NS SMR Stem Installation Instructions

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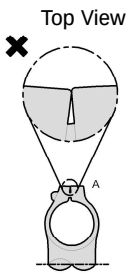


Fig. C

Fig. A

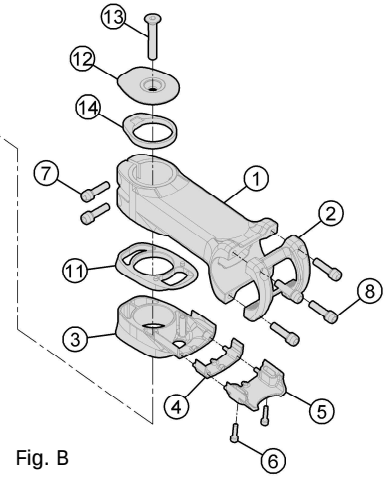
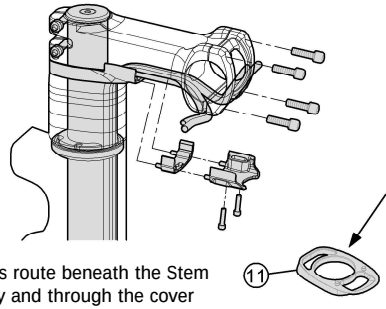
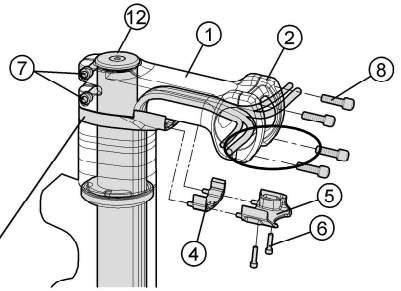


Fig. B



wires route beneath the Stem Body and through the cover



wires route through the Stem Body

Fig. D

Introduction

Congratulations on your Full Speed Ahead product. Please read these instructions and follow them for correct use. Failure to follow the warnings and instructions could result in damage to product not covered under warranty, damage to bicycle; or cause an accident resulting in injury or death. Since specific tools and experience are necessary for proper installation, it is recommended that the product be installed by a qualified bicycle technician. FSA & Vision assumes no responsibility for damages or injury related to improperly installed components.

Warranty

Full Speed Ahead (FSA) warrants all FSA and Vision products to be free from defects in materials or workmanship for a period of two years after original purchase unless otherwise stated in the full warranty policy. The warranty is non-transferable and valid to the original purchaser of the product only. Any attempt to modify the product in any way such as drilling, grinding, and painting will void the warranty. For more information on warranty policy and instructions for completing a warranty claim, check out the Full Warranty Policy found at our website: https://www.fullspeedahead.com/en/technology

Specification

Model Name **FSA NS SMR**

FSA Road, MTB and Vision stems are compatible with industry standard steerer tube and handlebar diameters. To choose the correct FSA stem, first check the specific diameter of steerer tube and handlebar to be used.

Components

Follow the assembly order in the illustration:

① NS SMR Stem Body x1
② Stem Face Plate x1
③ SMR Spacer x1

④ SMR Cable Cover Spacer (Table 1)

Stem size	Usage of SMR Cable Cover Spacer	
	-6°	0°
70L	0	-
80L	0	0
90L	0	-
100L	1	2
110L	2	-
120L	3	4
130L	4	-

⑤ SMR Cable Cover x1
⑥ SMR Cable Cover Fixing Bolts x2
⑦ Steerer Clamp Bolts x2
⑧ Face Plate Fixing bolts x4
⑨ Left / Right spacer 5mm x1
⑩ Left / Right spacer 10mm x2

⑪ ACR Spacer x1
⑫ Top cap x1
⑬ Top cap Fixing bolt x1
⑭ Upper Spacer x1
⑮ Bushing 1 1/4″ to 1 1/8″ x1

Wiring Installation Tips

1. Before proceeding to installation, all Brake/ Hydraulic Hose / electronic wiring / should be run through the handlebar and SMR Stem Body ①, SMR Spacer ③ or Spacer for ACR ⑪, Spacers ⑨, ⑩ and headset.
2. SMR Stems have two options for cable routing. When using handlebars with internal routing ports, the housings and electronic wires can be routed through the Stem Body ①. Alternativly, the housings and electronic wires can be routed beneath the Stem Body and through the SMR Cable Cover ⑤ and Cover Spacers ④.
3. Front brake housings can only be internally routed for disc brakes. Compatible forks have an internal routing port on the steerer tube (Fig. B). All other front brake housings must be routed externally.
4. Depending on stem length you may need to install up to 4x SMR Cable Cover Spacers ④.
5. Installation is greatly improved when using a guide cable to gently pull the housing or electronic wires through the stem from either direction.

Stem Installation to Fork Steerer Tube

1. Measure diameter of steerer tube to be certain it is correct size for SMR stem installation. It's often required that the steerer tube be cut to length and should be performed by a qualified bicycle technician. Ensure the steerer tube is clean and free of burrs or chips before installing stem onto steerer tube.

Note: Carbon steerer tubes should extend through the stem completely for proper clamp pressure.
Note: If **0°** using with Bushing ⑮ for 1 1/8″steerer tube, install Upper Spacer ⑭ It is recommended to have minimum 2mm steerer tube extended above the stem.

