

English

SERVICE PART GUIDE

TURBO VADO

VADO & VADO S

turbob



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SYMBOLS LEGEND

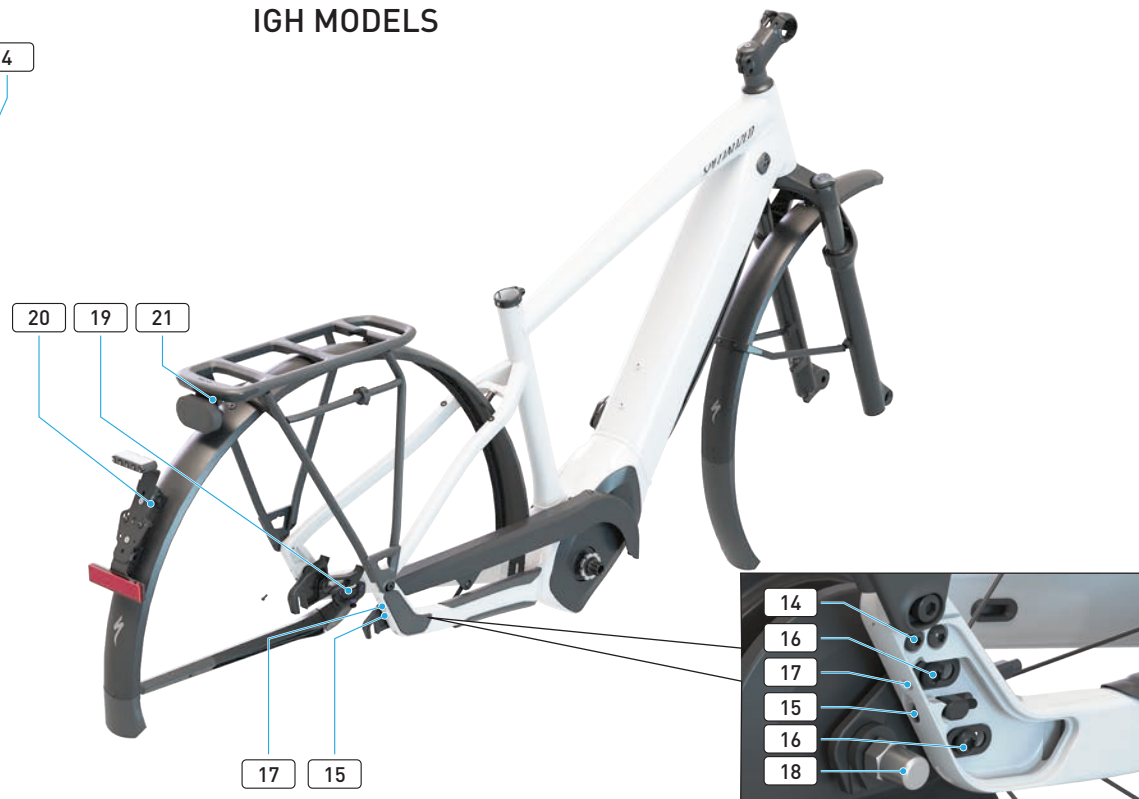
	PART NUMBER		BRAKE HOSE
	ORDER OF ASSEMBLY		SPEED SENSOR
	INSERT PATH		MANUAL HUB INTERFACE
	ASSEMBLY DIRECTION		AUTOMATIQ HUB INTERFACE
	HIGH QUALITY GREASE		DERAILLEUR
	BLUE THREADLOCKER		ELECTRIC MOTOR
	EVERSEAL THREADLOCKER		HMI DISPLAY
	NYOGEL 760G GREASE		FRONT LIGHT
	TORQUE REQUIRED		REAR LIGHT
	SERVICE PART NUMBER		BRAKE LIGHT
	VIDEO GUIDE AVAILABE		HORN
			RADAR

1. GENERAL TORQUE SPECIFICATIONS

DERAILLEUR MODELS



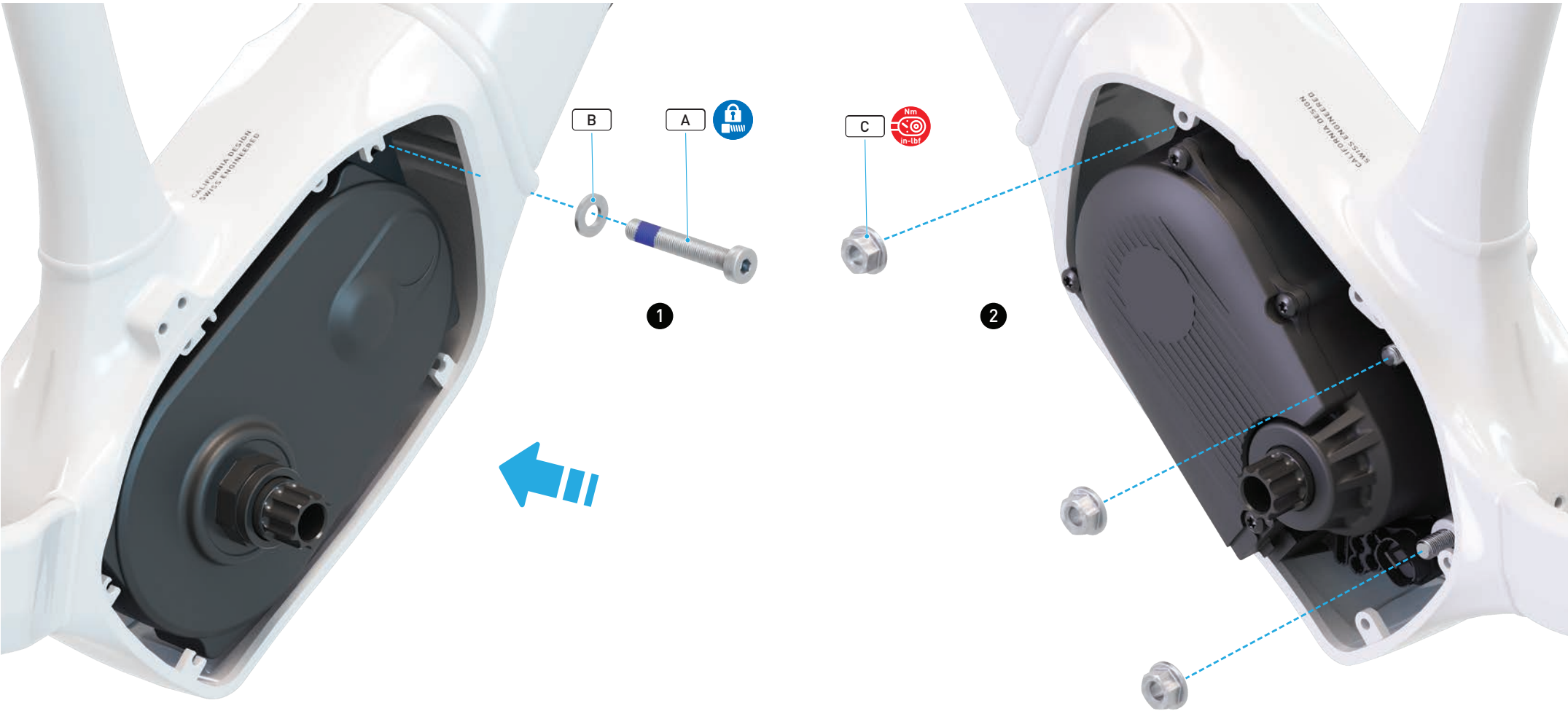
IGH MODELS



#	PART NAME	SPECIFICATION	TOOL	TORQUE	
				Nm	in-lbf
1	ICR port screw	M3 x 18 mm x 0.5 Mm p bolt	T10 Torx	1	9
2	Rack mounting bolt	M6 mm x 16 mm	5 mm hex	9	80
3	Mouting bolt fork arch	M4 x 7 mm x 0,7 mm p	4 mm hex	4	35
4	Fender mouting bolt	M5 x 16 mm x 0,7 mm p	4 mm hex	4	35
5	Fork thru axle	12 Mm thru axle supplied with fork	6 mm hex	Fork specific	
6	Battery cover bolt	M4 x 18 mm x 0.7 mm p	T20 Torx	4	35
7	Motor cover nut	M4 x 8 mm x 0.7 mm p	T20 Torx	1	9
8	Seat collar bolt	M5 mm x 18 mm x 0.8 mm p Ti	4 mm hex	6.2	55
9	Chain guard bolt	M5 mm x 10 mm x 0.8 mm p	3 mm hex	4.5	40
10	Derailleur hanger bolt	M5 mm x 12 mm x 0.8 mm p	4 mm hex	6.2	55
11	Rear thru axle	12 Mm x 178 mm thru axle	6 mm hex	15	133
12	Kickstand bolts (non IGH)	M6 x 14 mm x 1.0 mm p	5 mm hex	9	80
13	Speed sensor bolt	M4 x 8 mm x 0.7 mm p	3 mm hex	1	9

#	PART NAME	SPECIFICATION	TOOL	TORQUE	
				Nm	in-lbf
14	Seatstay coupler bolt	M5 x 14 mm x 0.8 mm p	T25 Torx	4	35
15	Adjuster bolt	M4 x 25 mm x 0.7 mm p	3 mm hex	-	-
16	Sliding dropout locking bolt	M6 x 10 mm x 1.0 mm p	T30 Torx	13	115
17	Dropout cover bolt	M3 x 7 mm x 0.5 mm p	2.5 mm hex	1	9
18	Enviolo axle nut	Nut, Acorn Nut for IGH	15 mm wrench	30 - 40	265 - 354
19	Kickstand bolts (IGH)	M6 x 18 mm x 1.0 mm p	T30 Torx	9	80
20	License plate mount bolt	?	2.5 mm hex	-	-
21	Radar mount bolt	M4 x 5 mm x 0.7 p	3 mm hex	2	18

2. MOTOR - MOUNTING BOLTS

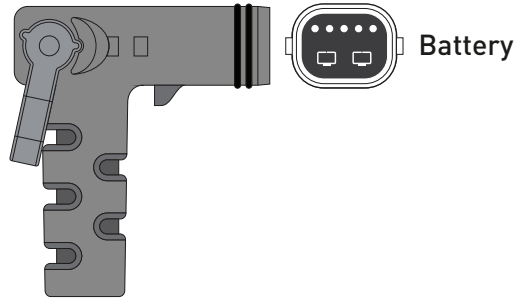
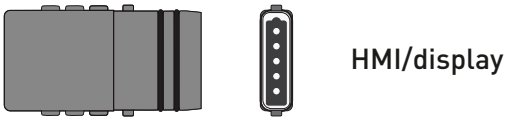
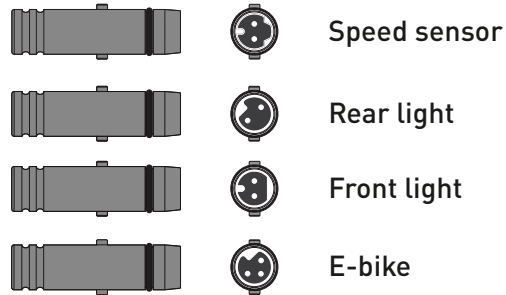
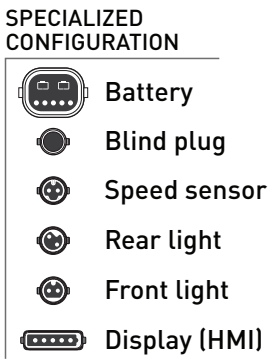
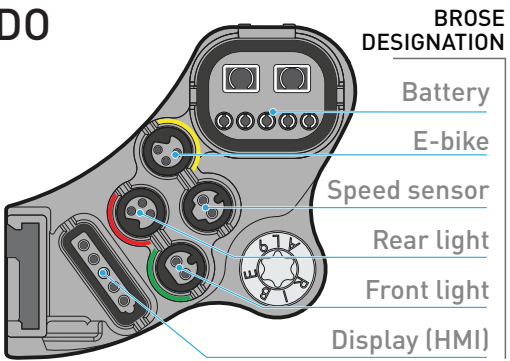


#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Motor mounting bolt	S210500015	1	M8 x 50 mm x 1.25 p	5 mm hex	23	203	Apply threadlocker
B	Motor mounting bolt washer		1	M8 x 8.4 mm ID x 16 OD x 1.6 mm	-	-	-	
C	Serrated nut		3	M8 x 1.25 p Serrated	13 mm Socket wrench	23	203	

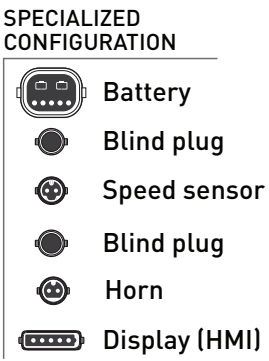
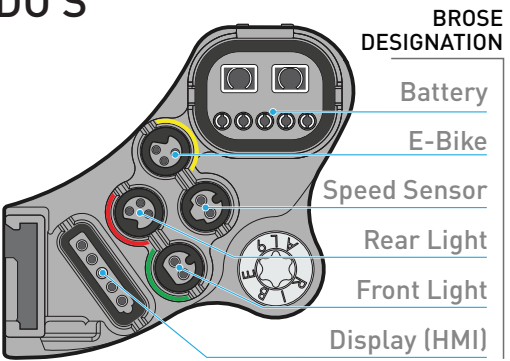
3. MOTOR - CONNECTORS



VADO

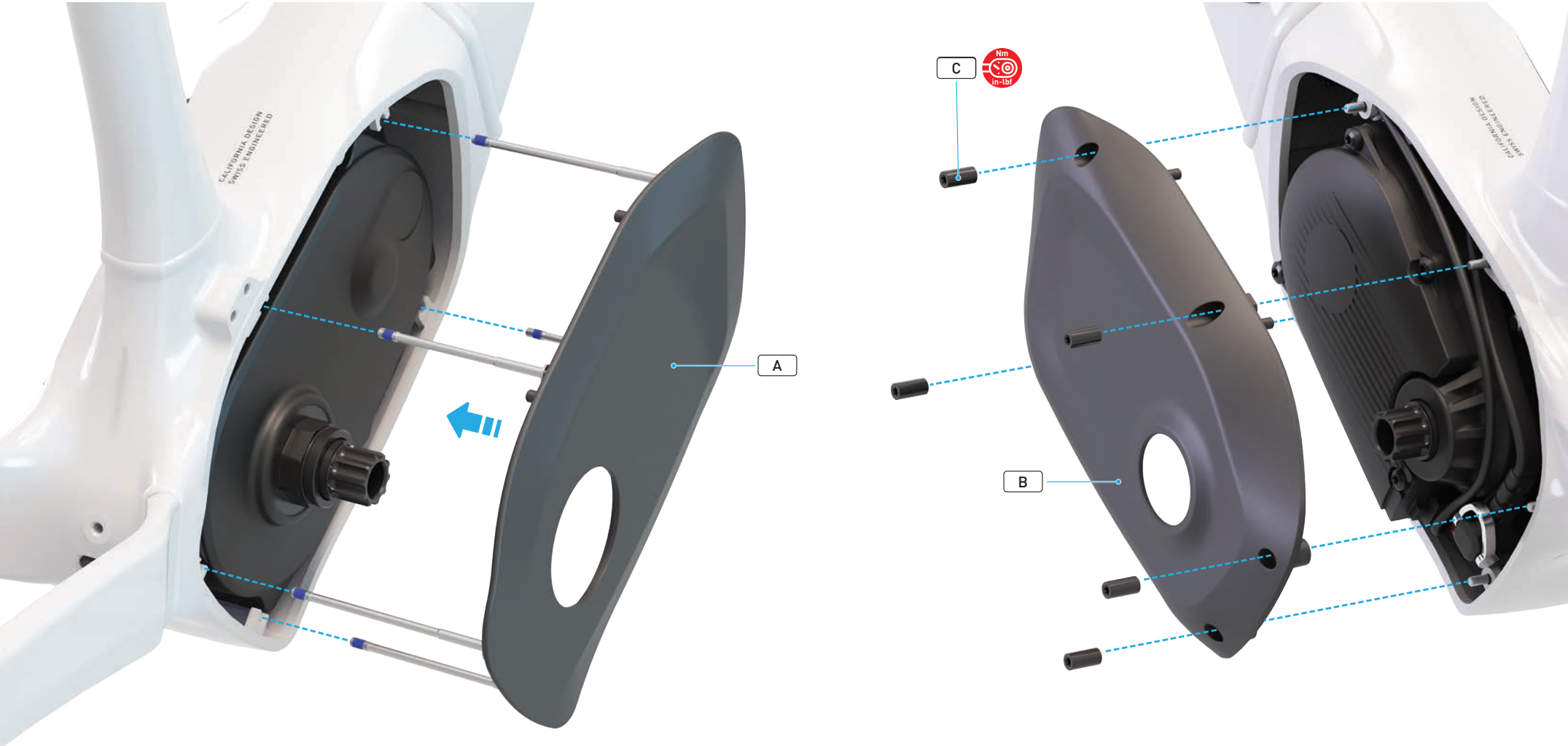


VADO S



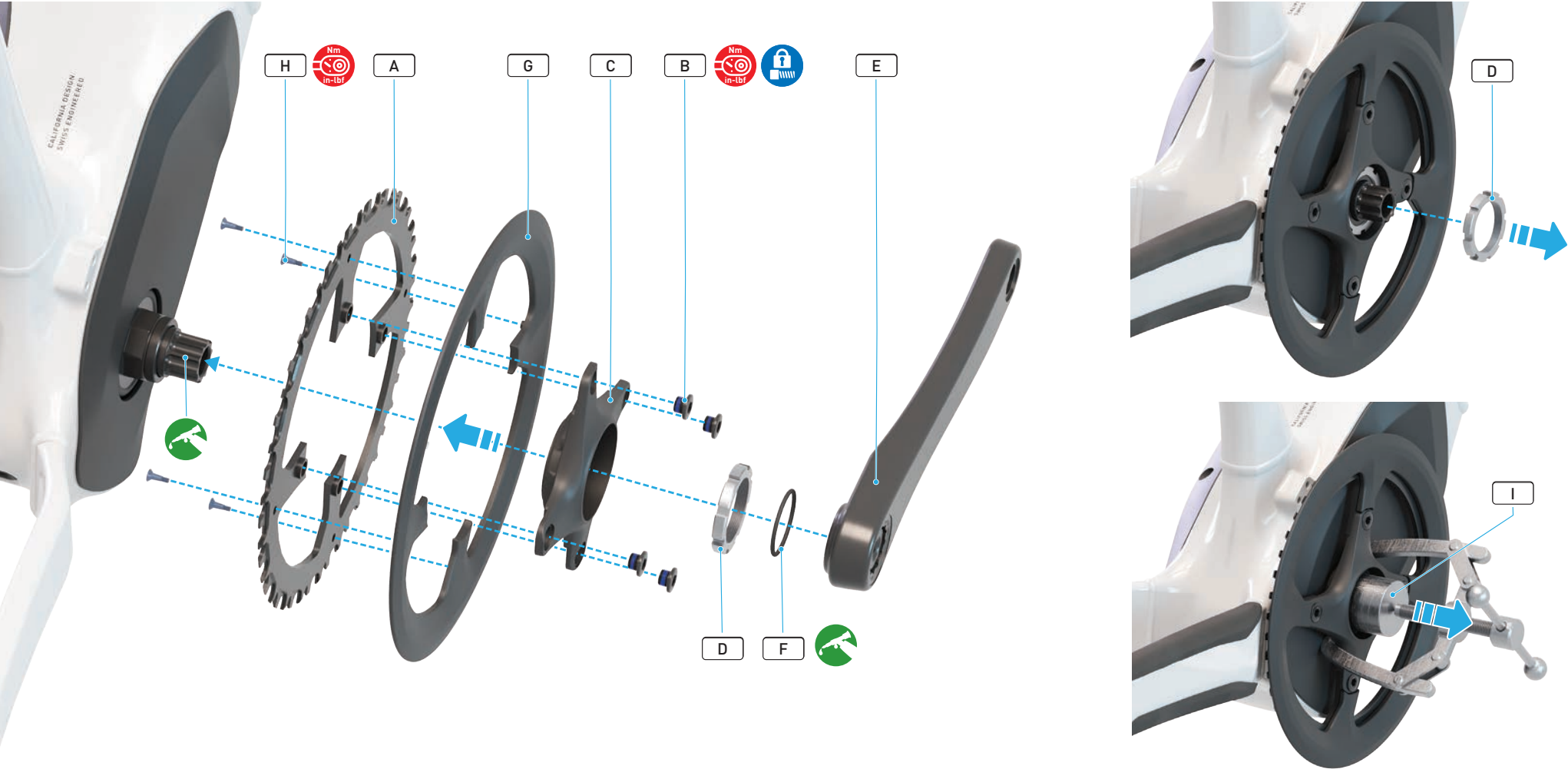
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Motor 2.0e [50 Nm] (Vado 3.0)	S216800027	1	Specialized 2.0 drive side loader	-	-	-	Apply Nyogel 760 g to the plugs before assembling connectors
	Motor 2.0 [70 Nm] (Vado 4.0)	S216800029	1	Specialized 2.0 drive side loader	-	-	-	
	Motor 2.2 [90 Nm] (Vado 5.0)	S216800028	1	Specialized 2.2 drive side loader	-	-	-	
	Motor 2.0 [70 Nm] / 28 mph USA spec	S226800003	1	Specialized 2.0 drive side loader 28 mph	-	-	-	
	Motor 2.2 [90 Nm] 45 km/h (Vado S)	S216800030	1	Specialized 2.2 drive side loader 45 km/h	-	-	-	
B	Blind plug	S216800024	1	Brose motor light sockets blind plugs	-	-	-	Used in empty ports

4. MOTOR COVERS



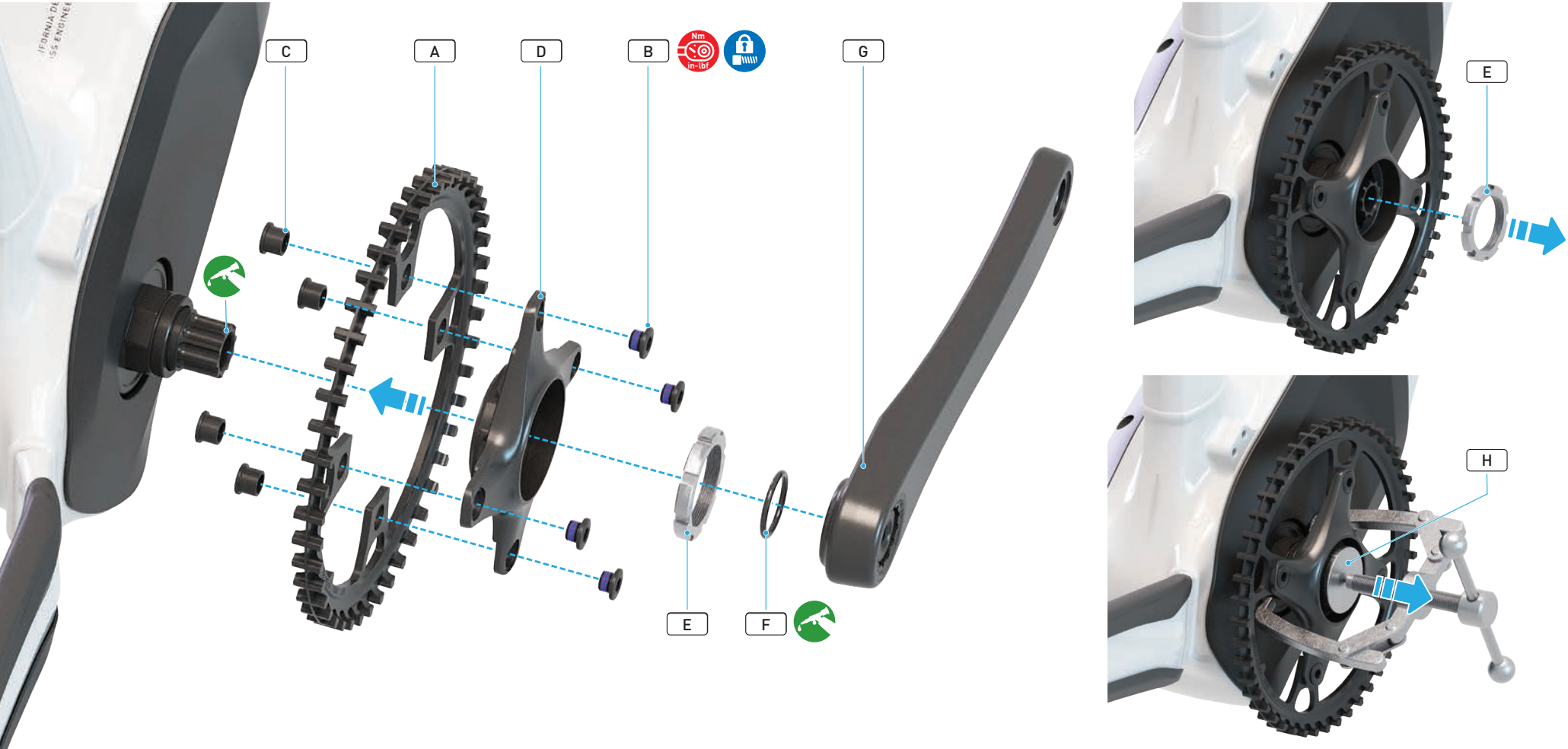
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	DS motor cover	S219900056	1	Motor cover DS	-	-	-	With molded thru bolts - apply threadlocker
B	NDS motor cover		1	Motor cover NDS	-	-	-	
C	Custom motor cover nut		5	M4 x 8 mm x 0.7 mm p	T20 Torx	1	0.8	

