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Card Dispenser

CHECK	DATE	DESCRIPTION	REV	PAGE
1	2010.12.22	KHT-2200 series service manual establishment	A	27
2	2011.05.19	Spare part list upgrade	B	28
3	2014.07.14	Service manual update	C	26
4	2017.08.10	Service manual update	D	6, 16, 17, 18



Ingeniería Electrónica

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Notice

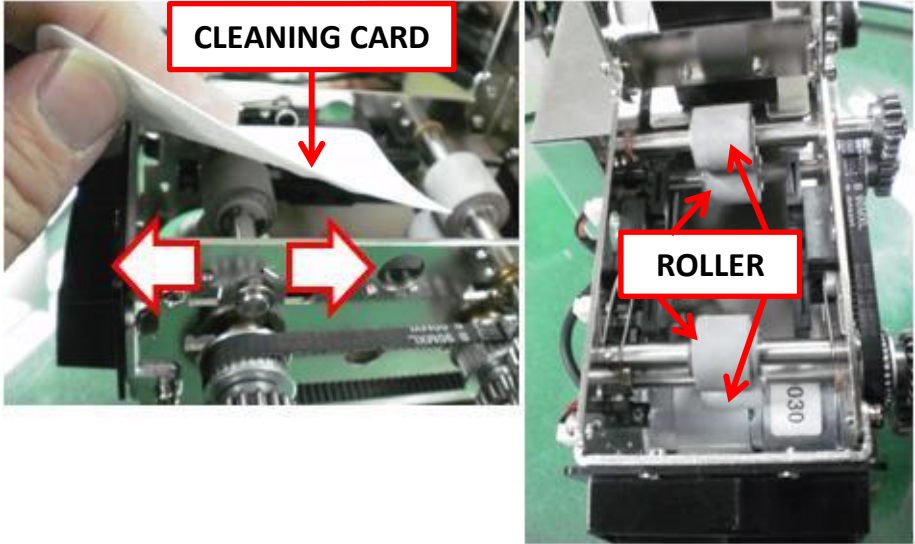
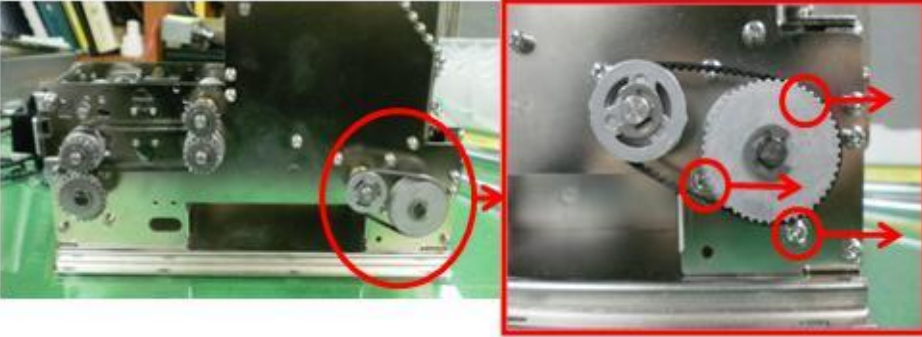
We greatly appreciate your using KHT-2200 series.

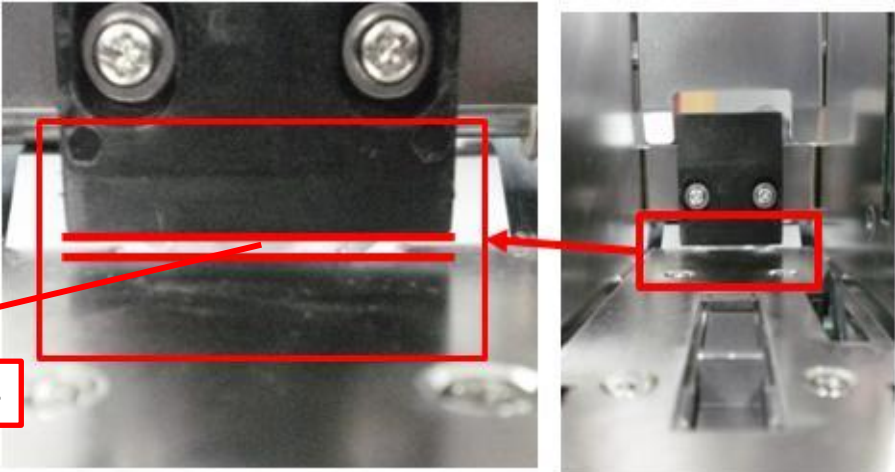
Please follow this manual which is helpful for user to maintain
and repair KHT-2200 series when facing problem.