2. Install fork through the Stem Body ①, place either the SMR Spacer ③ or ACR Spacer ⑪ over the fork and then according to your demand place left/right spacers ⑨, ⑩ (⑨, ⑩ are detachable, Fig A).
3. Headset should be installed per headset manufacturer's instructions.
4. Apply small amount of FSA Dynamic installation compound on Carbon steerer tube. Install the Expander Assembly (not shown) per Expander Assembly instructions below.

Note: If use the Bushing ⑮ apply FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit.

5. Apply grease to Steerer Clamp Bolts ⑦. Tighten the bolts to 61 kgf.cm / 6 Nm / 53 in.lbs. of torque by alternating between bolts 1/4 turn at a time so both bolts reach proper torque simultaneously.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. If your steerer clamp looks like Fig. C it may be over torqued or installed incorrectly.If two Steerer Clamp Bolts ⑦ go over the maximum torque, can cause cracks in carbon steerer tube. Check stem for slippage on the steerer tube before proceeding.

Expander Assembly Installation

The Expander Assembly is designed to work with Carbon Steerer Tubes. Do not apply grease on the Carbon Steerer or Expander Assembly.

1. Install the NS SMR Stem ① onto the Carbon Steerer. Tighten the Steerer Clamp Bolts ⑦ finger tight only.
2. Adjust Expander Assembly so it contacts the inner walls of the steerer tube but is still able to slide inside. Install the pre-adjusted Expander Assembly. Tighten the Expander Assembly with a 5mm hex wrench to 51 kgf.cm / 5 Nm / 44 in.lbs. of torque. Note: The Expander Assembly must be complete assembled and adjusted to fit tightly into the Carbon Steerer before installation.
3. Install the Top Cap ⑫ by tighten the Fixing Bolt ⑬ with a 6mm hex wrench to until proper bearing preload is achieved. Note: Proper bearing preload is apparent when there is no "knock" (fore / aft or up / down free play) in the headset assembly, while the bearings rotate freely (free steering motion).

⚠ CAUTION Check the alignment of Stem to the front wheel before final torque is applied to the Steerer Clamp Bolts, loosen and adjust if required. Be sure all bolts are tightened to recommended torque.

Handlebar Installation to Stem

1. Apply FSA Dynamic Installation Compound on handlebar clamp area. Insert the handlebar between SMR Stem Body ① and Face Plate ② Pre-tighten Face Plate Fixing bolts ⑧.
2. Apply grease to faceplate bolts ⑧ and tighten the upper bolts to a torque 61 kgf.cm / 6 Nm / 53 in.lbs Alternately tighten stem bolts until there is no gap between faceplate and stem body. (Fig. D).
3. Tighten the lower bolts ⑧ to a torque 61 kgf.cm / 6 Nm / 53 in.lbs 1/4 turn at a time to tighten faceplate evenly.

⚠ CAUTION Do not go above maximum torque rating printed on the stem. Check handlebar for slippage before each ride to ensure safe operation. Contact FSA for Troubleshooting information.

⚠ WARNING

Be sure to choose the correct stem to fit the steer tube and handlebar for which it is to be installed. Installing the stem on an incorrect steerer tube, or handlebar clamp diameter may cause damage to product, or cause an accident resulting in injury or death.

- FSA SMR ST-OS-188/SMR-0° stem is compatible with 1 1/4″steerer tubes and 1 1/8″steerer tube when the Bushing ⑮ is used (use FSA Dynamic installation compound on between steerer tube and bushing AND bushing and stem for tight fit).
- FSA Road and MTB stems are available to fit 31.8mm Handlebar clamp only.

⚠ WARNING

Measure Fork Steerer tube and handlebar clamp area before installing stem. Use an accurate measuring device such as a caliper or micrometer. Installing stem onto an undersized steertube or handlebar can cause stem or bar to slip causing loss of control of bicycle; resulting in an accident, damage to bicycle, injury or death. Use FSA Dynamic Assembly Paste between stem, steerer tube, and handlebar to reduce chances of slippage. Consult fork and handlebar manufacturer for exact diameter specification. If manufacturer specifications are unavailable, general guidelines are as follows:

Handlebar Clamp Area Dimensions:

- Φ31.8mm + 0.15 / -.00mm
- Φ26.0mm + 0.15 / -.00mm
- Φ25.4mm + 0.15 / -.00mm

Steerer Tube Dimensions:

- 1 1/8″ Φ28.6mm +.01 / -.00mm
- 1 1/4″ Φ31.8mm +.01 / -.00mm
- 1 .5″ Φ38.1mm +.01 / -.00mm

⚠ WARNING

Headset and Fork must be installed before stem installation. Headset and Fork installation requires specialized knowledge, tools, and experience. General mechanical aptitude may not be sufficient to properly install these components. It is recommended that the headset and fork be installed by a qualified bicycle technician. Improper installation can result in failure of headset, fork, stem, and cause personal injury or death.

Contact

If you have questions, please visit our web site technical section: https://www.fullspeedahead.com/en/support or contact:

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Notes: Specifications of product may be changed or improved for performance. Please refer to website periodically for technical updates and revised instructions. Printed in Taiwan.