5. SPIDER AND CRANK ASSEMBLY - DERAILLEUR MODELS



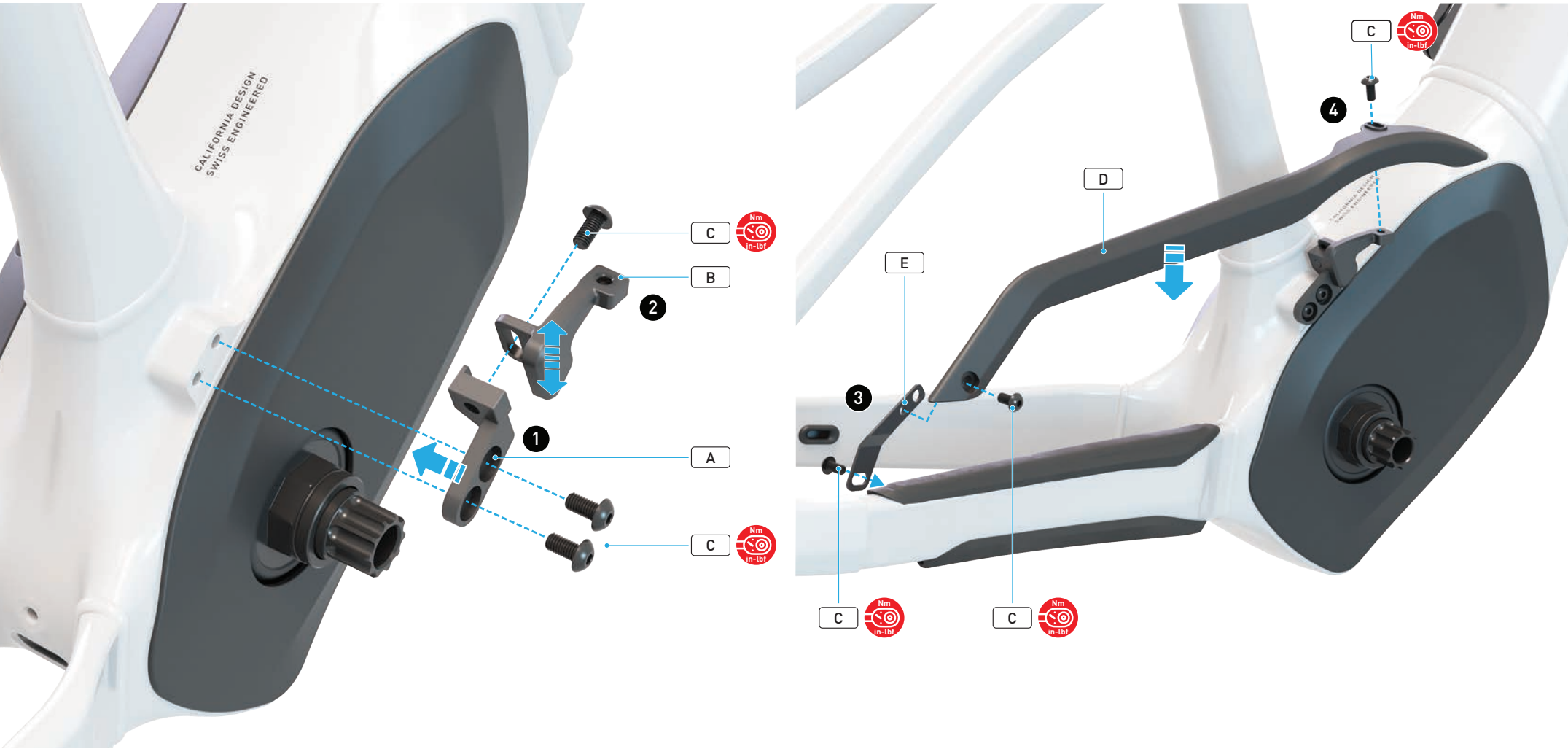
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Chain ring	S211400005	1	Praxis 48 t - 104 mm bcd	-	-	-	
B	Chain ring bolts		4	M8 x 6.5 mm x 0.75 mm p	5 mm hex	10	89	
C	Spider	S195100001	1	Spider,104 mm bcd	-	-	-	
D	Spider groove nut	S166800011	1	Levo isis groove nut	ParkTool BBT-18 or Shimano TL-UN96	50	443	
E	Crank DS	S211600027	1	Brose Praxis 170 mm alloy	8 mm hex	40	354	
	Crank NDS	S211600028	1	Brose Praxis 170 mm alloy	8 mm hex	40	354	
F	O-ring	S221600011	1	O-ring, 23.5 mm ID x 2.4 mm OD	-	-	-	Grease, drive side only
G	Chainwheel protector	S179900050	1	Vado chain guard, 48t, Praxis	-	-	-	
H	Chainwheel protector screw	S220500002	4	Self tapping screw	Phillips head screwdriver	-	-	
I	Brose cap puller	S175300006	1	Brose Spindle cap tool	Jaw puller	-	-	

6. SPIDER AND CRANK ASSEMBLY - IGH MODELS



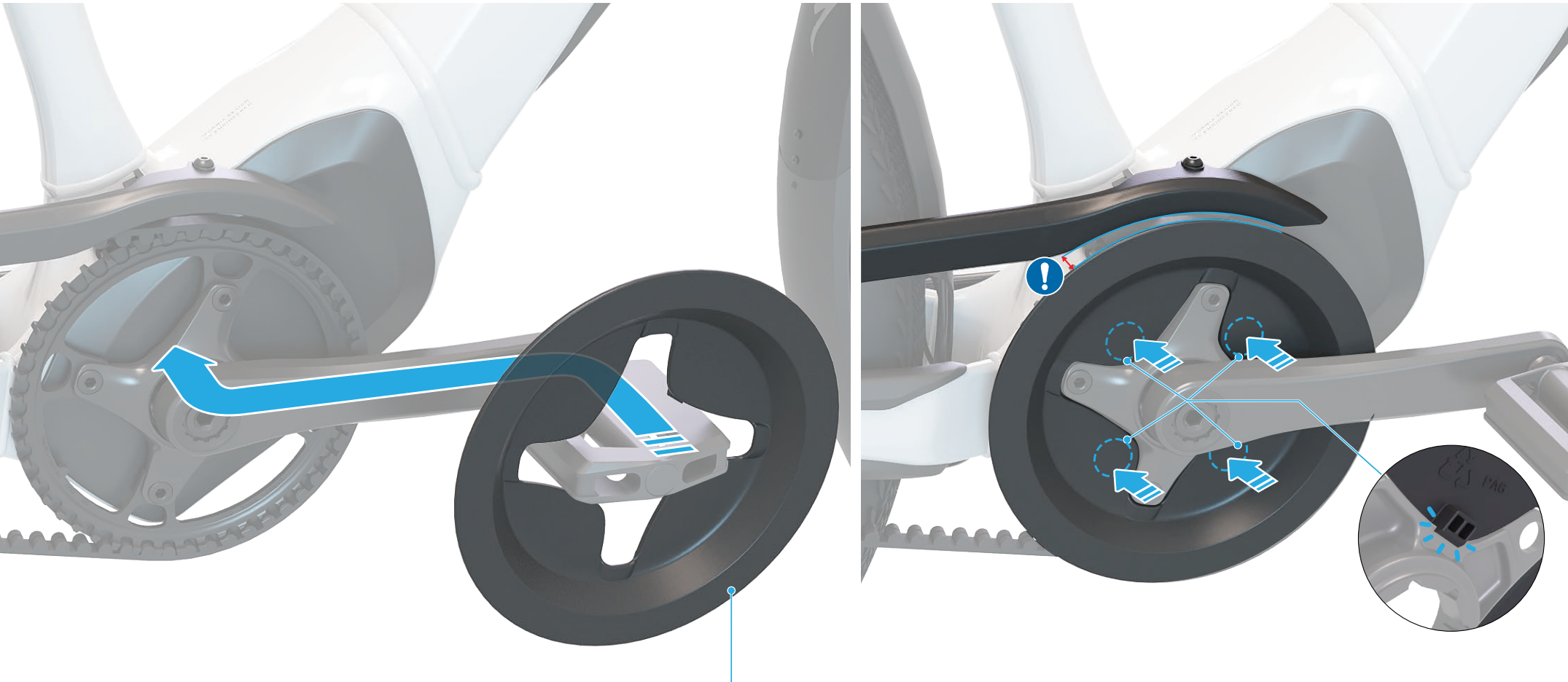
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Chain ring	S221400005	1	Gates CDX 50 t - 104 mm bcd	-	-	-	
B	Chain ring bolt		4	M8 x 6.5 mm x 0.75 mm p	5 mm hex	10	89	
C	Chain ring nut		4	M8 x 6.5 mm x 0.75 mm p nut	5 mm hex	10	89	
D	Spider	S211600026	1	Spider,104 mm bcd	-	-	-	
E	Spider groove nut	S166800011	1	Levo Isis groove nut	ParkTool BBT-18 or Shimano TL-UN96	50	443	
F	O-ring	S221600011		O-Ring, 23.5 mm ID x 2.4 mm OD, drive Side	-	-	-	Grease, drive side only
G	Crank DS	S211600027	1	Brose Praxis 170 mm alloy	8 mm hex	40	354	
	Crank NDS	S211600028	1	Brose Praxis 170 mm alloy	8 mm hex	40	354	
H	Brose cap puller	S175300006	1	Brose Spindle cap tool	Jaw puller	-	-	

7. CHAIN GUARD REAR DERAILLEUR (EMEA & USA)



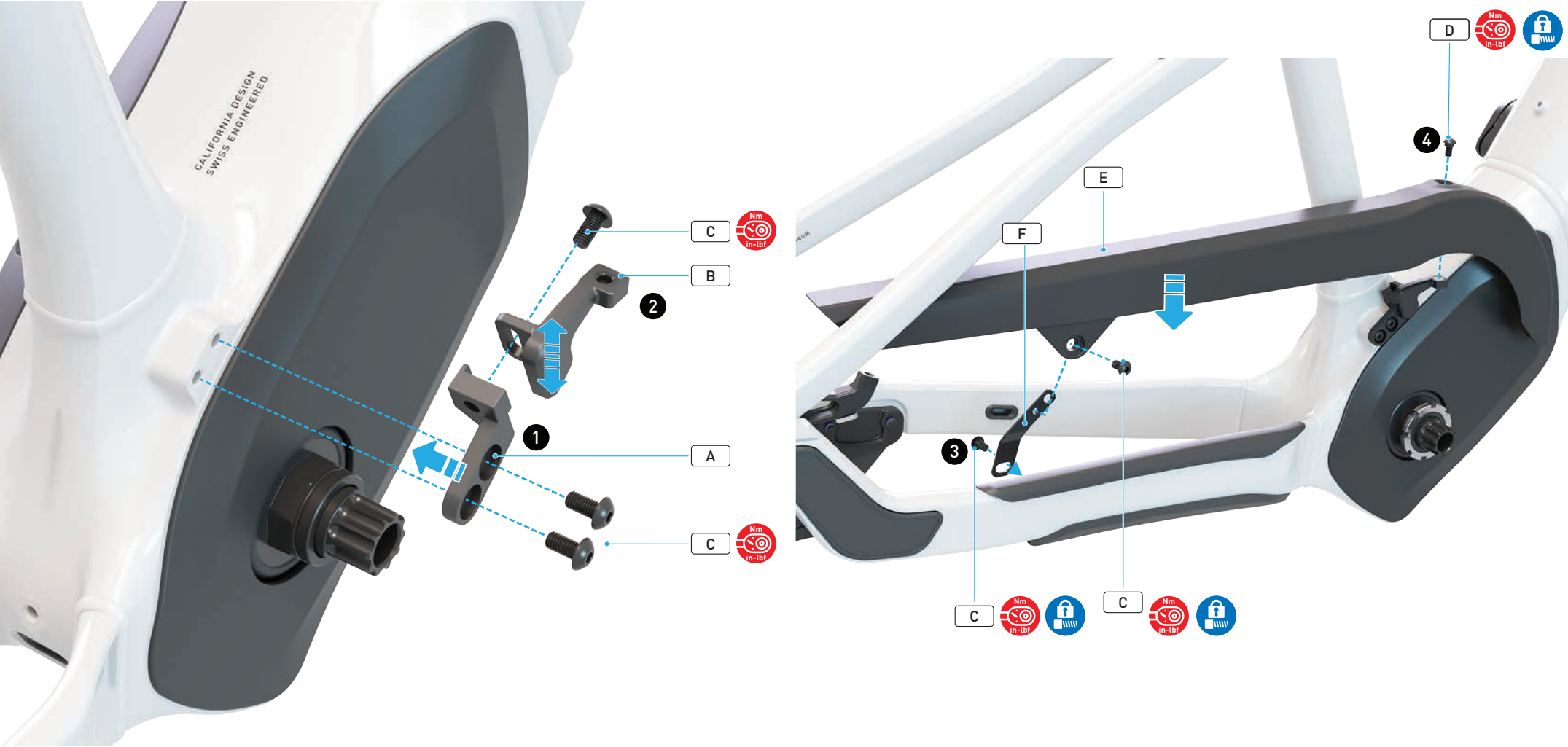
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Chain guard - frame bracket	S251200009	1	M5 mm x 10 mm x 0.8 mm P	-	-	-	Vertically adjustable
B	Chain guard - front bracket		1		-	-	-	
C	Chain guard - bolt		6		3 mm hex	4.5	40	
D	Chain guard		1		-	-	-	
E	Chain guard - chainstay bracket		1		-	-	-	

48. CHAIN GUARD IGH (EMEA)



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Chain guard - Chainring protector	S251200003	1	Clip on	-	-	-	Updated chain guard used for EMEA market

49. CHAIN GUARD IGH (USA)



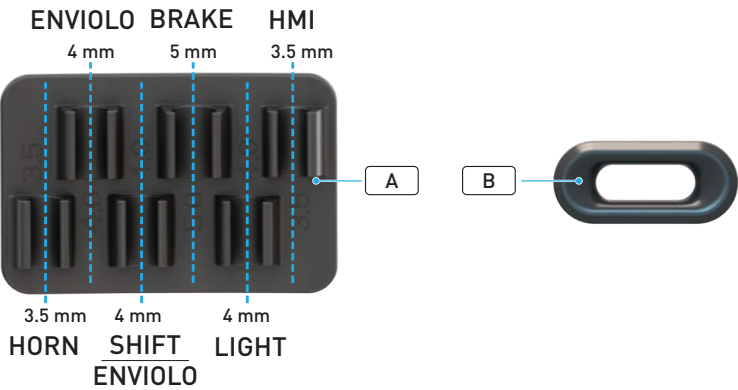
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Chain guard - frame bracket	S251200006	1		-	-	-	
B	Chain guard - front bracket		1		-	-	-	Vertically adjustable
C	Chain guard - bolt 1		5	M5 x 10 mm x 0.8 mm P	3 mm hex	4.5	40	
D	Chain guard - bolt 2		1	M5 x 6 mm x 0.8 mm P	3 mm hex	4.5	40	
E	Chain guard		1		-	-	-	Chainguard used for USA market
F	Chain guard - chainstay bracket		1		-	-	-	

8. ICR - HEADTUBE PORTS



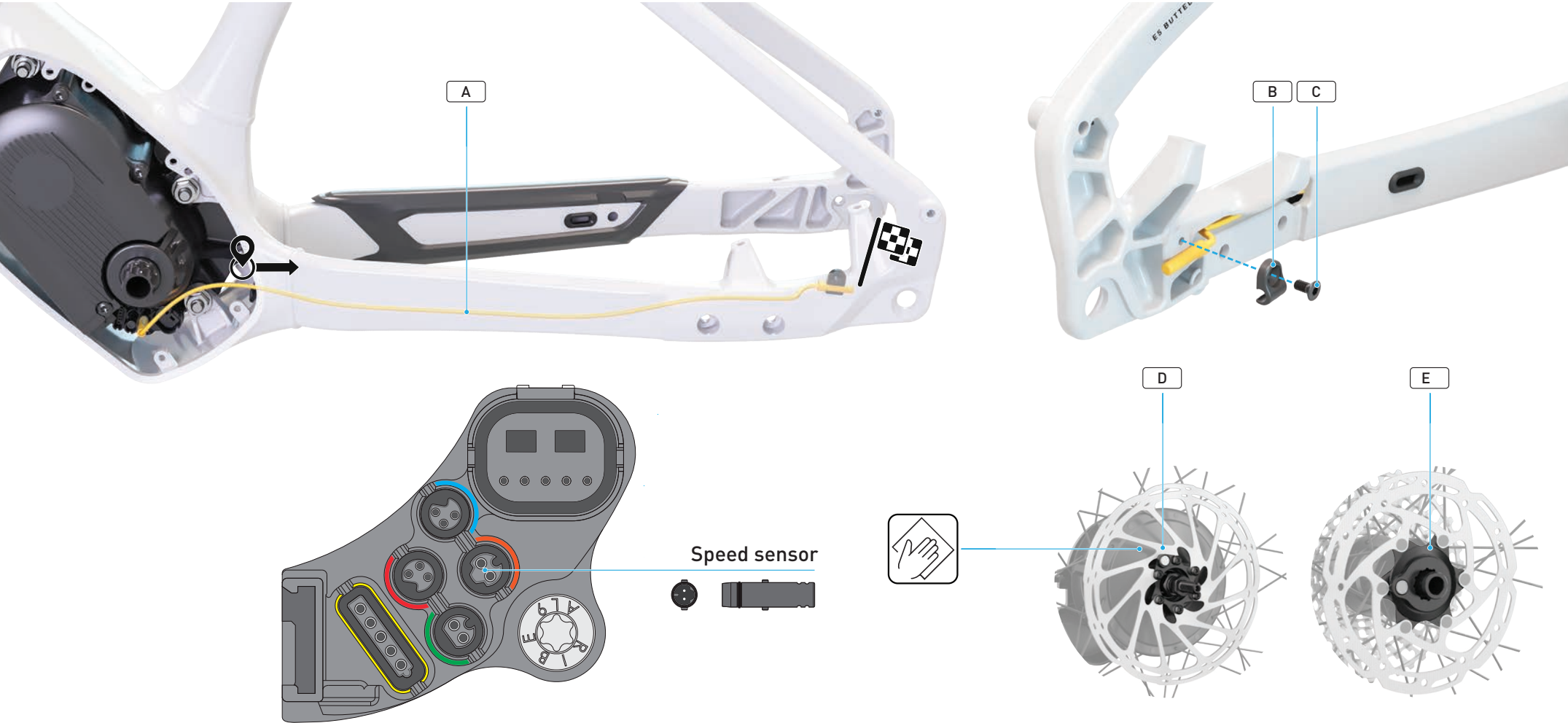
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	ICR port inversal 2 cable port	PART OF KIT S216500008	2	ICR cover Universal racetrack	-	-	-	
B	ICR port screw		2	M3 x 18 mm x 0.5 mm p	T10 Torx	0.8	7	Do not over tighten
C	ICR port universal base		2	ICR base Universal racetrack	-	-	-	

9. ICR - DOWNTUBE GUIDE & ENTRY PORT COVERS



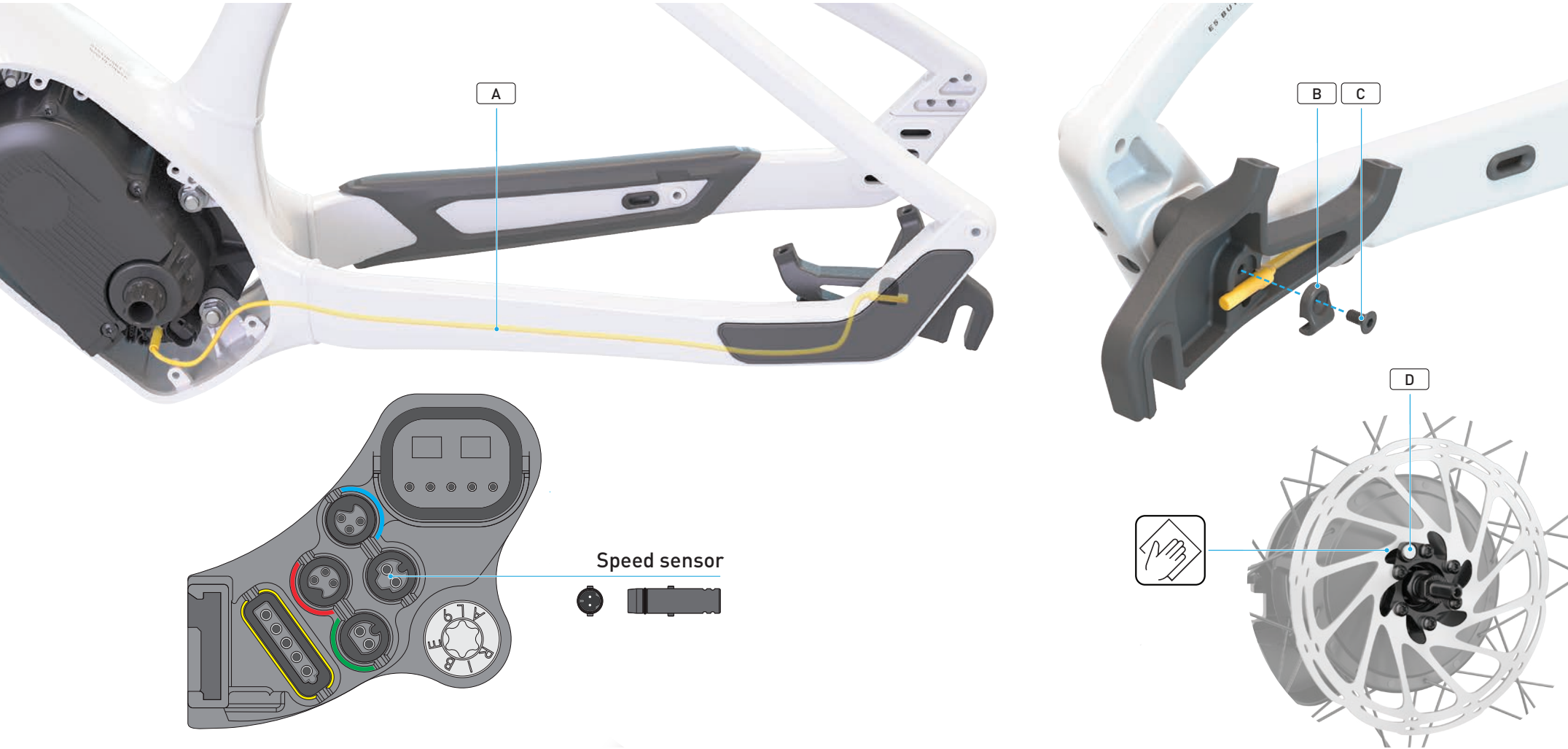
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Down tube cable guide	Part of kit S216500008	2	2 x 3.5 / 3 X 4.0mm / 1 x 5.0 mm	-	-	-	Self adhesive
B	Cable exit grommet		3	ICR entry port covers	-	-	-	

10. SPEED SENSOR - DERAILLEUR MODELS



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Speed sensor cable	S216800025	1	Speed sensor cable	-	-	-	
B	Speed sensor cable holder	S246500003	1	5 mm cable bat	-	-	-	
C	Speed sensor cable holder screw		1	M4 x 8 mm x 0.7 mm p,	3 mm hex	1	9	
D	Speed Sensor Magnet 6-Bolt	S194200016	1	Speed sensor 6 bolt mag holder	Follow manufacturer specs	6.2	55	Use brake rotor bolts
E	Centerlock speed sensor magnet	S226800004	1	Mounts to rear hub	Cassette lock ring tool	40	354	Vado 3.0 only