If you need other assistance or just have a question,
please call our technical support staff or send us e-mail

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PART-I.	Configuration of KHT-2200 series	=====	1 ~ 2	PAGE
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PART-III.	Trouble shooting	=====	4	PAGE
PART-IV.	Parts Replacement	=====	5 ~ 22	PAGE
PART-V.	Spare part list	=====	23 ~ 25	PAGE

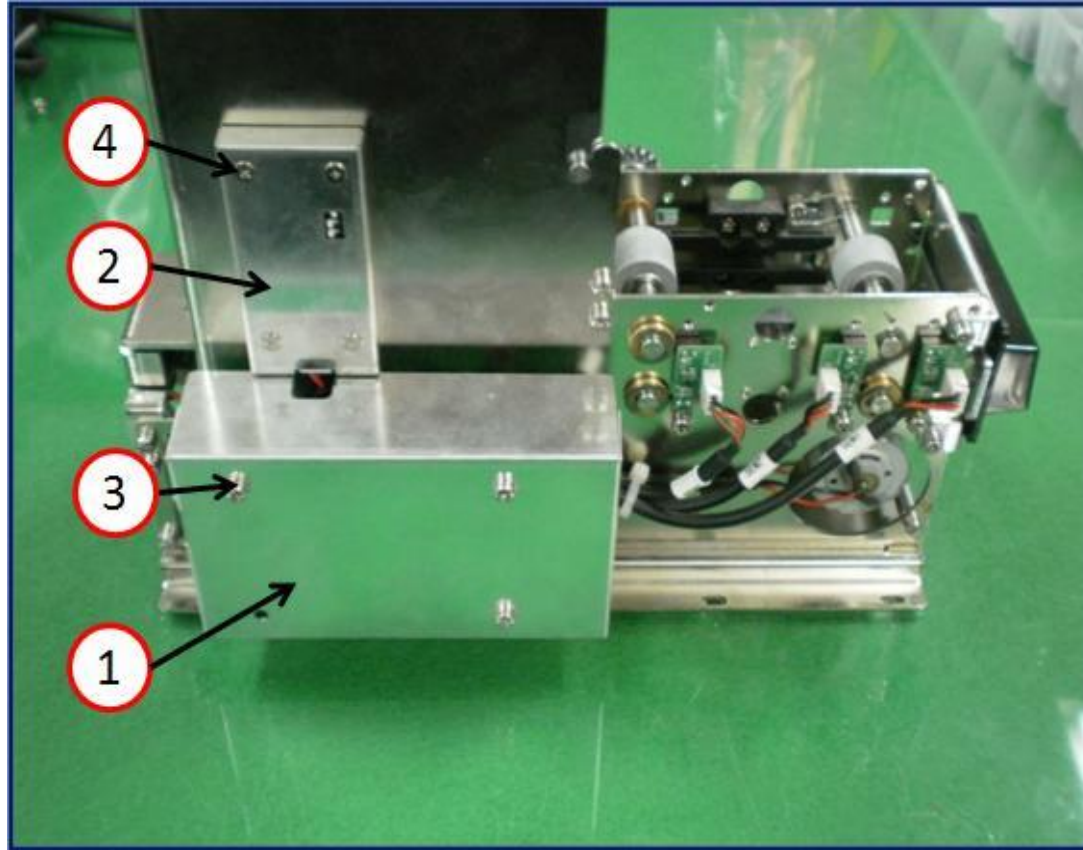
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PART (II)		MAINTENANCE	PROCESS			
NO	Section	Maintenance method				
1	ROLLER CLEANING	<p>Wet CLEANING CARD with 4 ~ 7 drop of alcohol, And then wipe the header and roller with cleaning card in 5 ~ 6 times by moving the roller.</p> <p>☞ Clean every day or every week according to the pollution rate and the movement status of the roller.</p> <p>☞ HEAD CLEANING CARD</p> <p>(1) Product name : TNET-337,020 (2) Company name : FQ INGENIERIA ELECTRONICA, S.A. (3) info@fqingenieria.com</p>				
2	BELT TENSION	<p>As the picture on the right, Loosen the screws with the plus screw driver. And push up or pull down the motor along the arrows. And then tighten the screws.</p> <p>☞ it does require maintenance every week or every month according to the belt tension.</p>				
3	Parts replacement	<p>1. All assembly is in reverse order of disassembly. 2. Please be sure to take care of "※ NOTE" mark.</p>				

