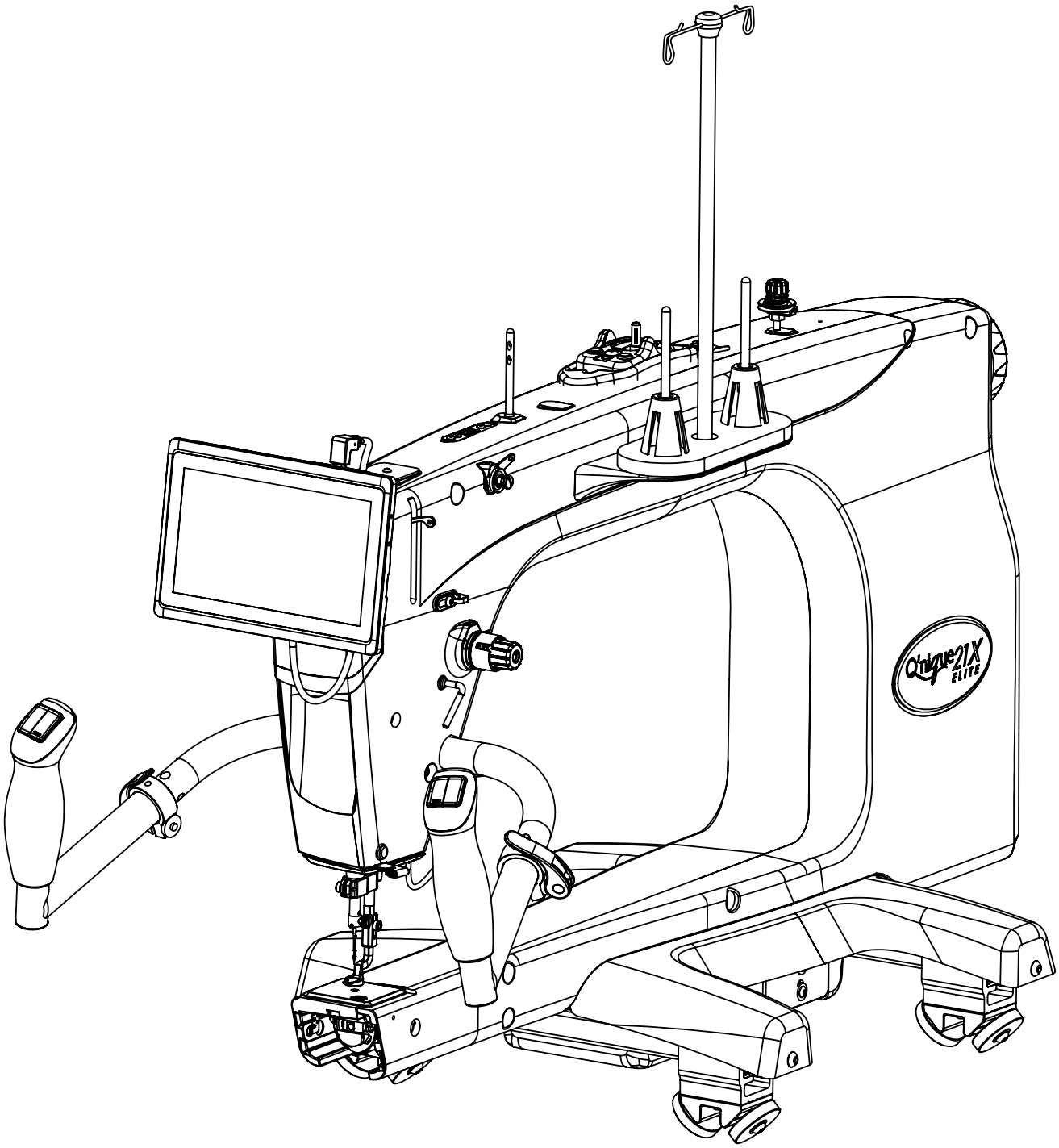
Q'nique® 21X ELITE

Exploded Views



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Revision 1.0

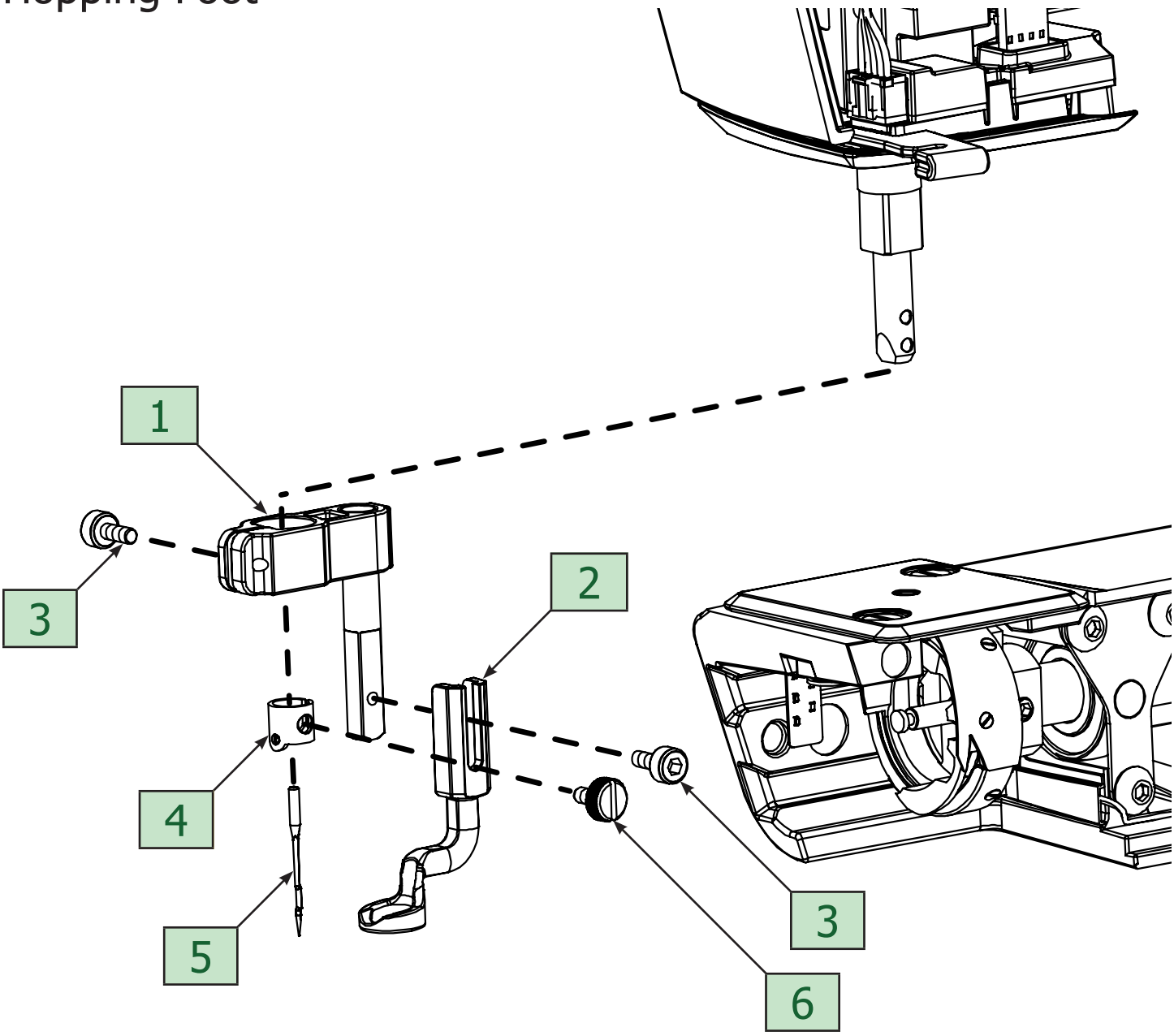
Grace COMPANY

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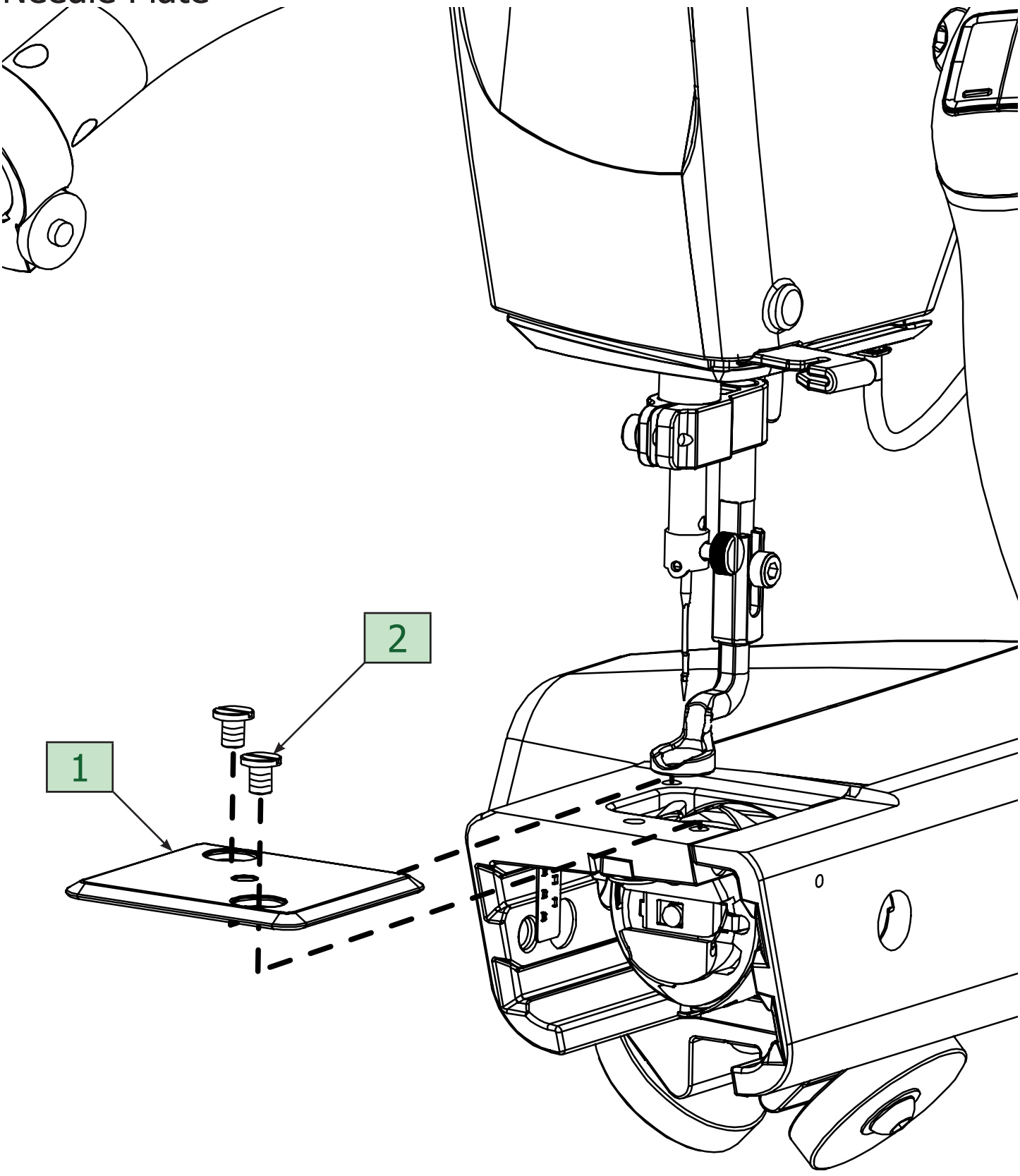
Peripherals

Needle
Hopping Foot



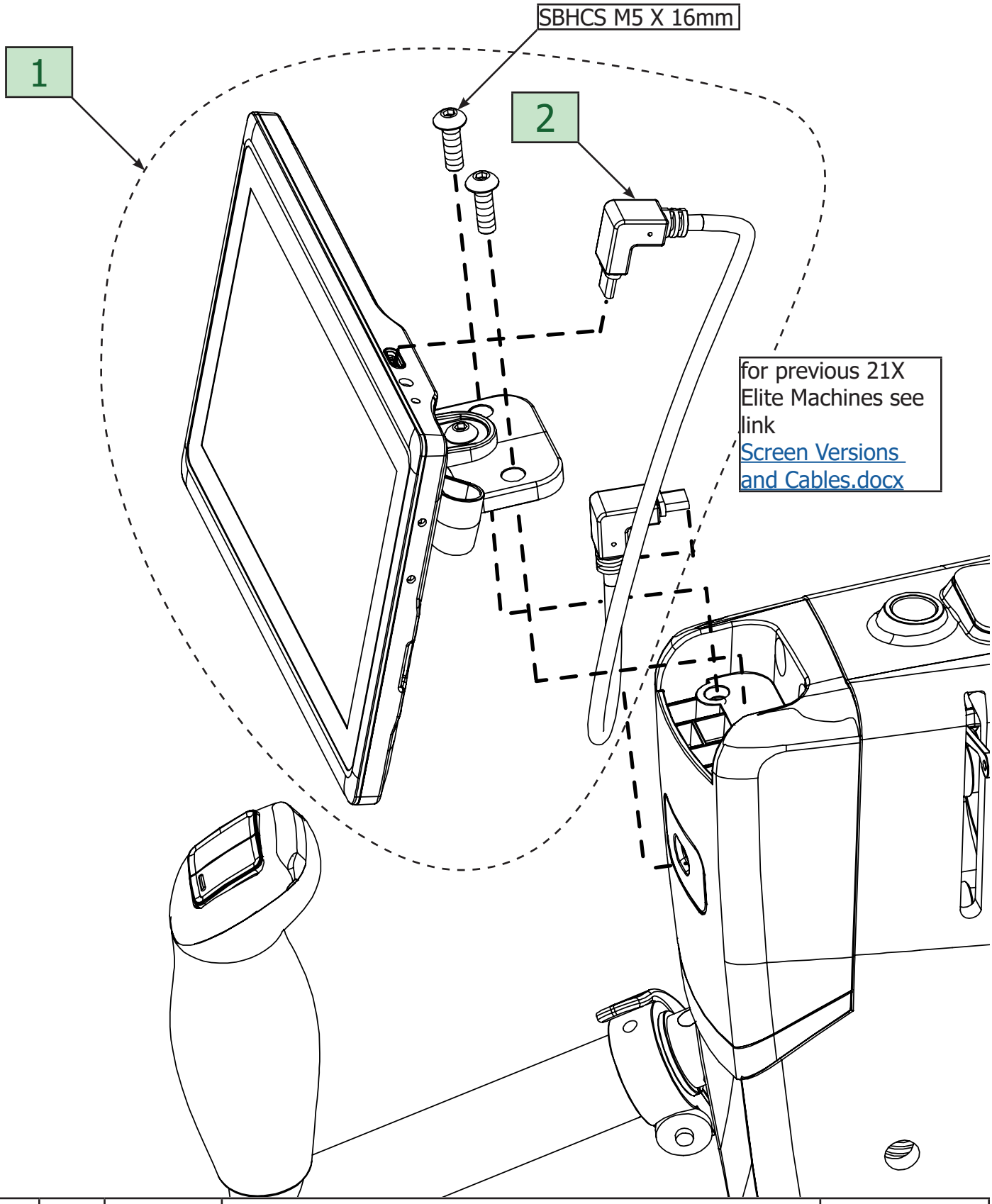
Item	QTY	Part #	Description	Serviceability
1	1	04-15480	Hopping Foot Collar	CU
2	1	04-10057	Standard Hopping Foot	CU
3	2	03-10966	SHCS Hopping Foot M3 X 8mm	CU
4	1	04-10039	Needle Bar Thread Guide	CU
5	1	08-11144	Needle #16	CU
6	1	03-15109	Slotted Thumb Screw M3 X 4mm	CU

Needle Plate



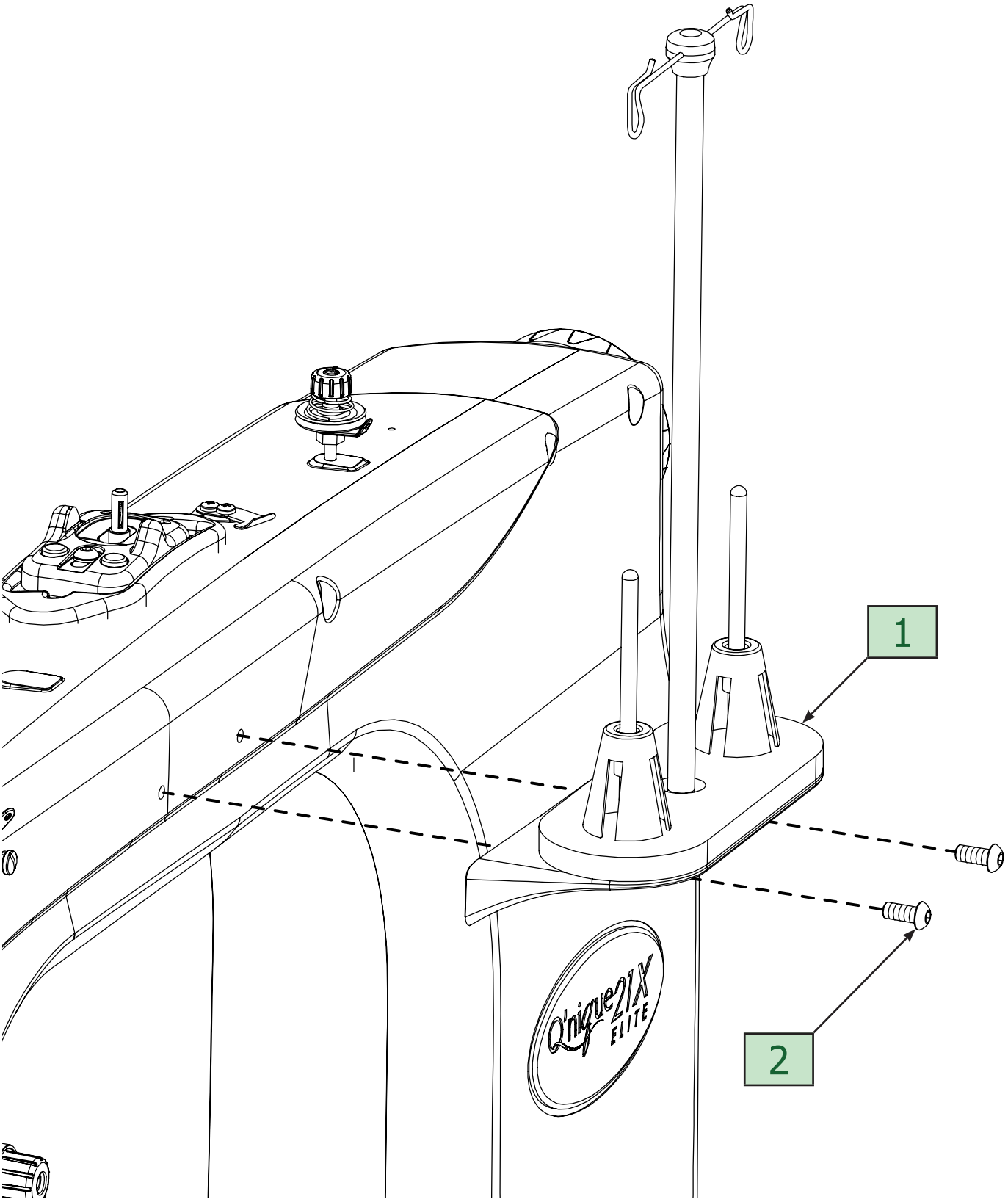
Item	QTY	Part #	Description	Serviceability
1	1	04-11916	Needle Plate v2	CU
2	2	03-10005	Needle Plate Screw Ø4.36 X 5.85mm	CU

7-inch Display



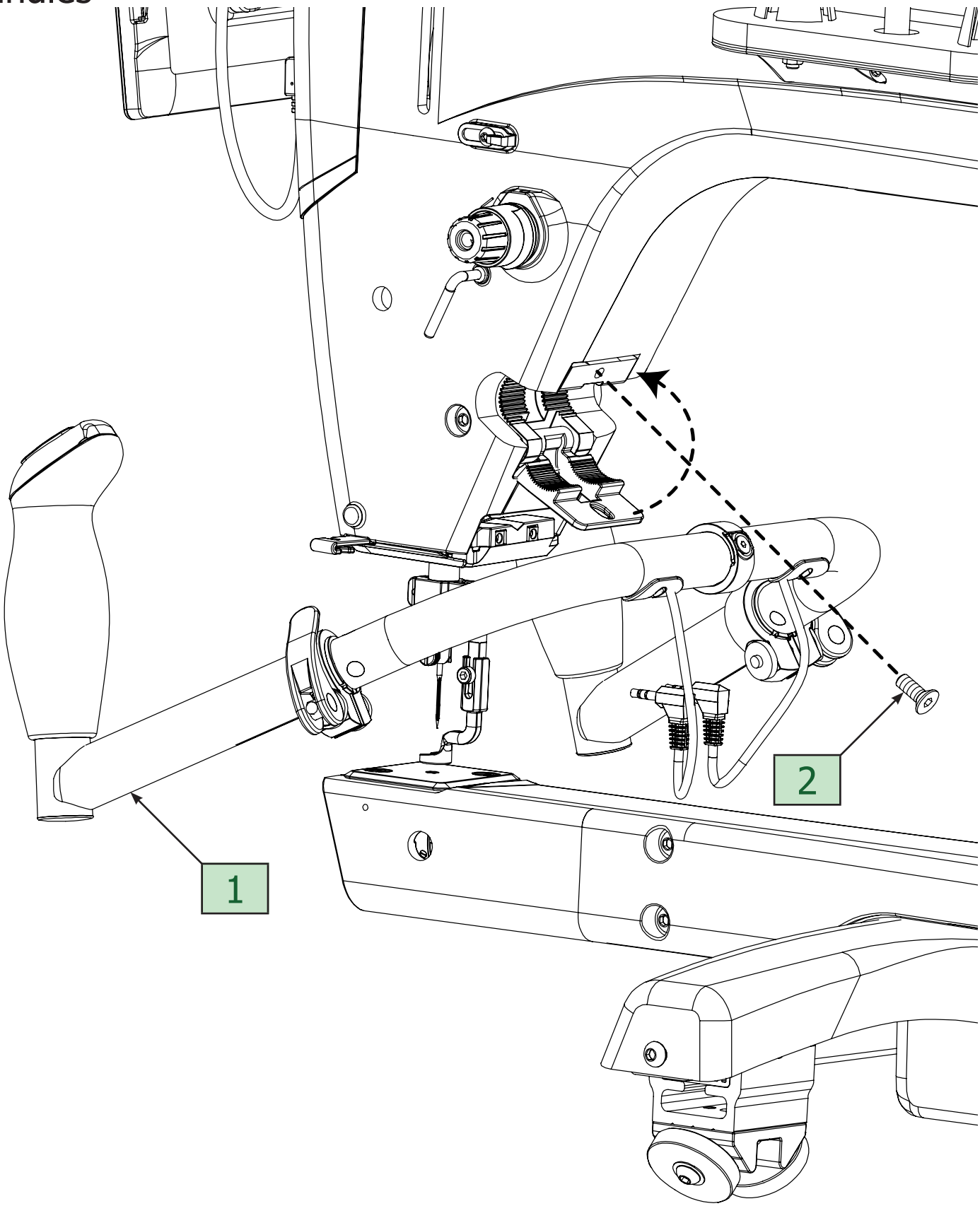
Item	QTY	Part #	Description	Serviceability
1	1	09-18972	7” Display Box Assembly v2	CU
2	1	02-18854	7-inch Display USB-C Cable 200mm	CU

