10 washers (item 1.6). Tighten to a torque setting of 24-27 Nm (18-20 lbf ft). (FIG.6A).
- xiii) Position handle caps (item 1.14) in end of handles and tap into position, ensuring they finish flush with the surrounding plastic surface with no sharp edges.



4 POST INSTALLATION INSPECTION

CHECK

- | | | | |
|---|--|-------|-------------------------------|
| 1 | The unit is installed at the correct seat height. | CHECK | ✓
<input type="checkbox"/> |
| 2 | All fixings are tightened to the correct torque and have no protruding sharp edges. | | <input type="checkbox"/> |
| 3 | Paint work is not damaged. | | <input type="checkbox"/> |
| 4 | The polyethylene is not damaged. | | <input type="checkbox"/> |
| 5 | Concrete foundations are secure. | | <input type="checkbox"/> |
| 6 | Concrete has a water shed away from legs. | | <input type="checkbox"/> |
| 7 | Adequate provision of impact absorbing surfacing and no obstructions or trip points within the equipments falling space. | | <input type="checkbox"/> |
| 8 | Site is clear of all tools and rubbish. | | <input type="checkbox"/> |
| 9 | Remove any warning signs. | | <input type="checkbox"/> |

Appendix A: SUB-ASSEMBLIES

The assemblies described below are for the spring and profile sub-assemblies. These will be supplied complete by SMP. Instructions are included should the units need to be dis-assembled.

1 SPRING SUB-ASSEMBLY (CODE 86559999)

PARTS LIST

SPRING SUB-ASSY			
ITEM	CODE	DESCRIPTION	QTY.
2.1	86009003	BASE PLATE	1
2.2	86009006A	U-BOLT 43mm LONG	3
2.3		NYLOC NUT-M12	6
2.4		WASHER-PLAIN M12	6
2.5	86009006B	U-BOLT 55mm LONG	1
2.6		NYLOC NUT-M12	2
2.7		WASHER-PLAIN M12	2
2.8	86009006C	U-BOLT 69mm LONG	2
2.9		NYLOC NUT-M12	4
2.10		WASHER-PLAIN M12	4
2.11	86009007	CLAMPING BLOCK	2
2.12	86009005	SPRING	1
2.13	86559004	TOP MOUNTING	1

- i) Place U-bolt (2.8) over the spring approximately one coil up from the base. Locate the clamping block (2.11) over the threaded ends of the U-bolt, ensuring that the taper and the curved face of the block are the correct way round. "Wind" the bolt and clamping block down the spring until it is pinched between the spring coils and over the holes in the base mounting. Place the threads in the holes and secure in position with M12 nuts (2.9) and washers (2.10). Do not tighten (Fig 7).
- ii) Place U-bolt (2.5) over the first two coils and through the base mounting. Place the remaining two U-bolts (2.2) over the first coil and through the base mounting. Secure in position with M12 nuts (2.3) and washers (2.4). (Fig 8).
- iii) Place the top mounting bracket (2.13) onto the spring assy in the position shown so that it is in line with the four fixing holes of the base plate (Figs 8 & 9).
- iv) Place U-bolt (2.8) over the first two coils. Locate the clamping block (2.11) over the threaded ends of the U-bolt, ensuring that the taper and the curved face of the block are the correct way round, and through the top mounting bracket (2.13). Place the remaining U-bolt (2.2) over the first coil and through the top mounting bracket. Secure in position with M12 nuts (2.3) and washers (2.4). Tighten the nuts evenly until the spring is fully secured and in alignment with the base plate to a final torque setting between 34-38 Nm (25-27 lbf ft) (Fig 9).