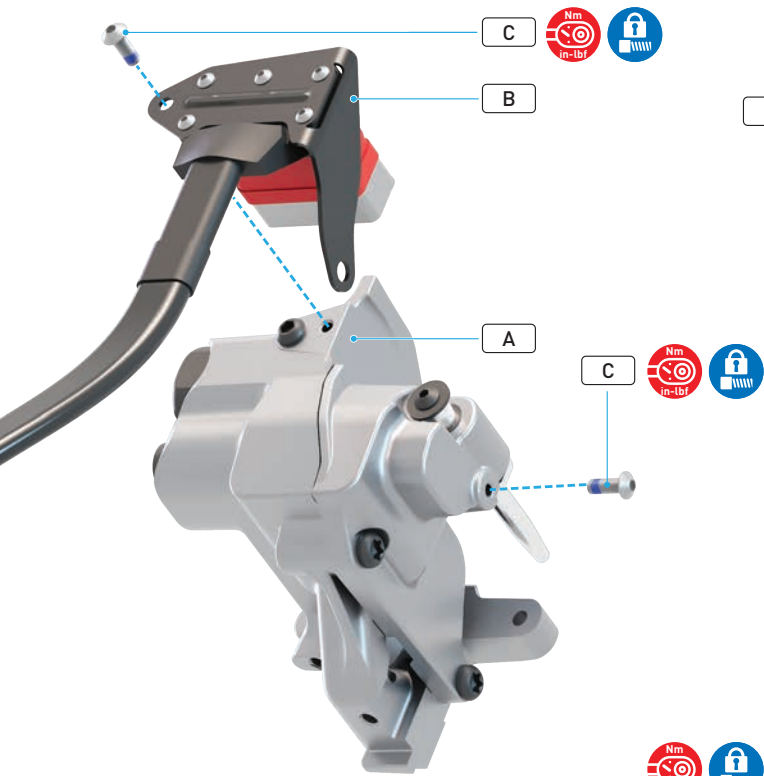
11. SPEED SENSOR - IGH MODELS



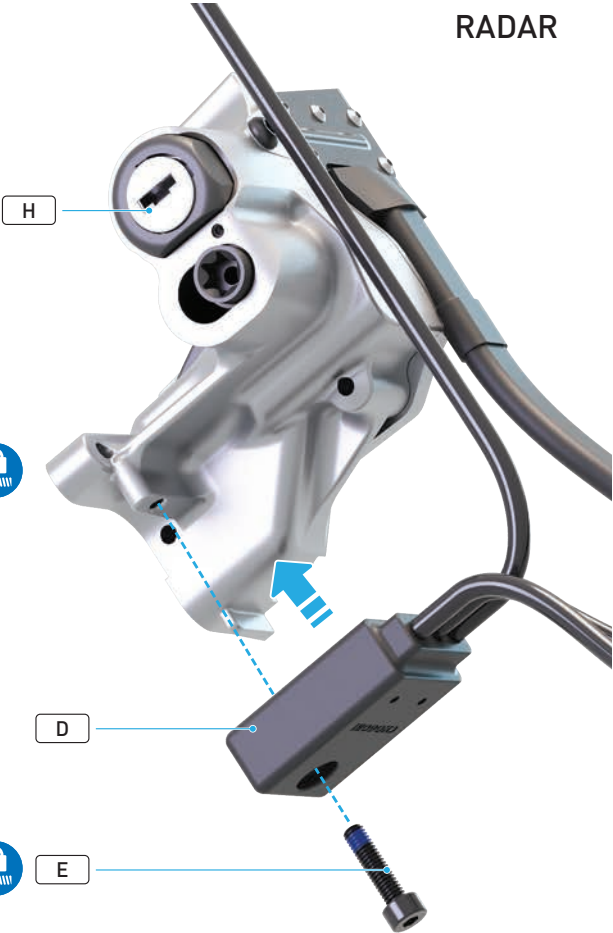
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Speed sensor cable	S216800025	1	Speed sensor cable	-	-	-	
B	Speed sensor cable holder	S246500003	1	5 mm cable bat	-	-	-	
C	Speed sensor cable holder screw		1	M4 x 8 mm x 0.7 mm p	3 mm hex	1	9	
D	Speed sensor magnet	S216800039	1	Speed Sensor 6 Bolt Mag Holder	as per manufacturer specs	6.2	55	Use brake rotot bolts

12. BATTERY - LOCK AND CABLE CONNECTORS

MAIN HARNESS



RADAR

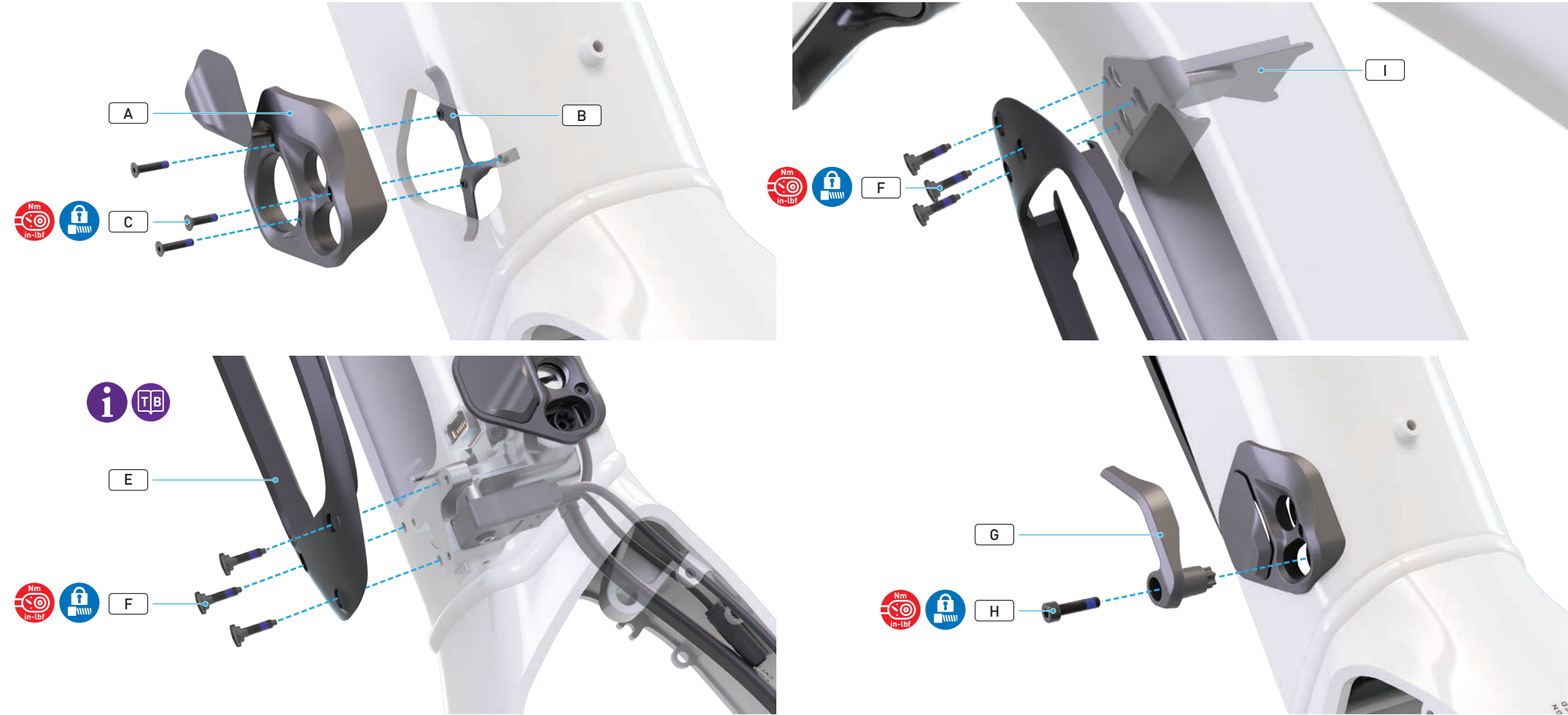


ENVIOLLO AUTOMATIQ EQUIPPED



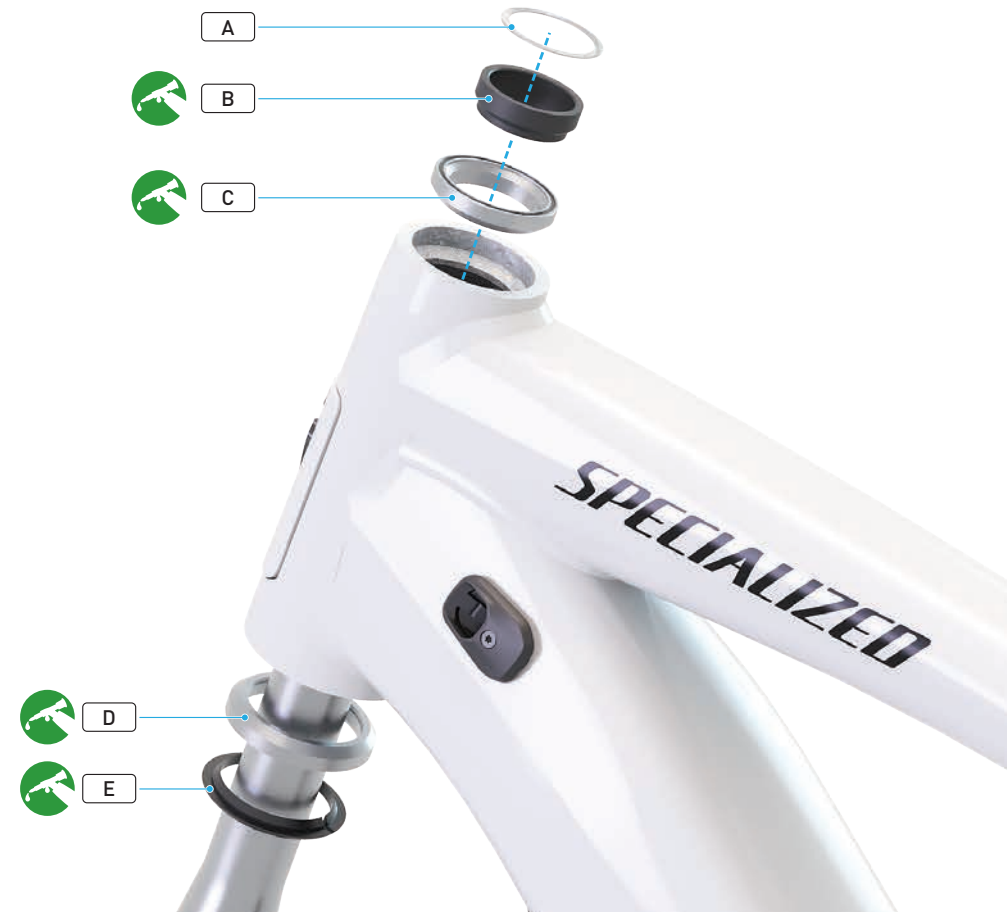
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENTS
						Nm	in-lbf	
A	Lower battery lock mechanism (Abus)	S226800021	1	Lower battery mount and lock assembly equipped with Abus x lock and keys.	-	-	-	
B	Motor / battery cable	S216800034	1	Main wiring harness that connects the motor and battery	-	-	-	Non radar equipped models
C	Motor / battery cable bolt		2	M3 x 8 mm x 0.5 mm p	2 mm hex	1	9	
D	Radar Y splitter	S216800033	1	Y-Splitter 3 cables	-	-	-	Radar equipped models
E	Radar splitter bolt		1	M4 x 16 mm x 0.7 mm p	3 mm hex	2	18	
F	Motor / battery cable - enviolo Automatic	S216800032	1	Vado 5 & S battery to motor cable, enviolo, Supernova	-	-	-	Vado 5.0 and Vado S only
G	Motor / battery cable bolt- enviolo Automatic		1	M4 x 16 mm x 0.7 mm p	3 mm hex	2	18	
H	Lock replacement cylinder + key (ABUS)	S226800020	1	Replacement lock core & keys, Abus X plus	-	-	-	

13. BATTERY LOCK AND HOOK



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		
						Nm	in-lbf	
A	Battery charge port cover	S216800035	1	Magnet charge port cover for Gen.2 Vado, Tero HT, and Tero X bikes.	-	-	-	Install the battery before torquing the downtube battery seal bolts. TB - VADO COMO TERO - BATTERY ALIGNMENT
B	Charge port cover mount		1	Back plate	-	-	-	
C	Battery charge port cover screw		3	M2.5 x 10 mm x 0.45 mm p	1.5 mm hex	1.5	13.2	
D	Battery charger magnetic flap	S219900053	1	Magnetic charge port cover	-	-	-	
E	Downtube battery seal - V 2		1	Vado/Como (gen.2), downtube battery cover (v2)	-	-	-	
F	Downtube battery seal bolt - V2	S220500020	6	M4 x 17 mm x 0.7 mm p	T20 Torx	3.3	29	
G	Battery lever	Part of S226800021	1	Lever,lock mechanism	-	-	-	
H	Battery lever bolt		1	M4 x 25 mm x 0.7 mm p	3 mm hex	3	26.5	
I	Battery mount upper v2	S236800007	1	Vado/Como (gen.2), Upper battery mount w/ hardware, v2	-	-	-	

VADO



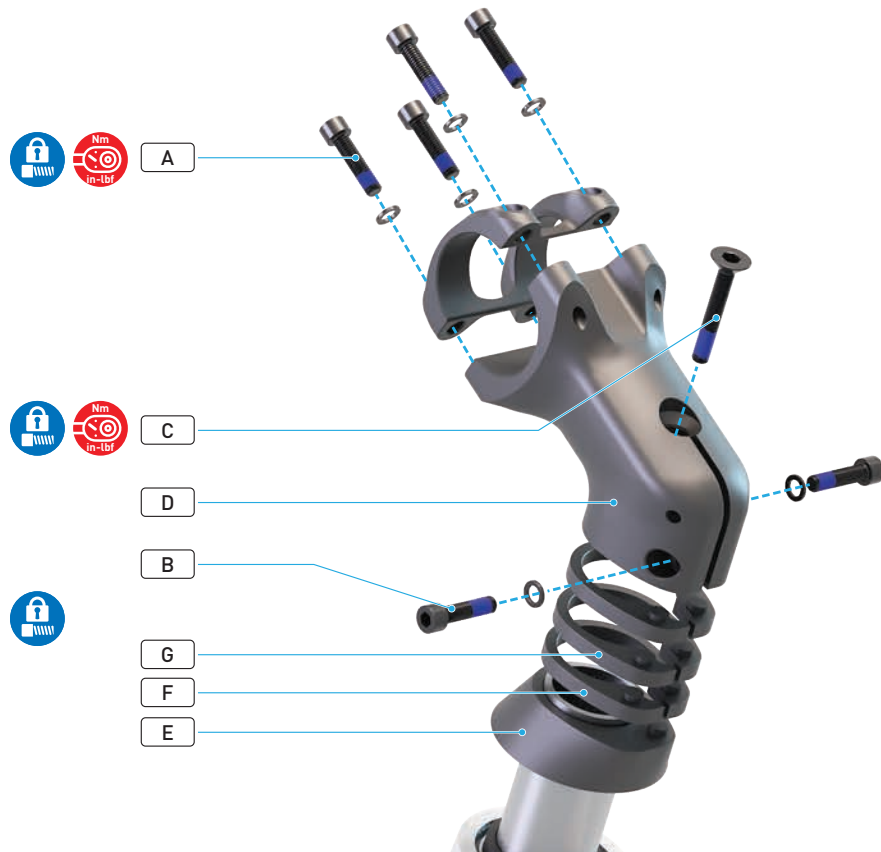
#	PART NAME	PART NUMBER	QTY	SPEC
A	Micro shim	S212500020 HS-S-01	1	1-1/8" micro shim
B	Compression ring		1	Split plastic compression ring, 11mm tall
C	Upper bearing		1	1-1/8" 41.8 mm OD x 30.5 mm ID x 8 mm thick [45°x45°]
D	Lower bearing		1	1.5" 51.8mm OD x 40mm ID x 8 mm thick [36° x45°]
E	Crown race		1	H6091 split alloy crown race for 1.5" bearing

VADO S



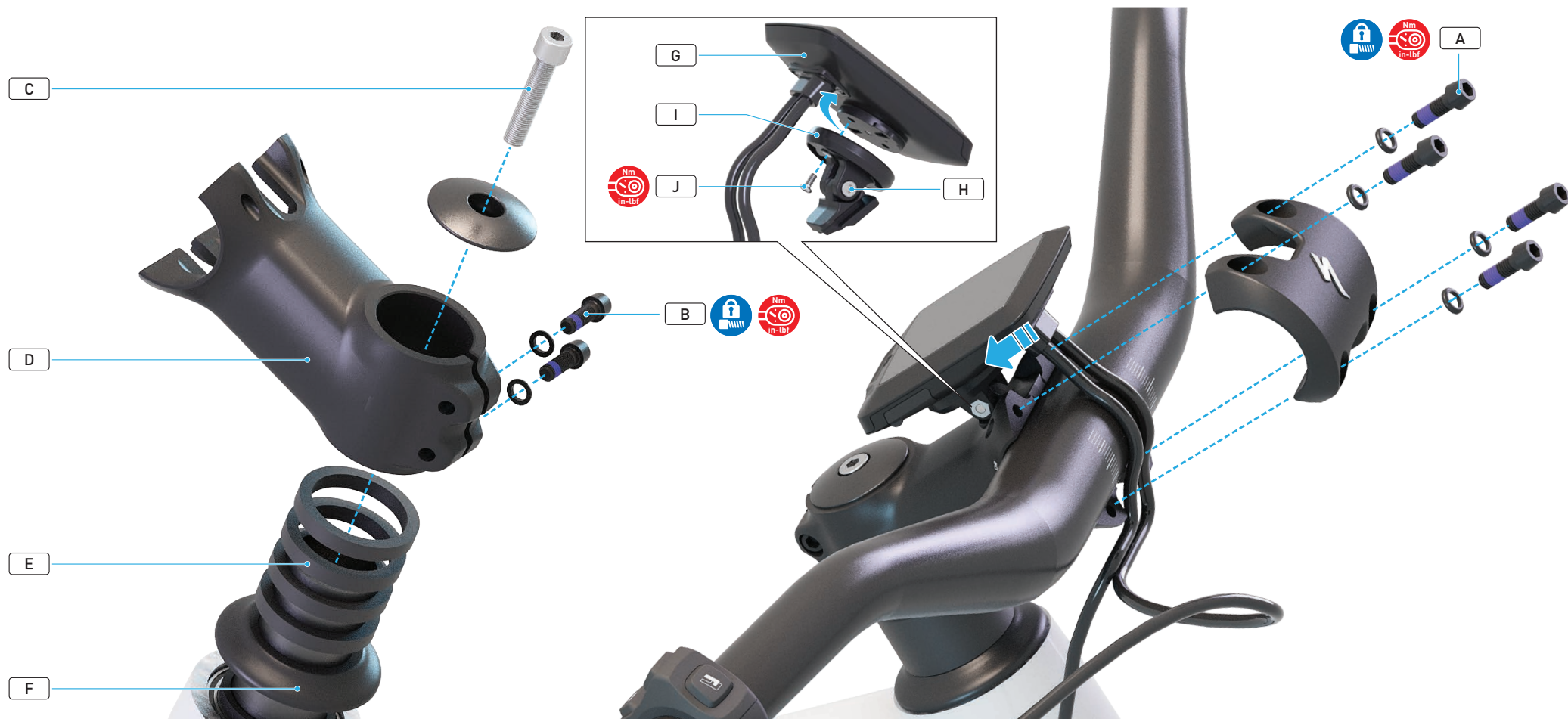
#	PART NAME	PART NUMBER	QTY	SPEC
A	Micro shim	S212500021 HS-S-02	1	1-1/8" micro shim
B	Compression ring		1	Split plastic compression ring, 11mm tall
C	Upper bearing		1	1-1/8" 41.8 Mm OD x 30.5 Mm ID x 8 mm thick [45°x45°]
D	Lower bearing		1	1.5" 51.8mm OD x 40mm ID x 8 mm thick [36° x45°]
E	Crown race		1	H6091 split alloy crown race for 1.5" bearing
F	Top cap		1	52 Mm OD / 10 mm tall alloy transition top cover for 1-1/8" stem

15. STEM - FLOW STEM - VADO



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Flow-set stem faceplate bolts & washers	60 mm stem S154800016	4	Flow-set stem, 31.8mm bar clamp, 60 mm 75 mm, 20° rise for 1-1/8" steerer	4 mm hex	6	52	60 mm frame size Small - Medium
B	Flow-set stem steerer bolts & washers		2		4 mm hex	6	52	75 mm frame size Large - Xlarge
C	Flow-set stem top cap bolt	75 mm stem S154800017	1		5 mm hex	-	-	
D	Flow-set stem		1		-	-	-	
E	Flow-set stem top cover	S154800020	1	Flow-set stem headset top cover, 52 mm OD / 15 mm tall	-	-	-	
F	Flow-set stem spacer 10 mm	S154800007	1	10 mm headset spacer	-	-	-	
G	Flow-set stem spacer 5 mm	S154800008	2	5 mm headset spacer	-	-	-	
H	MasterMind TCD	S216800041	1	MasterMind TCD with remote	-	-	-	Place TCD sideways in the mount and rotate 90° to lock in place, then secure with the security screw.
I	MasterMind TCD mount bracket	48119-1405	1	MasterMind TCD mtb mount	-	-	-	
J	MasterMind TCD security screw		1	M2.5 x 5 mm x 0.45 p	Phillips head screwdriver	1	9	
K	MasterMind TCD mount bracket bolt		1		3 mm hex	-	-	
L	Handlebar	S210800012	1	31.8 mm, 680 mm width, 46mm rise ,15 ° backsweep / 5 ° upsweep	-	-	-	

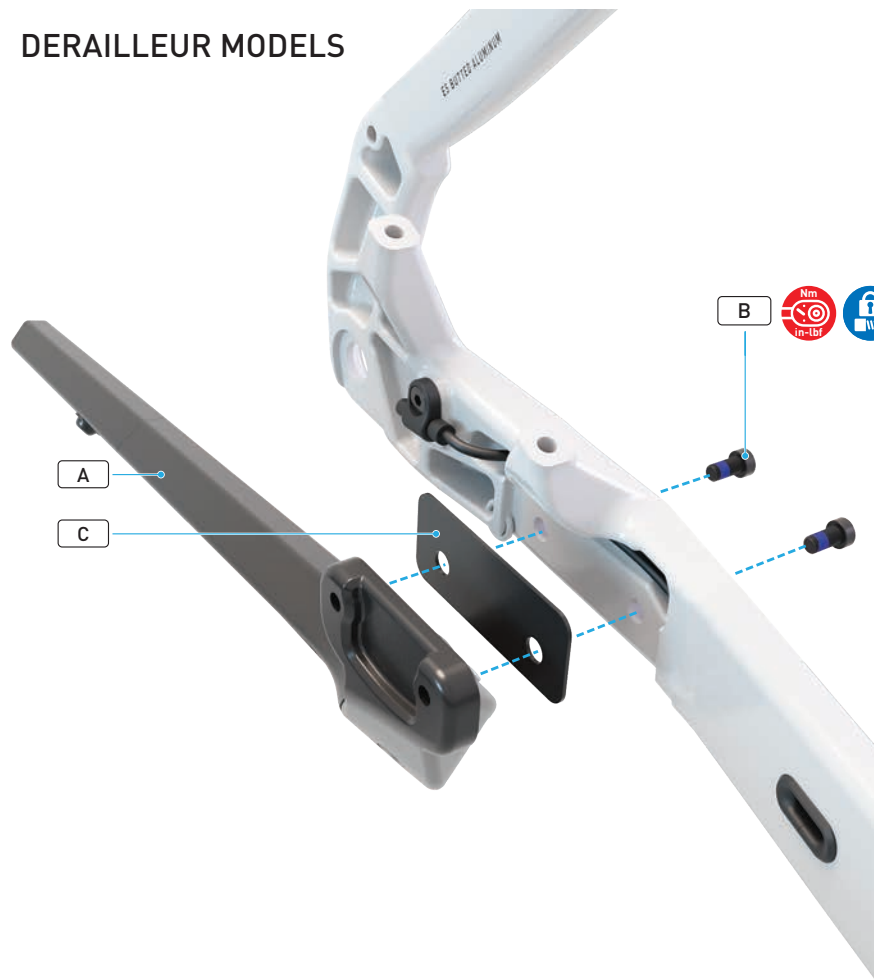
16. STEALTH STEM - VADO S



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Stealth stem faceplate bolts & washers	60 mm stem S194800002 75 mm stem S194800003 90 mm stem S194800004	4	Stealth stem DA-264, 31.8mm bar clamp 60 mm 75mm 90 mm 14° rise, for 1-1/8" steerer	4 mm hex	5.2	46	Guide TCD cables over handlebar under the faceplate
B	Stealth stem steerer bolts & washers		2		4 mm hex	5.2	46	
C	Stealth stem		1		-	-	-	
D	Stealth stem top cap and bolt		1	TL-666c-1 headset cap, M6 x 30 mm x 1.0 mm p bolt	5 mm hex			
E	Stem spacers		3	1-1/8" Headset spacers	-	-	-	
F	Stealth cone spacer	Part of Headset	1	52 mm OD x 10 mm alloy top cover for standard 1-1/8" stem	-	-	-	
G	MasterMind TCD	S216800041		MasterMind TCD with remote	-	-	-	Place TCD sideways in the mount and rotate 90° to lock in place, then secure with the security screw.
H	MasterMind TCD mount screw and nut	S219900057	1	Nut: M3 Bolt: M3 x 11 mm x 0.75 p	2.5 mm hex	-	-	
I	MasterMind TCD mount bracket (stealth stem)		1	Dovetail mount and twistlock mount	-	-	-	
J	MasterMind TCD security screw (stealth stem)		1	M2.5 x 5 mm x 0.45 p s steel	Phillips head screwdriver	1	9	

