


DOCUMENT CONTROL SHEET

TECHNICAL BULLETIN

69F

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REVISION HISTORY

Rev Number	Reason for issue	Pages affected
01	First Issue	-
02	Updated some of the previous upgrades and added a few more. Prices update.	all

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1. INTRODUCTION

- 1.1. The purpose of this document is to list the upgrades made to the standard one-design supply during the 2021 season and define their type.

2. DEFINITIONS

- 2.1. Upgrades are of one of the following types:
- 2.1.1. **Maintenance:** made in order to mitigate issues that occurred on one or more boats during the 2021 season. This kind of upgrade is not mandatory for taking part in the official events 2022.
 - 2.1.2. **Performance:** made for the purpose of improving the performance of the boat and/or simplifying its use (e.g. maneuvers). This kind of upgrade is not mandatory for taking part in the official events 2022.
 - 2.1.3. **Functional:** made for the purpose of reducing/simplifying maintenance and minimizing replacement frequency. This kind of upgrade is not mandatory for taking part in the official events 2022, although it is recommended.
 - 2.1.4. **Mandatory:** any upgrade that affects performances or safety.

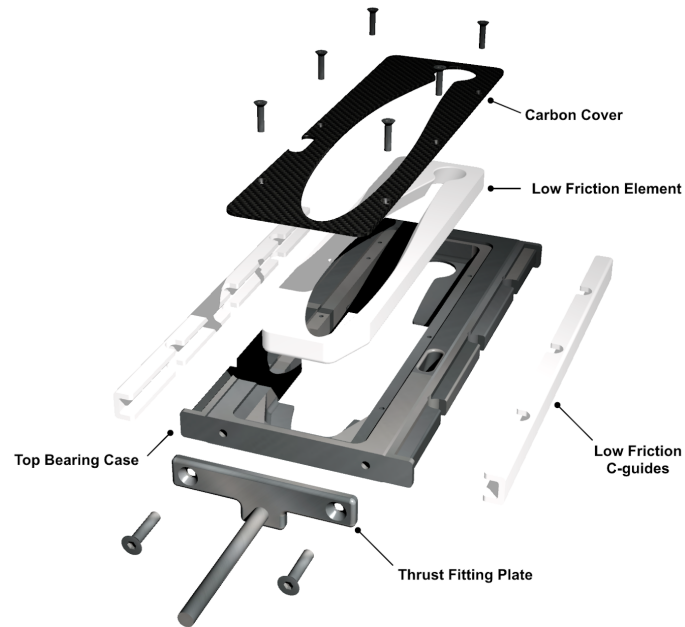
3. LIST OF UPGRADES

Item	Description	Type
Foil top bearing	Titanium top bearing case with updated low friction element and cover design	Functional
Roller bearing	New roller bearing component to prevent rust formation in salt water	Functional
Rudder rake control line	Closed rake line system crossing the boats from side to side	Performance
No-fall stick shock cord	Shock cord on one end of no fall stick in order to facilitate rigging/unrigging and removing need to tension the line every day	Functional
Sails	New mainsail and jib design and material	Performance
Mainsail lock strop	Replaced steel wire with soft strop and carbon plate	Maintenance
Foil-up dyneema line	Adjustable splice	Functional

Retriever line	Double shock cord on retriever line for improved slack picking up	Performance
Sailmon MAX carbon support bracket	Stronger carbon support bracket for Sailmon MAX	Functional
Jib halyard and jib tack covered soft shackles	Soft shackles with higher SWL and resistance to wear	Maintenance
Bowsprit-out system	Added 20mm lead ring on front soft loop with 57 ratchet	Functional
Tiller Stop Strop	Updated system to prevent tiller to go max excursion	Performance
Anti-Torsion soft shackle for foil down strop	Longer soft shackle to avoid external block of down strop 57S to twist	Performance
Soft Shackle on jib car block	Stronger soft shackle on jib car block	Maintenance
Jib sheet cleat fairlead	X-treme angle fairlead added to increase lifespan	Performance
Foil Rake Organizer	3D printed foil rake organizer cover	Functional
Gennaker Halyard Sheave	Bigger gennaker halyard sheave with higher SWL and fitting carbon plate	Performance