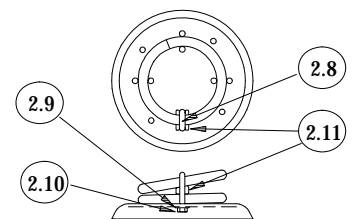


Fig 7

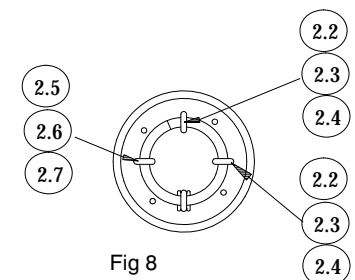


Fig 8

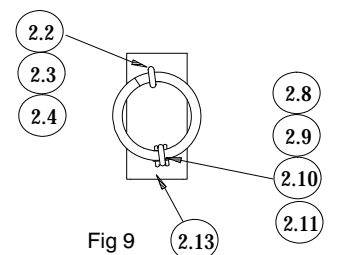


Fig 9

2 SEAT & PROFILE SUB-ASSEMBLY

2.1 PARTS LIST

SEAT & PROFILE SUB-ASSY			
ITEM	CODE	DESCRIPTION	QTY.
3.1	SEE BELOW	FRONT PROFILE	1
3.2	SEE BELOW	REAR PROFILE	1
3.3	SEE BELOW	INNER BODY PROFILE	2
3.4	SEE BELOW	SPACER	2
3.5	10281000	LOCKNUT-M10	4
3.6	10251044	BOLT-M10x45LG	2
3.7	10251080	BOLT-M10x80LG	2
3.8	10291000	WASHER-PLAIN-M10	8
3.9	19028651	PLASTIC CAP	8

2.2 PROFILE IDENTIFICATION

REFERENCE	SPBIK	SPCAR (DISCONTINUED)	SPCAT	SPFIS	SPHIP
PROFILE DESCRIPTION	BIKE	CAR	CAT	FISH	HIPPO
FRONT PROFILE (3.1) No.	86560011	86560021	86560031	86560051	86560061
REAR PROFILE (3.2) No.	86560012	86560022	86560032	86560052	86560062
INNER BODY PROFILE (3.3) No.	86560013	86560023	86569002	86569002	86569002
SPACER (3.4) No.	86569004	86560024	86569004	86569004	86569004

- i) Position 85mm & 45mm long bolts (items 3.6 & 3.7) with plain washers (items 3.8), ensuring the counterbores on items 3.4 and 3.3 face outermost. (FIG.10)
- ii) Tighten to a torque setting between 24-27 Nm (18-20 lbf ft). Position plastic caps (item 3.9) over counterbores and tap into place, ensuring they finish flush with the surrounding plastic surface with no sharp edges..

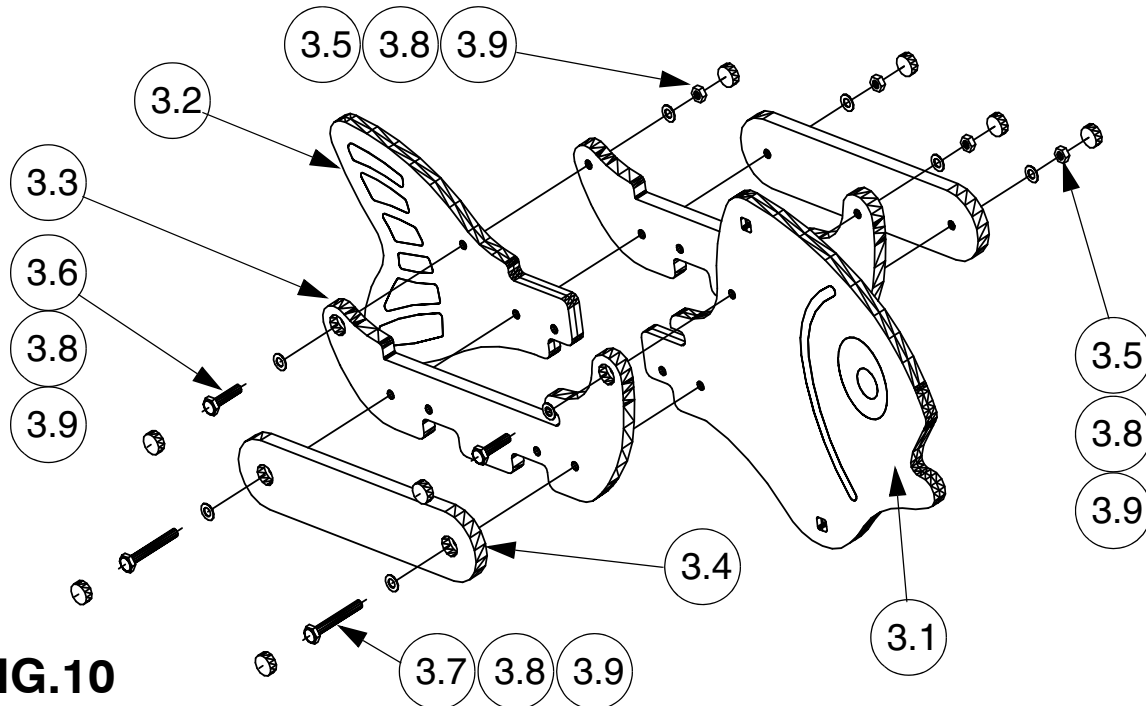


FIG.10

Appendix B: SPCAR FOOTREST REPLACEMENT

The assembly below is for the replacement of an existing cylindrical footrest with a new headed type footrest. The parts list includes all the components required to complete the assembly.