17. KICKSTAND

DERAILLEUR MODELS

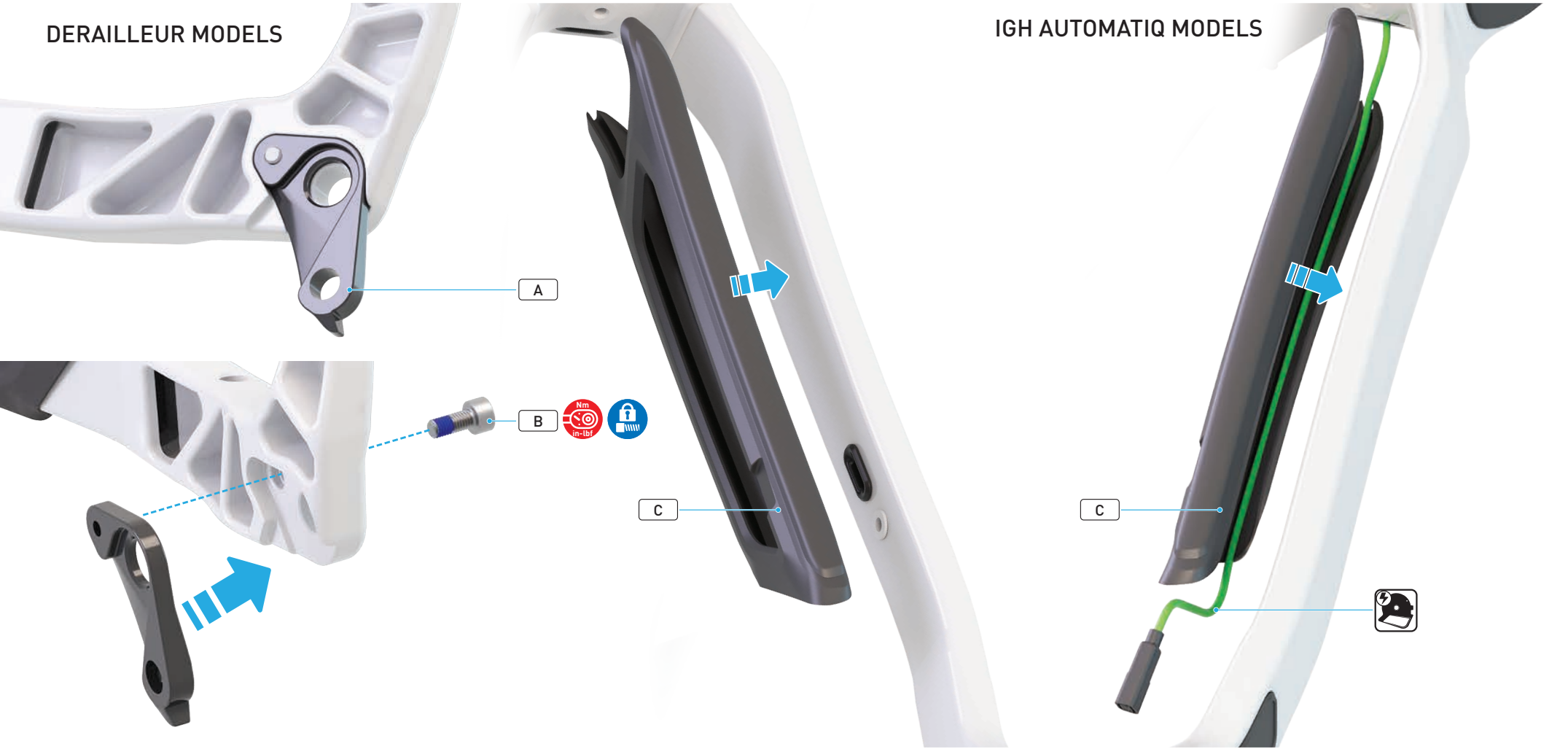


IGH MODELS



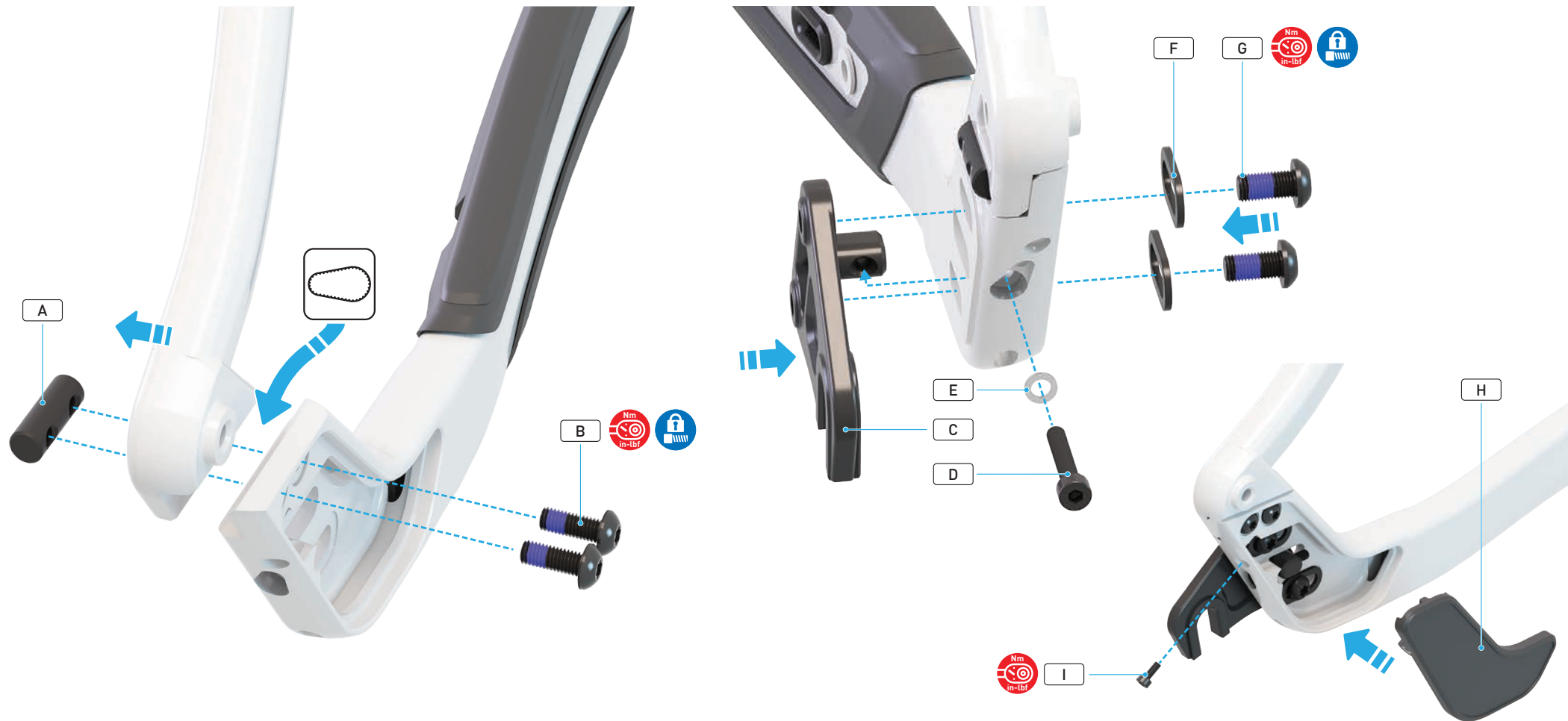
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Kickstand	S179900045	1	Chainstay-mounted kickstand 332 mm length. (incl. bolts)	-	-	-	Derailleur models only
B	Kickstand mounting bolt	S219900062	2	M6 x 14 mm x 1.0 mm p	5 mm hex	9	80	Derailleur models only
C	Kickstand mouting plate		1	My22 Como kickstand hardware kit	-	-	-	Derailleur models only: Install between the kickstand and the chainstay mounting surface.
D	Kickstand mounting bolt	Part of S216000003	2	M6 x x 18 mm x 1 mm p	T30 Torx	9	80	IGH models only
E	Dropout cover	S219900054	2	Frame dropout cover NDS	-	-	-	IGH models only
F	Dropout cover bolt		2	M3 x 7 mm x 0.5 mm p	2.5 mm hex	1	9	Do not force the cover open as this will damage the molded clips

18. DERAILLEUR HANGER & CHAINSTAY GUARD



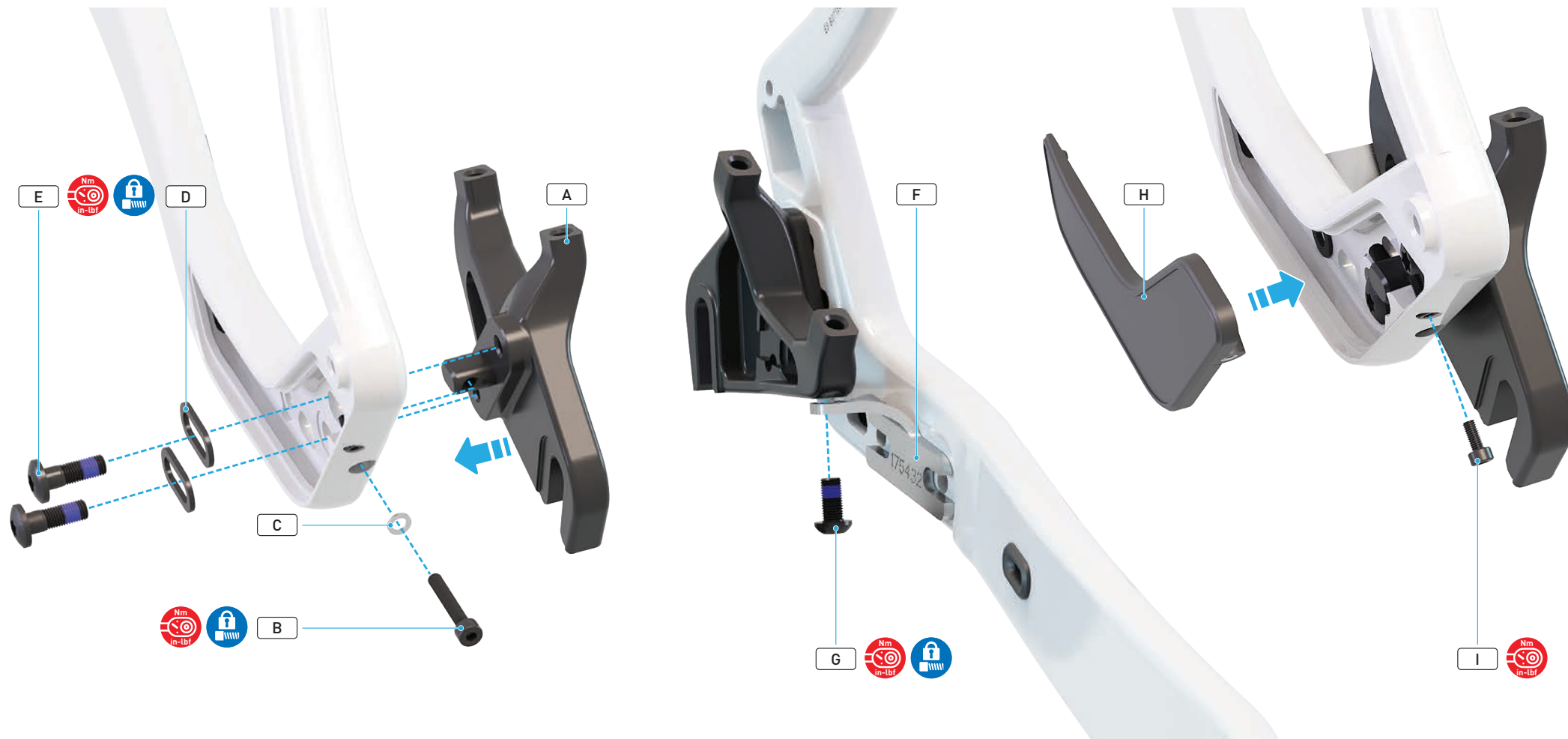
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Derailleur hanger	S172600003	1	Amazinger 2.1	-	-	-	Derailleur models only
B	Derailleur hanger bolt		2	M5 x 10 mm x 0.8 mm p	4 mm hex	6.2	55	
C	Chainstay protector	S216900004	1	Chainstay protector, co-molded	-	-	-	Thread cable through chainstay protector cable guide only on Enviolo Automatiq equipped models

19. SLIDING DROPOUT - DRIVE SIDE - IGH MODELS



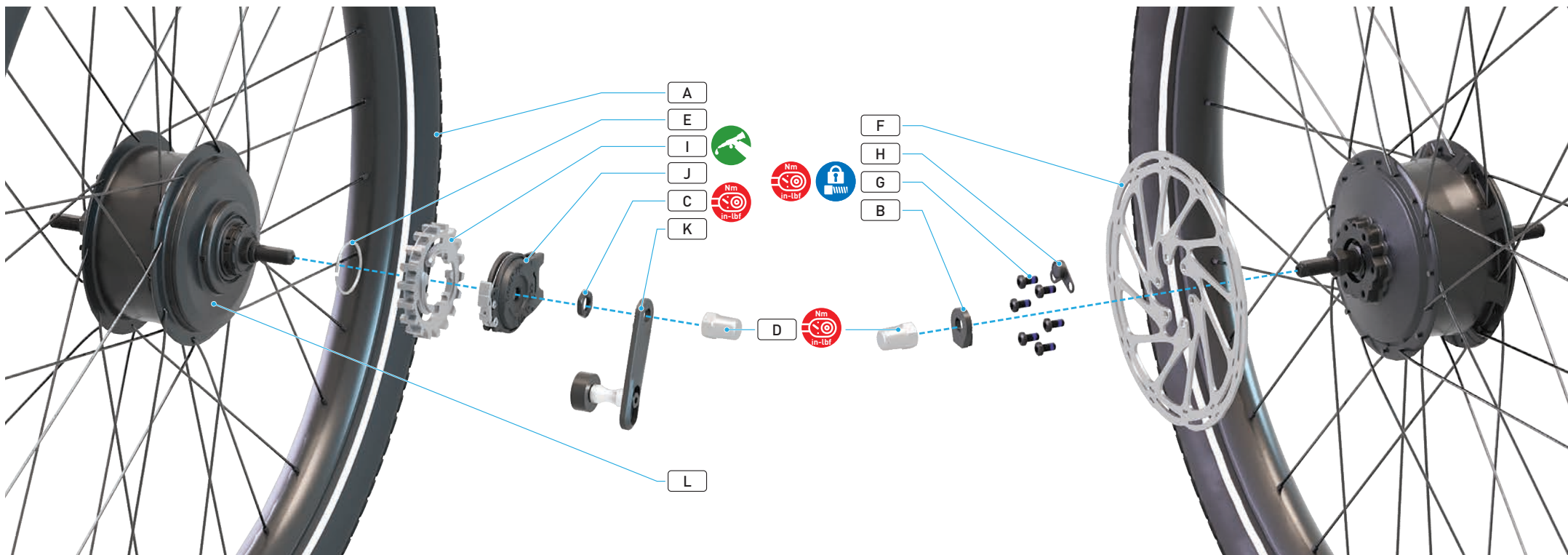
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Seatstay coupler barrel	S210500016	1	Dowel 8 mm OD x 23,2 mm x M5 x 0.8, mm p	-	-	-	Open for belt replacement
B	Seatstay coupler bolt		2	M5 x 14 mm 0.8 mm p	4 mm hex	4	35	
C	Sliding dropout DS	S216000004		DS slider	-	-	-	
D	Adjuster bolt		2	M4 x 25 mm 0.7 mm p	3 mm hex	6.2	55	
E	Adjuster bolt washer		2	M4 x 4.2 mm ID x 7 mm OD x 0.8mm thick	-	-	-	
F	Sliding dropout locking bolt washer		2	M6 racetrack x 1.6 mm thick	-	-	-	
G	Sliding dropout locking bolt		2	M6 x 12 mm x 1.0 mm p	T30 Torx	13	115	
H	Dropout cover	S219900054	2	Frame dropout cover	-	-	-	Do not force the cover open as this will damage the molded clips
I	Dropout cover bolt		2	M3 x 7 mm x 0.5 mm p	2.5 mm hex	1	9	

20. SLIDING DROPOUT - NON - DRIVE SIDE - IGH MODELS



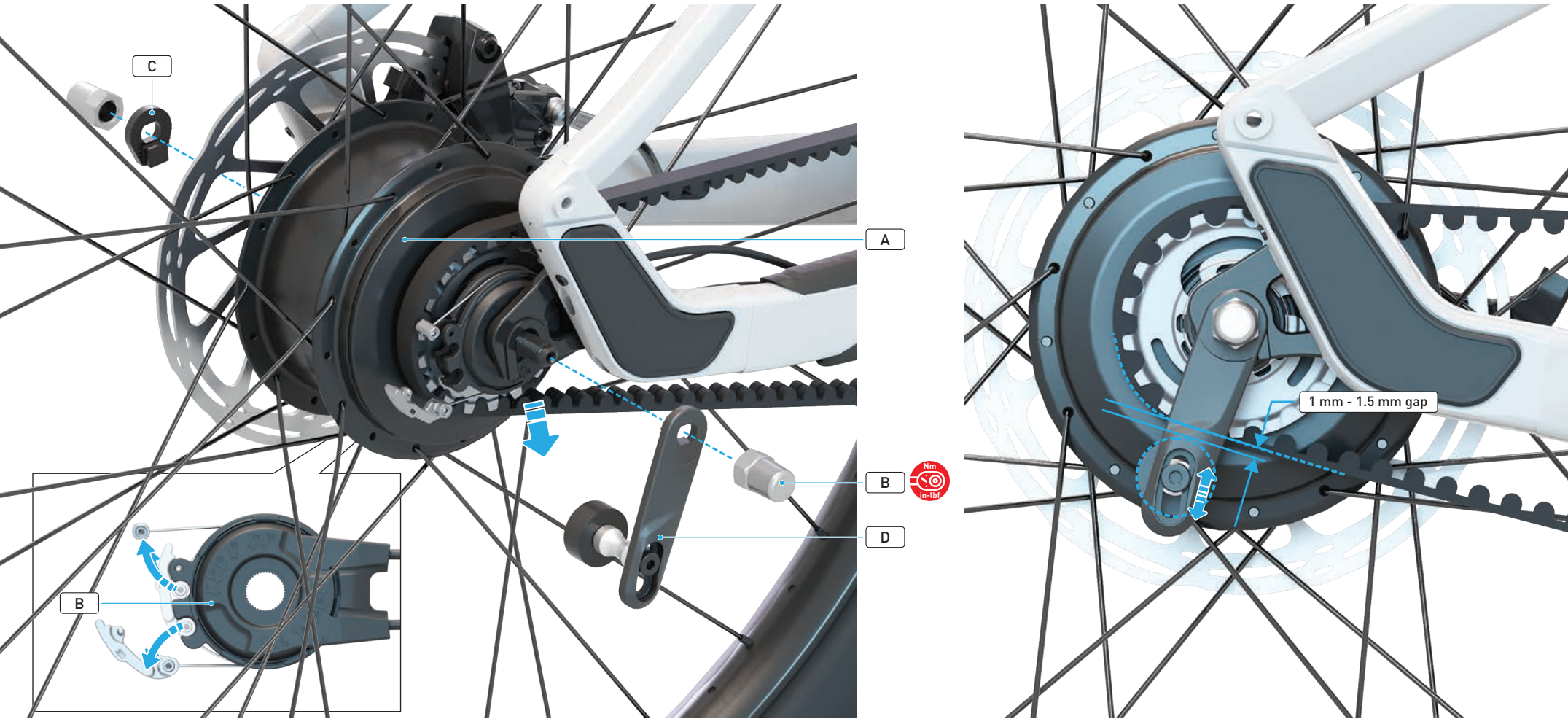
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Sliding dropout NDS	S216000005		NDS slider	-	-	-	
B	Adjuster bolt		2	M4 x 25 mm 0.7 mm p	3 mm hex	6.2	55	
C	Adjuster bolt washer		2	M4 x 4.2 mm ID x 7 mm OD x 0.8 mm thick	-	-	-	
D	Sliding dropout locking bolt washer		2	M6 racetrack x 1.6 mm thick	-	-	-	
E	Sliding dropout locking bolt		2	M6 x 12 mm x 1.0 mm p	T30 Torx	13	115	
F	Sliding dropout mounting bracket		1	Mounting bracket				
G	Sliding dropout mounting bracket bolt	S219900054	1	M6 x 12 mm 0.8 mm p	T30 Torx	9	80	
H	Dropout cover		2	Frame dropout cover	-	-	-	Do not force the cover open as this will damage the molded clips
I	Dropout cover bolt		2	M3 x 7 mm x 0.5 mm p	2.5 mm hex	1	9	

21. REAR WHEEL - MANUAL INTERFACE - IGH MODELS



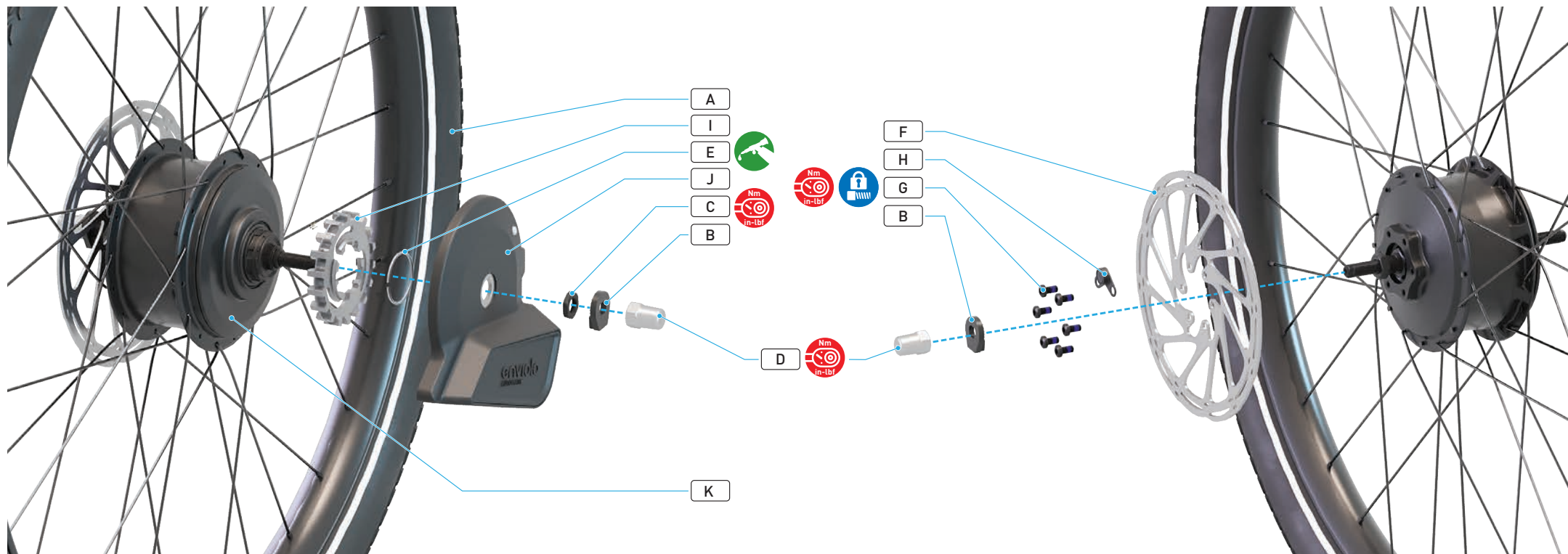
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear wheel Vado 3.0 IGH	S225500001	1	Enviolo, CVP-CT-32-DC-OE, CVP, CT, 32 spoke, 135 mm spacing	-	-	-	
A	Rear wheel Vado 4.0 IGH	S225500003	32	Enviolo, CVP-TR-32-DC-OE, CVP, TR, 32 spoke, 135 mm spacing	-	-	-	
B	No turn washer	S220500017	2	Washer, hw-wash-oe, enviolo, no turn washer for IGH	-	-	-	
C	Hex nut		1	Nut, hw-hnut-oe, enviolo, rh hex nut, for IGH	17 mm wrench	8-10	71- 90	
D	Axle nut		2	Nut, hw-anut-oe, enviolo, acorn nut for IGH	15 mm wrench	35	310	
E	Retaining ring		1	Retaining wire ring, hw-ring-oe, enviolo, for IGH	-	-	-	
F	Brake rotor		1	Sram assy DB rotor / bolts G2cs 180 mm	-	-	-	
G	Brake rotor bolts		6		T25 Torx	6.2	mm	
H	Speed sensor magnet holder	S216800039	1	My22 Vado/Tero speed sensor magnet, 6 bol	-	-	-	Use brake rotor bolts
I	Gates belt drive sprocket	S241000001	1	Gates, xf1122e9mn, 22 t CDXcog, carbon belt drive, 9-spline	-	-	-	
J	Enviolo manual hub interface	S231900001	1	Enviolo IGH, rear manual hub interface	-	-	-	
K	Snubber	S231900002	1	Enviolo IGH rear hub, belt snubber assembly	-	-	-	Adjust position of roller
L	Enviolo freehub	S232100001	1	CVP-FW-3SPG-KIT	-	-	-	