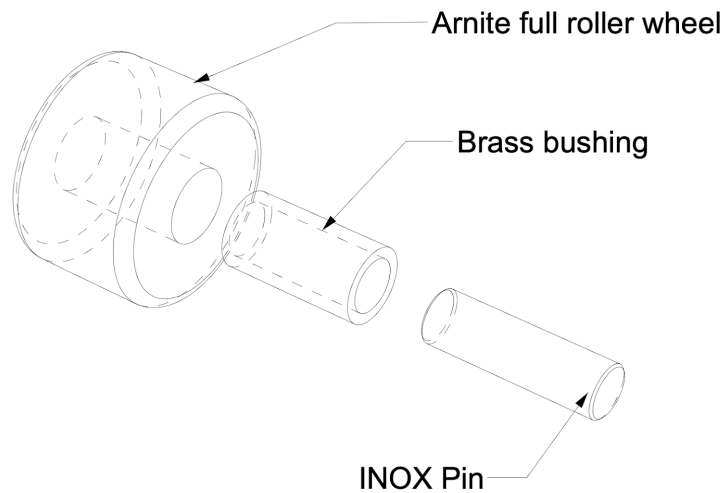
4. DETAILS

4.1. Foil Top Bearings - Functional



- 4.1.1. **Top bearing case** CNC machined out of Titanium Ti-6Al-4V
- 4.1.2. **Low friction element** to facilitate foil up/down sliding, CNC machined out of Arnite (same material as old part)
- 4.1.3. **Low friction C-guides** CNC machined out of POM (Polyoxymethylene) for improved sliding of titanium case inside carbon guides
- 4.1.4. **Carbon cover** CNC out of carbon c-plate to keep the low friction element in place
- 4.1.5. Advantages of new system:
 - Reduced fracture risk of low friction element
 - Improved reliability (even in case of rupture of low friction element, the boat can continue to sail)
 - Low friction element is replaceable on the water. This was not possible with old part
- 4.1.6. Price: approx € 6,280.00. Cost is for a pair of bearing assemblies
Mounting cost (on request not mandatory): € 183.00

4.2. Roller Bearings - Functional

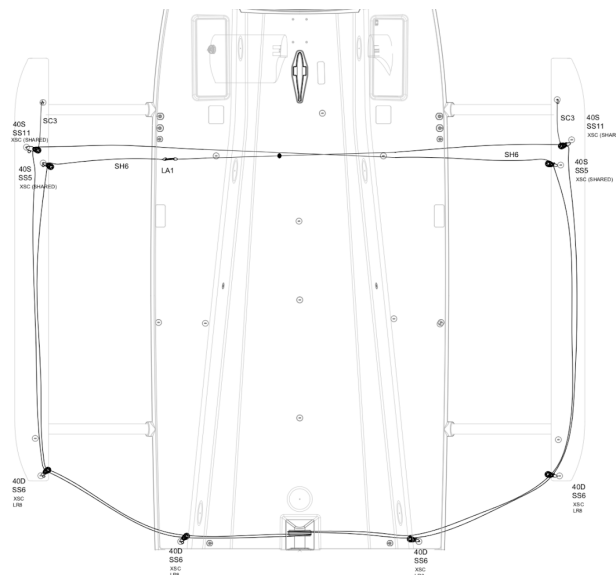


4.2.1. Full roller wheel with brass bushing. Old pin and carbon boxes are kept the same.

4.2.2. Cost of the assembly:

- Total of the assembly: € 1,439.00
- Mounting cost (on request not mandatory): € 244.00

4.3. Rudder rake control line - Performance



4.3.1. Closed single circuit

4.3.2. Advantages:

- Rudder rake easier to control by flight controller when sitting inside the cockpit
- Ball on one of the lines crossing the boat from side to side providing visual reference on current rudder rake setting
- More even load on sheave for a smoother and softer control
- Saving 2x 40 mm T2™ Soft-Attach Block blocks