1 FOOTREST ASSEMBLY

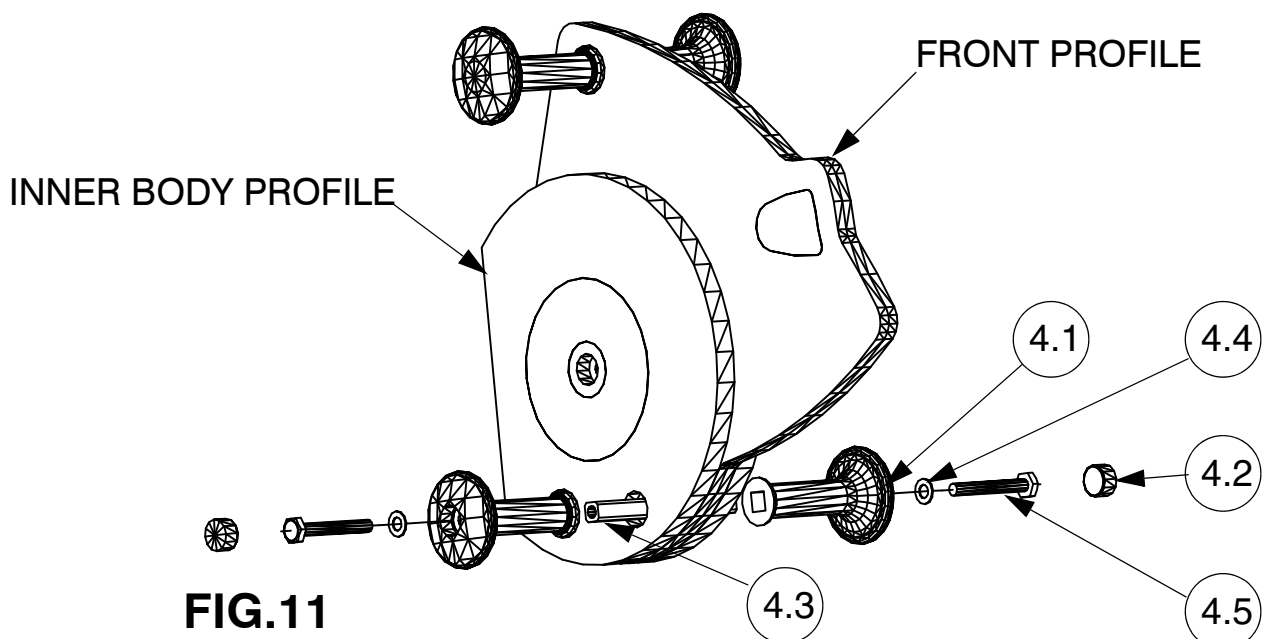
PARTS LIST

ITEM	CODE	DESCRIPTION	QTY.
4.1	86012001	HANDLE	2
4.2	86012002	HANDLE CAP - (DOMED HEAD)	2
4.3	86012005	LOCATOR	1
4.4	10291000	WASHER-PLAIN M10	2
4.5	10251080	HEX HD. BOLT M10 X 80	2
4.6	19028651	PLASTIC CAP - (FLAT STEPPED HEAD)	12

- i) Dismantle the SPCAR springer body. See Section 1-3 & Appendix A 2.2 Installation & Assy Procedures and reverse the procedure.
- ii) Remove Locator from rectangular hole in Front Profile and discard.
- iii) Open out the counterbored hole in both Inner Body Profiles only by drilling through with a $\varnothing 20\text{mm}$ drill. (This allows access to the Front Profile register slot for the Locator).
- iv) Re-assemble springer body. See Section 1-3 & Appendix A 2.2 Installation & Assy Procedures.
- v) Place Locator (Item 4.3) through hole in Inner Body Profiles and Front Profile. Slide handles (item 4.1) onto locator (item 4.3) and secure with M10 x 80 Hex head bolts (item 4.5) and M10 washers (item 4.4). (Apply Aradite or similar to bolt threads.) Tighten to a torque setting of 24-27 Nm (18-20 lbf ft). (FIG.11)

NOTE: When assembling the Hex head bolts, one bolt should be screwed in for 10 revolutions before assembling the second bolt to the recommended torque settings. This ensures that the locator is central about the front Profile thickness.

- vi) Position handle caps (item 1.2) in end of handles and tap into position, ensuring they finish flush with the surrounding plastic surface with no sharp edges..



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