22. REAR WHEEL REMOVAL - MANUAL INTERFACE - IGH MODELS



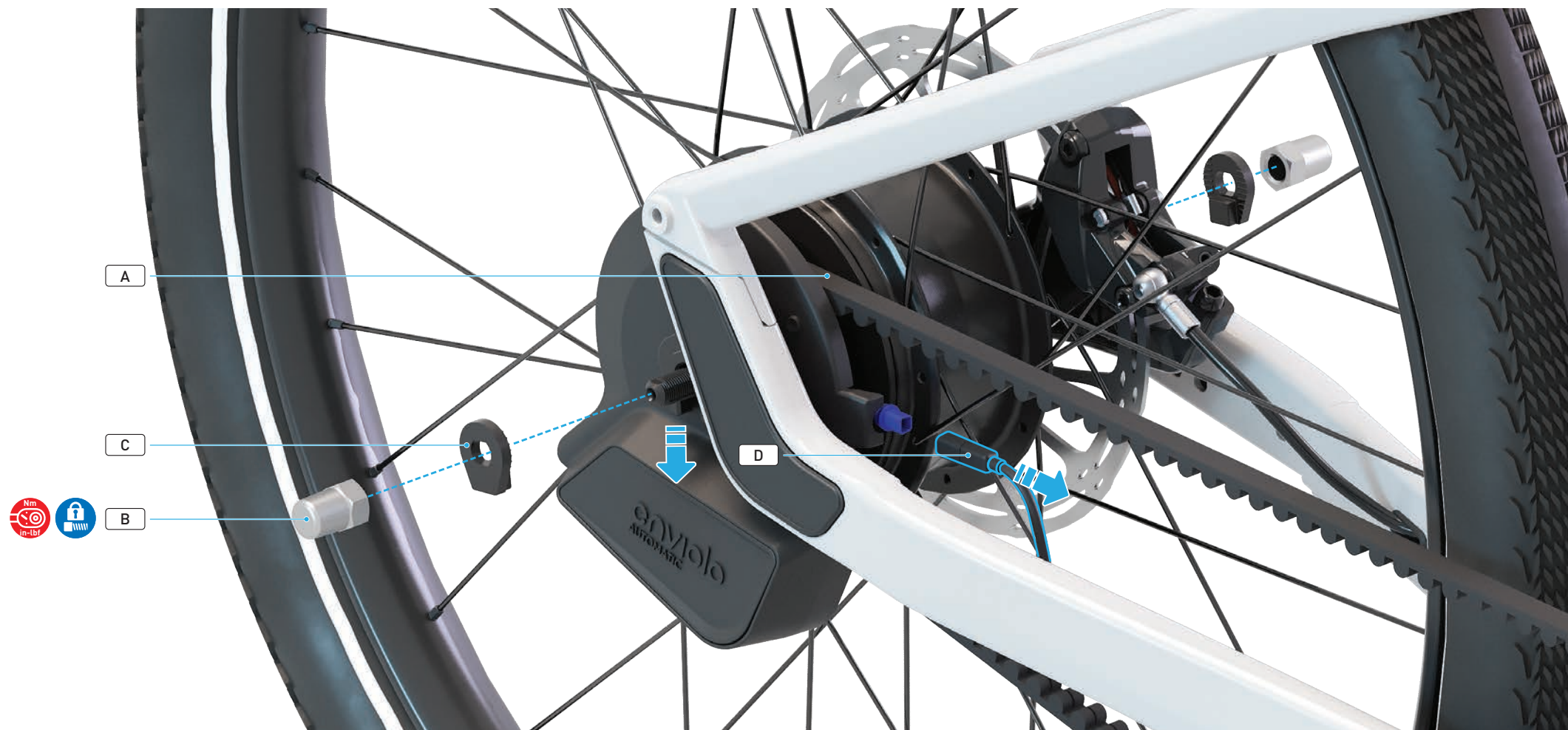
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear Hub	Part of S225500001 Part of S225500003	1	Enviolo internally geared hub (IGH)	-	-	-	
B	Axle nut	Part of S220500017	2	Acorn Nut (HW-ANUT-OE)	15 mm wrench	35	310	
C	No turn washer		2	HW-WASH-OE, enviolo, no turn washer for IGH	-	-	-	
D	Snubber	S231900002	1	Enviolo IGH rear hub, belt snubber assembly	4 mm hex	9	80	Adjust position of roller

23. REAR WHEEL - ENVIOLLO AUTOMATIQ - IGH MODELS



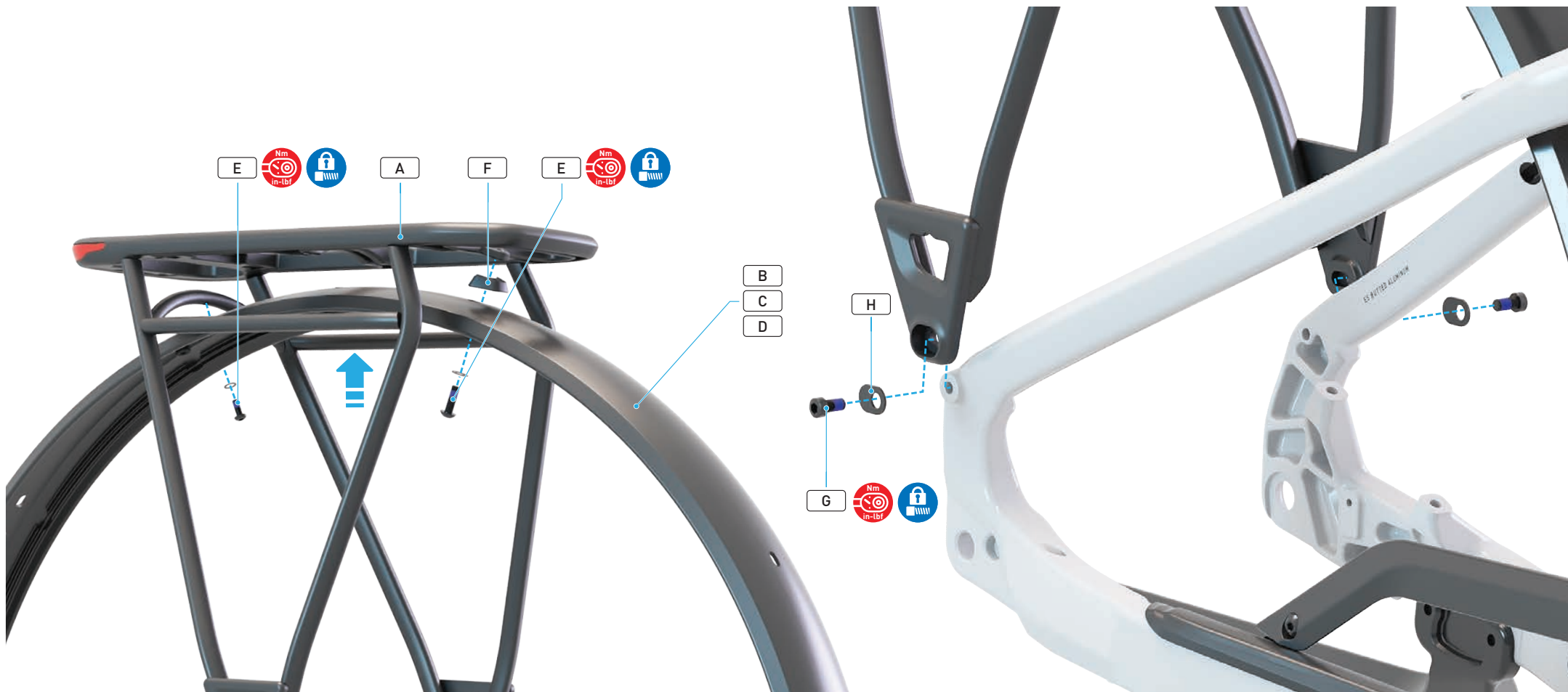
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear wheel Vado 5.0 IGH and Vado S	S225500002	32	Enviolo,CVP-HD-SA-32-DC-OE, CVP, SA, 32 spoke, 135 mm spacing	-	-	-	
B	No turn washer	S220500017	2	Washer, hw-wash-oe, enviolo, no turn washer for IGH	-	-	-	
C	Hex nut		1	Nut, hw-hnut-oe, enviolo, rh hex nut, for IGH	17 mm wrench	8-10	71- 90	
D	Axle nut		2	Nut, hw-anut-oe, enviolo, acorn nut for IGH	15 mm wrench	35	310	
E	Snap ring		1	Retaining wire ring, hw-ring-oe, enviolo, for IGH	Screwdriver	-	-	
F	Brake rotor		1	Tektro, R180s01e, Sus410, 6 bolt type, 180 mm Sram DB centerline 180 mm	-	-	-	
G	Brake rotor bolts		6		T25 Torx	6.2	mm	
H	Speed sensor magnet holder	S216800039	1	My22 Vado/Tero speed sensor magnet, 6 bol	-	-	-	Use brake rotor bolts
I	Gates belt drive sprocket	S241000001	1	Gates, xf1122e9mn, 22 t CDXcog, carbon belt drive, 9-spline	-	-	-	Install using Gates SureFit installer tool
J	Enviolo Automatiq interface	S221900004	1	Enviolo IGH, rear, automatic hub interface, 40t spline, HD compatible	-	-	-	
K	Enviolo freehub	S232100001	1	CVP-FW-3SPG-KIT				

24. REAR WHEEL - ENVIOLLO AUTOMATIQ - IGH MODELS



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear Hub	Part of S225500002	1	Enviolo internally geared hub (IGH)	-	-	-	
B	Axle nut	Part of S220500017	2	Acorn nut (HW-ANUT-OE)	15 mm wrench	35	310	
C	No turn washer		2	Washer, hw-wash-oe, enviolo, no turn washer for IGH	-	-	-	
D	Enviolo Automatiq power cable	Part of S216800032	1	Vado/Como (gen.2), motor-battery harness, w/ enviolo Automatiq Garmin, & Supernova (l1e) connectors	-	-	-	

25. REAR RACK ASSEMBLY



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Vado rear rack	S211700003	1	Vado/Como (gen.2), rear rack, 650b	-	-	-	The rear rack is combined with the rear fender and is attached with bolts to mounting tabs at the dropouts to support the vertical rack stays.
B	Fender rear 650b (std)	S212200009	1	Use with standard models / 65 mm width	-	-	-	
C	Fender rear 650b (Garmin)	S212200010	1	Use with models equipped with Garmin radar / 65 mm width	-	-	-	
D	Fender rear 650B (Garmin + licence plate)	S212200011	1	Vado S equipped with Garmin radar / license plate / 65 mm width	-	-	-	
E	Fender mounting bolt front and washer	Part of fender kits	2	M5 mm x 16 mm	4 mm hex			
F	Fender mounting spacer	Part of S211700003	1	Fender spacer	-	-	-	Flip washer to adjust rack position
G	Rack mouting bolt		2	M6 mm x 16 mm	5 mm hex	9	80	
H	Rack mounting washer		2	16.3 mm w x 11.3 mm h x 1 mm d	-	-	-	

26. REAR RACK ASSEMBLY



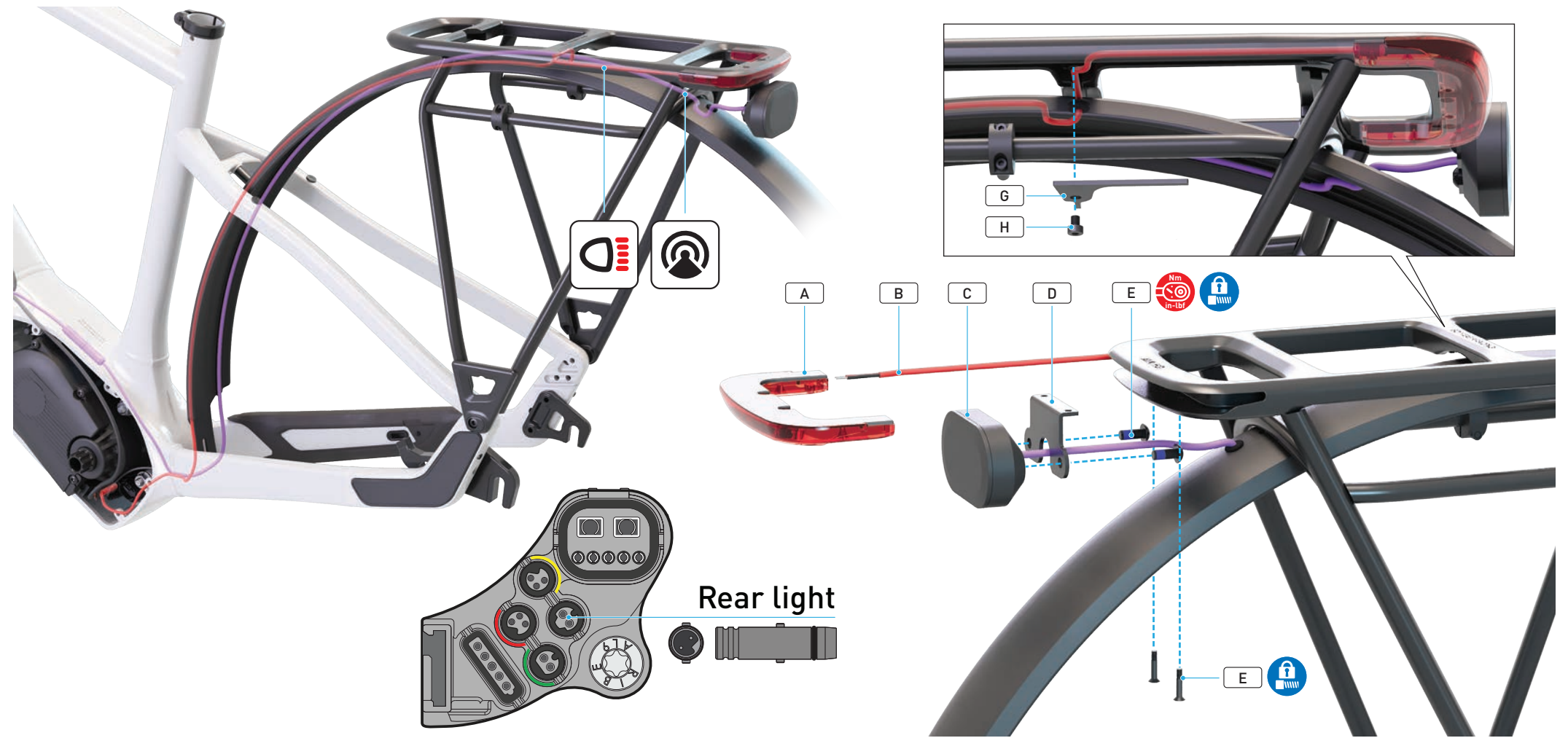
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Fender rear 650b (std)	S212200009	1	Use with Vado 3.0 & 4.0 models / 65C width	-	-	-	
	Fender rear 650b (Garmin)	S212200010	1	Use with Vado 5.0 models equipped with Garmin radar / 65C width	-	-	-	
	Fender rear 650B (Garmin + licence plate)	S212200011	1	Use with Vado S models equipped with Garmin radar / license plate / 65C width	-	-	-	
B	Fender mounting bolt	Part of fender kits	2	M5 mm x 30 mm	4 mm hex	4	35	
C	Fender mount spacer		2	10 mm OD x 5.5 mm ID x 15 mm spacer	-	-	-	

27. REAR RACK ASSEMBLY - STANDARD



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear light	S245800001	1	Spanninga, commuter glow, integrated rear rack light	-	-	-	Use Spanniga operating tool to release cables.
B	Rear light cable	S216800037	1	Brose 12v rear light cable, bare end, 1115 mm				
C	Rear light mount bolt		2	M3 x 14 mm x 0.5 mm p	2 mm hex	-	-	
D	Rear rack cable guide	Part of rear rack kit S211700003	1		-	-	-	Remove rear wheel and remove rear light cable from fender channel to free cable and remove light from rack.
E	Rear rack cable guide bolt		1		-	-	-	

28. REAR RACK CABLE ROUTING - RADAR



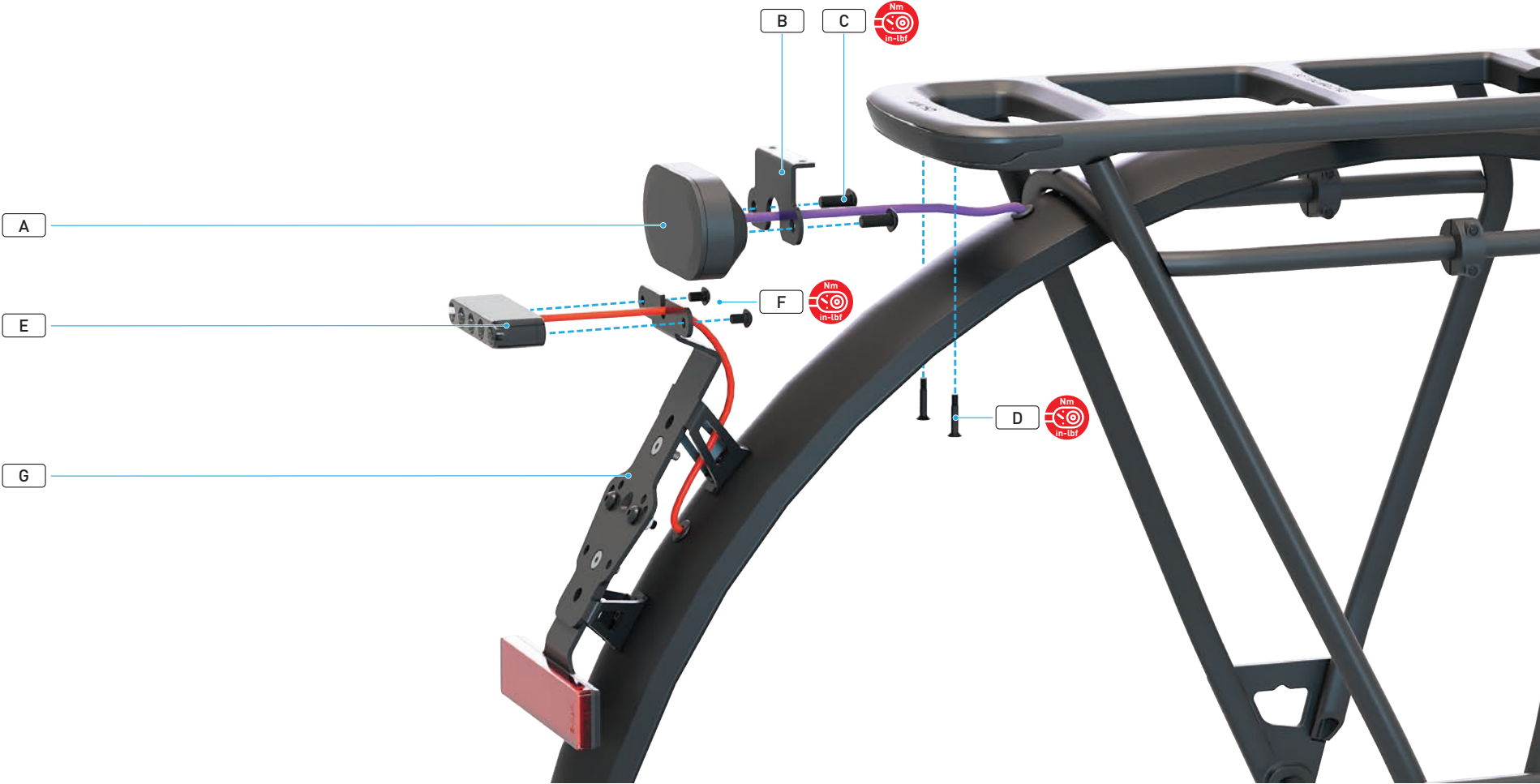
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear light	S245800001	1	Spanninga, commuter glow, integrated rear rack light	-	-	-	Use Spanninga operating tool to release cables.
B	Rear light cable	S216800037	1	Brose 12v rear light cable, bare end, 1115 mm	-	-	-	
C	Garmin radar	S226800015	1	Garmin radar, wired version, 1400 mm cable	-	-	-	
D	Garmin radar mount	S211700002	1	Vado/Como (gen.2), Garmin radar mounting bracket	-	-	-	
E	Garmin radar mount bolt		2	M4 x 5 mm x 0.7 mm p	3 mm hex	2	18	
F	Garmin radar rack mount bolt		2	M3 x 14 mm x 0.5 mm p	2 mm hex	-	-	
G	Rear rack cable guide	Part of rear rack kit			-	-	-	Remove rear wheel and remove rear light cable from fender channel to free cable and remove light from rack.
H	Rear rack cable guide bolt				-	-	-	

29. REAR RACK CABLE ROUTING - VADO S



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Rear fender cable tunnel	Part of S212200011	4		-	-	-	Use four cable tunnels to secure the rear light cable to the fender

30. REAR RACK COMPONENTS - VADO S



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Garmin radar	S226800015	1	Garmin radar, wired version, 1400 mm cable	-	-	-	
B	Garmin radar mount	S211700002	1	Vado/Como (gen.2), Garmin radar mounting bracket	-	-	-	
C	Garmin radar mount bolt		2	M4 x 5 mm x 0.7 mm p	3 mm hex	-	-	
D	Garmin radar rack mount bolt		2	M3 x 14 mm x 0.5 mm p	2 mm hex	-	-	
E	Rear light	S215800004	1	Supernova M99-Te12	-	-	-	
F	Rear light mounting bolt	Part of S199900078	2	M4 x 6 mm	3 mm hex	-	-	
G	Licence plate holder	S199900078	1	Rear fender license plate holder & M99 light mount, w/ reflector	-	-	-	

31. FRONT FENDER



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Vado fender front 650b (Suntour fork)	S212200008		Use with Suntour Fork / 65 mm width	-	-	-	Vado 3.0 / Vado 4.0
	Vado fender front 650b (Sram fork)	S212200007		Use with SRAM Fork / 65 mm width	-	-	-	Vado 5.0 / Vado S
B	Mouting bolt fork arch	Part of Fender Kit	1	M4 x 7 mm x 0,7 mm P	4 mm hex	4	35	Apply threadlocker
C	Fender mouting bolt		2	M5 x 16 mm x 0,7 mm P	4 mm hex	3	27	Apply threadlocker
D	Fender mounting spacer		2	10 mm OD x 5,2 mm ID x 6 mm	-	-	-	Do not assemble without spacer.

32. OPTIONAL ACCESSORY: FRONT RACK ASSEMBLY



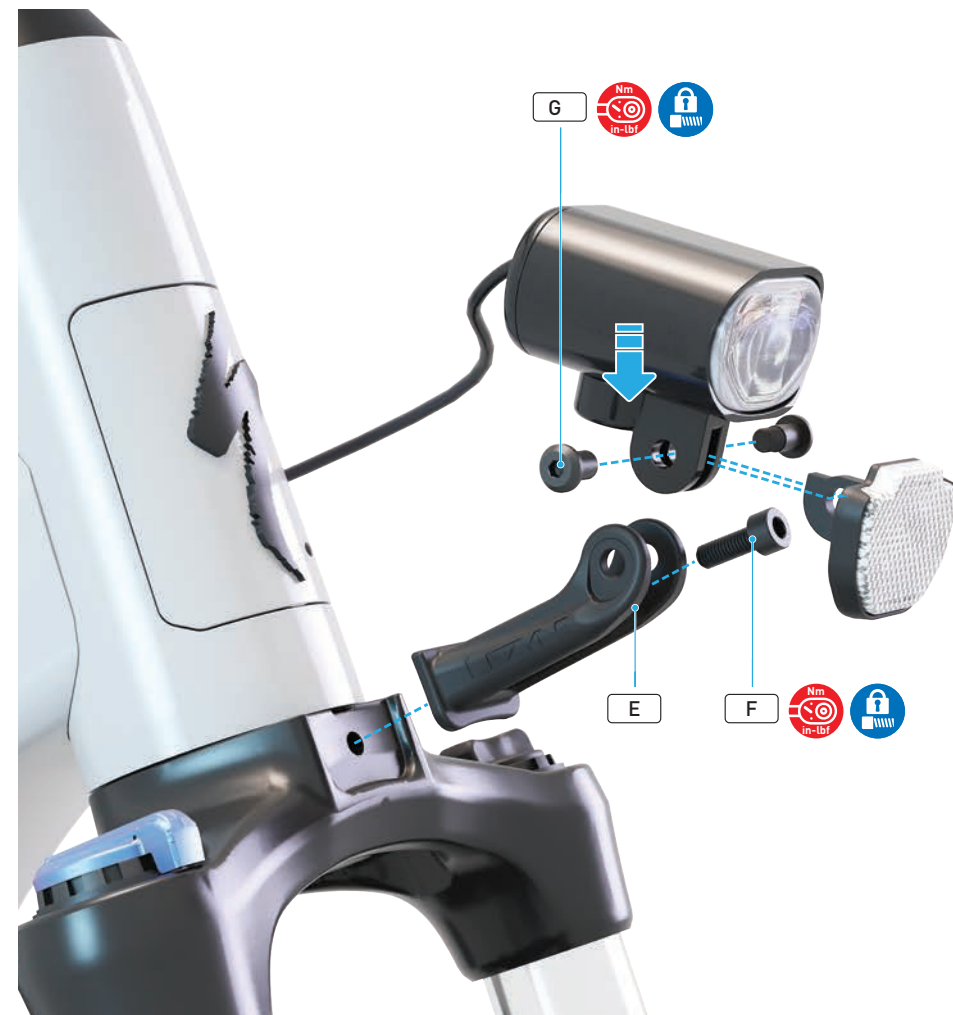
AG FRONT RACK & ADVENTURE PLATE



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Headtube cover	S219900055	1	Msc my22 Vado/Tero headtube cover (black)	-	-	-	See service part list for colour options
B	Headtube cover bolt	S220500011	1	M5 x 7 mm x 0.8 mm p	2.5 mm hex	3	27	Apply threadlocker

#	OPTIONAL ACCESORY	PART NUMBER	DESCRIPTION
	Front Rack & Adventure Plate	98922-5600	Assembly by Authorized Specialized Retailer required, follow the Assembly Guide for detailed assembly instructions.