4.3.3. Price: € 159.00

4.3.4. Mounting cost (on request not mandatory): € 30.50

4.4. No-fall stick shock cord - *Functional*



4.4.1. Shock cord on port end of no-fall stick line with medium ball for quick release. Additional shock cord to keep rudder swung to port side for quick removal/installation

4.4.2. Advantages:

- Quicker to fit
- Does not lose tension when load is applied to the line (e.g. mainsail at dock-out)

4.4.3. Price: €9.50

4.4.4. Mounting cost (on request not mandatory): € 30.50

4.5. Sails - Performance



- 4.5.1. New material (Onesails' 4T Forte Membrane - seamless and glueless membrane with high-modulus STR fiber structure)
- 4.5.2. New mainsail and jib design
- 4.5.3. New zip pocket on jib for improved sliding of retriever line
- 4.5.4. New lightweight carbon battens
- 4.5.5. Advantages:
 - Lighter and more durable
 - Improved performance by design
 - Zip pocket on jib makes it easier to drop the gennaker
- 4.5.6. Price: €11,000.00 + VAT. The price of the individual sails is:
 - Full-batten Mainsail FORTE 4T 225R: €5,900.00 + VAT
 - Full-batten Jib FORTE 4T 225R: €3,500.00 + VAT
 - Triradial Nylon Gennaker: €1,600.00 + VAT
- 4.5.7. Zip pocket can be added to existing jibs at the cost of €300.00 (VAT included) (work carried out by the Onesails Italy North East loft in Verona)

4.6. Mainsail lock strop - Maintenance



4.6.1. DSK Ultra 99 with dyneema cover and custom lock ball + carbon disk

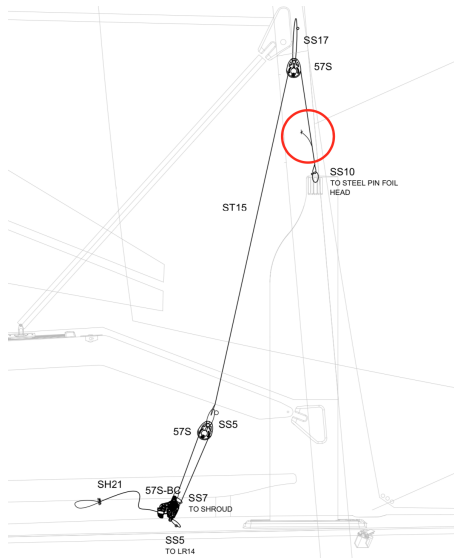
4.6.2. Advantages:

- Increased life
- Cheaper and more practical to replace
- Quicker to replace on the water, if needed
- Possible to adjust knot in order to compensate for stretch over time

4.6.3. Price: €75.00

4.6.4. Mounting cost (on request not mandatory): € 30.50

4.7. Foil-up dyneema line - Functional



4.7.1. Adjustable splice on dyneema line between foil head and 57 mm T2™ Soft-Attach Block

4.7.2. Advantages:

- More practical system to fine tune foil max up/down correcting for stretch in the system over time
- 4.7.3. Price: € 12.96 (dyneema line only)
- 4.7.4. Mounting cost (on request not mandatory): € 30.50

4.8. Retriever line - Performance



- 4.8.1. 4mm Shock cord fixed at aft end of gennaker bag, passing through a plastic fitting at the front of the bag and then running back again
- 4.8.2. Advantages:
- More stretch in the system to avoid frequent shock cord breakages
- 4.8.3. Price: €12.77
- 4.8.4. Mounting cost (on request not mandatory): € 30.50

4.9. Sailmon MAX carbon support bracket - Functional



- 4.9.1. Reinforced support bracket IWO hole for velcro strap with Sailmon FlatMount Bracket.
- 4.9.2. Advantages:

- More robust
- 4.9.3. Price:
- Carbon mast support € 85.40 (only carbon part with deck foam padding at the back)
 - Sailmon Flatmount € 59.98