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PART (Ⅲ)		TROUBLE SHOOTING	PROCESS			
NO	Malfunction	CHECK POINT	Management			
1	Communication Error	1. Check on/off status of Power switch. 2. Check if the power cable is normal. 3. Check if communication cable's connection is normal.	1. Power switch ON 2. Power cable connect 3. Communication cable connect			
2	Card feeding error or Card jam	1. Inspect connection status of the cables (Motor and sensor) 2. Sensor is functioning normally. (Insert the card into the front entrance, and then check if the sensor voltage is changed from HI (4.6v over) to LOW (0.5v under) while you turn the main pulley by hand.) 3. Check if the motor is functioning normally (Supply DC 24V to the motor.) 4. Confirm main PCB' A 5. Check the pollution rate of sensor and roller. 6. Confirm the belt tension. 7. Check if roller gap is appropriate.	1. Motor & Sensor cable connect 2. Replace SENSOR PCB'A. 3. Replace Motor. 4. Replace Main PCB'A. 5. Remove the dust and clean the roller. 6. Adjust or replace the belt tension. 7. Loosen the screw of the stopper a little. And insert the card with paper or gap gauge between stopper and ass'y middle shaft. And then push up middle of the stopper and tighten the SCREW while maintaining level of the stopper. (CARD GAP: CARD thickness * 1.2 ~ 1.4) - (See Picture) 8. Load the cards in the cartridge normally.			
						
		<div style="border: 1px solid red; padding: 5px; display: inline-block;"> GAP : CARD THICKNESS * 1.2 or 1.4 </div>				

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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y PCB COVER Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	72300016	A	PCB COVER (MAIN PCB'A)	1
2	72300017	A	PCB COVER (WARNING SENSOR)	1
3	69017063	A	SCREW M3*6 PH FNW (SEMS SMALL)	3
4	60927063	A	SCREW CONTACT M3*5 0.5P FNW	4