33. FRONT LIGHT



#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Front light	S225800007	1	Lgt front, Pezyne, Power stvzo e115, 310 lumens / 12v, fork mounted, w/ brose light	-	-	-	Models with Sram forks
B	Front light wire mount	S225800008	1	Lgt sub, Lezyne, front light fork arch mount, for Sram forks, steel wire	-	-	-	
C	Front light binding post		1	M4 x 14 mm x 0,7 mm P female / M4 x 11 mm x 0,7 mm P male	3 mm hex	-	-	
D	Fender bolt fork bridge	Included with fender kit	1	M7 x 7 mm x 0,7 mm P	4 mm hex	4	35	
E	Fork crown mount	S225800009	1	Lgt sub, Lezyne, front light fork crown mount, for Suntour Mobie forks, plastic, w/ bolt	-	-	-	Models with Suntour forks.
F	Fork crown mount bolt		1	M5 x 14 mm x 0,8 mm P	4 mm hex	-	-	
G	Front light binding post		1	M4 x 14 mm x 0,7 mm P female / M4 x 11 mm x 0,7 mm P male	3 mm hex	-	-	

HANDLEBAR LAYOUT

VADO



VADO IGH



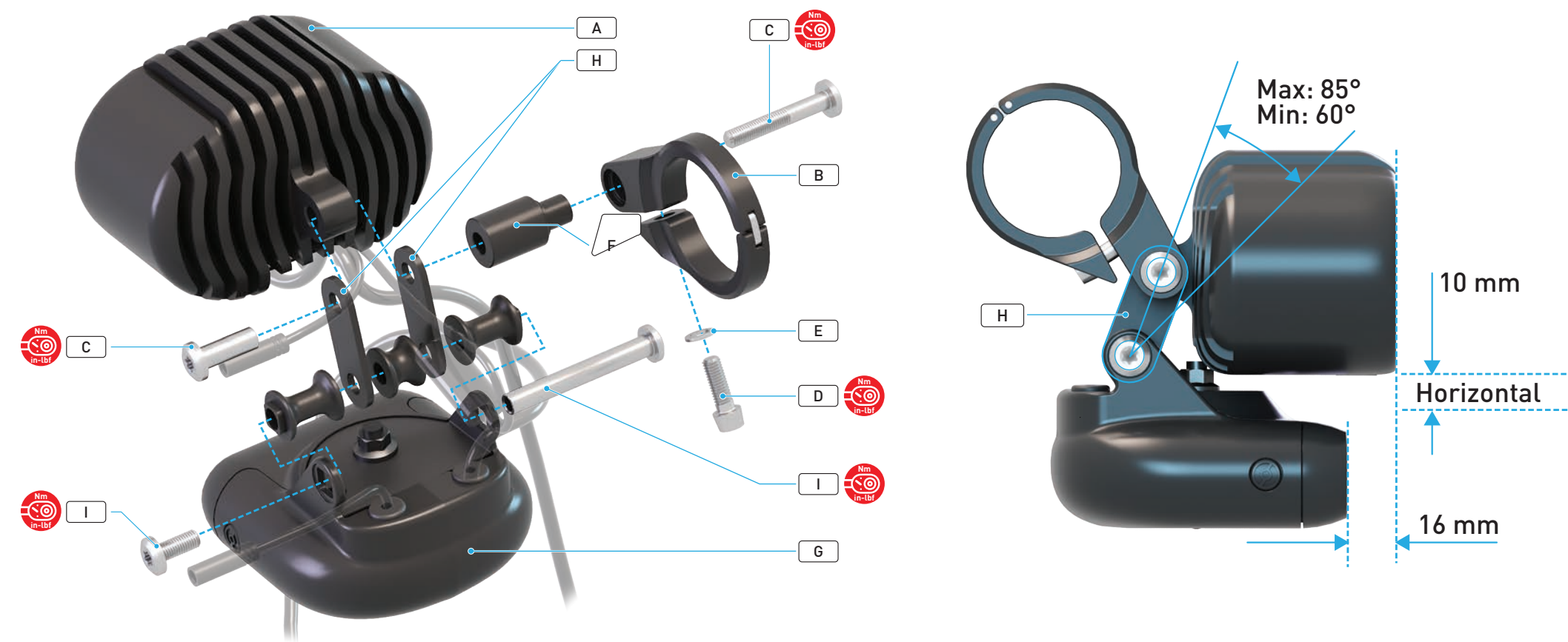
VADO IGH AUTOMATIQ



VADO S

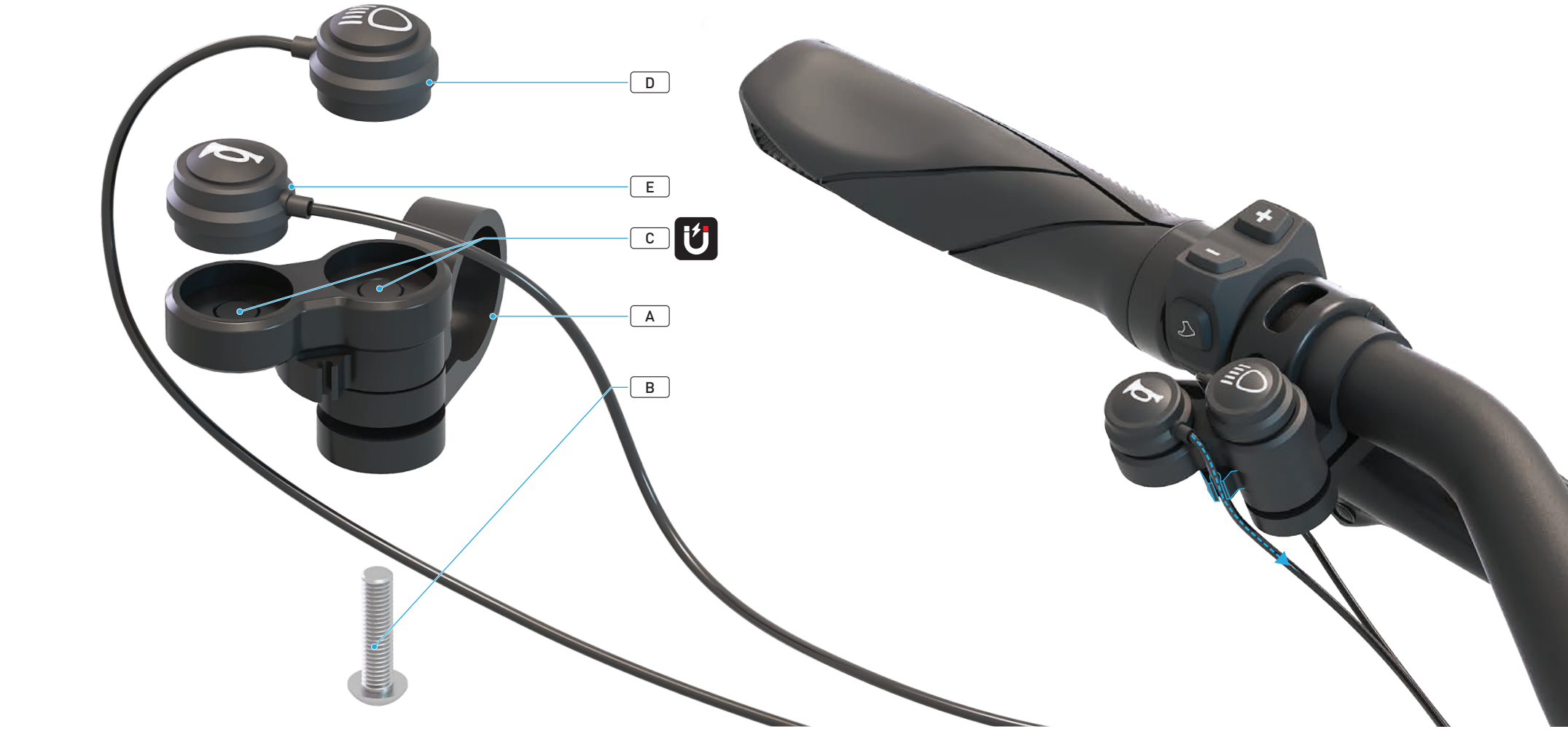


34. FRONT LIGHT AND HORN - VADO S



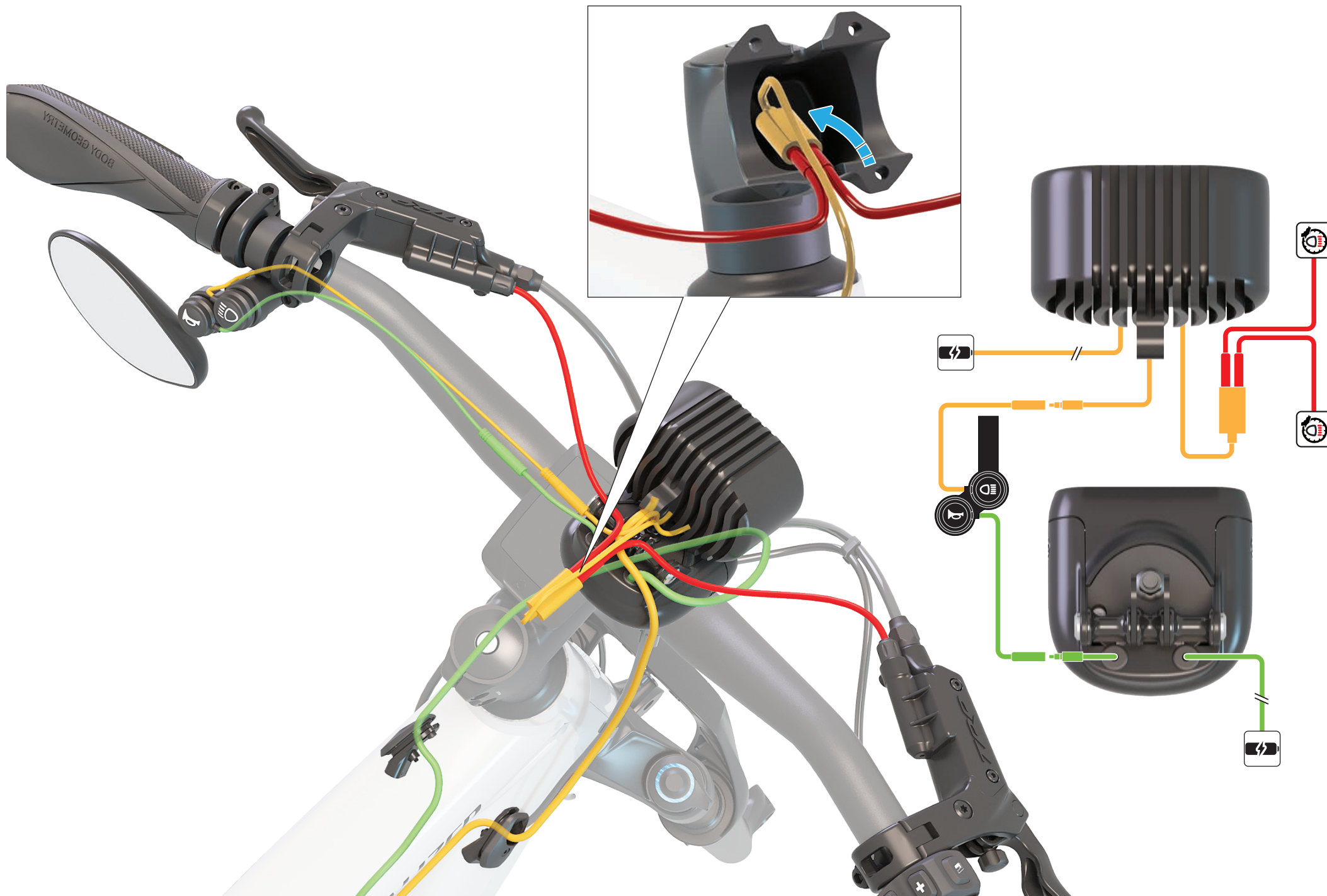
#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Front light	S215800003	1	Custom Supernova M99 Pro S-Pedelec Front Light	-	-	-	If the angle of the strut (H) between the horn and the light is greater than 85° or less than 60°, the cables will collide with the horn and cause it not to function correctly.
B	Handlebar light mount	S199900079	1	Sn_universal_Hbm_rev_08 one piece	-	-	-	
C	Light mount bolt and barrel nut		1	M5 custom bolt + M5 custom nut	T25 Torx	4-5	35-44	
D	Handlebar mounting bolt		1	M4 x 12 mm bolt	T25 Torx	4	35	
E	Handlebar mounting washer		1	8.3 mm OD x 5.1 mm ID x 1 mm thick	-	-	-	
F	Shim	S226800029	1	Alloy shim	-	-	-	
G	Horn		1	Supernova Horn	-	-	-	
H	Horn mounting strut		2		-	-	-	
I	Horn mount bolt and barrel nut		1	M5 custom bolt + M5 custom nut	T25 Torx	4-5	35-44	

35. HIGH BEAM AND HORN REMOTE - VADO S

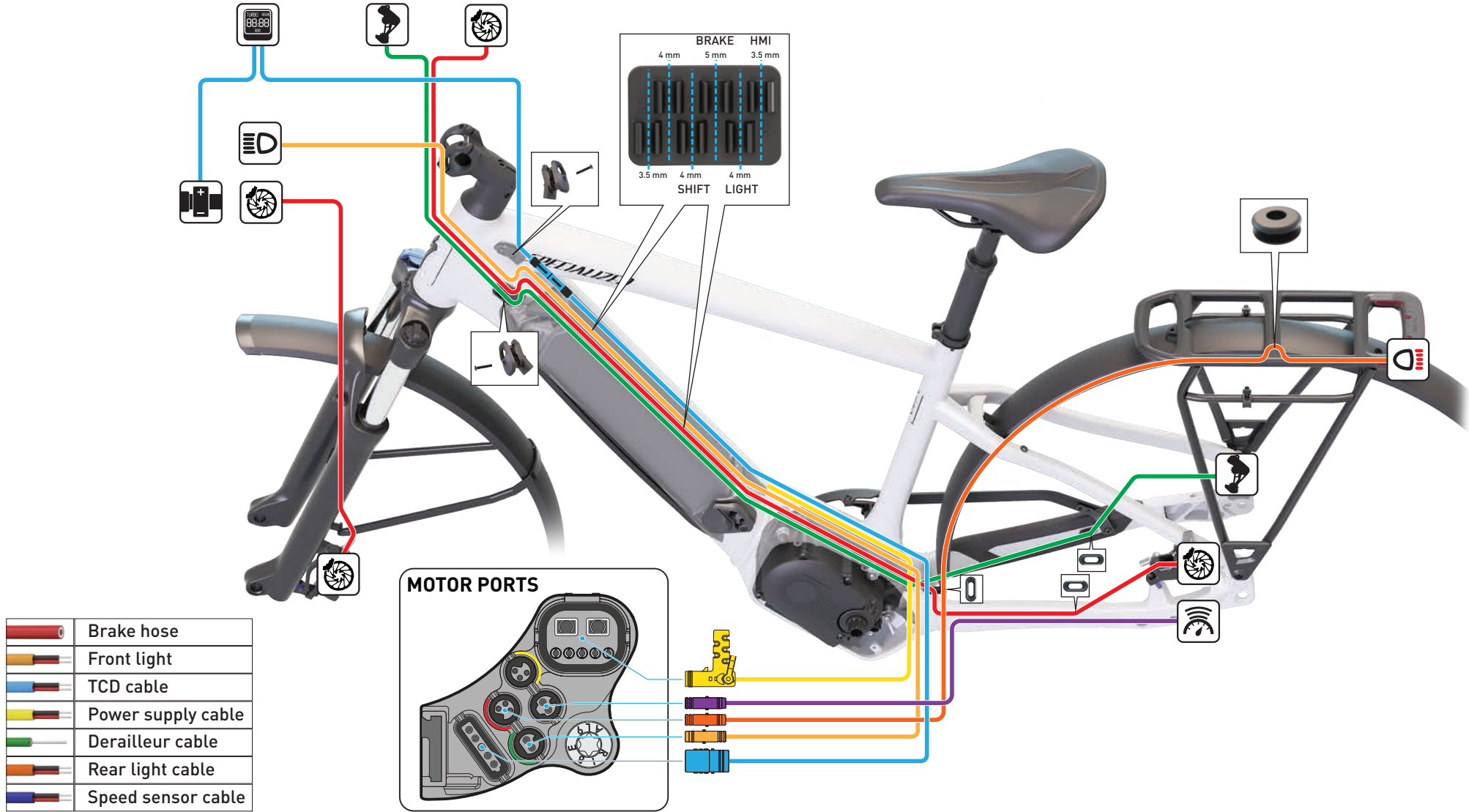


#	PART NAME	PART NUMBER	QTY	SPEC	TOOL	TORQUE		COMMENT
						Nm	in-lbf	
A	Handlebar mount	S226800028	1	Supernova, U-DSH22-OE, plastic, dual switch holder	-	-	-	
B	Mount bolt		1	M5 x 14 mm x 0,8 mm p	T25 Torx	-	-	
C	Magnet		2	Switch retaining magnet	-	-	-	
D	High beam light switch	S226800031	1	Supernova, T-HBS-MCR-310-OE, high beam switch	-	-	-	Button is secured with magnet, thread cable through cable holder
E	Horn switch	S226800030	1	Supernova, U-HRNS-MCL-212-OE, horn switch	-	-	-	Button is secured with magnet, thread cable through cable holder

36. WIRING: FRONT LIGHT AND HORN - VADO S



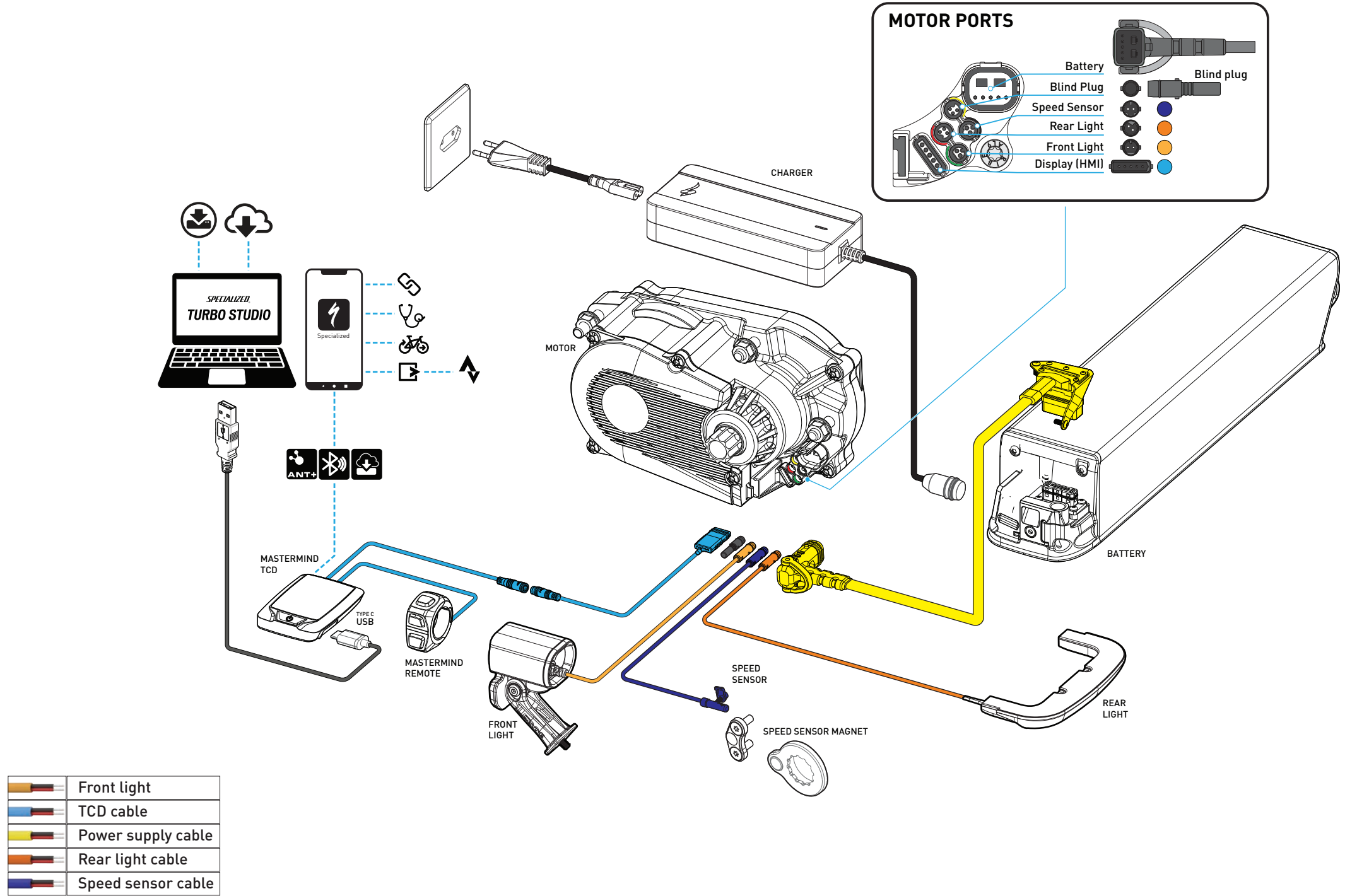
37. WIRING DIAGRAM - VADO DERAILLEUR



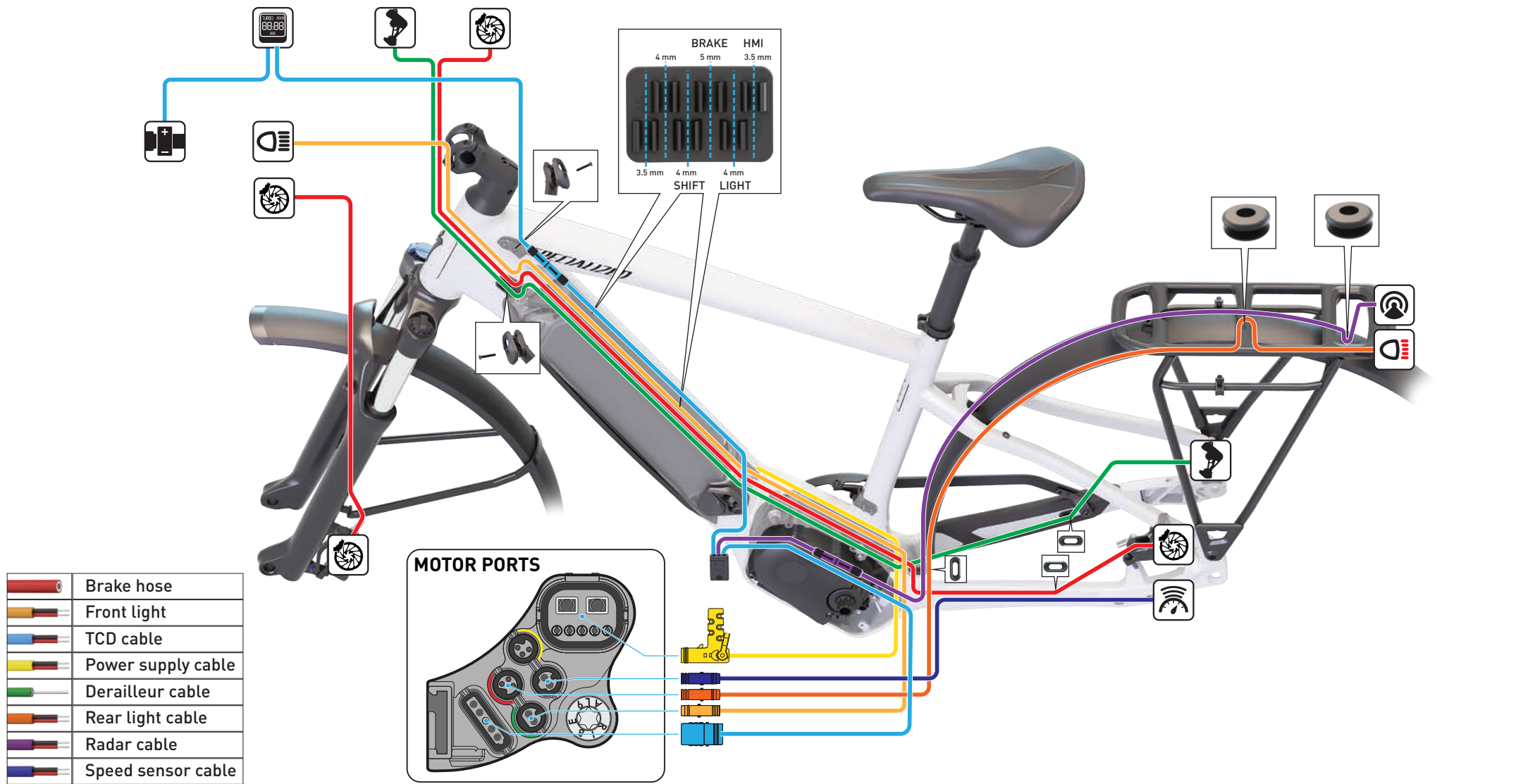
PART NAME	PART NUMBER	NOTES
Wiring - Motor - TCD	S194200010	Connectors are directional
Wiring - Motor - battery	S216800034	
Wiring - Speed sensor	S216800025	
Rear light	S245800001	Use Spinniga tool to release cable from light
Front light	S225800007	Lezyne Power STVZO E115 fork mounted front light

PART NAME	PART NUMBER	SPEC
Blind motor plug	S216800024	For unused motor connectors
Wiring - Rear light	S216800037	