Thread Stand



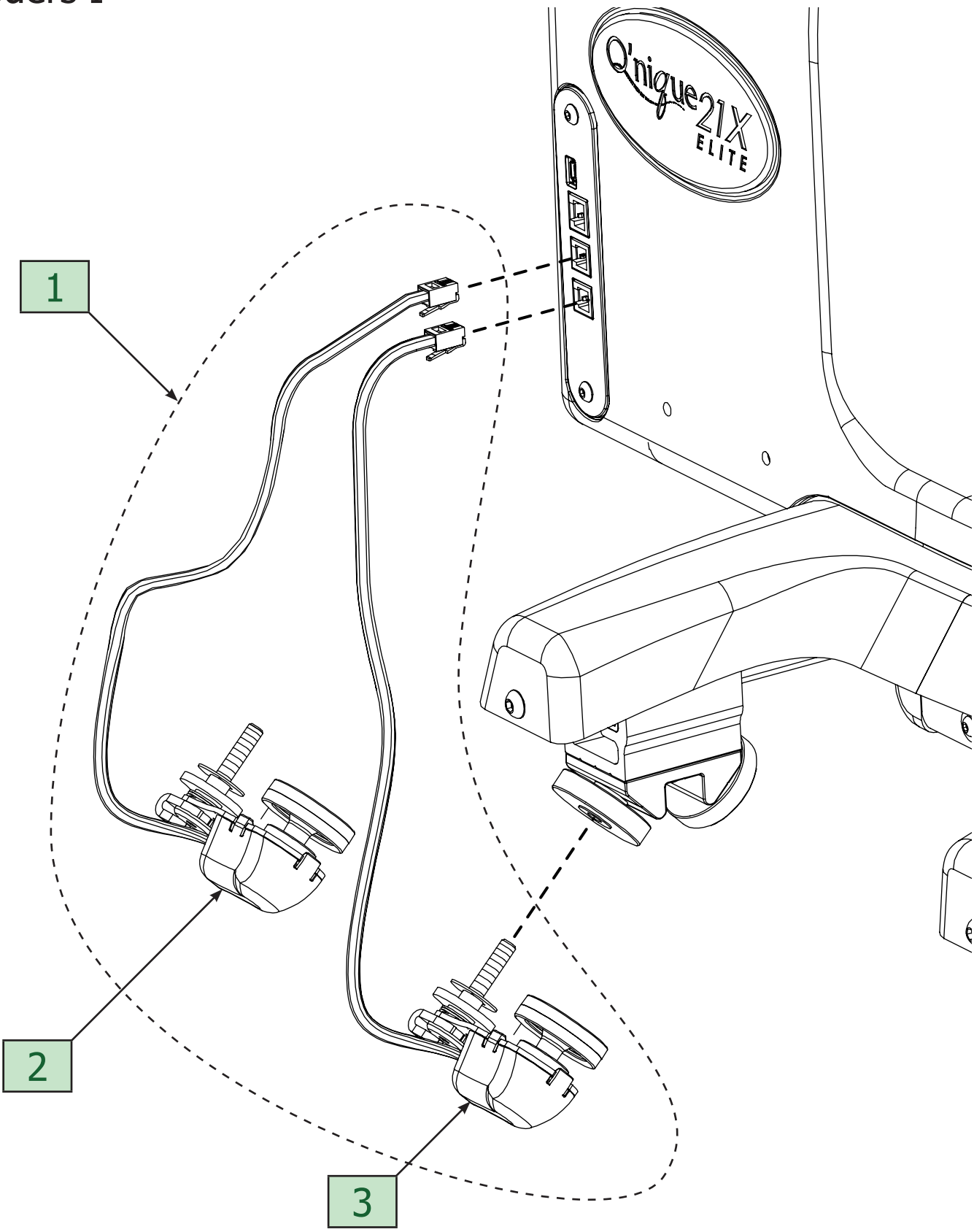
Item	QTY	Part #	Description	Serviceability
1	1	09-16355	Thread Stand Assembly	CU
2	1	03-10221	SBHCS M6 X 14mm (Socket Button Head Cap Screw)	CU

Handles



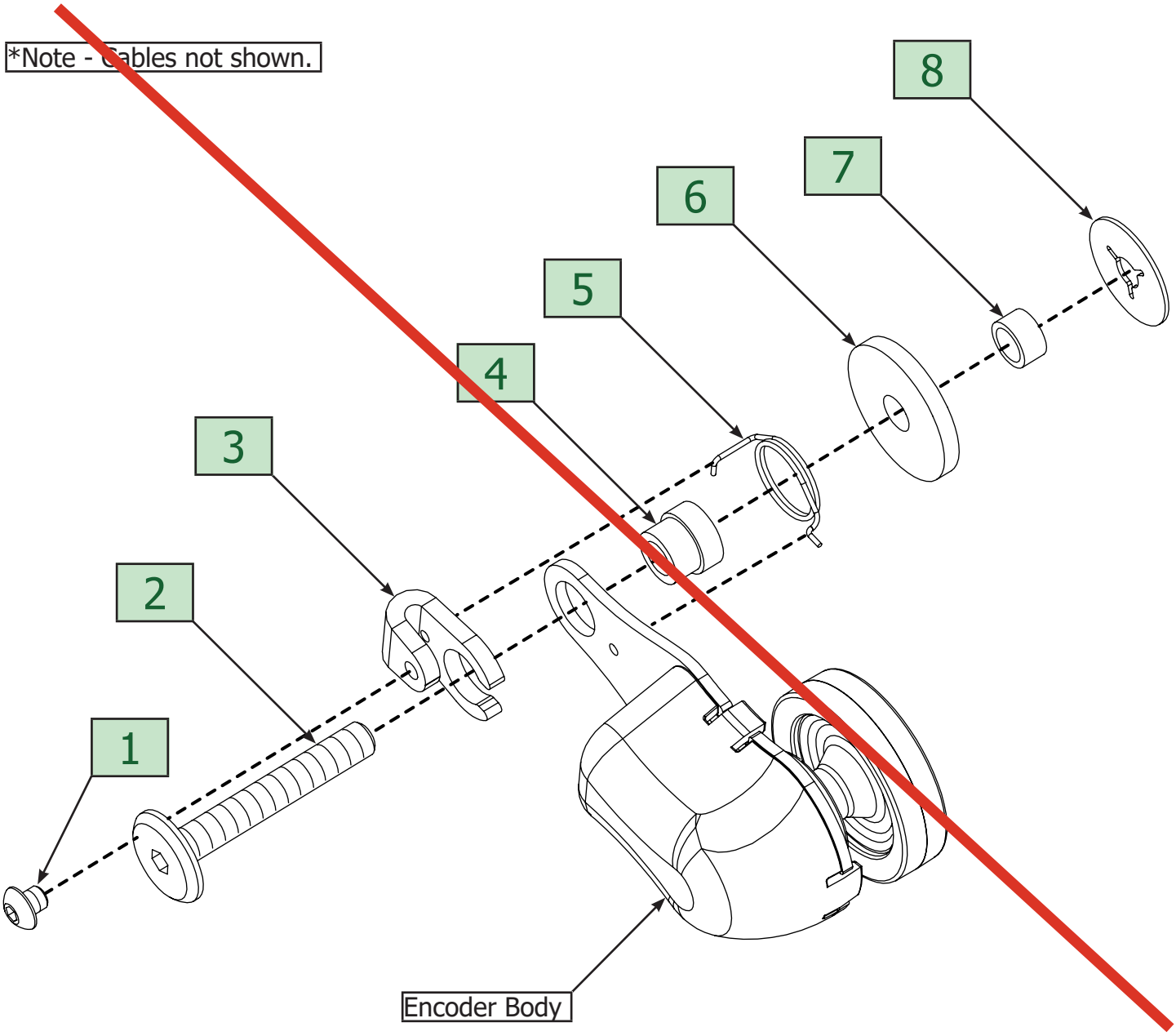
Item	QTY	Part #	Description	Serviceability
1	1	09-18927	Handle Assembly	CU
2	1	03-11741	Socket FHS M6 X 16mm (Flat Head Screw)	CU

Encoders I



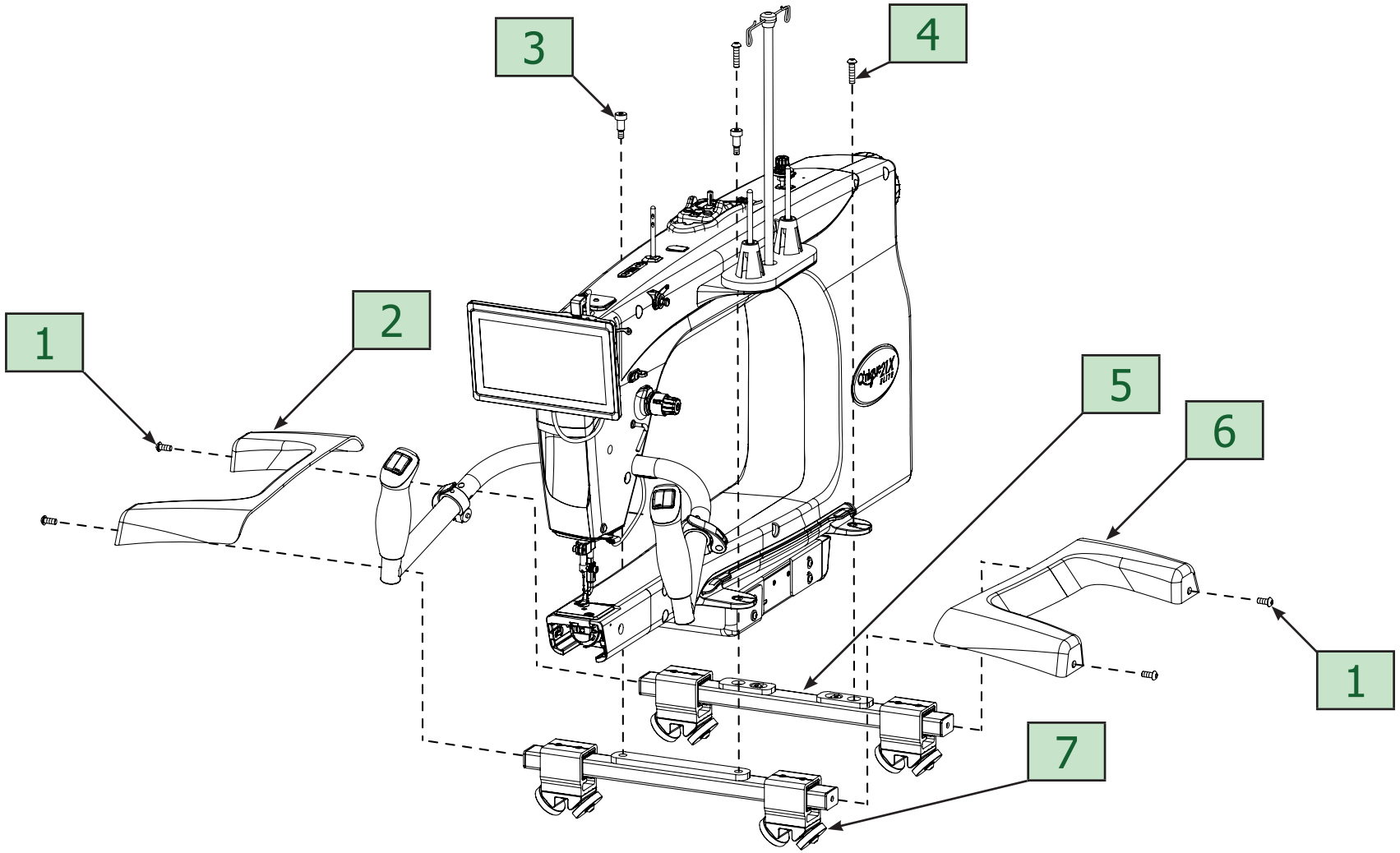
Item	QTY	Part #	Description	Serviceability
1	1	09-15034	Encoders Box	CU
2	1	09-15700	Lower Encoder v5	CU
3	1	09-15701	Upper Encoder v5	CU

Encoder Parts



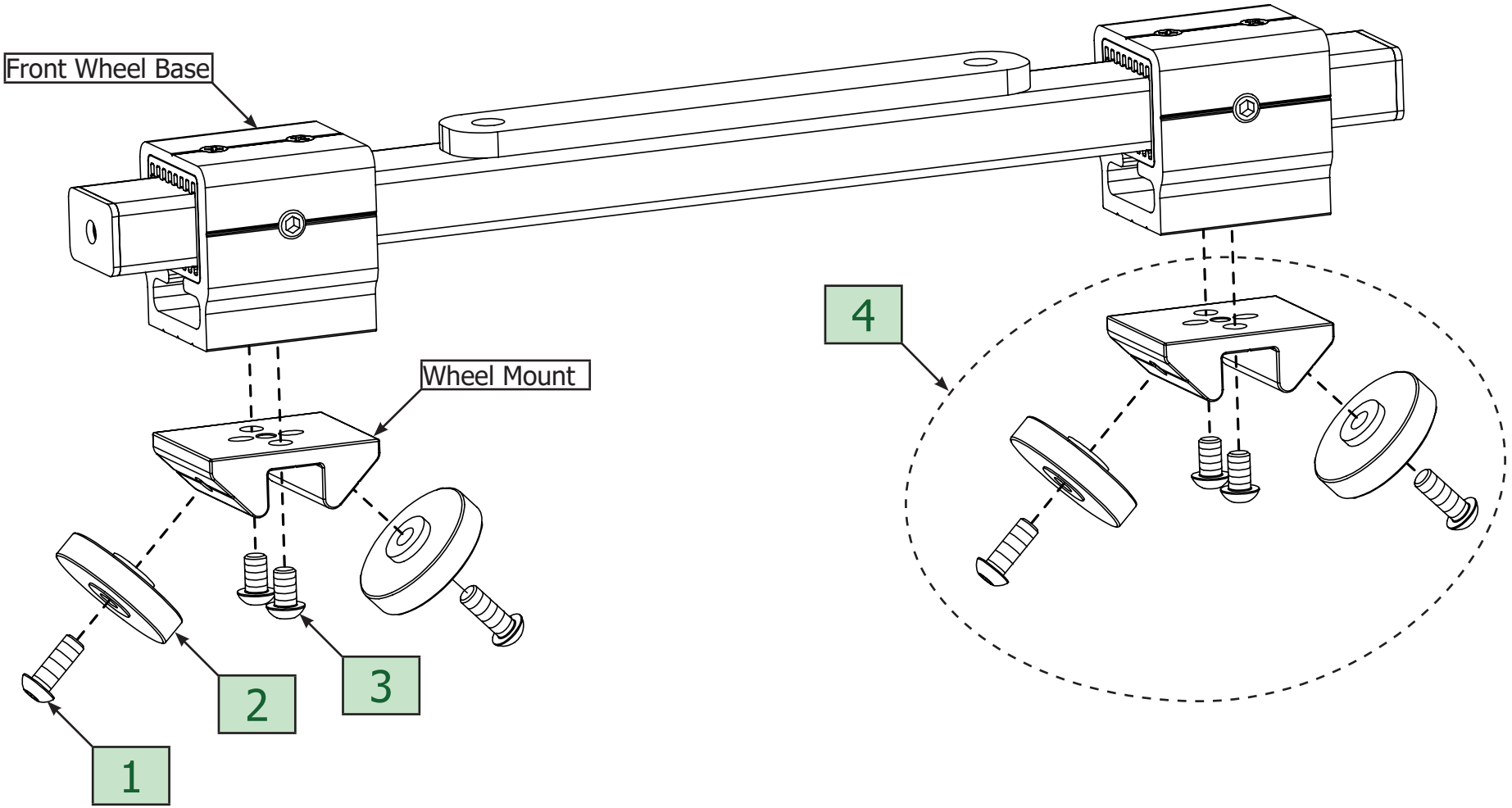
Item	QTY	Part #	Description	Serviceability
1	1	03-11602	SBHCS M4 X 4mm	CU
2	1	03-14354	Connector Bolt M6 X 40mm	CU
3	1	04-11263	Encoder Disk Brake Collar	CU
4	1	03-10988	Encoder Spacer	CU
5	1	03-10671	Encoder Torsion Spring (Black) (for lower encoder) or	CU
5	1	03-10216	Encoder Torsion Spring (Silver) (for upper encoder)	CU
6	1	03-10979	Washer M6, Wide	CU
7	1	03-11258	Wheel Spacer	CU
8	1	05-11461	Plastic Retaining Washer M6	CU
9	1	02-10605	Encoder Cable, 550 L (for lower encoder) or	CU
9	1	02-10606	Encoder Cable, 300 L (for upper encoder)	CU

Wheel Bases and Wheel Covers



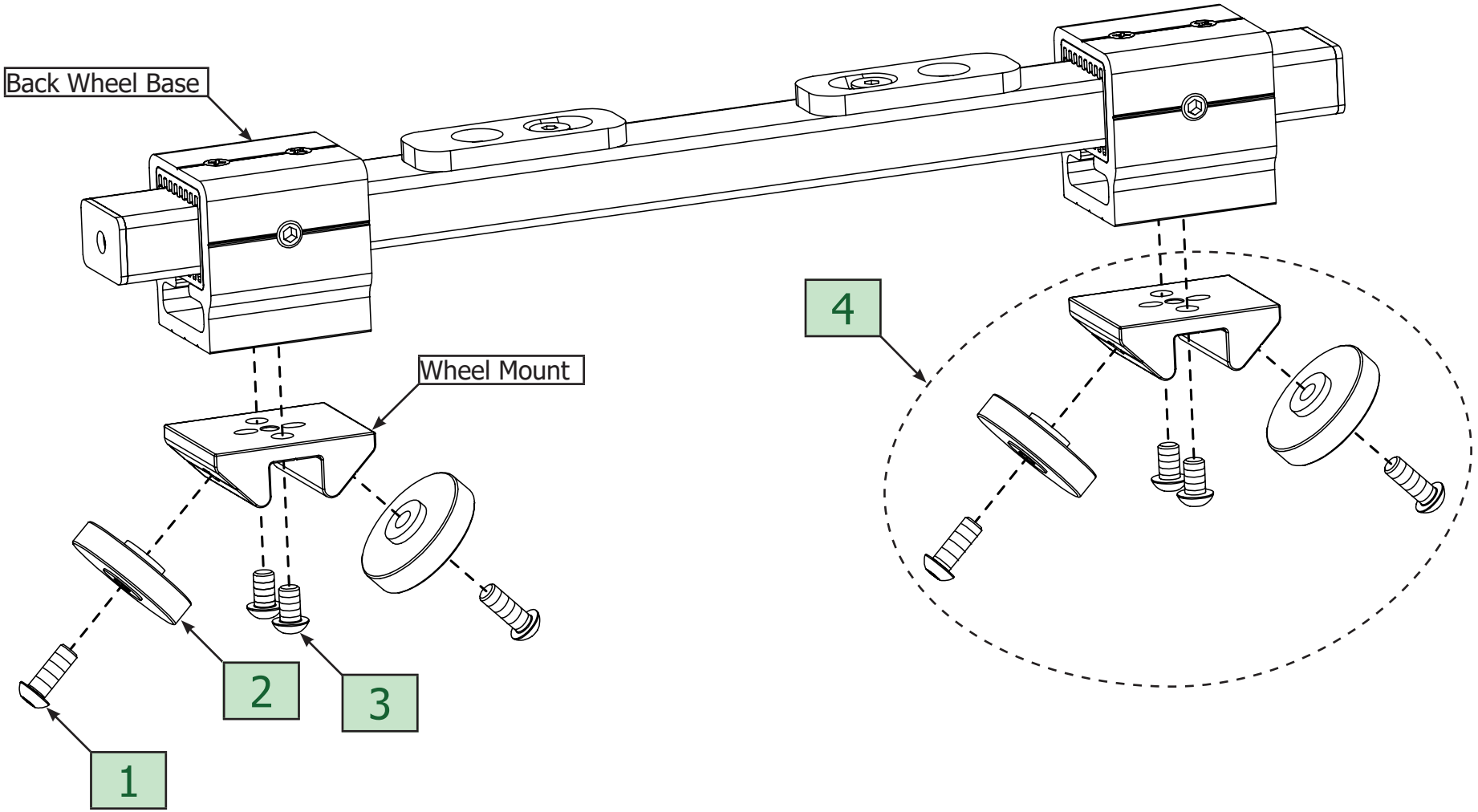
Item	QTY	Part #	Description	Serviceability
1	4	03-10221	SBHCS M6 X 14mm (Socket Button Head Cap Screw)	CU
2	1	09-16098	Left Wheel Cover (part of Wheel Covers Box Assembly)	CU
3	2	03-12292	Shoulder Bolt 8 X 13mm, M6	CU
4	2	03-10215	SBHCS M6 X 25mm (Socket Button Head Cap Screw)	CU
5	1	09-13185	Back Wheel Base Assembly	CU
6	1	09-16098	Right Wheel Cover (part of Wheel Covers Box Assembly)	CU
7	1	09-13184	Front Wheel Base Assembly	CU