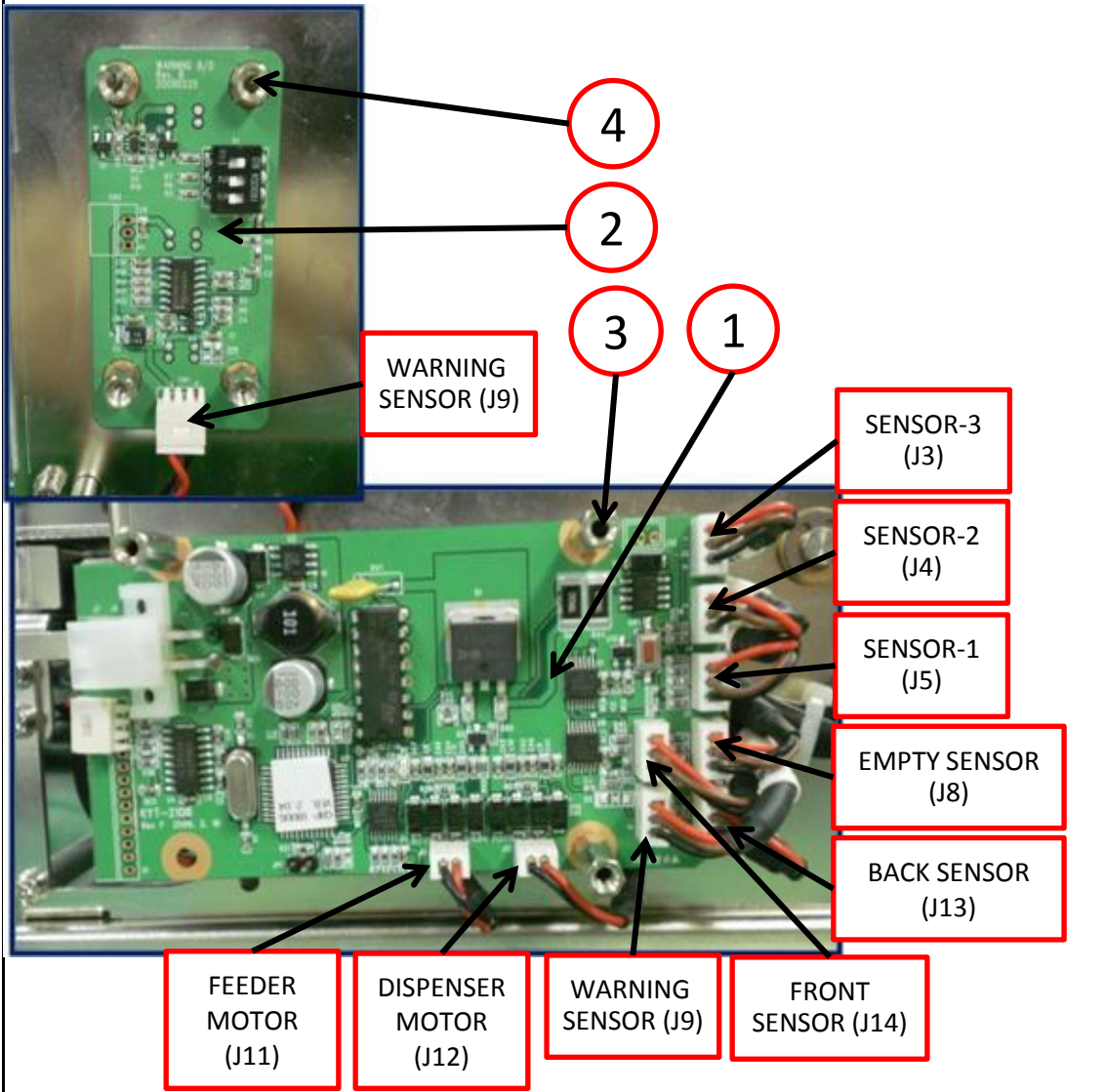


● Sequence

1. Unscrew SCREW(3), and then disassemble PCB COVER(1).
2. Unscrew CONTACT SCREW(4), and then disassemble PCB COVER(2).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y CABLE connection position
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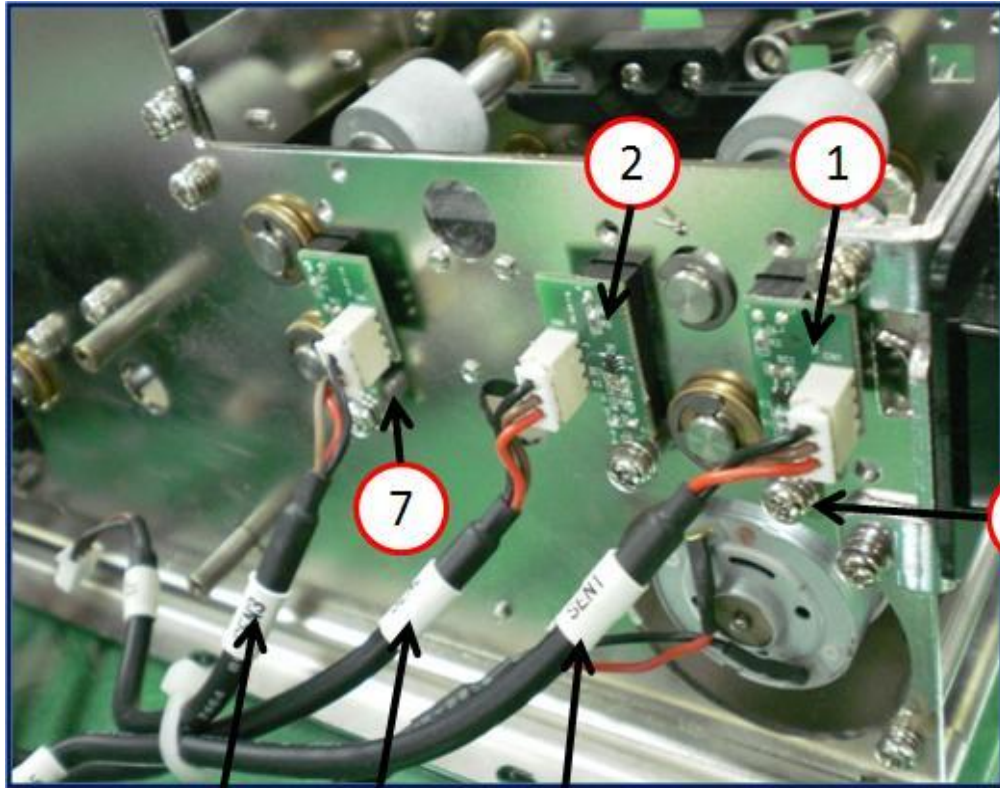
NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	89520606	A	ASS'Y MAIN PCB (KHT-22XX)	1
2	89280229	A	ASS'Y WARNING SENSOR (SG-105 B/D)	1
3	72330005	A	POST NUT M3*15	3
4	72330001	A	POST NUT M3*5	4

- Sequence
1. Pull out all cables.