38. SYSTEM DIAGRAM - VADO DERAILLEUR



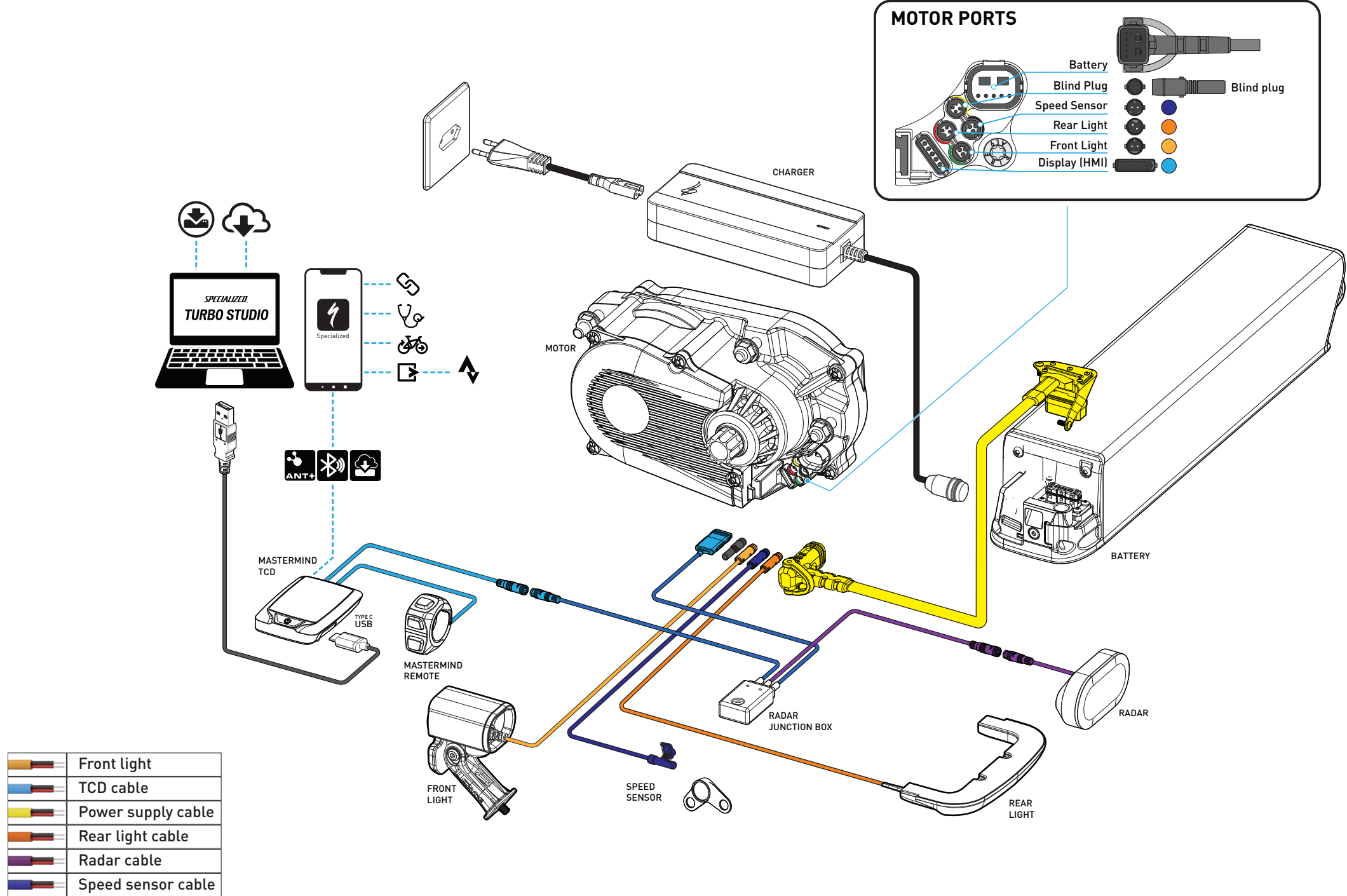
39. WIRING DIAGRAM - VADO DERAILLEUR - RADAR



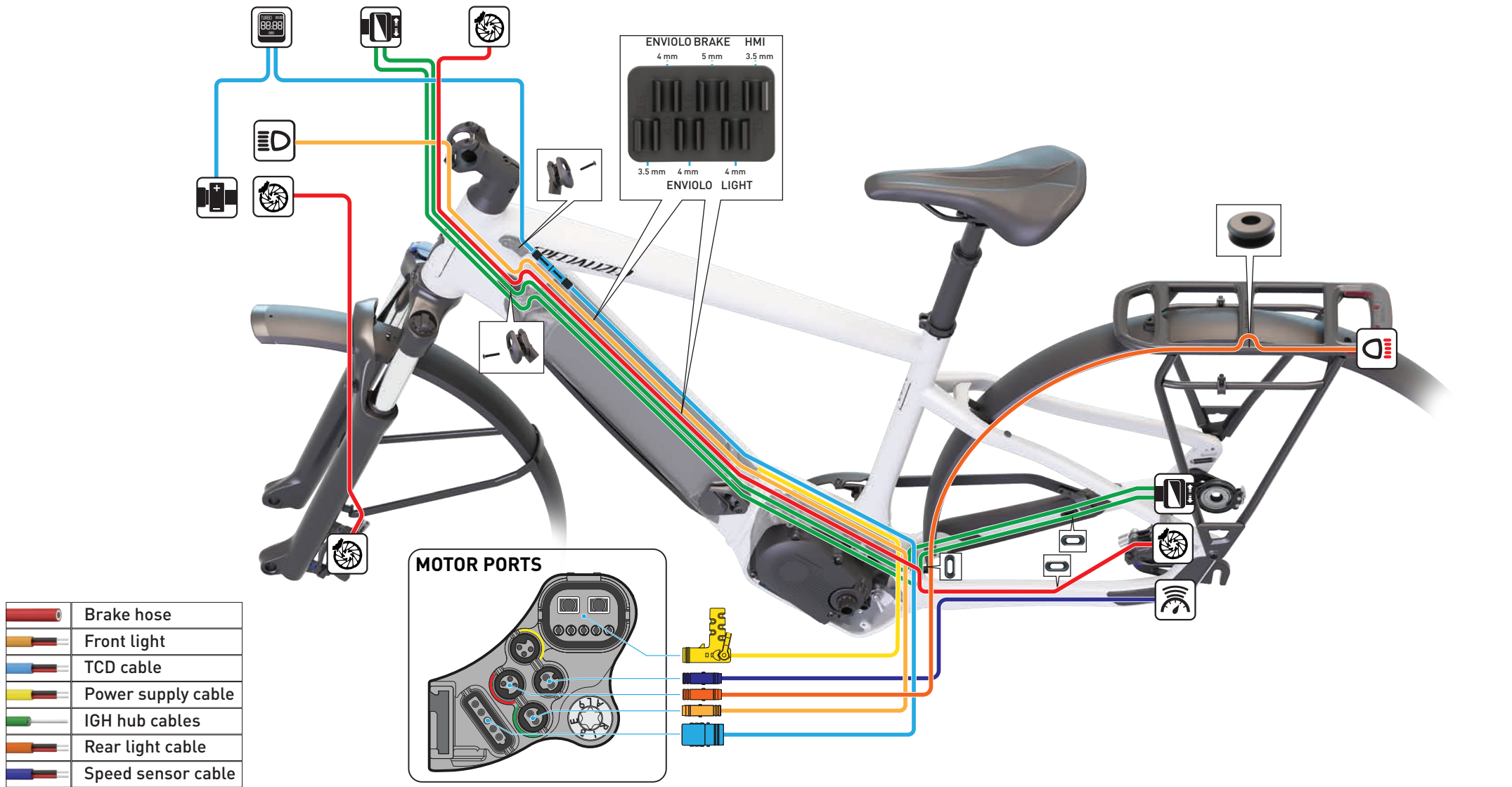
PART NAME	PART NUMBER	NOTES
Wiring - Motor - TCD	S194200010	Connectors are directional
Wiring - Motor - battery	S216800034	
Wiring - Speed sensor	S216800025	
Rear light	S245800001	Use Spinniga tool to release cable from light
Front light	S225800007	Lezyne Power STVZ0 E115 front light

PART NAME	PART NUMBER	NOTES
Wiring - Radar junction box	S216800033	Radar equipped models
Garmin radar	S226800015	Rear rack mounted wired Garmin radar
Blind motor plug	S216800024	For unused motor connectors
Wiring - Rear light	S216800037	

40. SYSTEM DIAGRAM - VADO DERAILLEUR - RADAR



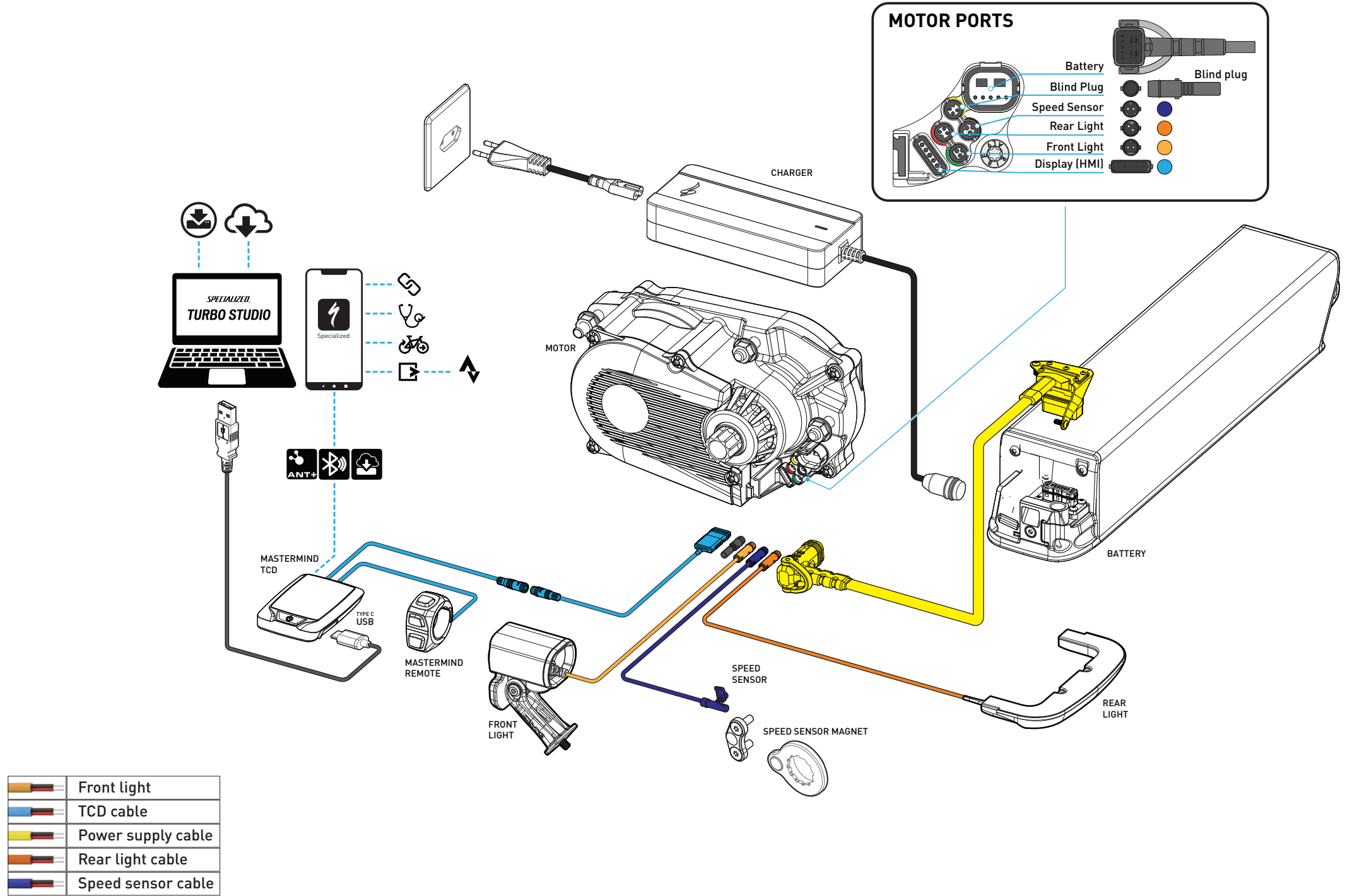
41. WIRING DIAGRAM - VADO IGH MANUAL INTERFACE



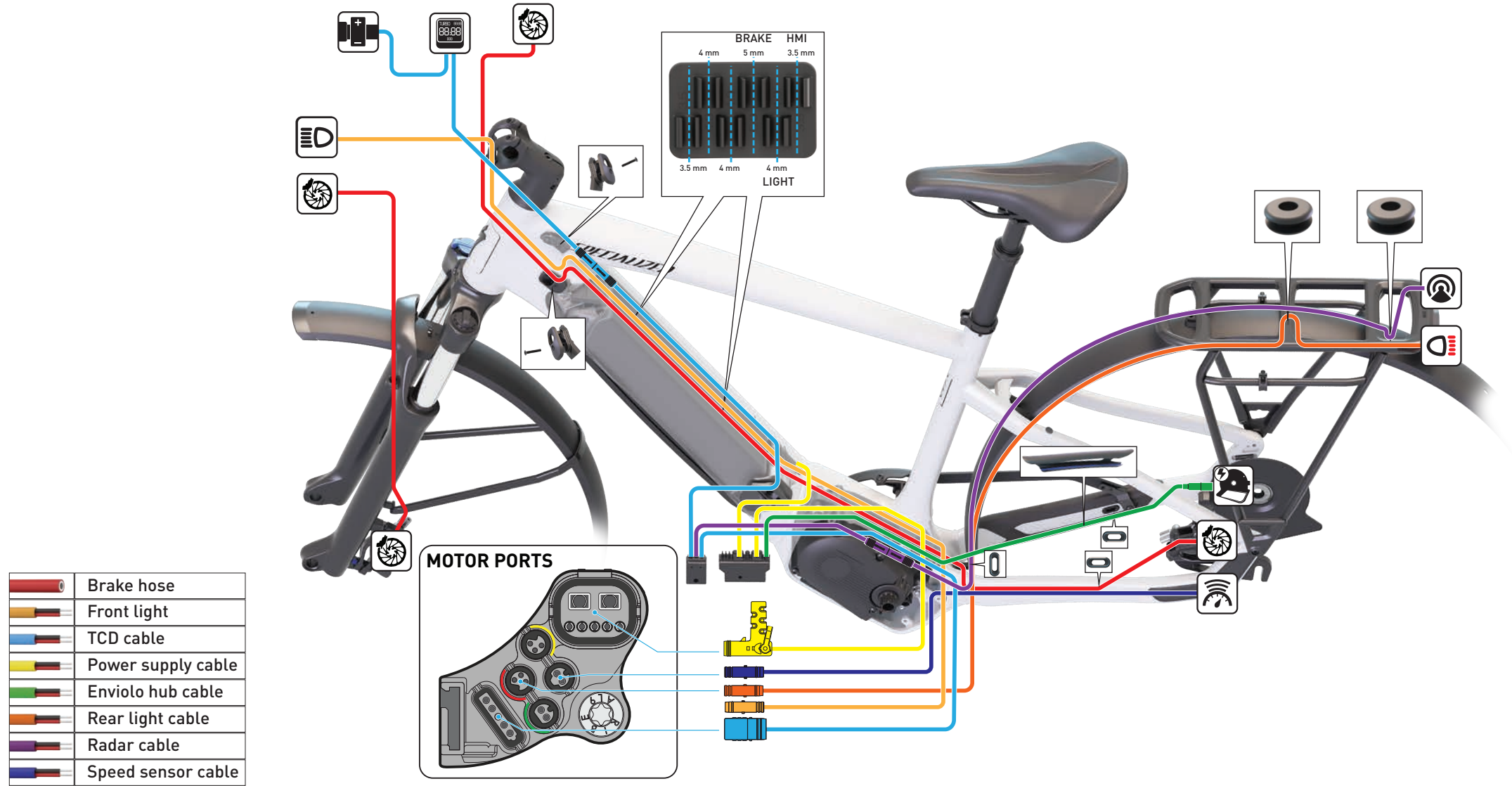
PART NAME	PART NUMBER	NOTES
Wiring - Motor - TCD	S194200010	Connectors are directional
Wiring - Motor - battery	S216800034	
Wiring - Speed sensor	S216800025	
Rear light	S245800001	Use Spinniga tool to release cable from light
Front light	S225800007	Lezyne Power Stvzo E115 fork mounted front light

PART NAME	PART NUMBER	NOTES
Blind motor plug	S216800024	For unused motor connectors
Wiring - Rear light	S216800037	

42. SYSTEM DIAGRAM - VADO IGH MANUAL INTERFACE



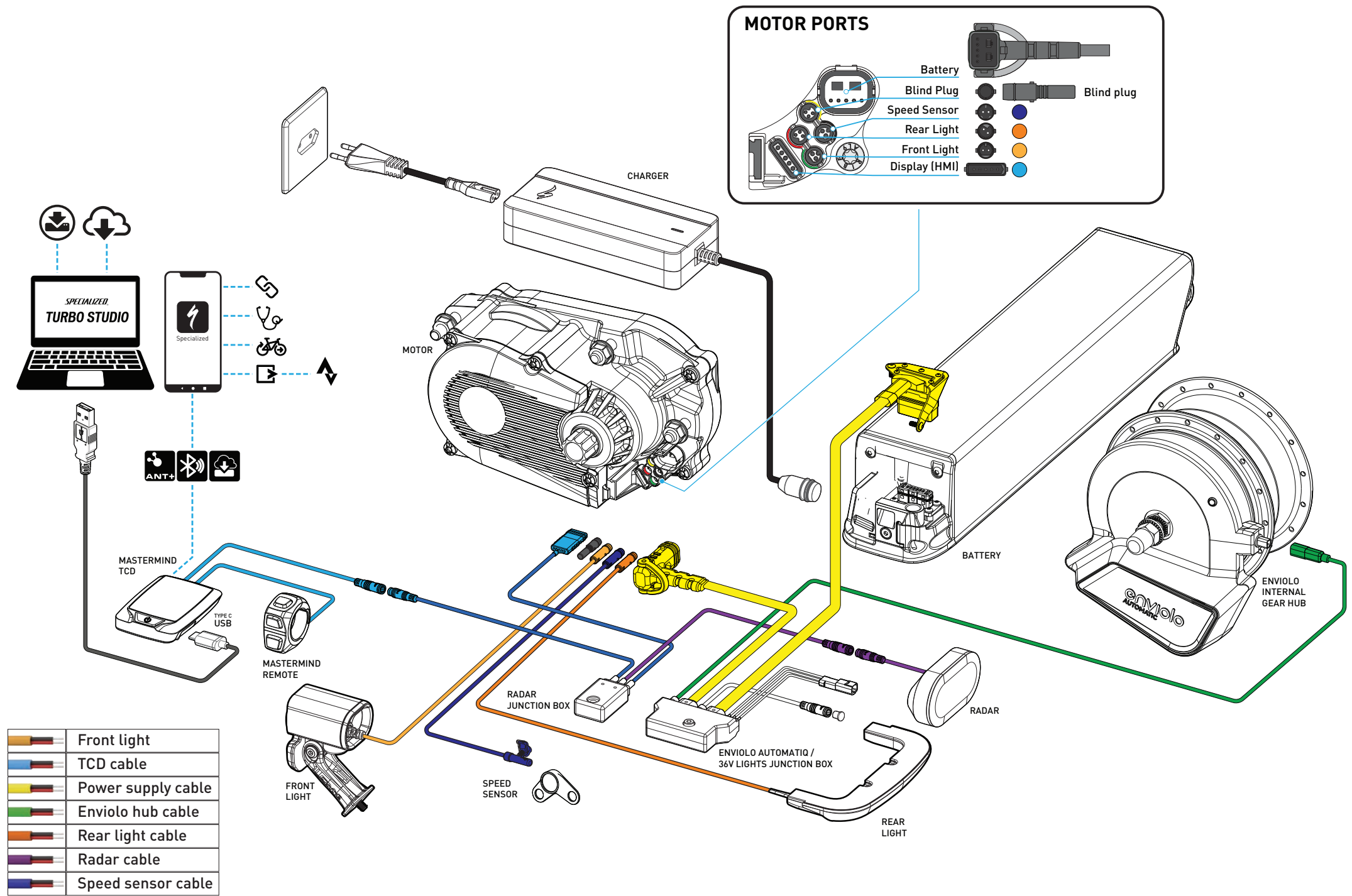
43. WIRING DIAGRAM - VADO IGH AUTOMATIQ - RADAR



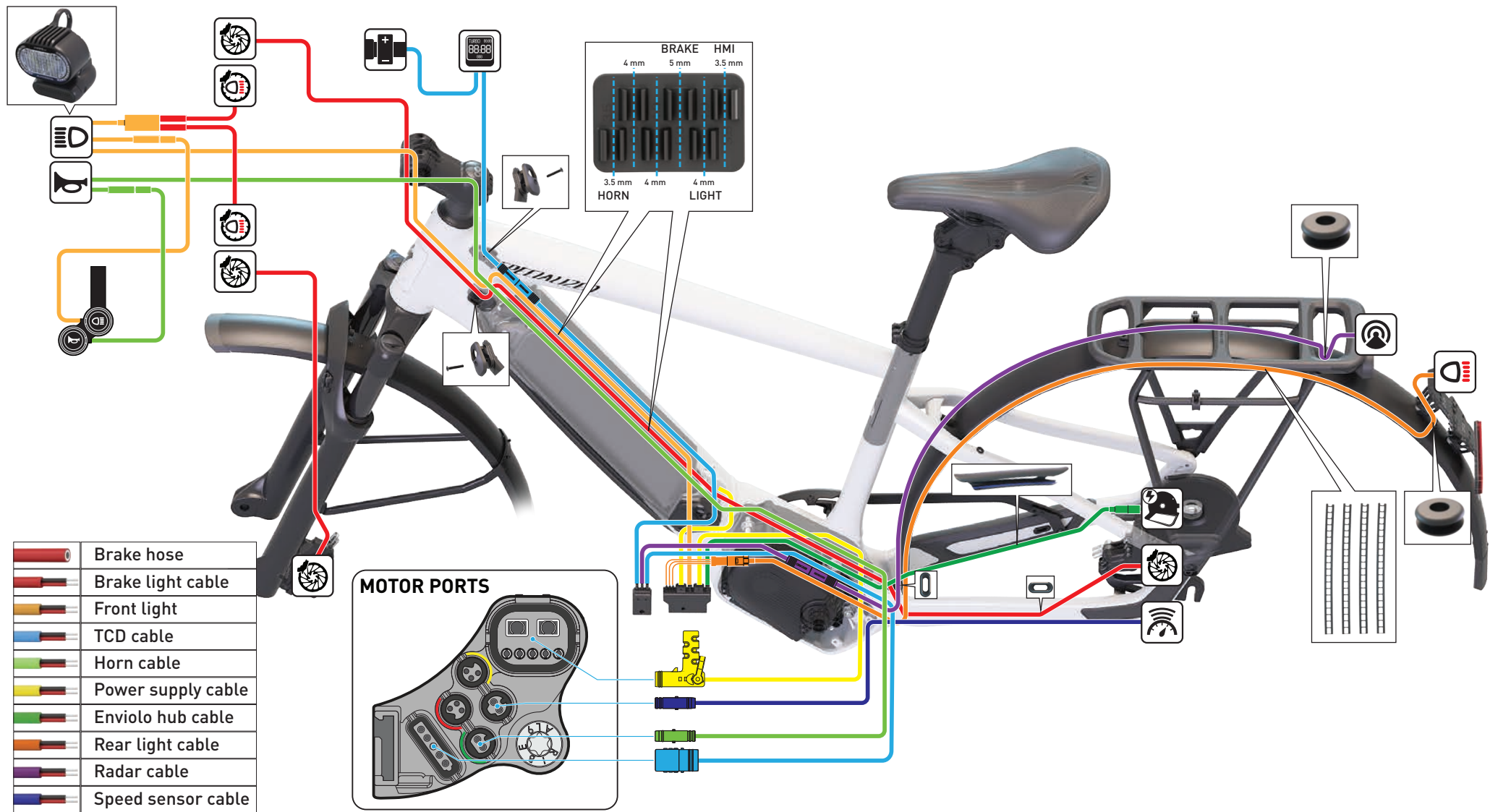
PART NAME	PART NUMBER	NOTES
Wiring - Speed sensor	S216800025	
Rear light	S245800001	Use Spinniga tool to release cable from light
Front light	S225800007	Lezyne Power Stvzo E115 front light
Wiring -Radar junction box	S216800033	Radar equipped models

PART NAME	PART NUMBER	NOTES
Garmin radar	S226800015	Rear rack mounted wired Garmin radar
Wiring - Motor - battery with Enviolo junction box	S216800032	Enviolo cable routed through chainstay guard. Unused connectors should be sealed.
Blind motor plug	S216800024	For unused motor connectors
Wiring - Rear light	S216800037	