Front Wheel Base Assembly



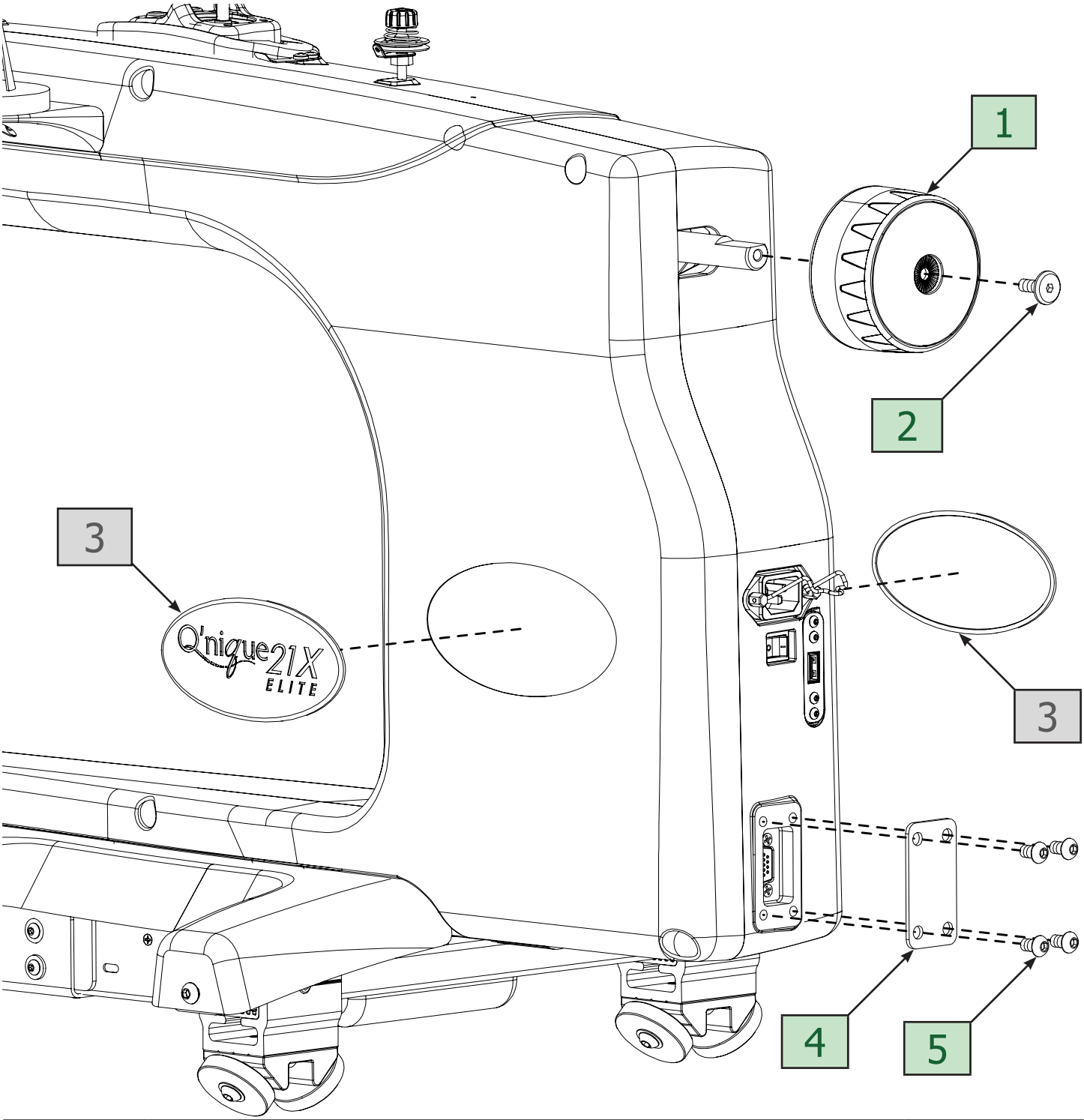
Item	QTY	Part #	Description	Serviceability
1	4	03-10974	SBHCS M6 X 16mm (Socket Button Head Cap Screw)	CU
2	4	03-10126	Wheel Bearing	CU
3	4	03-10124	SBHCS M6 X 10mm (Socket Button Head Cap Screw)	CU
4	2	09-13484	Dual Wheel Mount Assembly	CU

Back Wheel Base Assembly



Item	QTY	Part #	Description	Serviceability
1	4	03-10974	SBHCS M6 X 16mm (Socket Button Head Cap Screw)	CU
2	4	03-10126	Wheel Bearing	CU
3	4	03-10124	SBHCS M6 X 10mm (Socket Button Head Cap Screw)	CU
4	2	09-13484	Dual Wheel Mount Assembly	CU

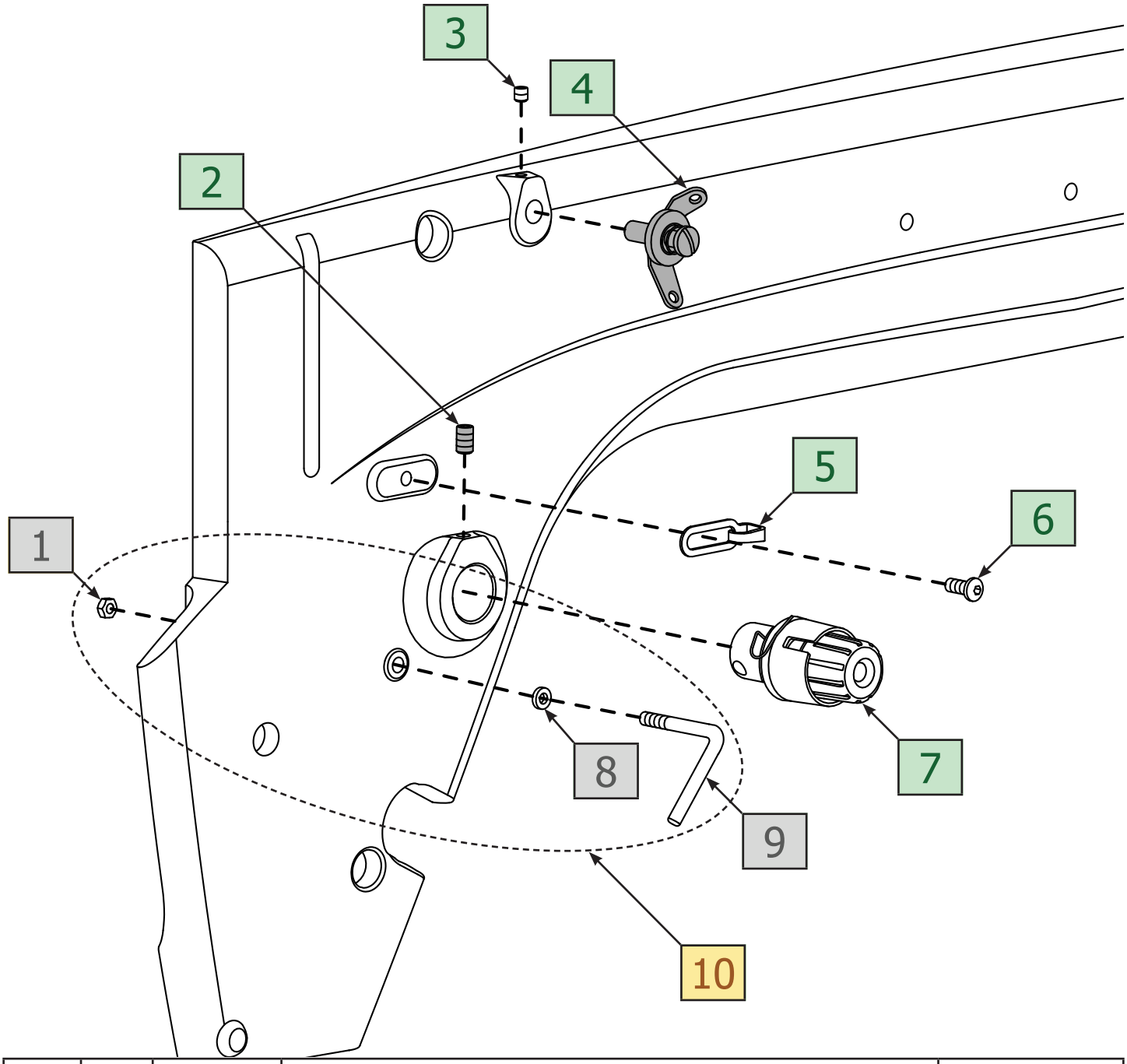
Handwheel
Logo Plate
Back Handle Cover



Item	QTY	Part #	Description	Serviceability
1	1	05-18774	Handwheel v2	CU
2	1	03-12351	Connector Bolt M6 X 16mm	CU
3	2	08-14299	Logo Plate	GR
4	1	04-10217	Back Handle Cover	CU
5	4	03-10124	SBHCS M6 X 10mm	CU

Thread Guides and Tensioners

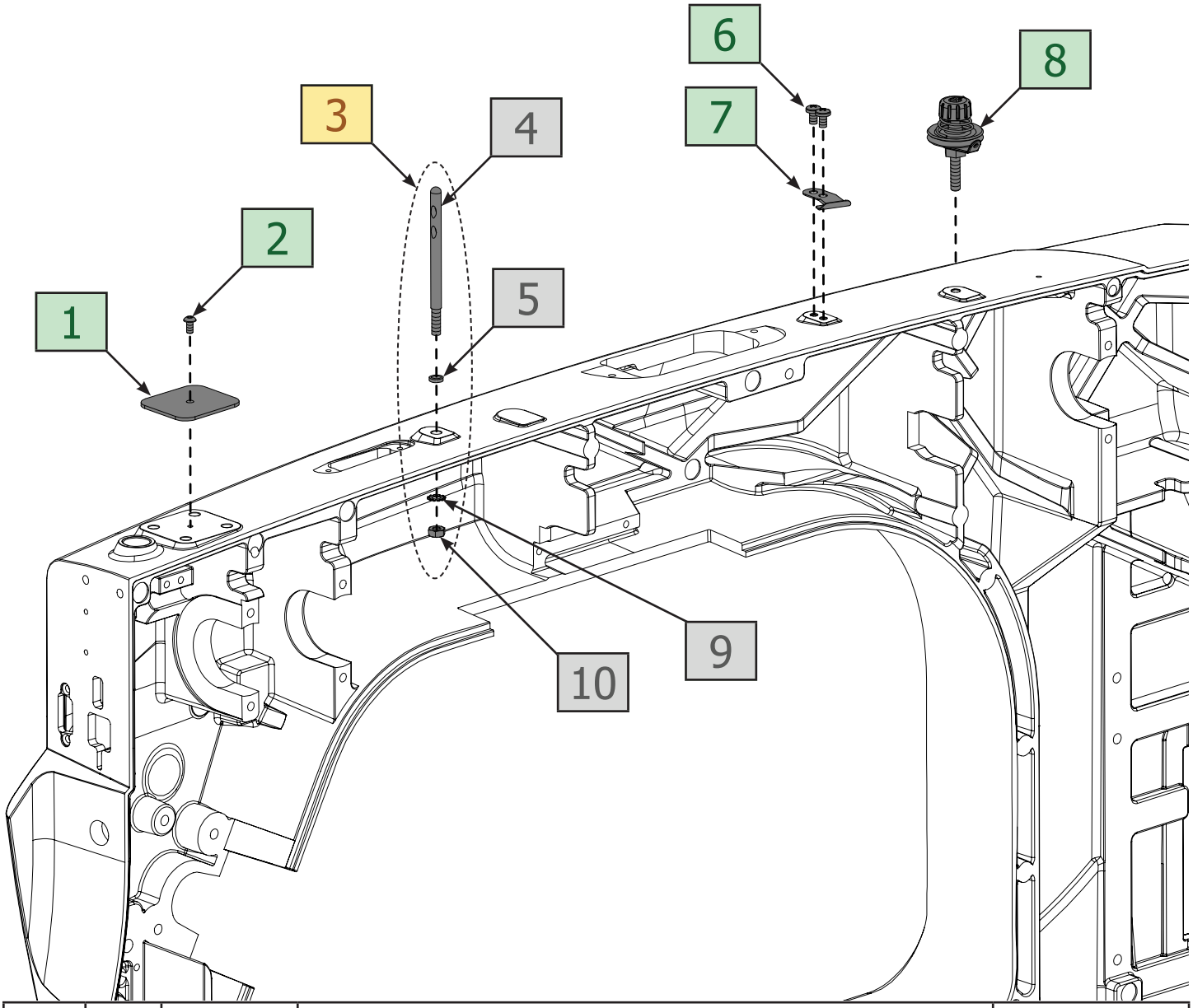
*Note - To replace the thread guide arm rod, first remove the front housing.



Item	QTY	Part #	Description	Serviceability
1	1	03-10062	Hex Nut M4	GR
2	1	03-10014	Socket FSS M5 X 8mm (Flat Set Screw)	CU
3	1	03-10016	Socket CSS M4 X 4mm (Cup Point Set Screw)	CU
4	1	08-10015	Little Thread Tension Assembly	CU
5	1	04-10009	Right Arm Thread Guide	CU
6	1	03-10175	SBHCS M4 X 8mm	CU
7	1	01-13180	Thread Tension Assembly	CU
8	1	03-12196	Round Nut M4	GR
9	1	04-19169	Thread Guide Arm Rod (rod only)	GR
10	1	09-11719	Thread Guide Arm Rod	DE

Bobbin Winder Thread Tensioner
QCT Cover Plate
Thread Guide Rod

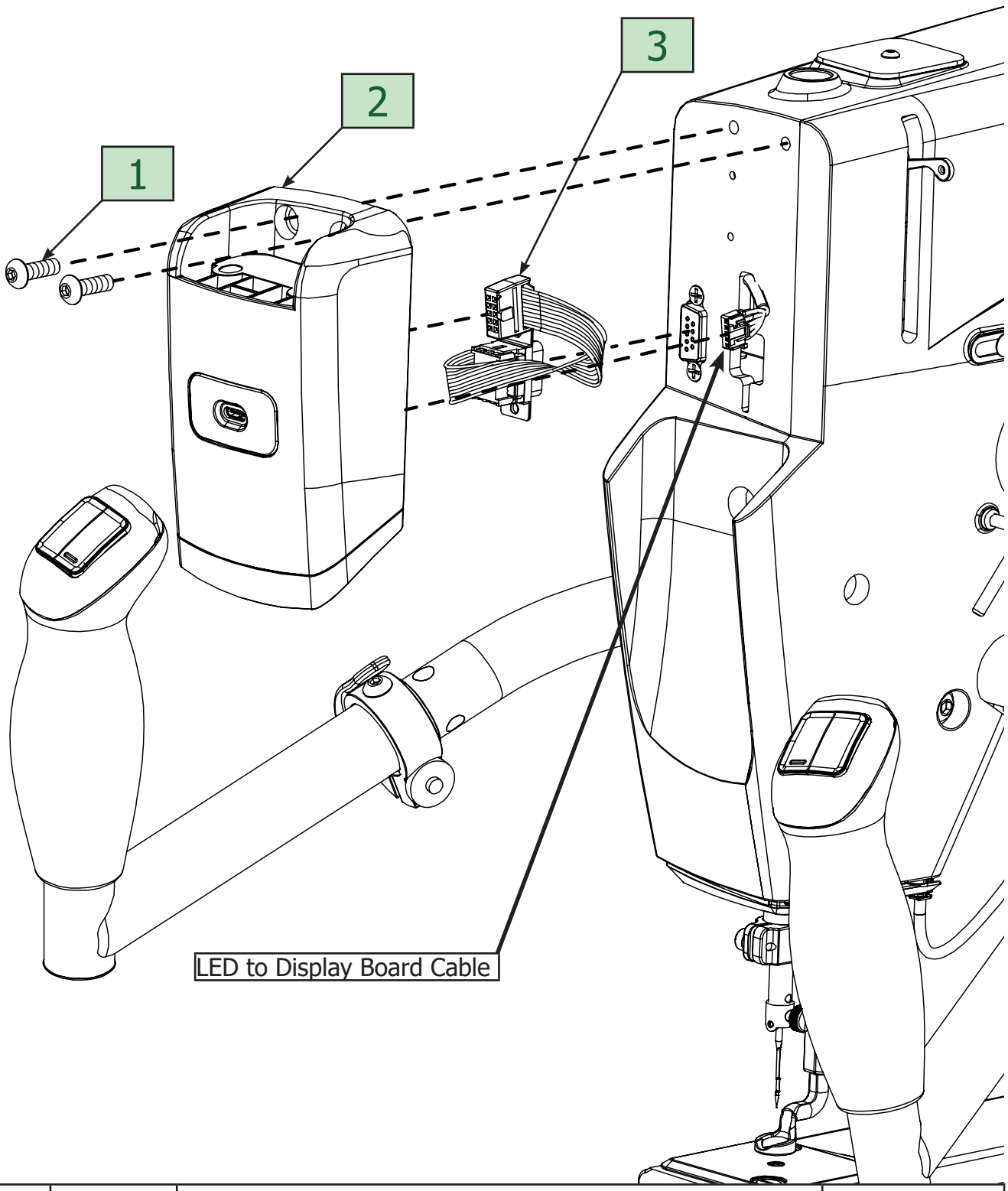
*Note - To replace the thread guide rod, first remove the front housing.



Item	QTY	Part #	Description	Serviceability
1	1	04-11716	QCT Cover Plate	CU
2	1	03-10177	SBHCS M3 X 6mm	CU
3	1	09-14310	Thread Guide Rod	DE
4	1	04-19168	Thread Guide Rod (rod only)	GR
5	1	03-12196	Round Nut M4	GR
6	2	03-10109	Phillips PHS M3.5 X 6mm	CU
7	1	04-10108	Bobbin Winder Thread Cutter	CU
8	1	08-10107	Bobbin Winder Thread Tension Assembly	CU
9	1	03-14309	External Tooth Lock Washer M4	GR
10	1	03-10062	Hex Nut M4	GR

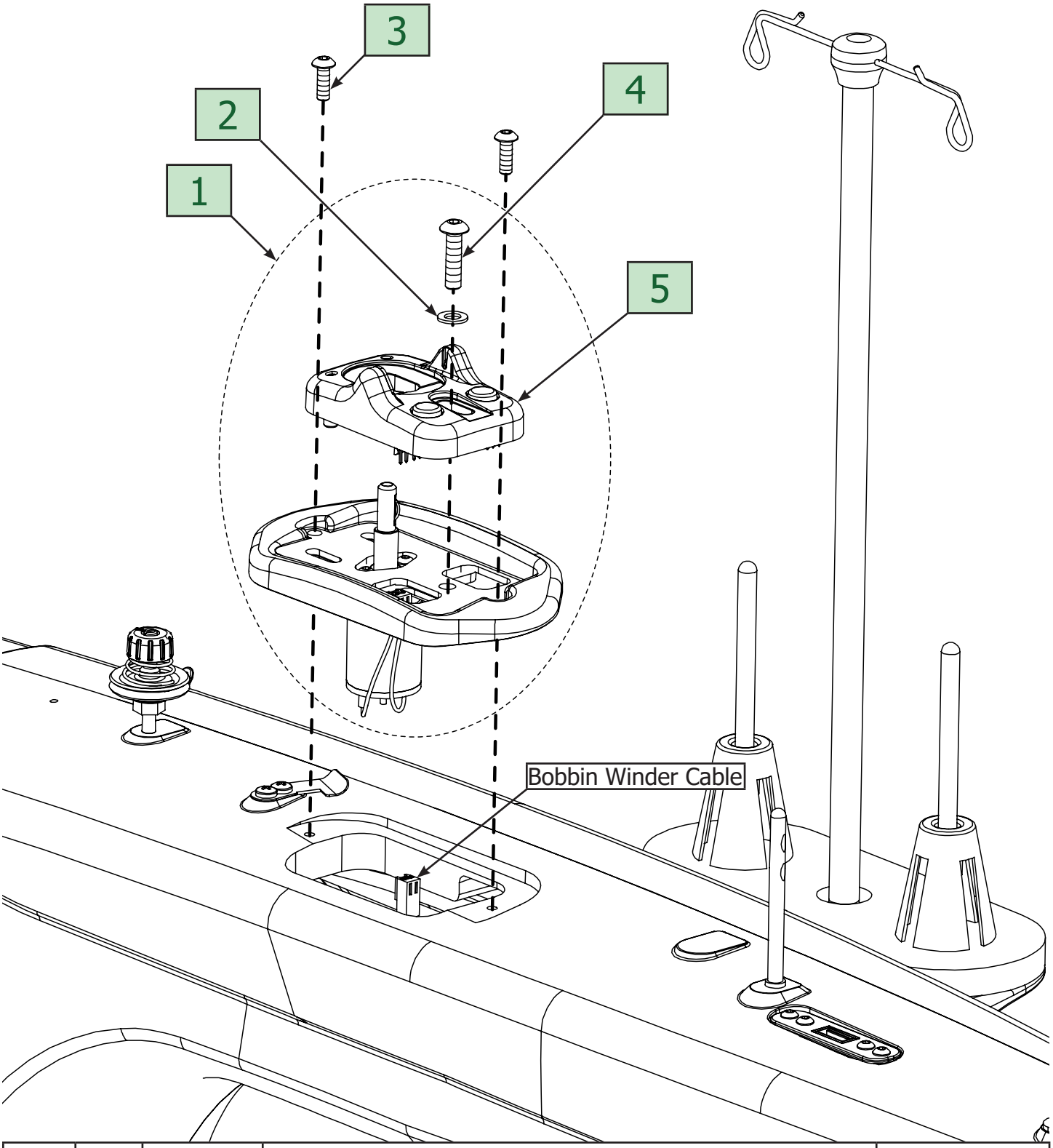
Electronics

Front Plastic Assembly



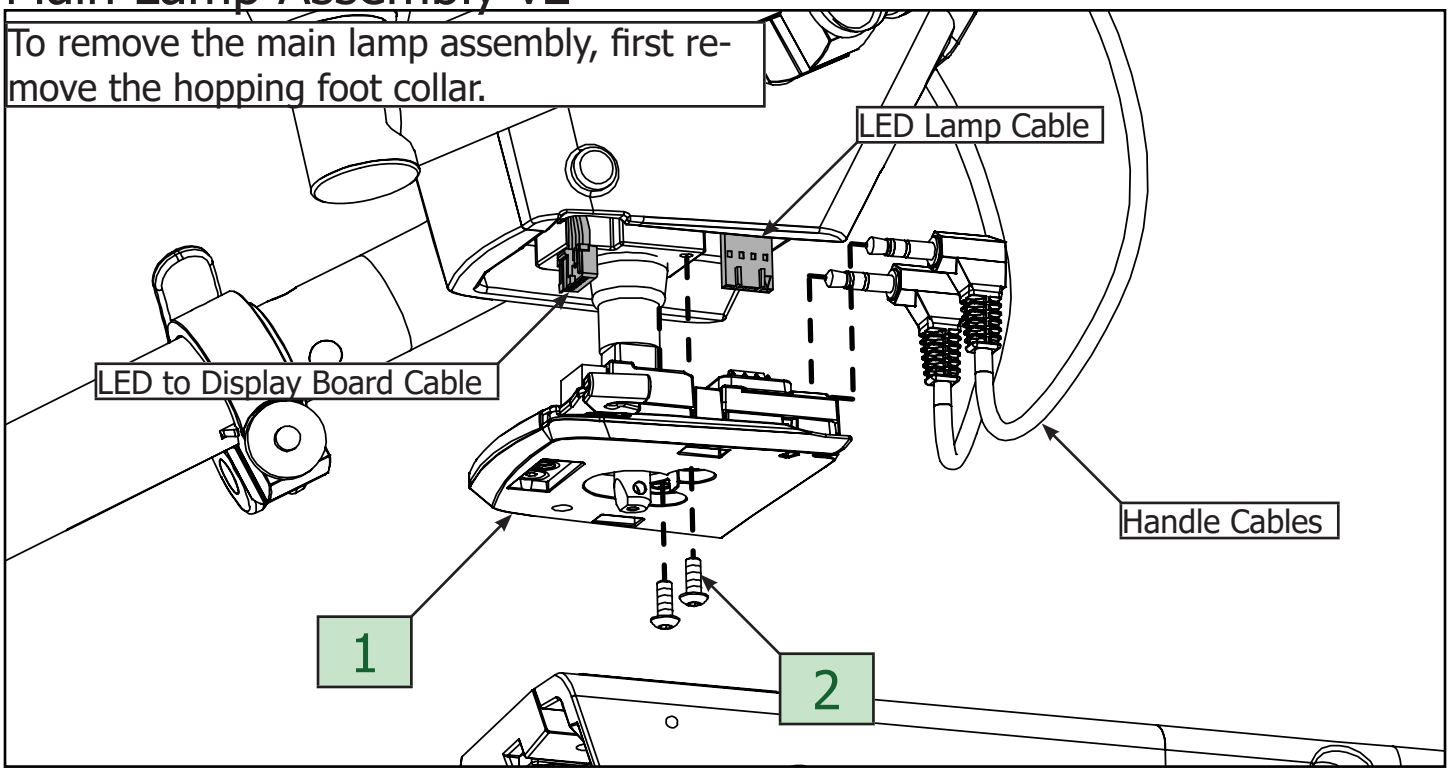
Item	QTY	Part #	Description	Serviceability
1	2	03-10857	SBHCS M5 X 16mm (Socket Button Head Cap Screw)	CU
2	1	09-18808	Front Plastic Assembly v3	CU
3	1	02-10238	Short Display Controller Cable	CU