 2. Unscrew both POST NUT(1) and POST NUT(2) by using 5mm HEX NUT DRIVER.

TOOL	PINCETTE, 5mm HEX NUT DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y SENSOR PCB Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	89280230	D	ASS'Y SENSOR PCB-L	2
2	89280210	D	ASS'Y SENSOR PCB-R	1
3	89262281	A	ASS'Y FEED SENSOR-3 CABLE	1
4	89262282	A	ASS'Y FEED SENSOR-2 CABLE	1
5	89262283	A	ASS'Y FEED SENSOR-1 CABLE	1
6	60917083	A	SCREW M3.0*8L FNW (SEMS SMALL)	3
7	70220043	A	SENSOR SPACER	3

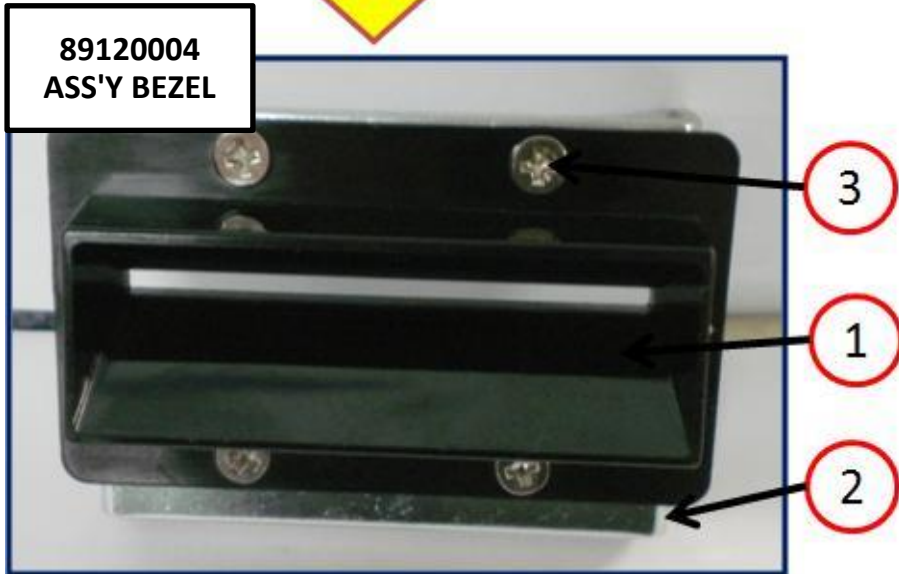
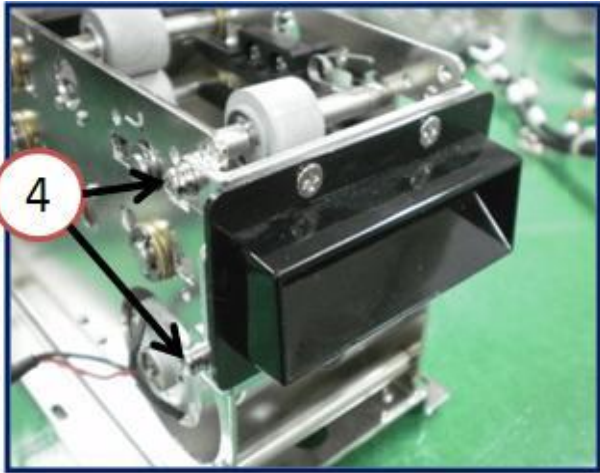
● Sequence