44. SYSTEM DIAGRAM - VADO IGH AUTOMATIQ - RADAR



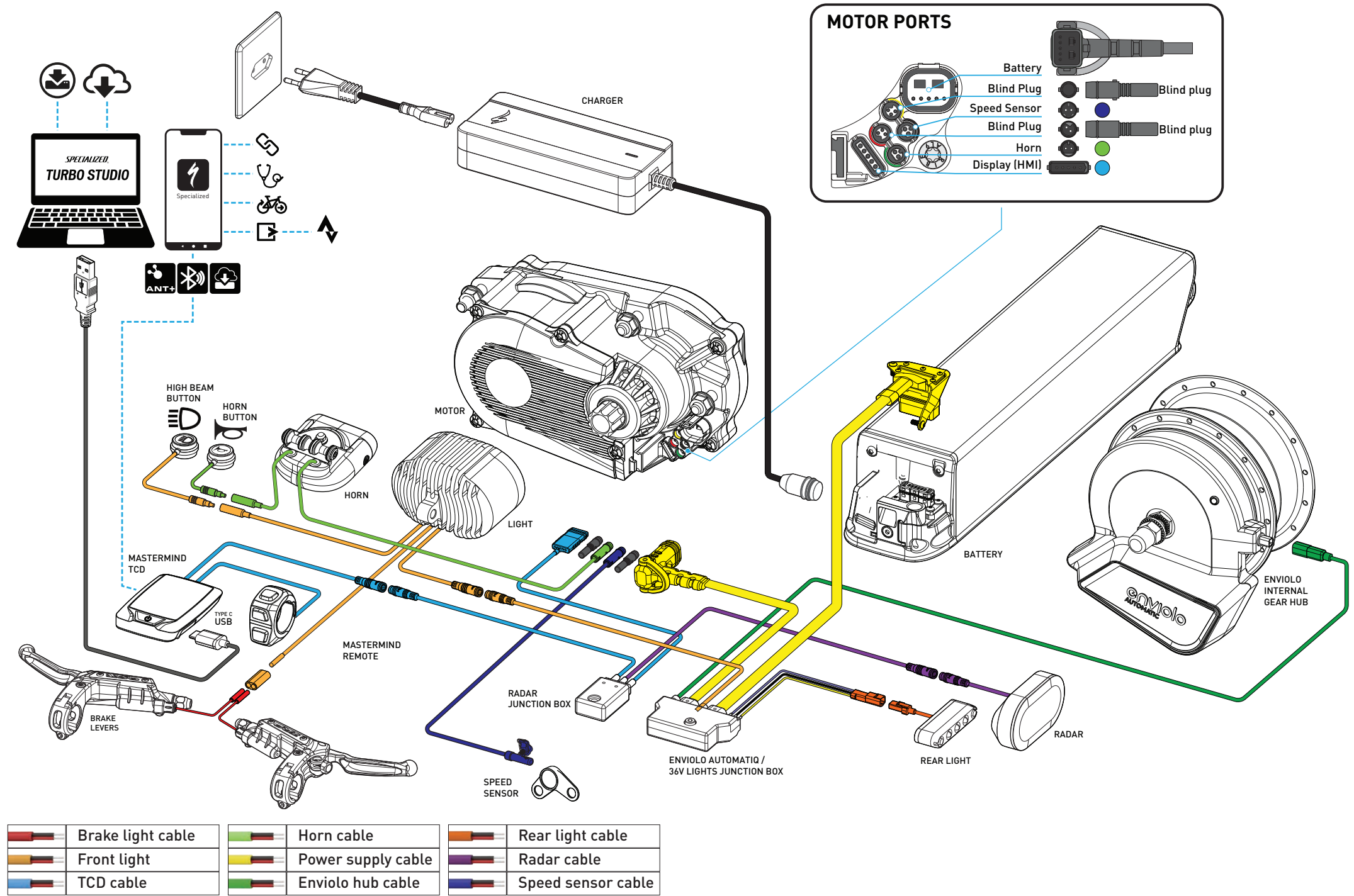
45. WIRING DIAGRAM - VADO S



PART NAME	PART NUMBER	NOTES
Wiring - Speed sensor	S216800025	
Rear light	S215800004	Supernova M99 Pro fender mounted rear light
Front light	S215800003	Custom Supernova M99 Pro S-pedelec front light
Wiring - Radar junction box	S216800033	Radar equipped models
Garmin radar	S226800015	Rear rack mounted wired Garmin radar
Wiring - Motor - battery with Enviolo junction box	S216800032	Cable routed through chainstay guard

PART NAME	PART NUMBER	NOTES
Horn	S226800029	Supernova horn
Blind motor plug	S216800024	For unused motor connectors
Brake light wire junction box	S226800032	Stored in stem cavity

46. SYSTEM DIAGRAM - VADO S



47. SERVICE PARTS LIST

PART NAME	NUMBER	PART SPECIFICATION	PART DESCRIPTION
Battery	98921-5634	Specialized U2-710 Battery (Service-AM) Single pack (SBC-20)	Smaller 530Wh (SBC-19) battery not carried as a Service or AM part
Battery Charge Port Cover	S216800035	ELE MY22 VADO/TERO CHARGE PORT COVER W/ LATCH	Charge port cover with latch
Battery Downtube cover	S219900053	MSC MY22 VADO/TERO DOWNTUBE BATTERY COVER, V2	Single cover for all frames & sizes & capacity batteries
Battery latch mounting hardware	S220500020	BATTERY LATCH & DOWNTUBE SEAL MOUNTING HARDWARE, V2	All models
Battery Lock Cylinder	S226800020	ELE LOCK, VADO/COMO (GEN.2), REPLACEMENT LOCK CORE & KEYS, ABUS X-PLUS	Battery lock cylinder - Abus X Plus
Battery lower Mount with Lock	S226800021	ELE LOCK, VADO/COMO (GEN.2), LOWER BATTERY MOUNT ASSEMBLY, W/ ABUS XPLUS LOCK	Lower battery mount with Abus x plus lock
Battery upper Mount	S236800007	ELE BATTERY, VADO/COMO (GEN.2), UPPER BATTERY MOUNT W/ HARDWARE, V2	Battery mount
Belt Drive	S219900009	MSC MY21 COMO SL BELT, CDX, 122T	Carbon Belt for IGH equipped Models
Front Brakes Vado S	S220700008	BRK TRP, ZURICH (L1E), FRONT, DISC, HYDRAULIC, 4-PISTON, POST MOUNT, FLAT BAR LEVER W/ REACH ADJ. & BRAKE LIGHT WIRE	With brake light wire
Rear Brakes Vado S	S220700009	BRK TRP, ZURICH (L1E), REAR, DISC, HYDRAULIC, 4-PISTON, POST-MOUNT, FLAT BAR LEVER W/ REACH ADJ. & BRAKE LIGHT WIRE	With brake light wire
Cable - Radar Y-Splitter	S216800033	ELE MY22 VADO 5 & S, 3 CABLE Y SPLITTER FOR RADAR	Y-Splitter for Garmin Radar equipped models
Cable - Motor to Battery	S216800034	ELE MY22 VADO/TERO BATTERY TO MOTOR CABLE	For Vado 3.0 4.0 For Como 3.0 4.0 all Tero Models
Cable - Brake light junction box	S226800032	ELE MY23 VADO S, TEKTRO BRAKE LIGHT WIRE JUNCTION BOX	For Vado S only
Chainstay Protector	S216900004	CSP MY22 VADO/TERO CHAINSTAY PROTECTOR, CO-MOLDED	Chainguide cover for all models - Used as cable guide on Automatiq equipped models
Chainguard	S251200009	CHG VADO (GEN.2), CHAIN GUARD KIT, FULL LENGTH, FOR REAR DERAILLEUR EQUIPPED BIKES, W/ HARDWARE (V2)	Chain guard for chain models
Chainguard IGH USA	S251200006	CHG VADO (GEN.2), CHAIN GUARD KIT, FULL LENGTH, FOR GATES IGH BIKES, W/ HARDWARE	Chain guard for IGH models - US market
Chainguard IGH EMEA	S251200003	CHG VADO/COMO (GEN.2), GATES IGH CHAINRING GUARD, 46-50T, PLASTIC, CLIP-ON	Chain guard for IGH models - EMEA market
Chainring	S211400005	CHR VADO, PRAXIS 48T, 104BCD, SINGLE WAVE STYLE 10/11 SPEED, W/ BOLTS	Stock chainring and bolts for all non-IGH models
Chainring Guard 48 t	S211200010	CHG VADO CHAIN GUARD, 48T, PRAXIS	Same as S179900050 Does not include the mounting bolts (S220500002)
Chainring Guard 48 t	S179900050	MSC MY17 VADO 48T PLASTIC BASH GUARD	Same as S211200010 Does not include the mounting bolts (S220500002)
Chainring Mount Screws	S220500002	BLT MY17-MY21 VADO/COMO FOR 40T & 48T PLASTIC	Screws for mounting plastic chainring guard to Praxis Chainring
Chainring IGH Front	S221400005	Gates CDX 50 t - 104 mm bcd	Chainrign for IGH models
IGH Rear sprocket	S221000002	GATES, CT1124VMN, 24T CDX COG, CARBON BELT DRIVE, FOR ENVILO HUB	Rear sprocket for IGH models
Cranks	S211600027	CRK MY22 VADO/TERO FORGED ALLOY, PRAXIS, DRIVESIDE, 170MM	Single length for all models & sizes
Cranks	S211600028	CRK MY22 VADO/TERO FORGED ALLOY, PRAXIS, NON DRIVESIDE, 170MM	Single length for all models & sizes
DS Crank O-ring	S221600011	BROSE DRIVESIDE CRANK SPINDLE SEALING O-RING	Drive side only
Derailleur Hanger	S172600003	HGR MY17 DER HANGER AMAZINGER 2.1	R. Derailleur hanger for all Non-IGH Models
Dropout Cover (IGH)	S219900054	DRO VADO/COMO (GEN.2), DROP OUT COVER KIT FOR IGH FRAMES	DS & NDS sliding drop-out cover kit for IGH equipped models

Fender Front 650B (SRAM)	S212200007	FND MY22 VADO 650B FRONT FENDER SET FOR SRAM FORK	Vado 5.0 models equipped with Sram fork 65C width
Fender Front 650B (Suntour)	S212200008	FND MY22 VADO 650B FRONT FENDER SET FOR SUNTOUR FORK	Vado 3.0 & 4.0 models equipped with SR Suntour fork 65C width
Fender Rear 650B	S212200009	FND MY22 VADO 650B REAR FENDER SET	Vado 3.0 & 4.0 models 65C width
Fender Rear 650B (Garmin)	S212200010	FND MY22 VADO 650B REAR FENDER SET WITH HOLE FOR GARMIN RADAR	Vado 5.0 models equipped with Garmin Radar 65C width
Fender Rear 650B (Vado S)	S212200011	REAR FENDER, 650B, ALLOY, 65MM WIDTH, W/ HOLES FOR WIRED GARMIN RADAR & LICENSE PLATE HOLDER	Vado S
Frame lock kit	S210500016	BLT VADO/COMO (GEN.2), IGH FRAME, DRIVESIDE FRAME COUPLER, W/ BOLTS	For Vado Como
Front light	S225800007	LGT FRONT, LEZYNE, POWER STVZO E115, 310 LUMENS / 12V, FORK MOUNTED, W/ BROSE LIGHT WIRE	All models exluding Vado S
Front light mount (Suntour forks)	S225800009	LGT SUB, LEZYNE, FRONT LIGHT FORK CROWN MOUNT, FOR SUNTOUR MOBIE FORKS, PLASTIC, W/ BOLT	Models with Suntour forks
Front light mount (Sram forks	S225800008	LGT SUB, LEZYNE, FRONT LIGHT FORK ARCH MOUNT, FOR SRAM FORKS, STEEL WIRE	Models with Sram forks
Front light Vado S	S215800003	GT FRONT, VADO S, SUPERNOVA, M99 PRO E32, 1100-1600 LUMENS / 24V, HANDLEBAR MOUNTED, W/ BRAKE LIGHT WIRE (L1E)	Vado S
Front light mount Vado S	S199900079	LGT SUB, MY20 VADO (L1E), SUPERNOVA M99 PRO, FRONT LIGHT HANDLEBAR MOUTNING BRACKET	Vado S
Front light High beam switch	S226800031	ELE MY23 VADO S, SUPERNOVA, M99 PRO E32, HIGH BEAM LIGHT SWITCH (L1E)	Vado S
Handlebar mount for light and horn button	S226800028	ELE MY23 VADO S, SUPERNOVA, HANDLEBAR MOUNTING BRACKET FOR LIGHT HIGHBEAM & HORN SWITCHES (L1E)	Vado S
Junction box - Motor - battery with Enviolo junction box	S216800032	ELE MY22 VADO 5 & S BATTERY TO MOTOR CABLE, ENVILOLO, SUPERNOVA (L1E)	For Vado 5.0 Radar and Vado S models
Horn	S226800029	ELE MY23 VADO S, SUPERNOVA, HORN (L1E)	Vado S - Includes mounting bracket
Horn switch	S226800030	ELE MY23 VADO S, SUPERNOVA, HORN SWITCH (L1E)	Vado S
Garmin Radar Mount	S211700002	CRR MY22 VADO GARMIN RADAR BRACKET WITH HARDWARE	Bracket to mount Garmin Radar on rear Fender - bolts to underside of rear rack for Vado / Como 5.0 OE spec only on Tero 4.0 EQ models
Handlebar (Vado)	S210800012	BAR MY22 VADO JD-MTB556A,31.8MM,BACK SWEEP 15DEG,RISE 46MM,UP SWEEP 5DEG, 680MM	Handlebar equipped on all Vado models
Headset (Vado)	S212500020	HDS COMPLETE, INTEGRATED, 1-1/8" UPPER (45X45), 1.5" LOWER (36X45), W/ SPLIT CROWN RACE (NO TOP COVER) (HS-S-01)	Headset assembly for all models - Does not include Flow-set compatible top cover
Headset (Vado S)	S212500021	HDS COMPLETE, INTEGRATED, 1-1/8" UPPER (45X45), 1.5" LOWER (36X45), 52MM TOP COVER (H2216), W/ CROWN RACE FOR 1.5" TAPERED STEERER (HS-S-02)	Headset assembly for Vado S
Headset Cone Spacer	S154800020	STM MY15 SIRRUS/VITA FLOW-SET STEM CONE SPACER 52MM OD 15MM HEIGHT	52mm OD headset top cover
Headset Stem Spacer	S154800007	STM MY15 TURBO / SIRRUS / VITA FLOW-SET STEM SPACER 10MM	10 mm Flow-set steerer spacer
Headset Stem Spacer	S154800008	STM MY15 TURBO / SIRRUS / VITA FLOW-SET STEM SPACER 5MM	5 mm Flow-set steerer spacer
Headtube Cover	S229900001	MSC MY22 COMO HEADTUBE COVER, LIMESTONE / BLACK REFLECTIVE	
Headtube Cover	S229900002	MSC MY22 COMO HEADTUBE COVER, SAND / BLACK REFLECTIVE	
Headtube Cover	S229900003	MSC MY22 VADO/TERO HEADTUBE COVER, CAST BLACK / SILVER REFLECTIVE	
Headtube Cover	S229900004	MSC MY22 VADO/TERO HEADTUBE COVER, OAK GREEN METALLIC / SMOKE	
Headtube Cover	S229900005	MSC MY22 VADO/TERO HEADTUBE COVER, RED ONYX / SMOKE	
Headtube Cover	S229900006	MSC MY22 VADO/TERO HEADTUBE COVER, RED TINT / SILVER REFLECTIVE	

Headtube Cover	S229900007	MSC MY22 VADO/TERO HEADTUBE COVER, REDWOOD / BLACK	
Headtube Cover	S229900008	MSC MY22 VADO/TERO HEADTUBE COVER, SMOKE / BLACK REFLECTIVE	
Headtube Cover	S229900009	MSC MY22 VADO/TERO HEADTUBE COVER, WHITE MOUNTAINS / BLACK REFLECTIVE	
Headtube Cover	S229900010	MSC MY22 VADO/TERO HEADTUBE COVER, WHITE MOUNTAINS / GUNMETAL	
HUB (Non IGH)	S202100001	FHB BEAR PAWLS, TA, SHIMANO 10-SPD, STEEL, 3 PAWL (HFH-0001) (BMB-0041201A / BEB-51412P1A)	FHB for rear wheel of non-IGH Vado 4.0 & 5.0 Como 4.0 5.0
ICR Routing Kit	S216500008	CBG MY22 VADO/TERO CABLE ROUTING KIT	Cable guide kits for all models
Kickstand	S179900045	MSC MY17 VADO SPECIALIZED REAR 40MM, BLACK, W/ THREADS IN KICKSTAND, W/O BOLTS, W/ PLASTIC FOOT, BLACK	Kickstand used on all models
Kickstand Plate	S219900062	MSC MY22 COMO KICKSTAND HARDWARE KIT	Plate that sits on inside of NDS chainstay to protect the speed sensor cable from the brake rotor. Plate sits between the frame and the kickstand. Used on non-IGH Models
Master mind TCD Handlebar Mount	48119-1405	TURBO CONNECT DISPLAY – MTB MOUNT	31.8mm handlebar mount for MasterMind TCD-w
Master mind TCD Stem Mount	S219900057	STEALTH STEM, MASTERMIND TCD-W 2 DISPLAY STEM MOUNT	Vado S
Mastermind TCD	S216800041	ELE TCD-W 2, WIRED DISPLAY WITH REMOTE	MasterMind TCD
Motor 2.0e (50 Nm) (Vado 3.0)	S216800027	ELE MY22 SPECIALIZED DRIVE C MAG HORIZONTAL, 25KMH	2.0E - 50 Nm Max Torque (E57028) Vado 3.0 models
Motor 2.0 (70 Nm) (Vado 4.0)	S216800028	ELE MY22 SPECIALIZED DRIVE S MAG HORIZONTAL, 25KMH	2.2 - 90 Nm Max Torque (E06855) Vado 5.0 models
Motor 2.2 (90 Nm) (Vado 5.0)	S216800029	ELE MY22 SPECIALIZED DRIVE T MAG HORIZONTAL, 25KMH	2.0 - 70 Nm Max Torque (E57026) Vado 4.0 models
Motor 2.0 (70 Nm) / 28 mph USA spec	S226800003	ELE MY22 SPECIALIZED DRIVE T MAG HORIZONTAL, 28MPH (USA SPEC)	2.0 - 70 Nm Max Torque (G23959) USA Spec Vado 4.0 models
Motor 2.2 (90 Nm) 45 km/h (Vado S)	S216800030	ELE MOTOR, SPECIALIZED TF MAG MOTOR (L1E), CUSTOM RX TUNE (90NM) 45 KMH	2.2 - 90 Nm Max Torque 45 kmh Vado S
Motor Bolts	S210500015	BLT MY22 VADO/TERO MOTOR MOUNTING HARDWARE KIT	For Vado Como Tero
Motor Covers	S219900056	MSC MY22 VADO/TERO MOTOR COVER KIT	DS & NDS motor cover kit, includes bolts
Motor Port Blind Plugs	S216800024	ELE EBIKE BROSE MOTOR LIGHT SOCKETS BLIND PLUGS	Light socket blind plugs (1 pcs per part #)
Rear Light (Rack Integrated)	S245800001	LGT REAR, SPANNIGA COMMUTER GLOW R581001, INTEGRATED RACK MOUNT, W/O WIRE	Rear light integrated into the rear rack. Does NOT include the light wire, that is available separately as S216800037.
Rear Light Vado S	S215800004	LGT MY22 VADO S, REAR LIGHT, SUPERNOVA, M99 PRO, FENDER MOUNTED (L1E)	For Vado S only
Licence plate holder	S199900078	REAR FENDER LICENSE PLATE HOLDER & M99 LIGHT MOUNT, W/ REFLECTOR	For Vado S only
Rear light Cable	S216800037	ELE MY22 VADO/TERO REAR LIGHT CABLE, 12V, 2 WIRES	Rear light wire for Spanniga integrated rear rack light
Rear Rack	S211700003	CRR MY22 VADO REAR RACK W/ HARDWARE	Rear rack w/mount for Spanniga integrated tail-light
Rear hub IGH Automatiq	S221900004	DER ENVIOLLO IGH, REAR, AUTOMATIC HUB INTERFACE, MULTI-TURN, 40T SPLINE, HD COMPATIBLE	Vado 5.0 and Vado S
Rear hub mounting kit	S220500017	ENVIOLLO IGH HUB, AXLE NUTS & ANTI ROTATION WASHERS KIT	IGH models
Rim (Vado)	S213700010	RIM TURBO, 650B, FRONT & REAR, ALLOY, 32H, DISC, 30MM INTERNAL (SD30)- BLACK W/ TURBO DCL	Front & Rear rim for Vado
Seat Collar (Vado Tero)	S184700003	STC MY18 EPIC SEAT COLLAR 34.9 MM WITH TI BOLT	34.9 mm seatpost collar for Vado
Seatpost (Vado Tero)	S214900008	STP SEATPOST ALLOY, 30.9 MM, OFFSET 0MM, 400MM, 2 BOLT CLAMP	Rigid seatpost OE on Vado 3.0 models
Seatpost Suspended	S224900028	STP SUSPENSION SEATPOST, 30.9MM, ALLOY, 400MM, 0MM OFFSET, 2-BOLT CLAMP, 40MM TRAVEL, BLACK	Vado 4.0 and 5.0 models

Seatpost Vado S	S224900037	STP CANECREEK, THUDBUSTER SUSPENSION SEATPOST, 30.9MM, 0MM OFFSET, 375MM LENGTH, BLACK	Vado S
Sliding Dropout Bolts	S216000003	DRO MY22 VADO/TERO DROPOUT SLIDER HARDWARE KIT	Bolts & washers for slider dropouts-IGH models
Sliding Dropout DS	S216000004	DRO MY22 VADO/TERO DROPOUT SLIDER, DRIVESIDE, W/ HARDWARE	DS Slider dropouts-IGH models
Sliding Dropout NDS	S216000005	DRO MY22 VADO/TERO DROPOUT SLIDER, NON DRIVESIDE, W/ HARDWARE	NDS Slider dropouts-IGH models
Speed Sensor Cable	S216800025	ELE LEVO FSR SPEED SENSOR CABLE	Speed sensor cable, all models
Speed Sensor Holder	S246500003	CBG CABLE CLIP, VADO/COMO/TERO (GEN.2), SPEED SENSOR CABLE GUIDE (V2)	Speed sensor holder with bolt
Speed Sensor Magnet 6-Bolt	S216800039	ELE MY22 VADO/TERO SPEED SENSOR MAGNET, 6BOLT	6-bolt speed sensor magnet for all models
Speed Sensor Magnet Centerlock	S226800004	ELE MAGNET, CENTERLOCK SPEED SENSOR MAGNET, LOCK RING (V2)	Centerlock speed sensor magnet - for non IGH models
Spider (IGH)	S211600026	CRK MY22 VADO PRAXIS SPIDER, 104BCD, VERSION C, IGH	IGH equipped models
Spider (Non IGH)	S195100001	CRK MY19 LEVO FSR SPIDER, 104BCD, PA TRAIL FSR D2	Rear derailleur equipped models (Non IGH)
Spider Nut	S166800011	ELE MY16 LEVO ISIS GROOVE NUT	Spider lock-ring for all models Use with either Park Tool BBt-18 or Shimano TL-UN96
Stem Flow-set 60 mm	S154800016	STM MY15 SIRRUS/VITA FLOW-SET STEM 31.8 20 DEG RISE 60MM BLACK	Vado Sizes S / M
Stem Flow-set 75 mm	S154800017	STM MY15 SIRRUS/VITA FLOW-SET STEM 31.8 20 DEG RISE 75MM BLACK	Vado Sizes L / XL
Stem Flow-set stem top cover	S154800020	STM SUB, FLOW-SET STEM, HEADSET TOP COVER, 52MM OD / 15MM TALL	
Flow-set stem spacer 10 mm	S154800007	STM SUB, FLOW-SET STEM, 10MM HEADSET SPACER	
Flow-set stem spacer 5 mm	S154800008	STM SUB, FLOW-SET STEM, 5MM HEADSET SPACER	
Stem Stealth 60 mm	S194800002	STM MY20 VADO DA-264,31.8MM, L 60MM, 14 DEG	Vado S sizes S / M
Stem Stealth 70 mm	S194800003	STM MY20 VADO DA-264,31.8MM, L 75MM, 14 DEG	Vado S sizes L
Stem Stealth 90 mm	S194800004	STM MY20 VADO DA-264,31.8MM, L 90MM, 14 DEG	Vado S sizes XL
Thru Axle - Rear	S170200003	AXL THROUGH AXLE, JD JD-QR43, 7075-T73 AXLE W/C6801 WASHER, REAR, 148MM SPACING, 172MM LENGTH, 12MM	Non-IGH models
IGH Snubber	S231900002	DER SUB, ENVILOLO IGH REAR HUB, BELT SNUBBER ASSEMBLY	IGH models with manual interface
Wheel Front (SRAM)	S215500024	WHL TURBO, 650B, FRONT, ALLOY, TA, 15X110MM, DISC, 6-BOLT, 32H	Front wheel for SRAM Fork equipped models
Wheel Front (Suntour)	S215500023	WHL TURBO, 650B, FRONT, ALLOY, TA, 15X100MM, DISC, 6-BOLT, 32H	Front wheel for SR Suntour Fork equipped models
Wheel Rear (Enviolo City)	S225500001	WHL COMO/VADO IGH REAR, EVIOLLO CT, 650B, 32H, DISC 6-BOLT, 135MM SPACING	Rear wheel with Enviolo City rear hub - 3.0 IGH Models
Wheel Rear (Enviolo HD)	S225500002	WHL COMO/VADO IGH REAR, EVIOLLO HD, 650B, 32H, DISC 6-BOLT, 135MM SPACING	Rear wheel with Enviolo Heavy Duty rear hub - 5.0 IGH Models
Wheel Rear (Enviolo Automatiq)	S225500003	WHL COMO/VADO IGH REAR, EVIOLLO TR, 650B, 32H, DISC 6-BOLT, 135MM SPACING	Rear wheel with Enviolo Trekking rear hub - 4.0 IGH Models
Wheel Rear (Non IGH)	S215500022	WHL TURBO, 650B, REAR, ALLOY, TA, 12X148MM, DISC, 6-BOLT, 32H, SHIMANO 11-SPD FHB	Rear wheel for non-IGH models