Bobbin Winder Assembly

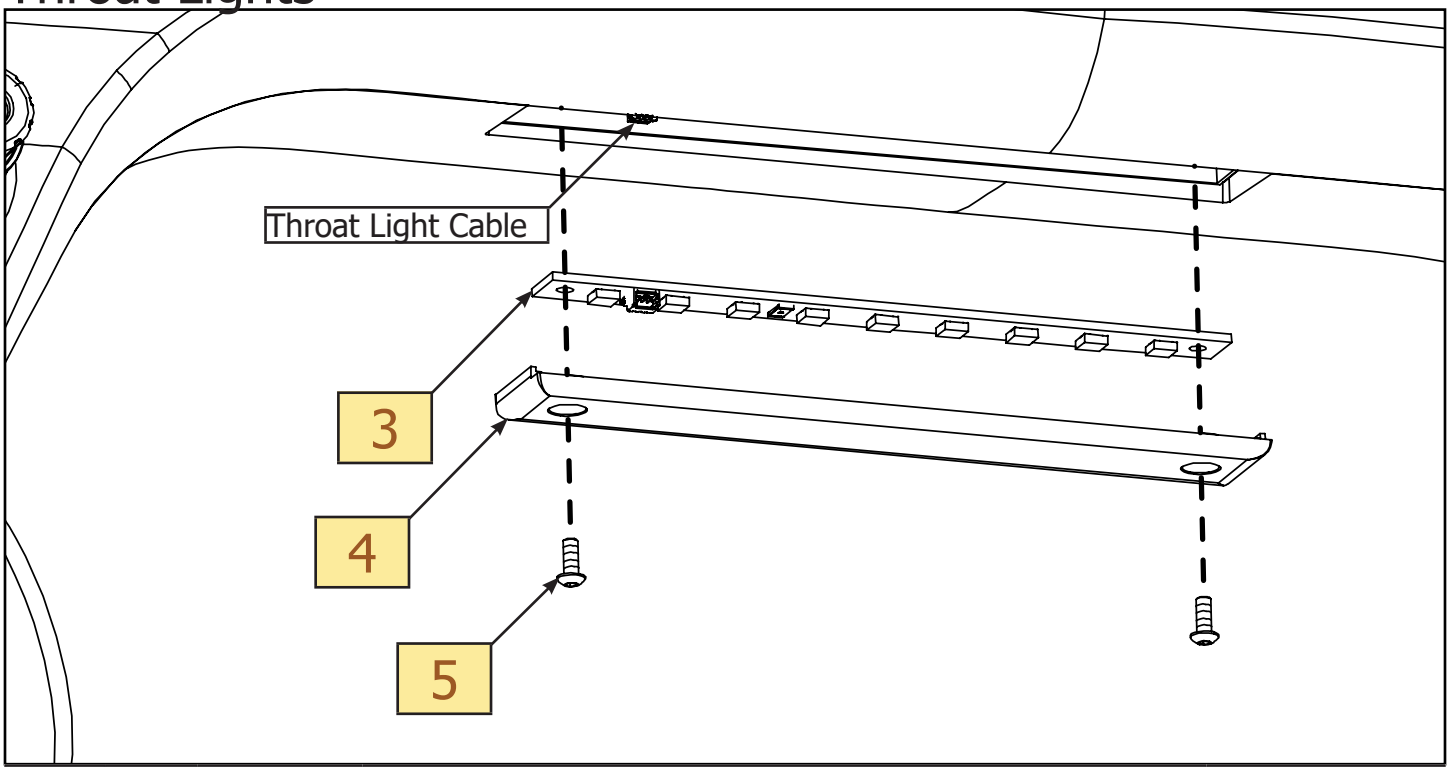


Item	QTY	Part #	Description	Serviceability
1	1	09-17767	Bobbin Winder Assembly	CU
2	1	04-16349	Washer 5.45 ID X 9.8 OD X 0.9mm T	CU
3	2	03-14247	SBHCS M4 X 12mm (Socket Button Head Cap Screw)	CU
4	1	03-11983	SBHCS M5 X 20mm (Socket Button Head Cap Screw)	CU
5	1	09-18969	Bobbin Winder Cover Assembly v2	CU

Main Lamp Assembly v2



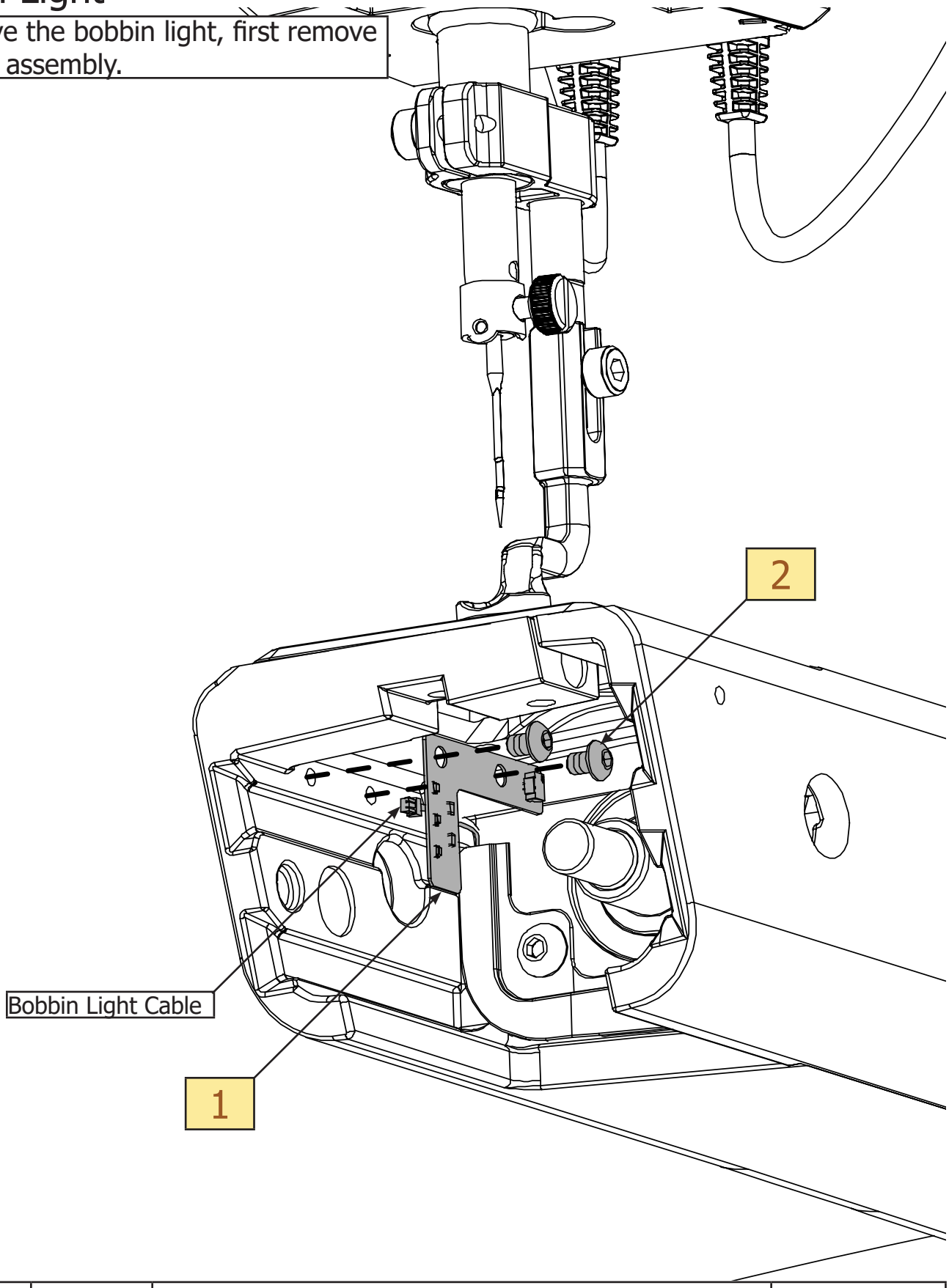
Throat Lights



Item	QTY	Part #	Description	Serviceability
1	1	09-18776	Main Lamp Assembly v3	CU
2	2	03-14003	SBHCS M3 X 8mm (Socket Button Head Cap Screw)	CU
3	1	02-16156	Throat Light Board	DE
4	1	05-17076	Throat Light Cover	DE
5	2	03-14003	SBHCS M3 X 8mm (Socket Button Head Cap Screw)	DE

Bobbin Light

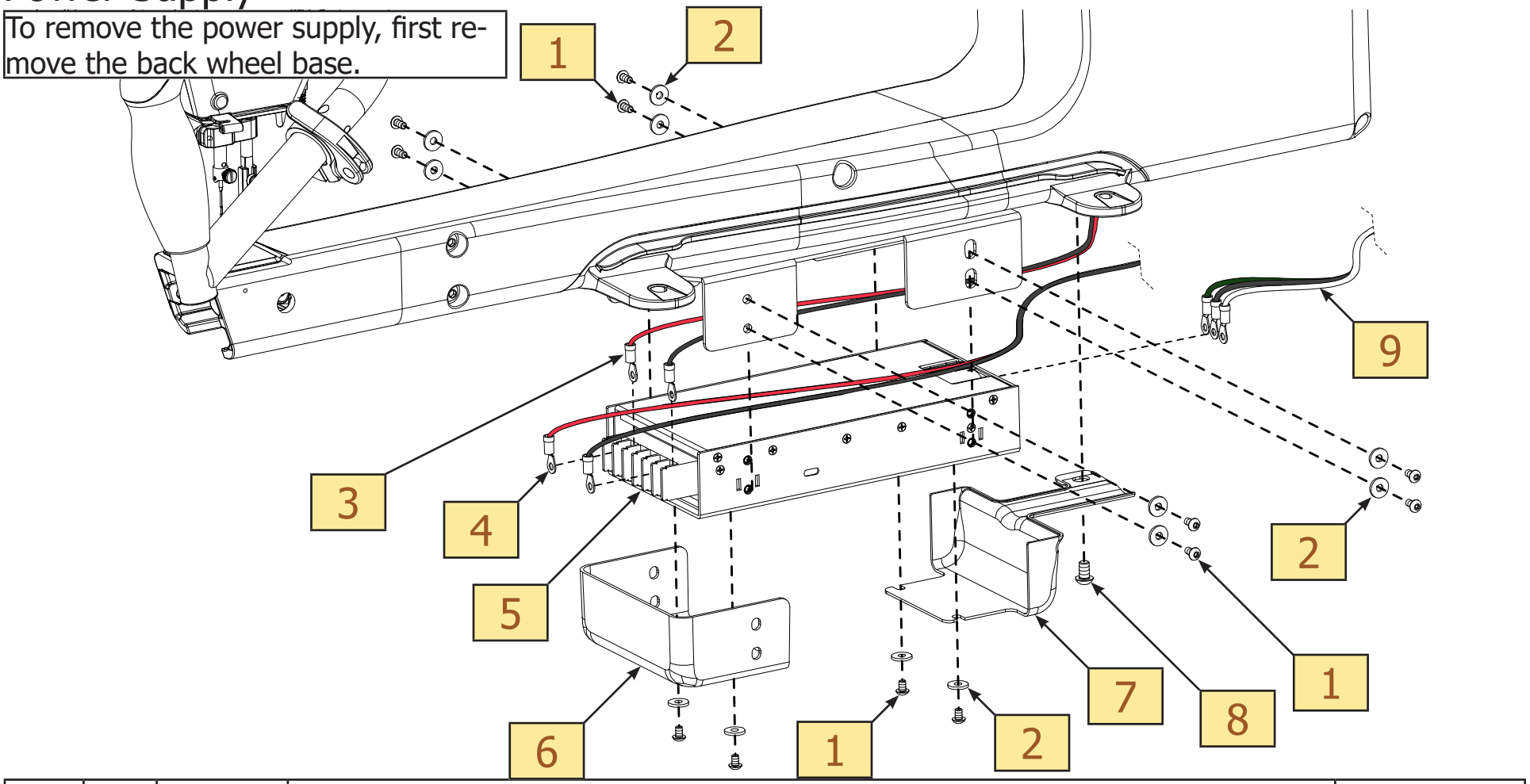
To remove the bobbin light, first remove the hook assembly.



Item	QTY	Part #	Description	Serviceability
1	1	05-18781	Bobbin Light Board	DE
2	1	03-10177	SBHCS M3 X 4mm (Socket Button Head Cap Screw)	DE

Power Supply

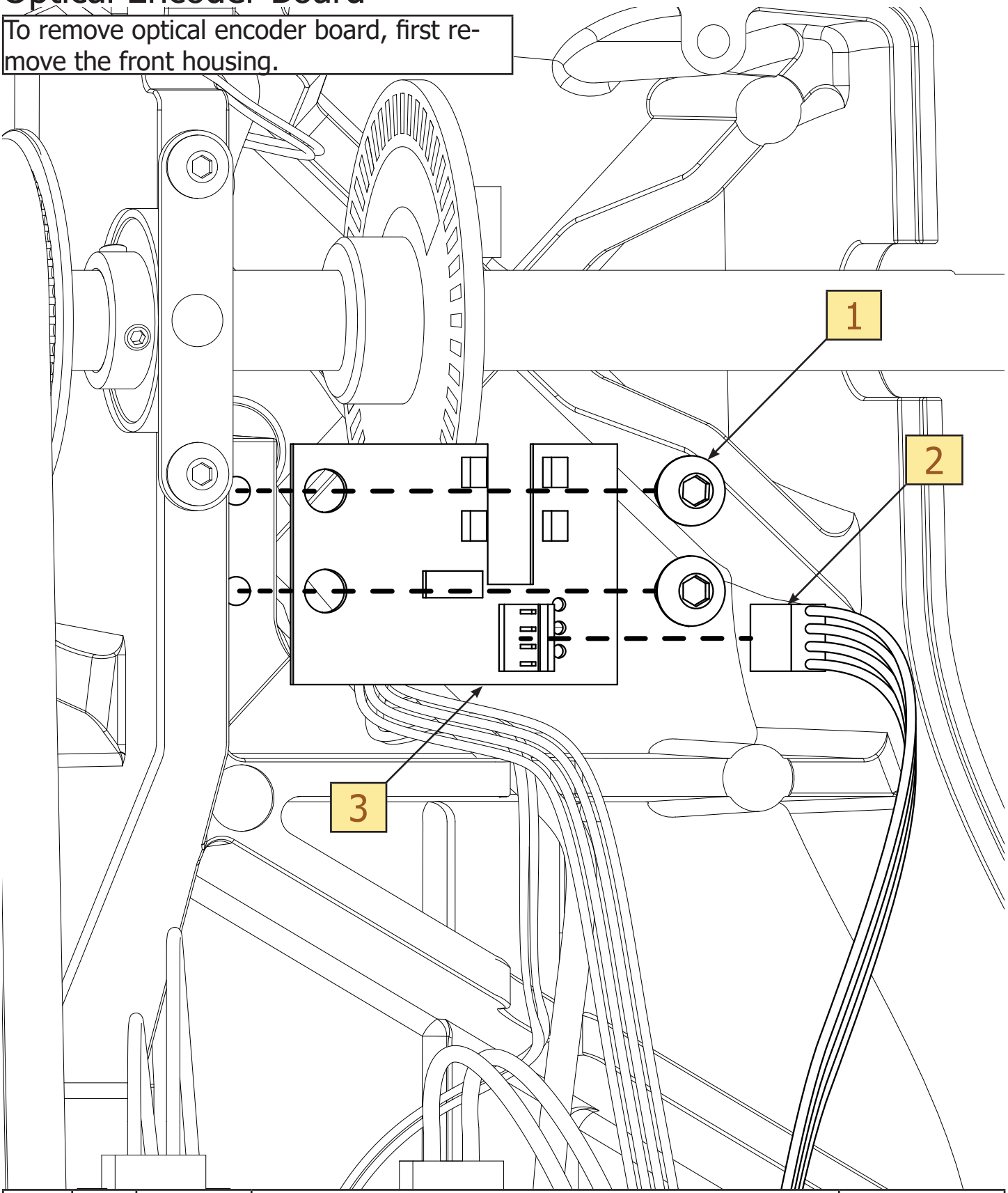
To remove the power supply, first remove the back wheel base.



Item	QTY	Part #	Description	Serviceability
1	12	03-10175	SBHCS M4 X 8mm (Socket Button Head Cap Screw)	DE
2	12	03-12454	Washer M4, Regular	DE
3	1	02-10850	Motor Driver Power Cable	DE
4	1	02-10237	Power Supply to Main Board Cable	DE
5	1	02-14300	Power Supply 36V 450W	DE
6	1	05-11703	Front Power Supply Cable Cover	DE
7	1	05-11596	Back Power Supply Cable Cover	DE
8	1	03-10124	SBHCS M6 X 10mm (Socket Button Head Cap Screw)	DE
9	1	02-18964	Power Cord to Power Supply Cable v2	DE

Optical Encoder Board

To remove optical encoder board, first remove the front housing.

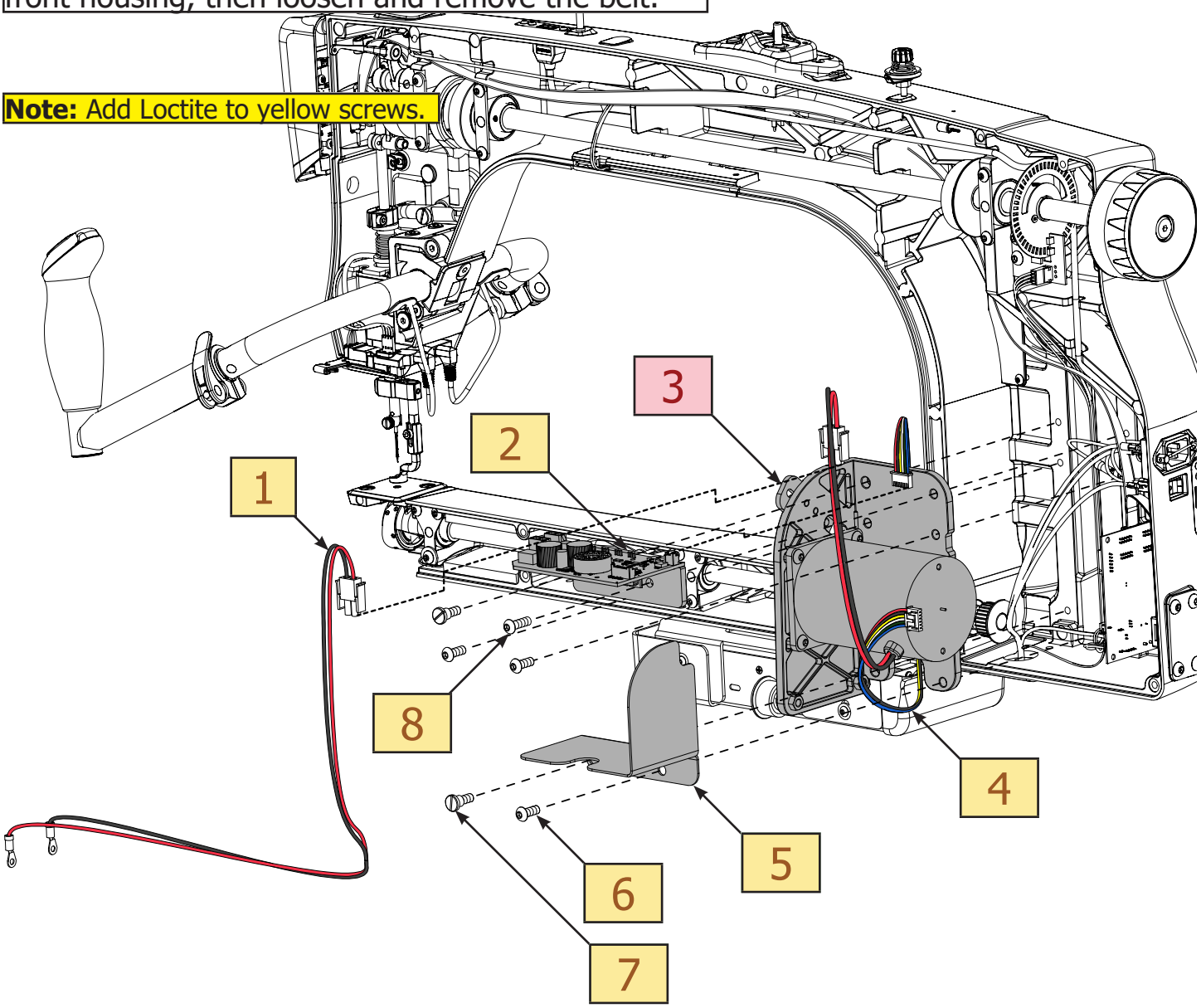


Item	QTY	Part #	Description	Serviceability
1	2	03-10124	SBHCS M6 X 10mm (Socket Button Head Cap Screw)	DE
2	1	02-10234	Speed Sensor Cable	DE
3	1	02-10229	Optical Encoder PCBA	DE

Motor Plate Assembly
Motor Driver Board Assembly

To remove these components, first remove the front housing, then loosen and remove the belt.