4.10. Jib halyard and jib tack covered soft shackles - Maintenance



- 4.10.1. Covered soft shackles between:
- Jib's head and jib halyard
 - Jib's tack line and hull through deck fitting
- 4.10.2. Advantages:
- Higher SWL
 - More resistance to wear
- 4.10.3. Price: € 19.50 (for both soft shackles)
- 4.10.4. Mounting cost: € 61.00

4.11. Bowsprit-out system- Functional



- 4.11.1. Added Harken 3272 - 20mm Lead Ring and Harken 2160 - 57mm T2™ Soft-Attach Ratchamatic® Block replacing Harken 2626 - 57mm Ratchamatic® Block — Swivel, Becket
- 4.11.2. Advantages:
 - Higher SWL
- 4.11.3. Price: € 170.05
- 4.11.4. Mounting cost (on request not mandatory): € 30.50

4.12. Tiller Stop Strop - Performance



- 4.12.1. More permanent solution for the fixing of the shock cord of the Tiller Stop system. A soft shackle around the rudder brass pin and a 8mm lead ring have been added.
- 4.12.2. Price: € 42.53
- 4.12.3. Mounting cost (on request not mandatory): € 30.50

4.13. Anti-Torsion soft shackle for foil down strop - Performance



- 4.13.1. Replace two soft shackle SS5 with SS14 on the two external 57mm T2™ Soft-Attach Block of the Foil down line strop.
- 4.13.2. Advantages: prevents the block to position itself sideways and risk to be jammed with the blue foil down line.
- 4.13.3. Price: € 5.72

4.14. Soft Shackle on jib car block - Maintenance



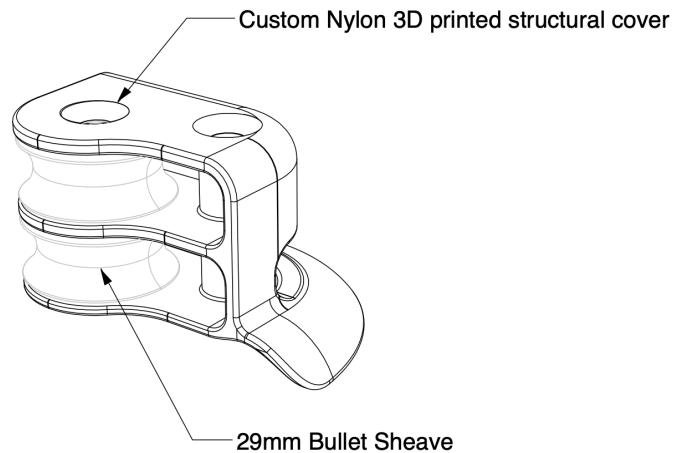
- 4.14.1. SS4 Soft shackle to be mounted to attach the 40mm T2™ Soft-Attach Block of the jib car to the car itself, replacing the Harken strop
- 4.14.2. Price: € 6.53
Mounting cost (on request not mandatory): € 30.50

4.15. Jib sheet cleat fairlead - Performance



- 4.15.1. In order to avoid cam-cleat spring to fail, the Micro X-Treme Angle Fairlead is mounted on the Micro Cam Cleat of the jib sheet.
- 4.15.2. Price: € 52.00
- 4.15.3. Mounting cost: € 30.50

4.16. Foil Rake Organizer - *Functional*



- 4.16.1. 3D printed foil rake organizer cover for better dealing with oxidation. Old 29mm Bullet Sheave to be kept.
- 4.16.2. Price (2 pieces) € 78.00
- 4.16.3. Mounting cost (on request not mandatory): € 30.50

4.17. Gennaker Halyard Sheave - *Performance*



- 4.17.1. Replace 38mm Wire Through-Deck with 51mm Wire Through-Deck Sheave fitted on carbon support glued to the mast.
- 4.17.2. Advantages: higher SWL and Breaking Load
- 4.17.3. Price of the assembly (pulley and carbon support): € 299.00
- 4.17.4. Mounting cost: € 122.00

5. ORDERS

- 5.1. To order, please send an email to irene.focarile@69fsailing.com with a list of the parts you would like to order. You will then receive an order confirmation with the final price and expected delivery date.