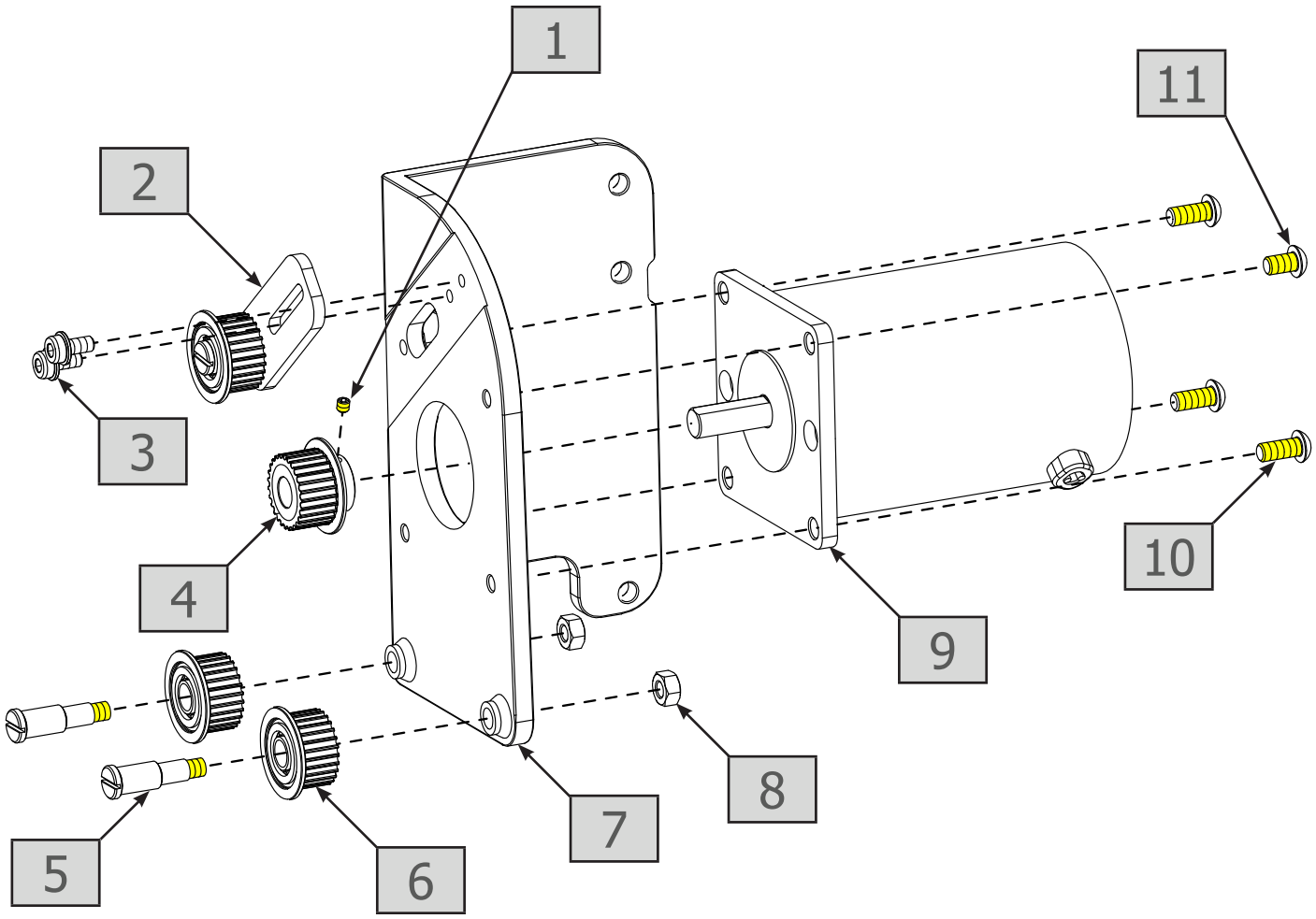
Note: Add Loctite to yellow screws.



Item	QTY	Part #	Description	Serviceability
1	1	02-10850	Motor Driver Power Cable	DE
2	1	02-14025	Motor Driver Board Assembly	DE
3	1	09-14333	Motor Plate Assembly	DI
4	1	02-11316	Motor Driver Signal Cable	DE
5	1	04-11892	Motor Shield	DE
6	3	03-10974	SBHCS M6 X 16mm (Socket Button Head Cap Screw)	DE
7	2	03-10092	Motor Plate Shoulder Bolt	DE
8	1	03-10088	SBHCS M6 X 20mm (Socket Button Head Cap Screw)	DE

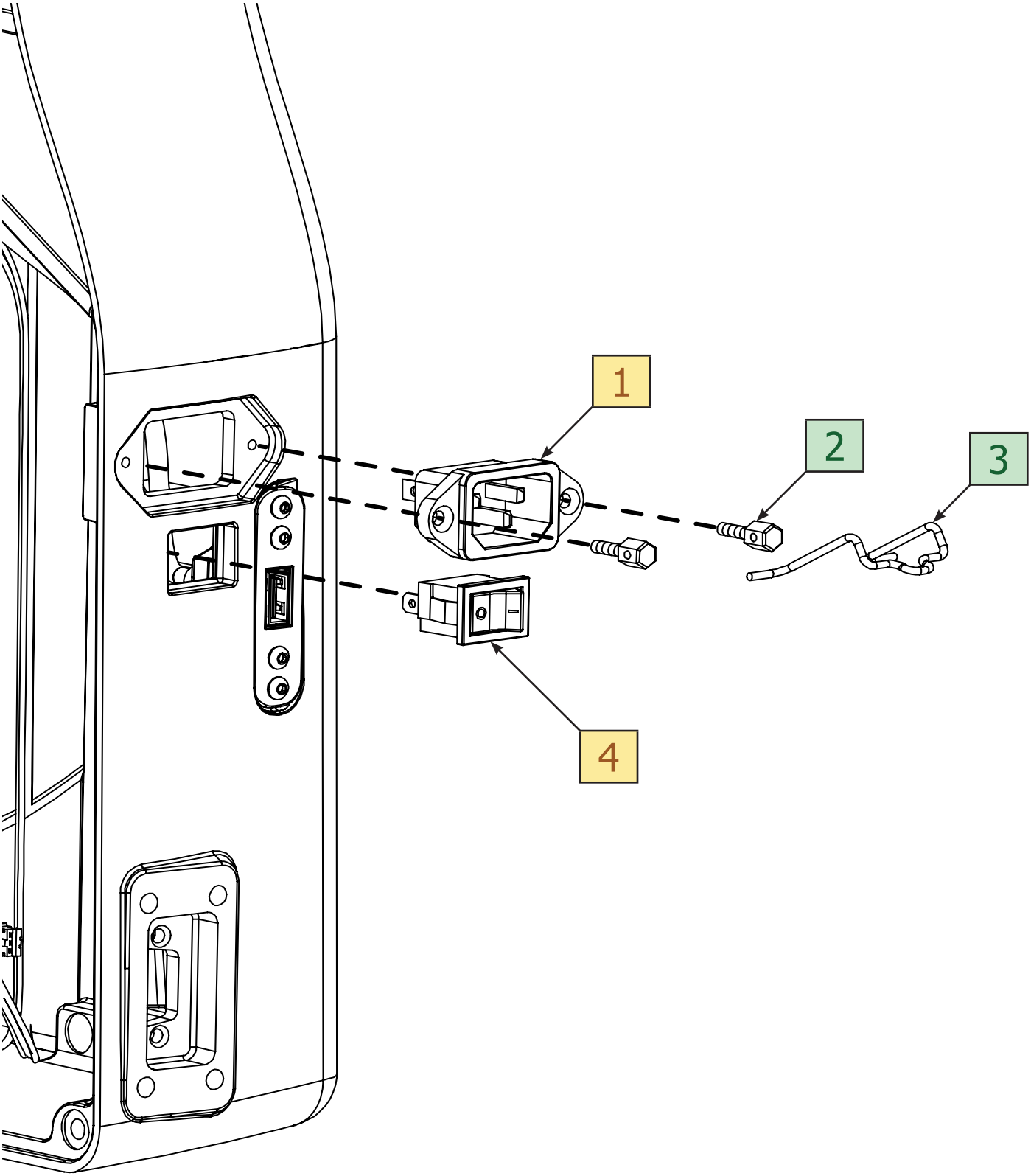
Motor and Pulleys

Note: Add Loctite to yellow screws.



Item	QTY	Part #	Description	Serviceability
1	1	03-15951	Socket FSS M4 X 4mm (Flat Set Screw)	GR
2	1	09-14445	Idler Tensioner Assembly	GR
3	2	03-19057	Serrated Flanged SHCS M5 X 10mm (Socket Head Cap Screw)	GR
4	1	04-14172	HTD Motor Pulley	GR
5	2	03-14276	HTD Pulley Axle	GR
6	2	04-14173	HTD Idler Pulley	GR
7	1	04-10087	Motor Plate	GR
8	2	03-10085	Hex Nut M6	GR
9	1	09-18963	DC 36V Motor Assembly	GR
10	3	03-10221	SBHCS M6 X 14mm	GR
11	1	03-10124	SBHCS M6 X 10mm	GR

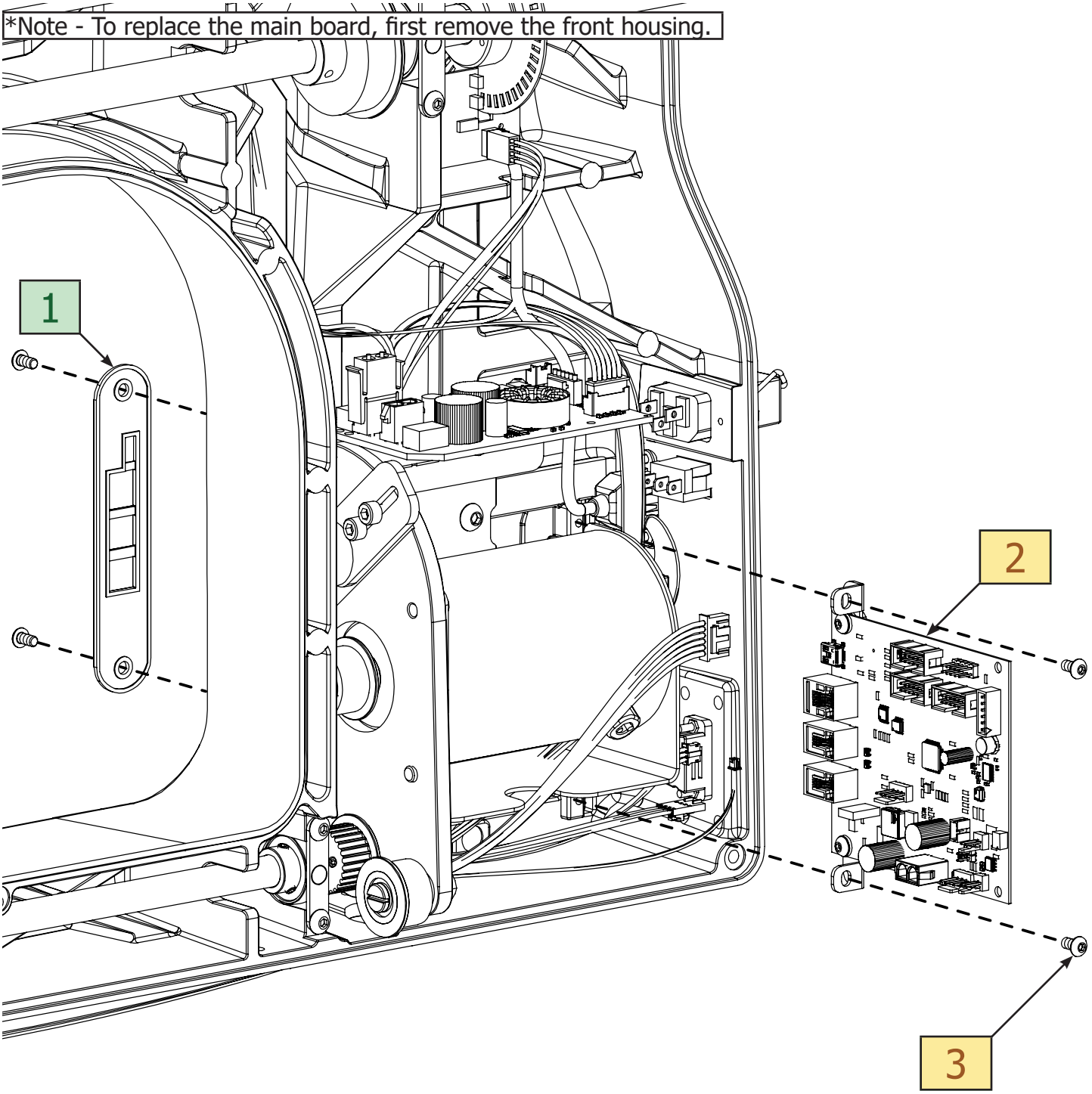
Power Connector and Switch



Item	QTY	Part #	Description	Serviceability
1	1	02-10223	Power Connector	DE
2	2	08-13848	Power Supply Retainer Bolt	CU
3	1	08-17371	Power Cable Retainer v3	CU
4	1	02-10222	Switch	DE

Main Board

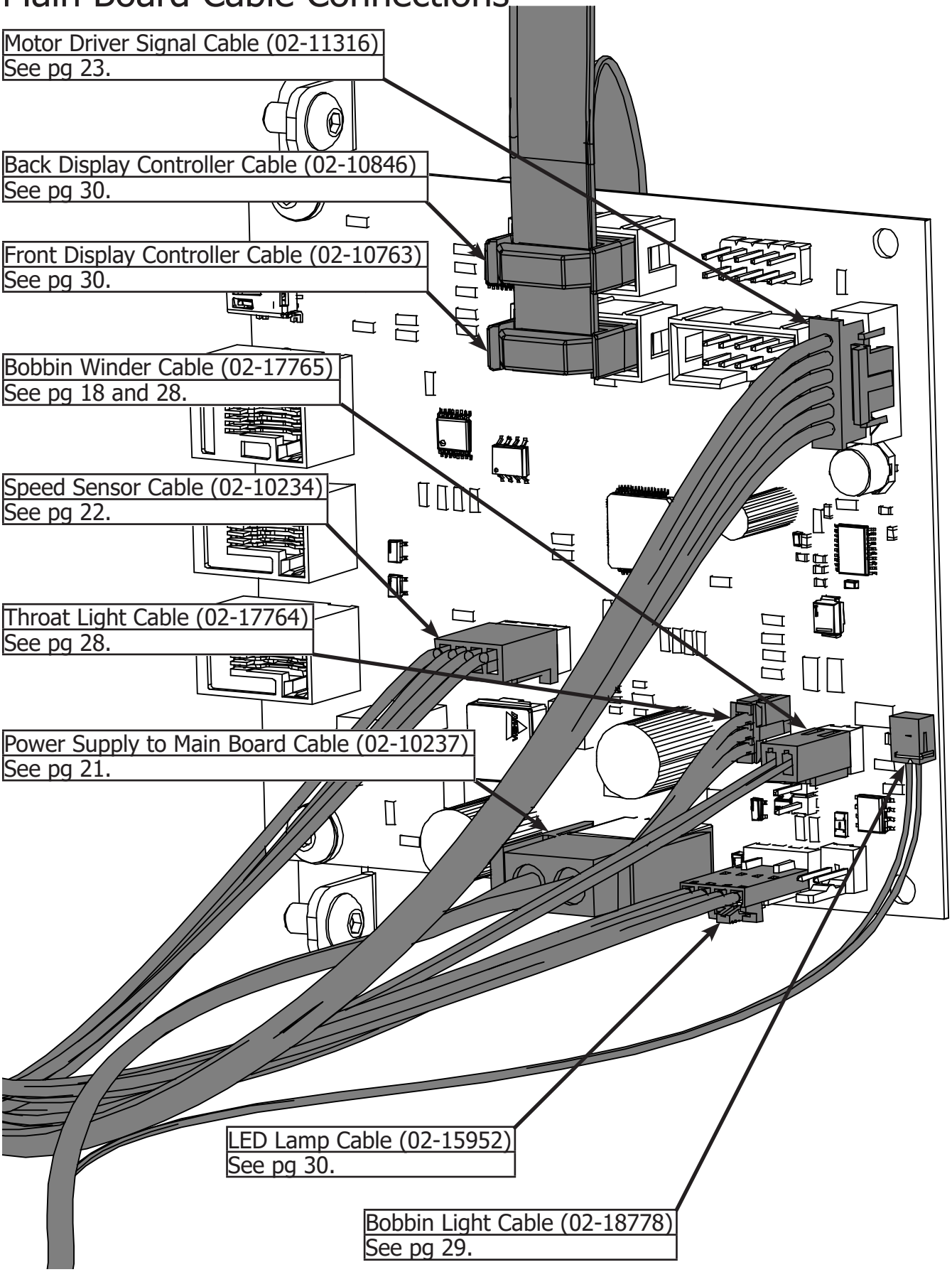
*Note - To replace the main board, first remove the front housing.



Item	QTY	Part #	Description	Serviceability
1	1	05-15368	Main Board Cover v3	CU
2	1	09-18967	Main Board Assembly v3	DE
3	4	03-10175	SBHCS M4 X 8mm (Socket Button Head Cap Screw)	DE

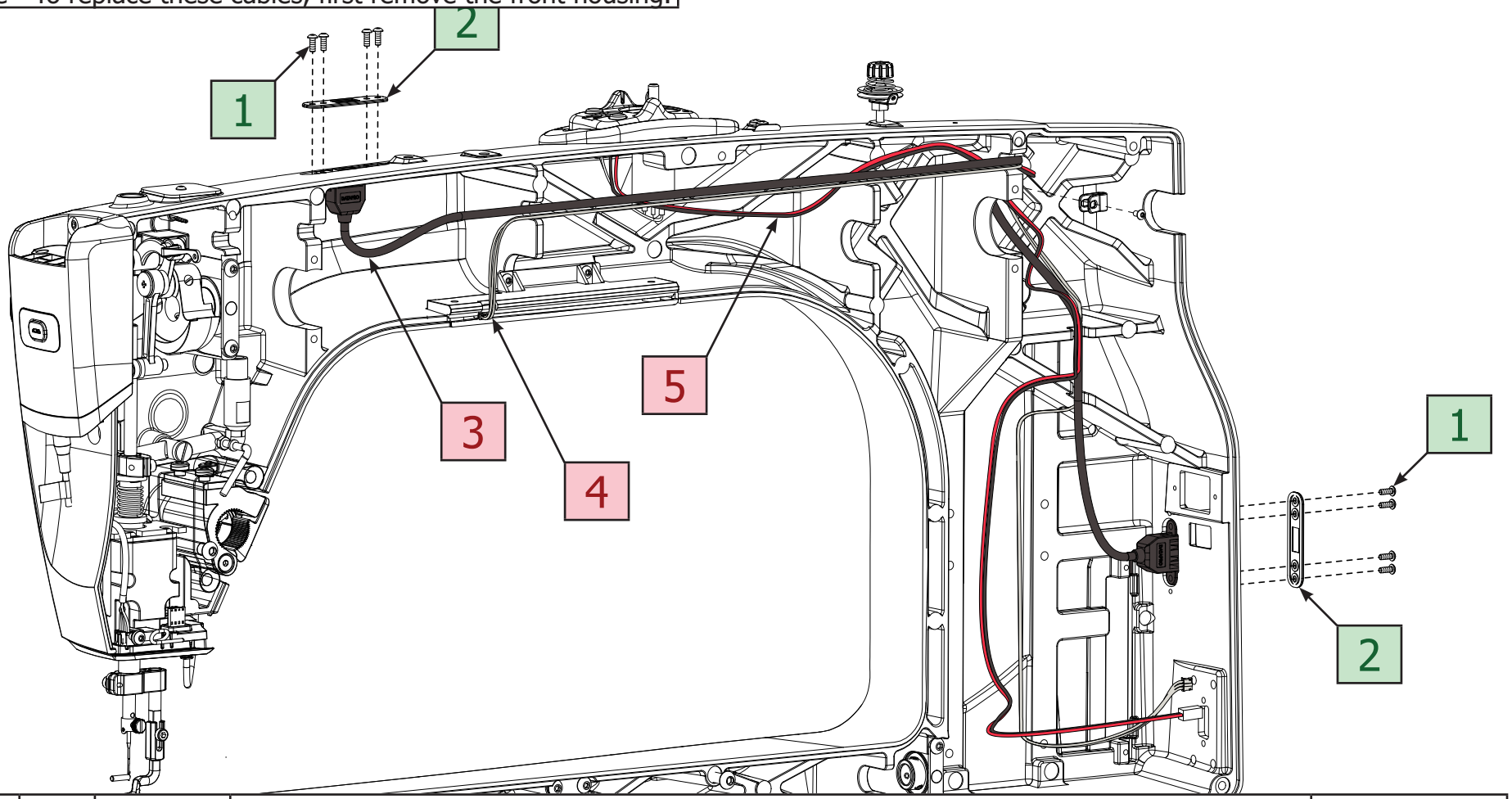
Cables

Main Board Cable Connections



Bobbin Winder Cable
Throat Light Cable
Internal USB Cable

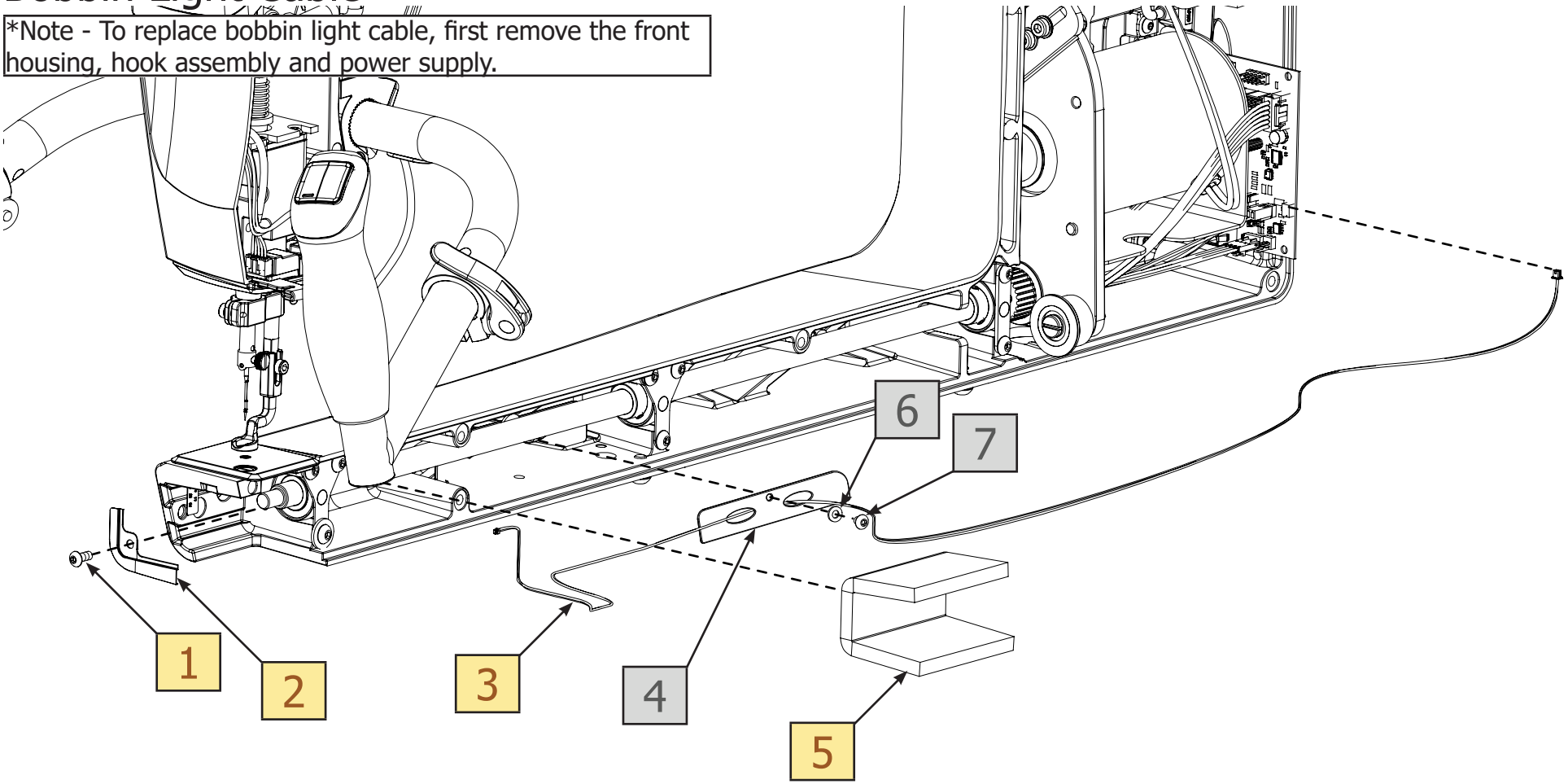
*Note - To replace these cables, first remove the front housing.



Item	QTY	Part #	Description	Serviceability
1	8	03-14003	SBHCS M3 X 8mm (Socket Button Head Cap Screw)	CU
2	2	04-11312	Female USB Mounting Plate	CU
3	1	02-11318	USB Female To Female Cable	DI
4	1	02-17764	Throat Light Cable	DI
5	1	02-17765	Bobbin Winder Cable 1000mm	DI

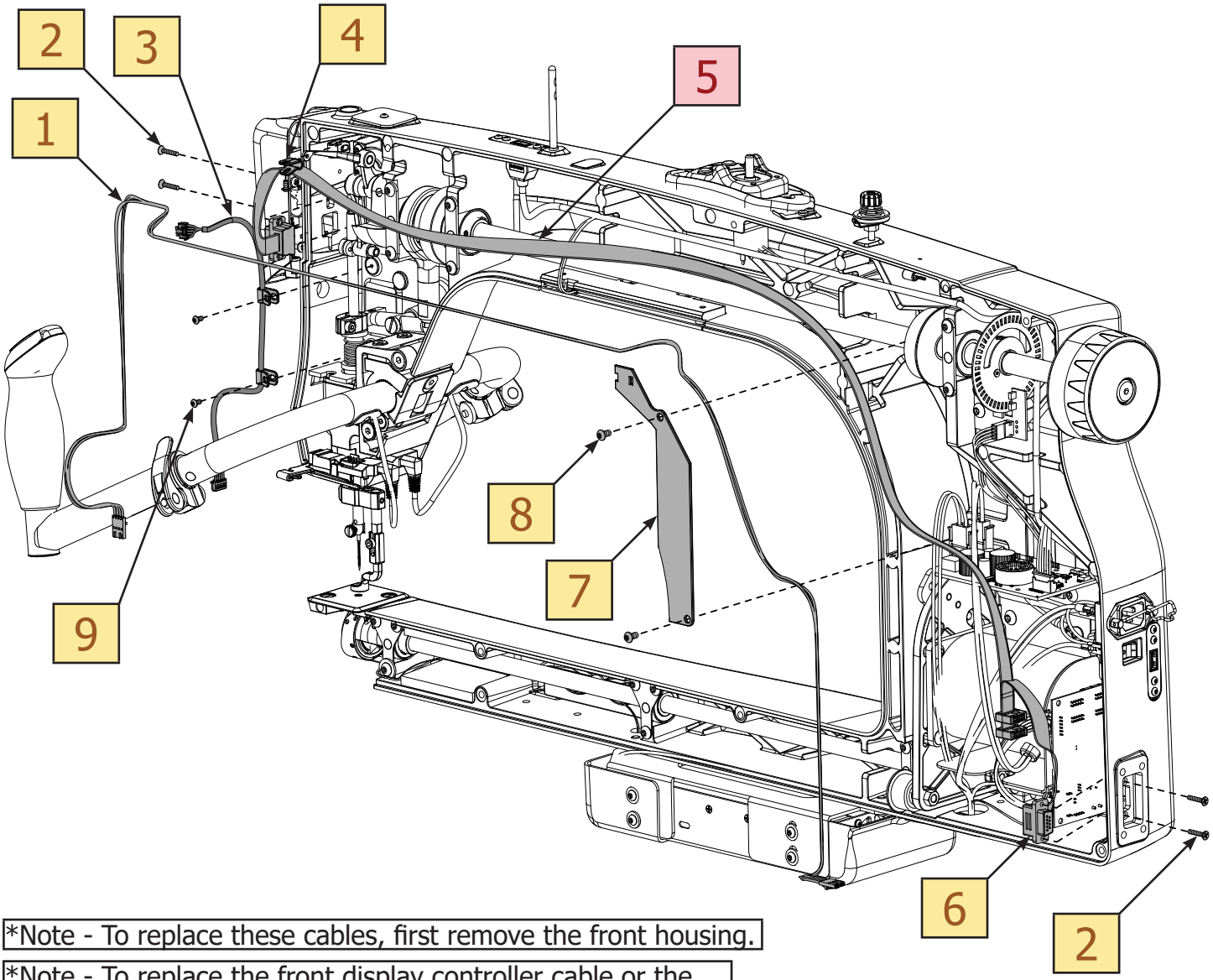
Bobbin Light Cable

*Note - To replace bobbin light cable, first remove the front housing, hook assembly and power supply.



Item	QTY	Part #	Description	Serviceability
1	1	03-10012	SBHCS M4 X 10mm (Socket Button Head Cap Screw)	DE
2	1	05-18794	Front Bobbin Light Cable Retainer	DE
3	1	02-18778	Bobbin Light Cable	DE
4	1	05-18803	Back Bobbin Light Cable Retainer	GR
5	1	08-14039	Noise Deadening Foam	DE
6	1	03-15017	Washer M5, Regular	GR
7	1	03-10184	SBHCS M5 X 6mm (Socket Button Head Cap Screw)	GR

Front Display Controller Cable
Back Display Controller Cable
LED Lamp Cable
LED to Display Board Cable



*Note - To replace these cables, first remove the front housing.

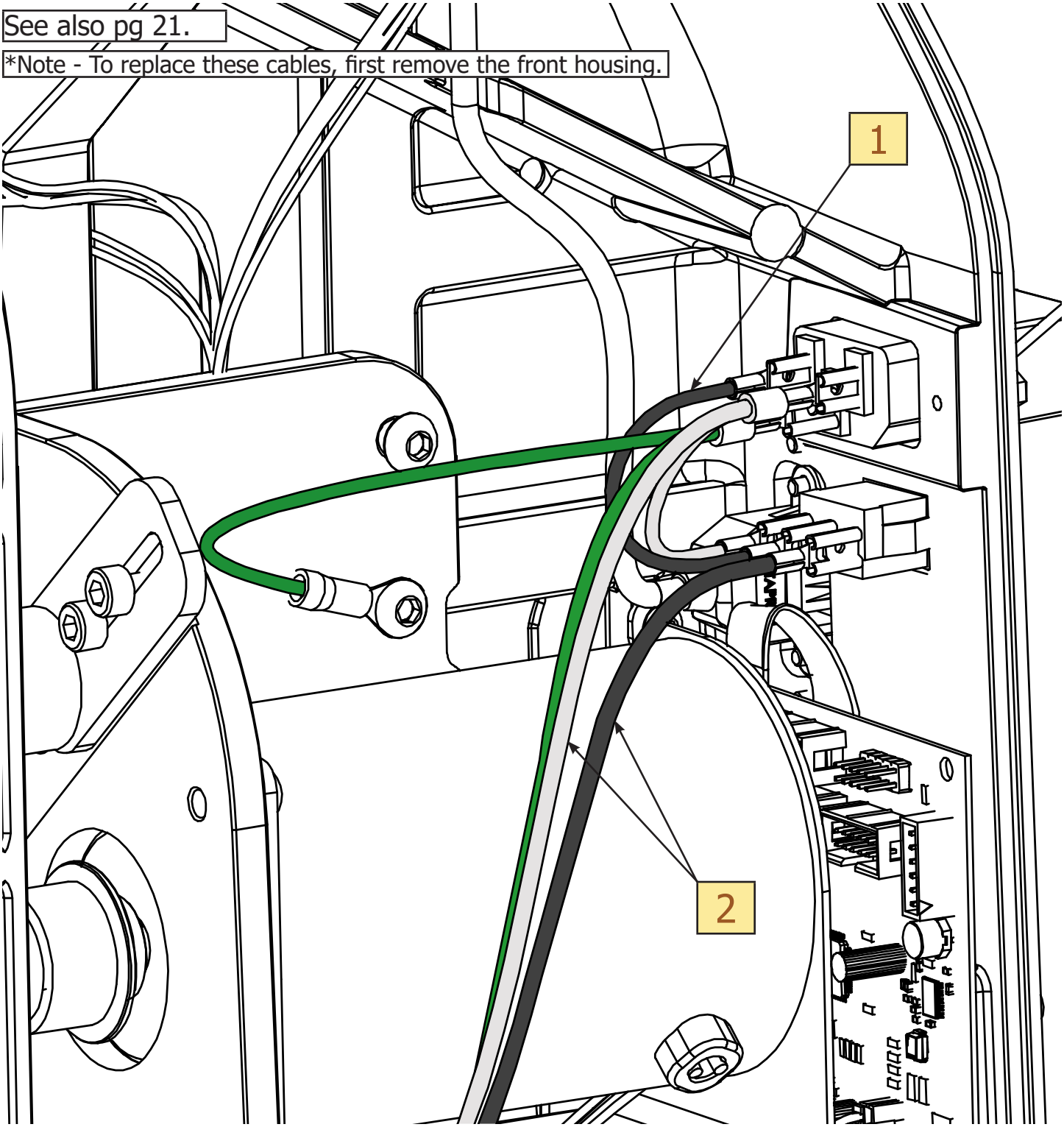
*Note - To replace the front display controller cable or the LED lamp cable, also remove the motor plate.

Item	QTY	Part #	Description	Serviceability
1	1	02-15952	LED Lamp Cable, 4pin 1575mm	DE
2	4	03-11739	Phillips FHS #4-40 X .626”	DE
3	1	02-15675	LED to Display Board Cable	DE
4	3	04-10176	Cable Mounting Bracket	DE
5	1	02-10763	Front Display Controller Cable 1200mm	DE
6	1	02-10846	Back Display Controller Cable 175mm	DE
7	1	05-18968	Cable Guide Behind Belt	DE
8	2	03-10175	SBHCS M4 X 8mm	DE
9	3	03-10177	SBHCS M3 X 6mm	DE

Power Cord to Power Supply Cable
Power Connector to Switch Cable

See also pg 21.

*Note - To replace these cables, first remove the front housing.

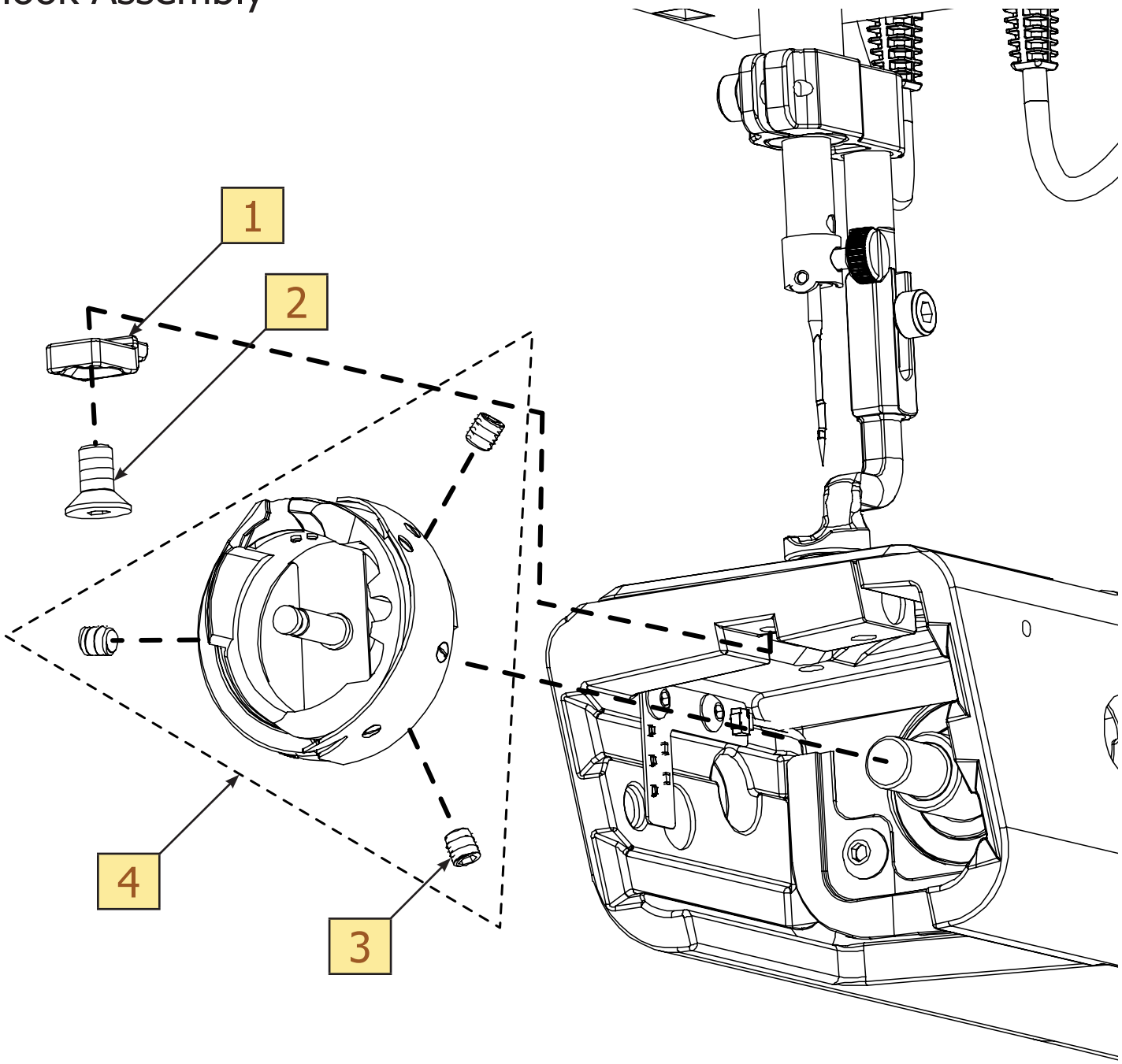


Item	QTY	Part #	Description	Serviceability
1	1	02-10236	Power Connector to Switch Cable	DE
2	4	02-18964	Power Cord to Power Supply Cable v2	DE

Speed Sensor Cable (see pg. 22 and 27)
Motor Driver Signal Cable (see pg. 23 and 27)
Motor Driver Power Cable (see pg. 21 and 23)
Power Supply to Main Board Cable (see pg. 21 and 27)

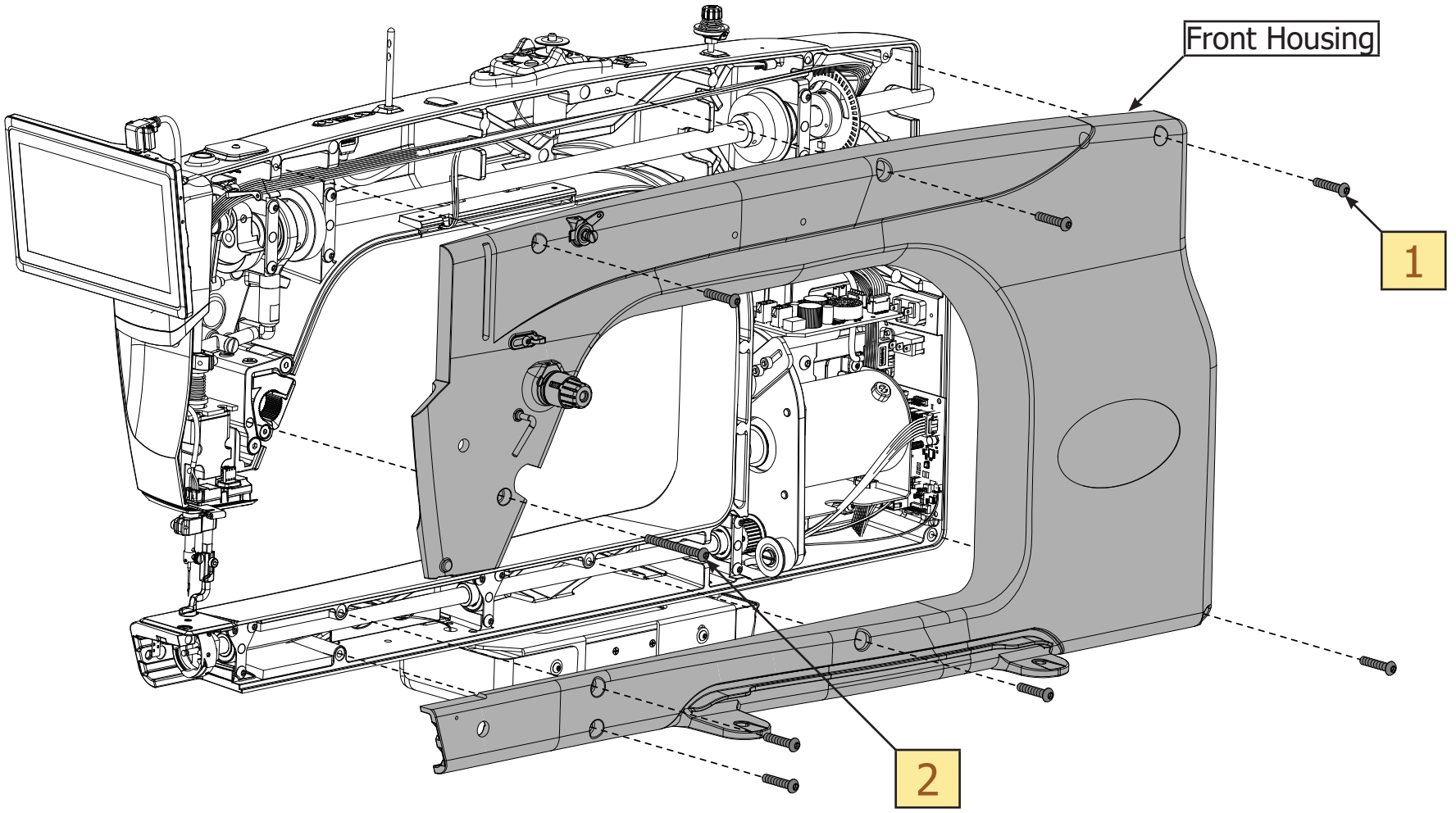
Mechanics

Hook Assembly



Item	QTY	Part #	Description	Serviceability
1	1	04-10072	Hook Holder	DE
2	2	03-11740	Socket FHS M5 X 10mm	DE
3	1	03-10077	Hook Assembly Set Screw 11/64-40 Thread	DE
4	1	09-19067	Elite Hook Assembly	DE

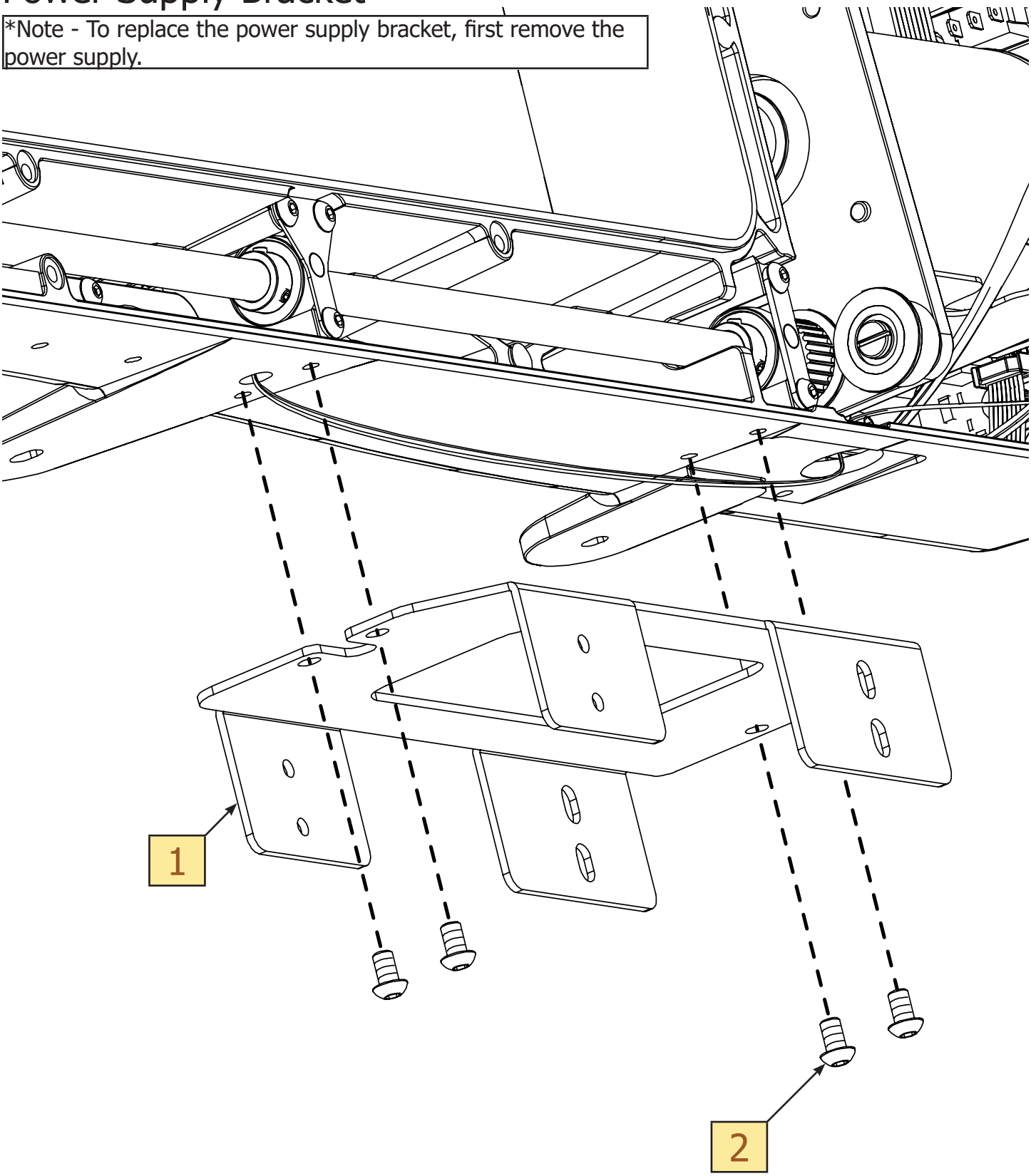
Front Housing



Item	QTY	Part #	Description	Serviceability
1	7	03-10215	SBHCS M6 X 25mm	DE
2	1	03-11733	SBHCS M6 X 60mm	DE

Power Supply Bracket

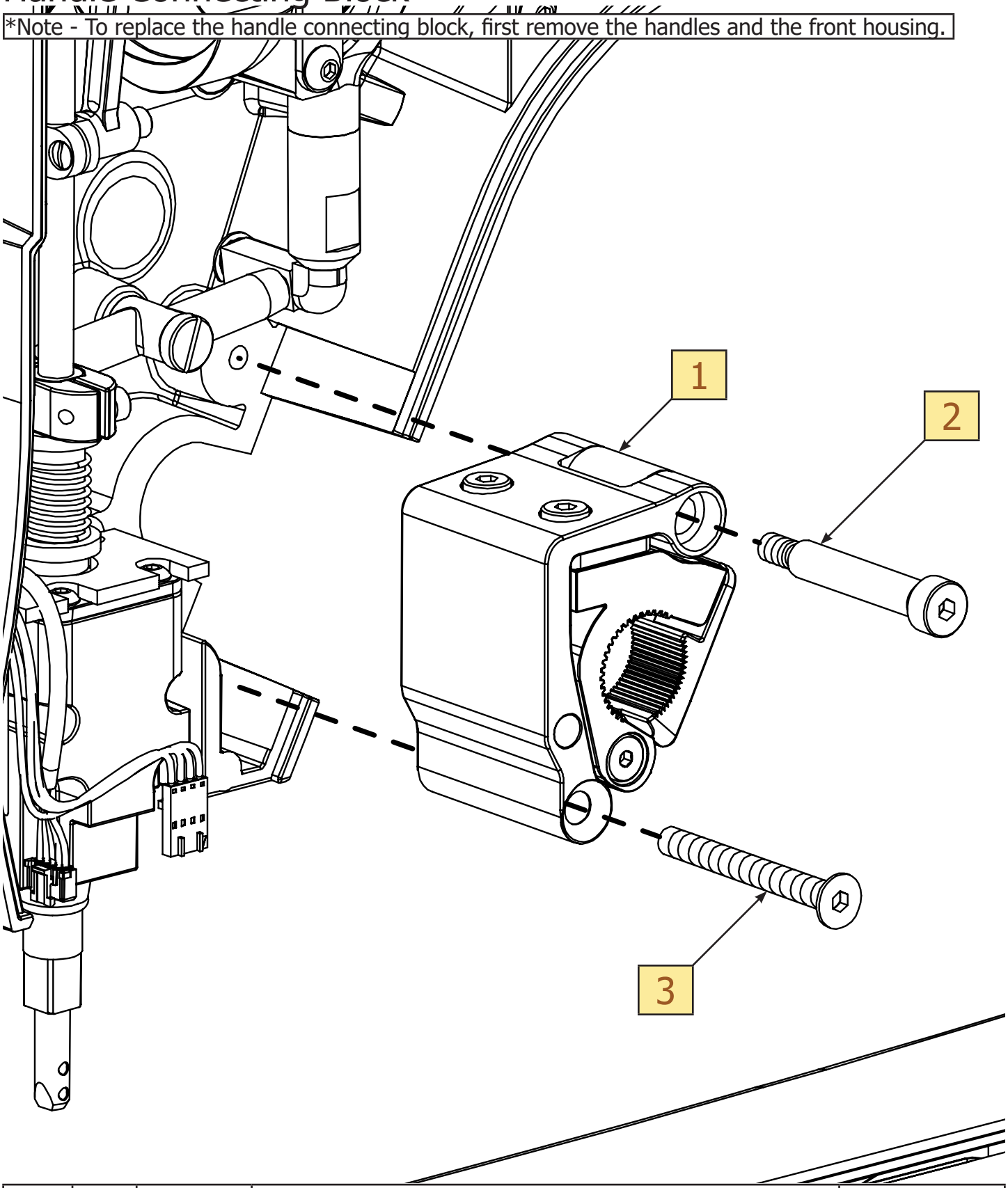
*Note - To replace the power supply bracket, first remove the power supply.



Item	QTY	Part #	Description	Serviceability
1	1	04-18785	Power Supply Bracket 36V v2	DE
2	4	03-10124	SBHCS M6 X 10mm	DE

Handle Connecting Block

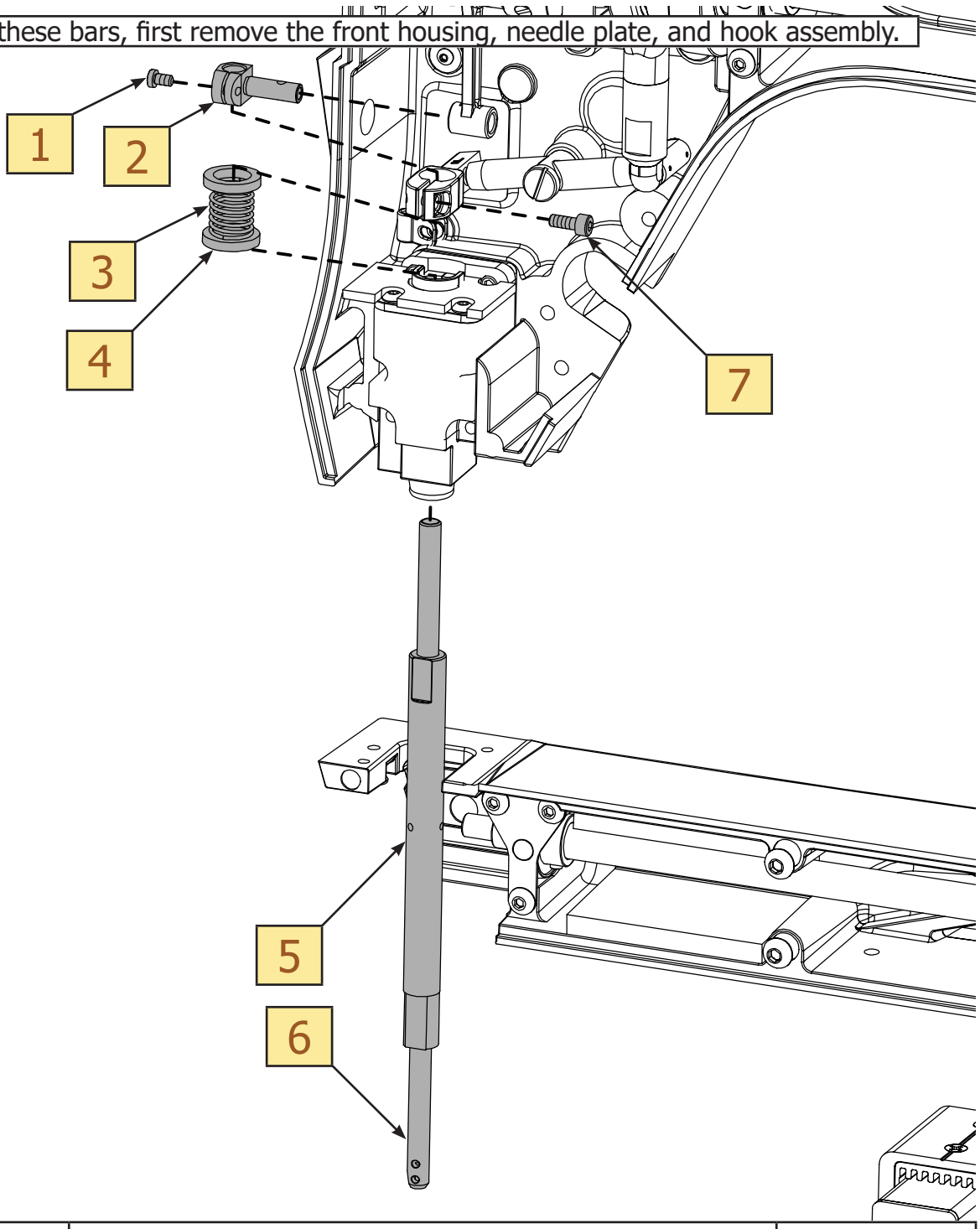
*Note - To replace the handle connecting block, first remove the handles and the front housing.



Item	QTY	Part #	Description	Serviceability
1	1	09-15695	Handle Connecting Block Assembly	DE
2	1	03-18801	Shoulder Bolt 8 X 40mm, M6	DE
3	1	03-11742	Socket FHS M6 X 55mm (Flat Head Screw)	DE

Needle Bar
Presser Bar

*Note - To replace these bars, first remove the front housing, needle plate, and hook assembly.



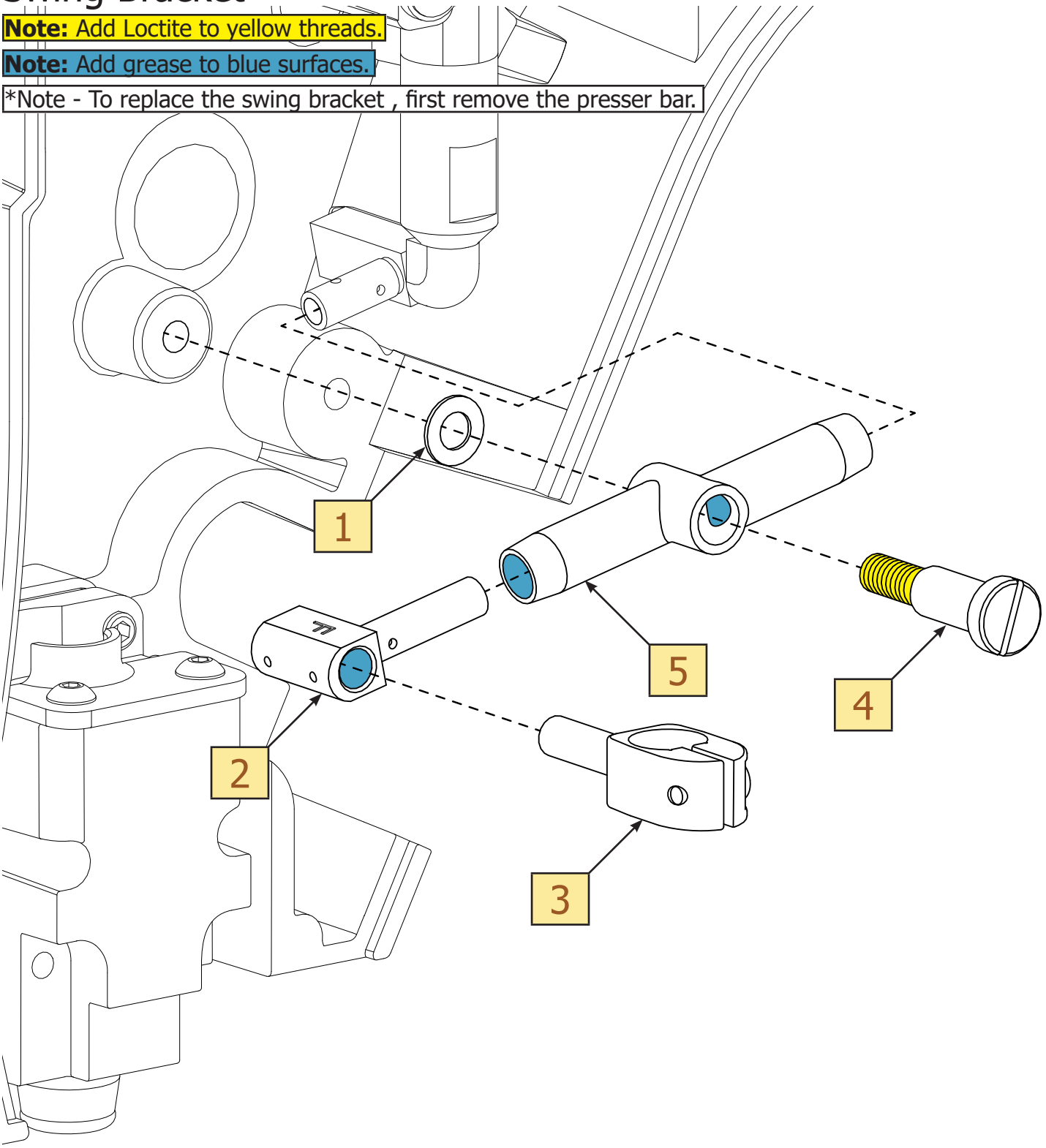
Item	QTY	Part #	Description	Serviceability
1	1	08-10044	Needle Bar Screw (part of Thread Take-up Lever Assembly)	DE
2	1	08-10044	Needle Bar Holder (part of Thread Take-up Lever Assembly)	DE
3	1	03-14432	Swing Bracket Dampening Spring	DE
4	2	05-14433	Plastic Washer 12.7 ID X 19.1 OD X 3.2mm T	DE
5	1	04-11712	Presser Bar	DE
6	1	04-11711	Needle Bar	DE
7	1	03-12813	SHCS M4 X 10mm	DE

Swing Bracket

Note: Add Loctite to yellow threads.

Note: Add grease to blue surfaces.

*Note - To replace the swing bracket , first remove the presser bar.

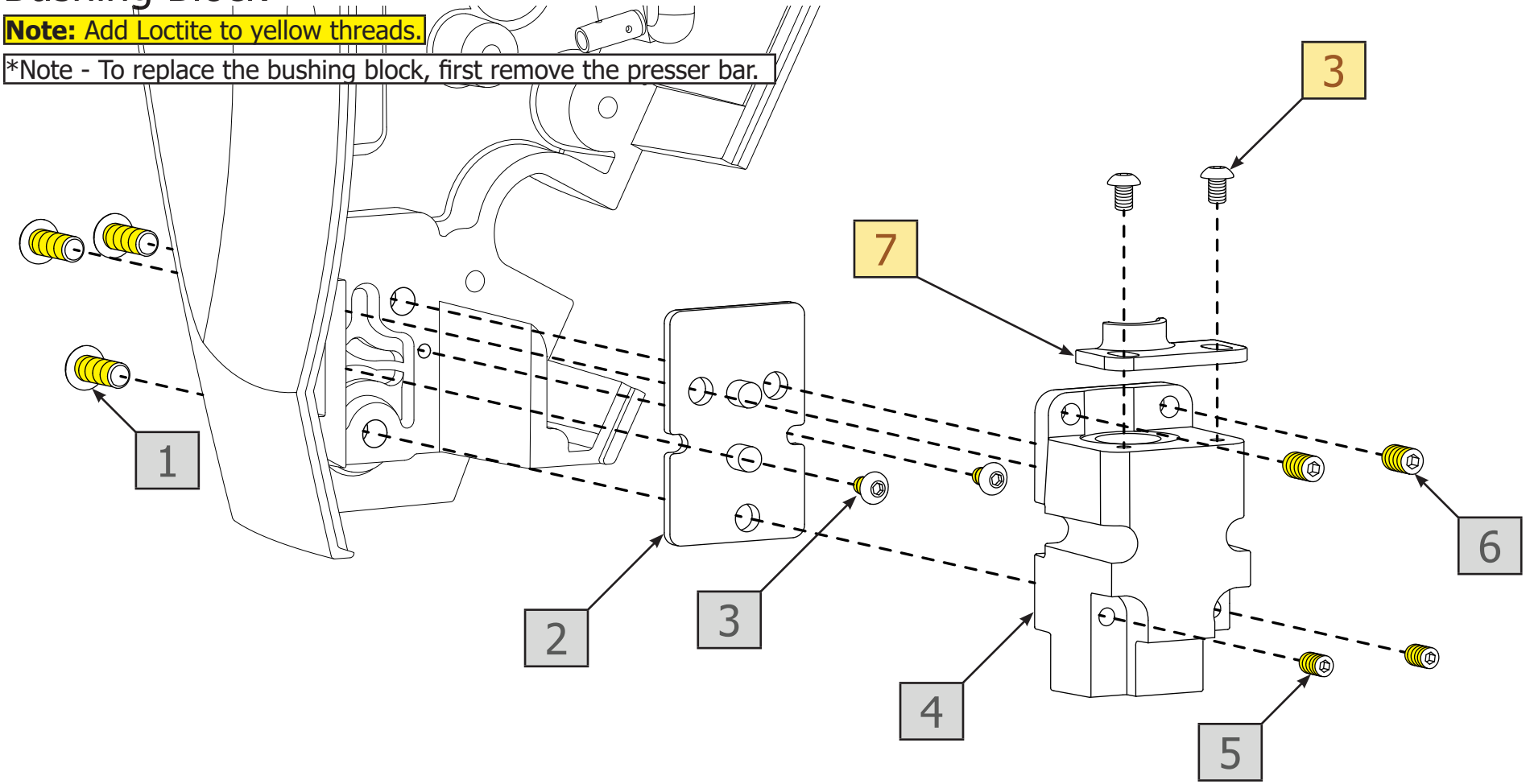


Item	QTY	Part #	Description	Serviceability
1	1	03-13924	Steel Shim 6 ID X 11 OD X 0.75mm T	DE
2	1	04-14033	Press Bar Rod Holder	DE
3	1	04-14038	Stop Collar v3	DE
4	1	03-10061	Swing Bracket Pin	DE
5	1	04-14032	Swing Bracket	DE

Bushing Block

Note: Add Loctite to yellow threads.

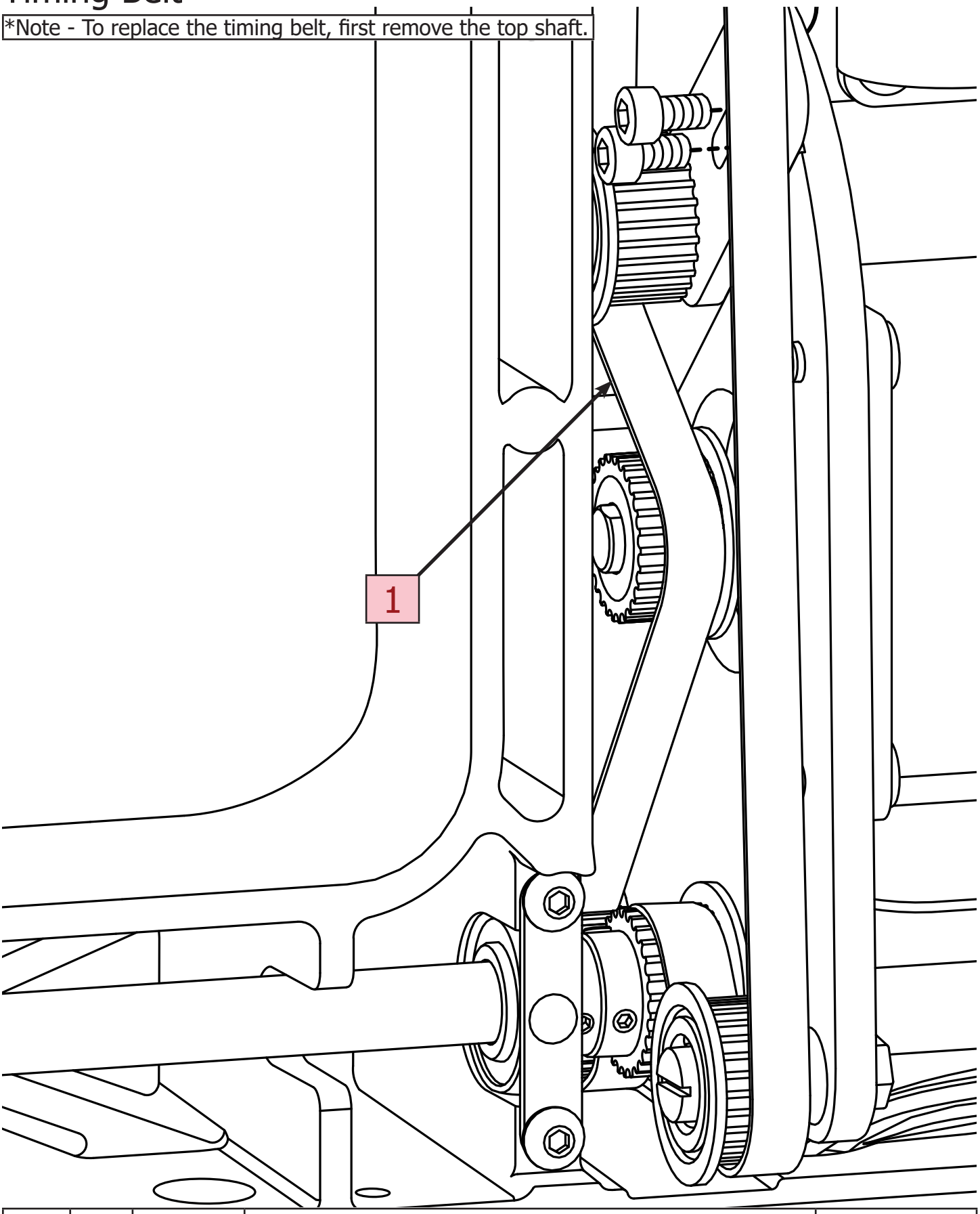
*Note - To replace the bushing block, first remove the presser bar.



Item	QTY	Part #	Description	Serviceability
1	3	03-10088	SBHCS M6 X 20mm	GR
2	1	04-13106	Bushing Block Adjustment Plate	GR
3	3	03-10088	SBHCS M6 X 20mm	DE
4	1	09-14439	Bushing Block Assembly	GR
5	2	03-10014	Socket FSS M5 X 8mm (Flat Set Screw)	GR
6	2	03-10973	Socket FSS M6 X 10mm (Flat Set Screw)	GR
7	1	04-14186	Press Bar Slide Plate v2	DE

Timing Belt

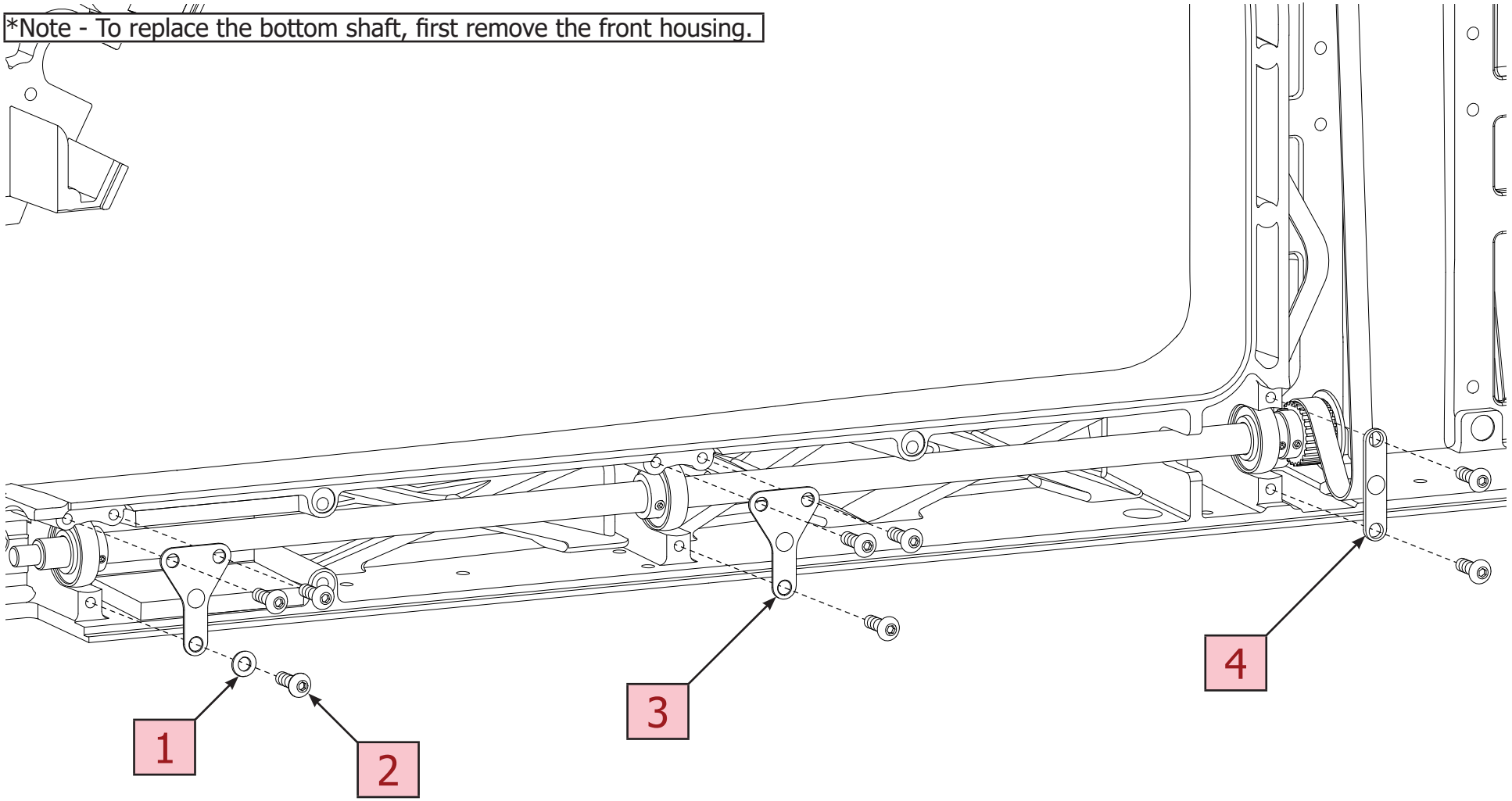
*Note - To replace the timing belt, first remove the top shaft.



Item	QTY	Part #	Description	Serviceability
1	1	08-11462	Timing Belt HTD 900mm L X 9mm W	DI

Bottom Shaft I

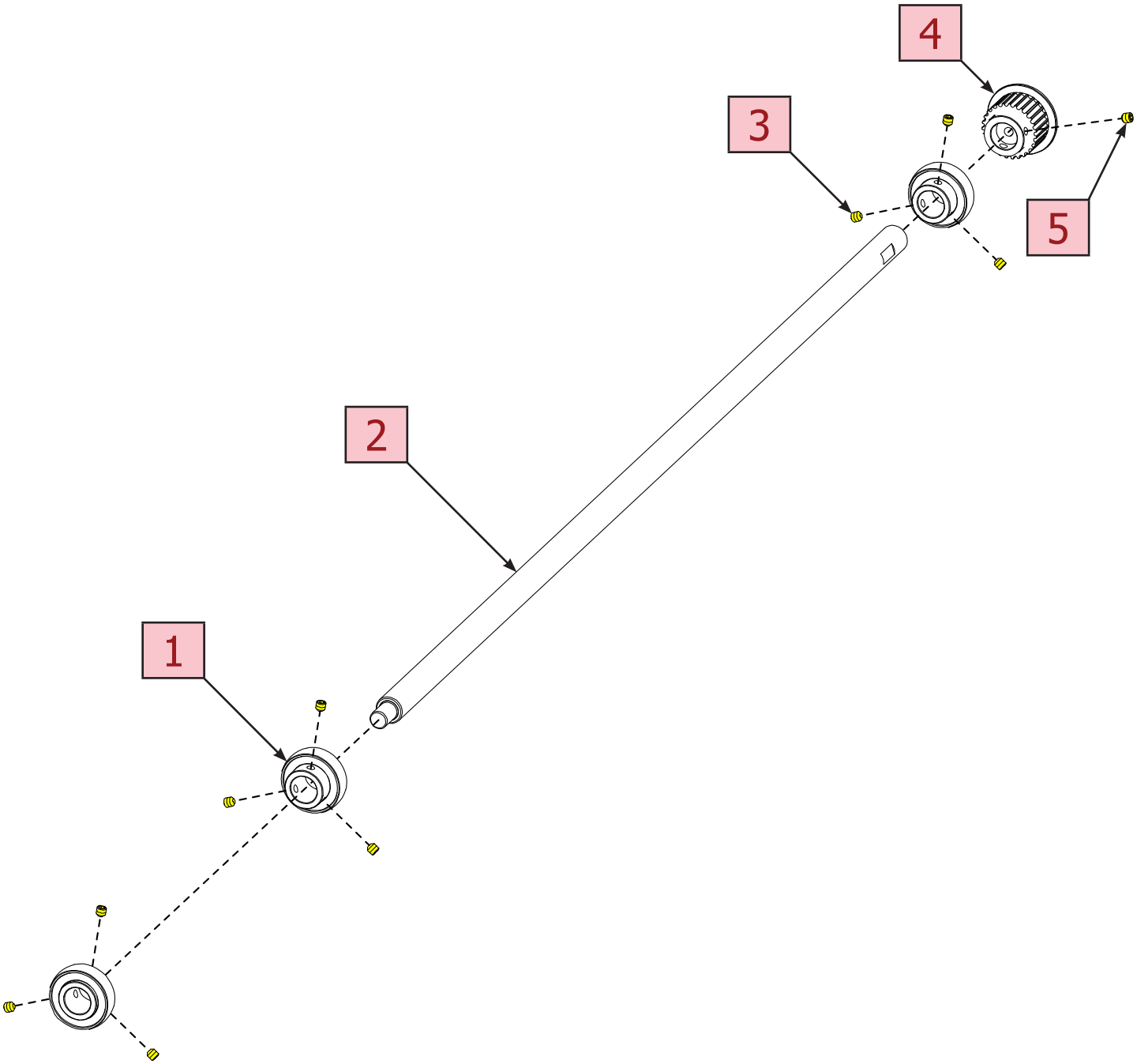
*Note - To replace the bottom shaft, first remove the front housing.



Item	QTY	Part #	Description	Serviceability
1	1	03-15017	Washer M5, Regular (5.4 ID X 15 OD X 1.5mm T)	DI
2	8	03-10030	SBHCS M5 X 16mm (Socket Button Head Cap Screw)	DI
3	2	04-11715	12mm Bushing Clamp Front	DI
4	1	04-10067	12mm Bushing Clamp Back	DI

Bottom Shaft II

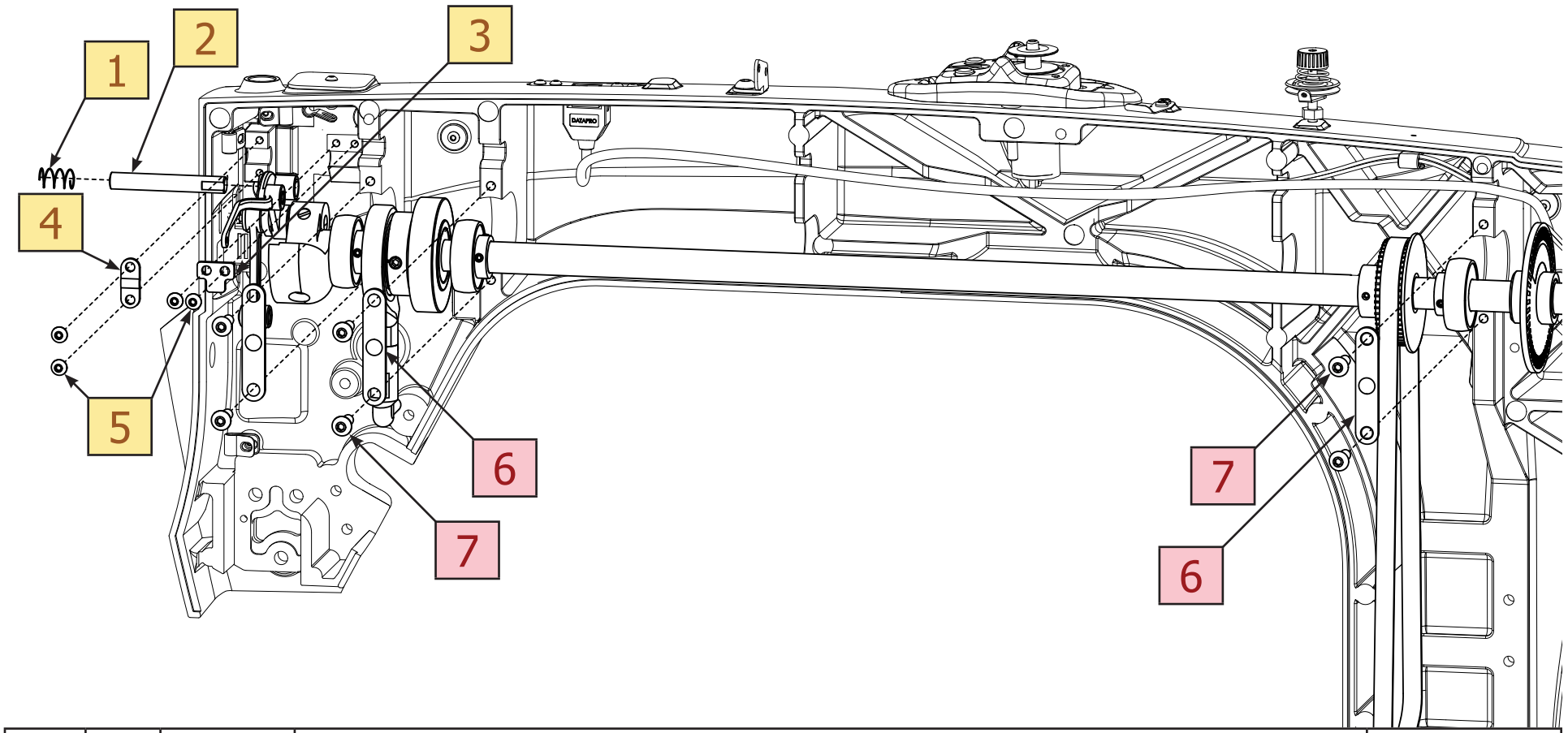
Note: Add Loctite to yellow threads.



Item	QTY	Part #	Description	Serviceability
1	3	03-10063	Y Bearing 12 ID X 28 OD X 8mm T	DI
2	1	04-11459	Bottom Shaft	DI
3	9	03-10016	Socket CSS M4 X 4mm (Cup Point Set Screw)	DI
4	1	04-14171	HTD Bottom Shaft Pulley	DI
5	1	03-15951	Socket FSS M4 X 4mm (Flat Set Screw)	DI

Top Shaft I

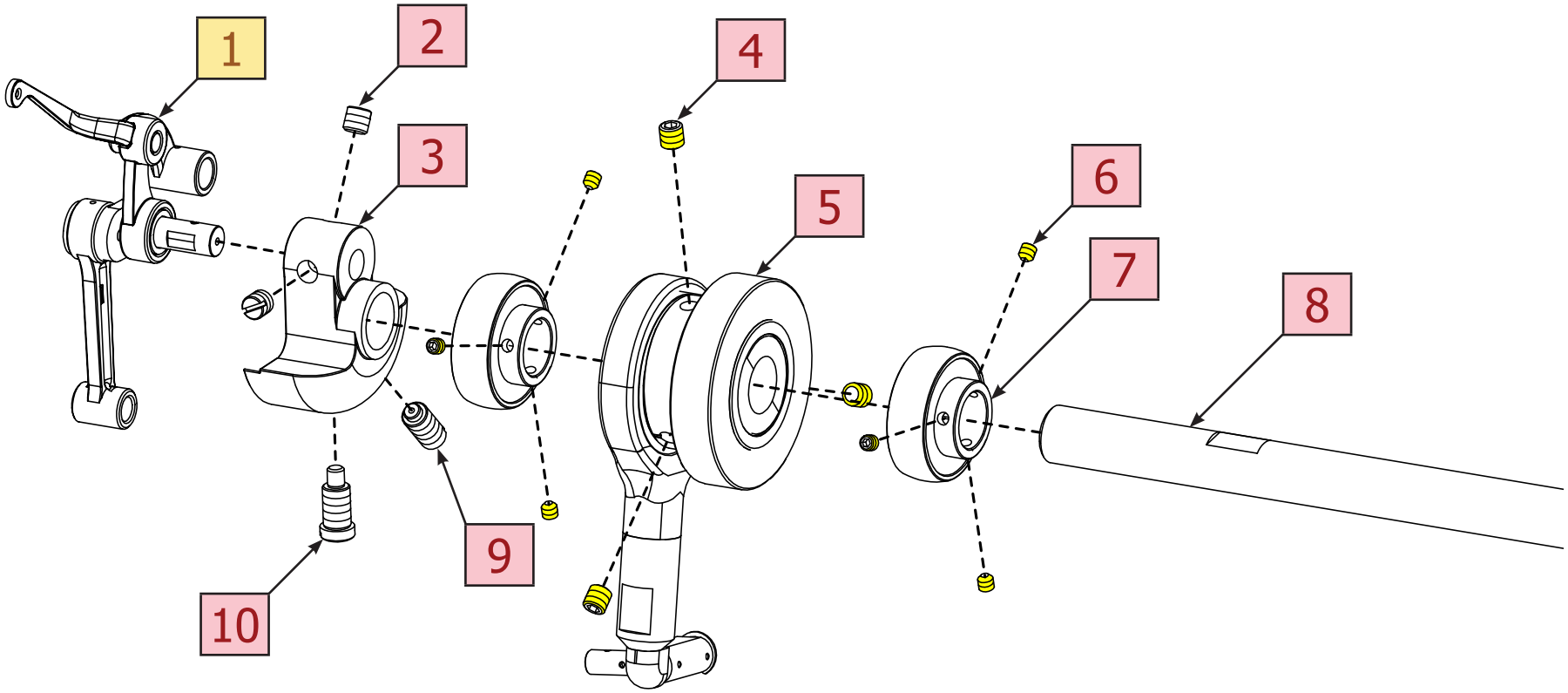
*Note - To replace the top shaft, first remove the swing bracket.



Item	QTY	Part #	Description	Serviceability
1	1	03-11463	Thread Take-Up Spring	DE
2	1	04-11523	Thread Take-Up Crank Pin	DE
3	1	04-11713	Thread Take-Up Lever Clamp Right	DE
4	1	04-11714	Thread Take-Up Lever Clamp	DE
5	4	03-10175	SBHCS M4 X 8mm	DE
6	3	04-10029	Main Shaft Bearing Clamp	DI
7	6	03-10030	SBHCS M5 X 16mm	DI

Top Shaft II

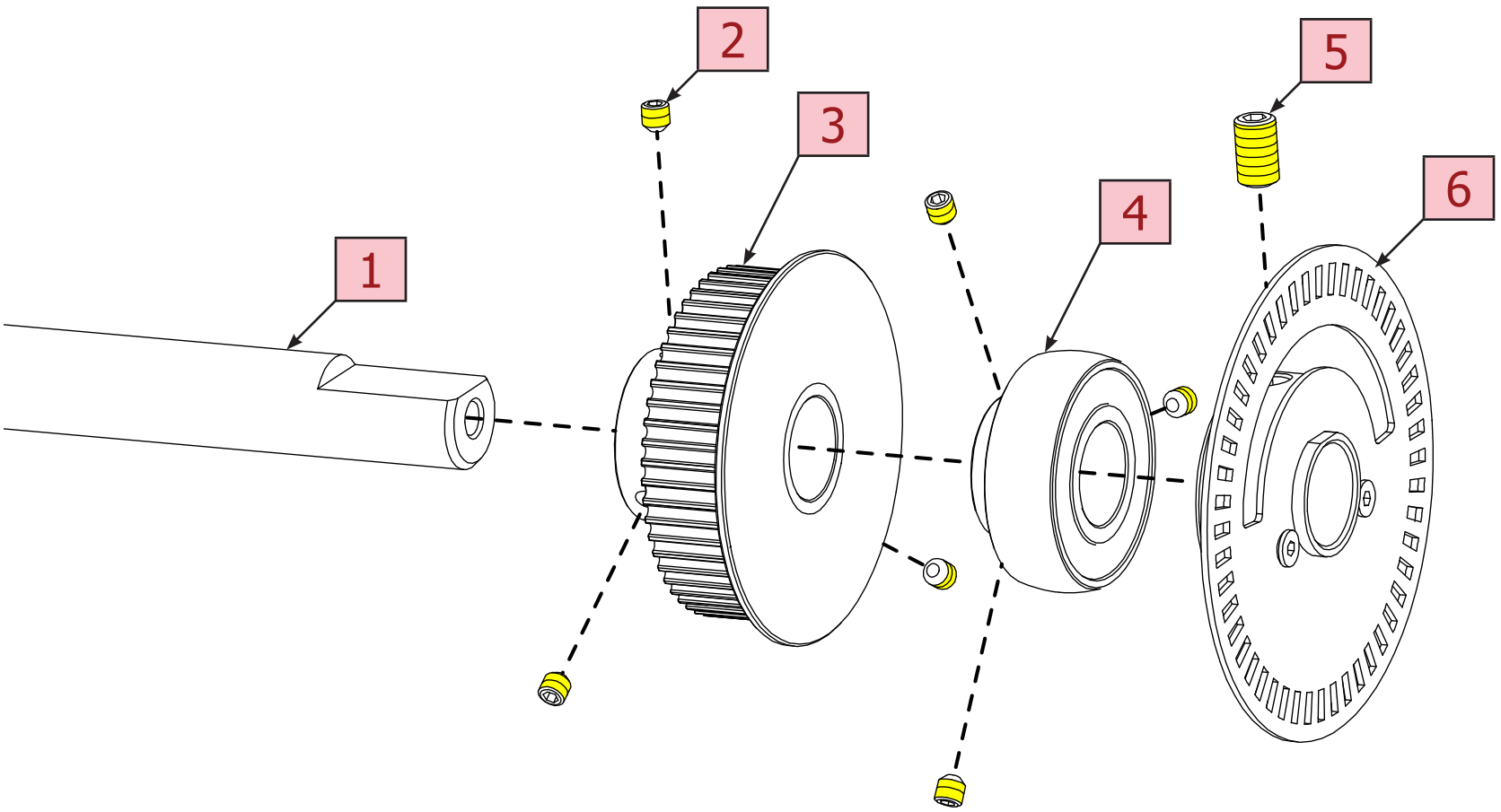
Note: Add Loctite to yellow threads.



Item	QTY	Part #	Description	Serviceability
1	1	08-10044	Thread Take-Up Lever Assembly	DE
2	2	03-10025	Slotted Set Screw 4-40 X 0.25in (6mm)	DI
3	1	04-14034	Counterweight V3	DI
4	3	03-10037	Socket FSS M6 X 6mm (Flat Set Screw)	DI
5	1	09-14329	Bushing Bearing Assembly	DI
6	6	03-10016	Socket CSS M4 X 4mm (Cup Point Set Screw)	DI
7	2	03-10017	Y Bearing 15 ID X 35 OD X 11mm T	DI
8	1	04-11460	Main Shaft	DI
9	1	03-10024	Crank Set Screw (Securing) SM 9/32 - 28 X 14	DI
10	1	03-10023	Crank Shoulder Screw (Orientation) 9/32 - 28 X 14	DI

Top Shaft III

Note: Add Loctite to yellow threads.



Item	QTY	Part #	Description	Serviceability
1	1	04-11460	Main Shaft	DI
2	6	03-10016	Socket Set Screw M4 X 4mm	DI
3	1	05-14185	HTD Top Shaft Pulley 15mm	DI
4	1	03-10017	Y Bearing 15 ID X 35mm X 11mm T	DI
5	1	03-10037	Socket FSS M6 X 6mm (Flat Set Screw)	DI
6	1	09-18777	Optical Encoder Assembly v2	DI

Torque Specifications Table

Screw Size	Torque Spec [Nm]	Torque Spec [in lb]	Torque Spec [ft lb]
M3	1.35	12.0	1.0
M4	3.10	27.6	2.3
M5	6.15	54.0	4.5
M6	10.5	92.4	7.7
M8	26.0		19.0
M10	51.0		37.0
M12	89.0		65.0