1. Pull out CABLE(3), CABLE(4) and CABLE(5).
2. Unscrew SCREW(6), and then disassemble both SENSOR(1) and SENSOR(2).

TOOL	PINCETTE, + SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y BEZEL Disassembly
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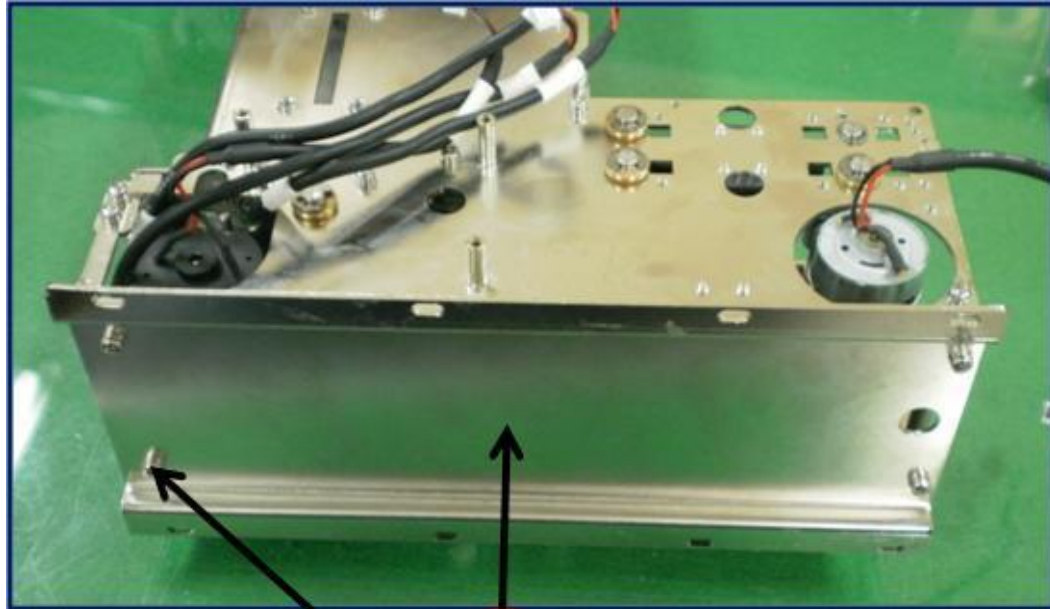
NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	67040007	A	BEZEL	1
2	69030025	A	BEZLE BRKT	1
3	60417049	A	SCREW FH M3*4L FNW	4
4	60917063	A	SCREW PH M3*6L FNW (SEMS SMALL)	4

- Sequence
 1. Unscrew SCREW(4), and then disassemble ASS'Y BEZEL.
 2. Unscrew SCREW(3), and then disassemble both BEZEL(1) and BEZEL BRKT(2).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y BASE BRKT Disassembly
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2

1

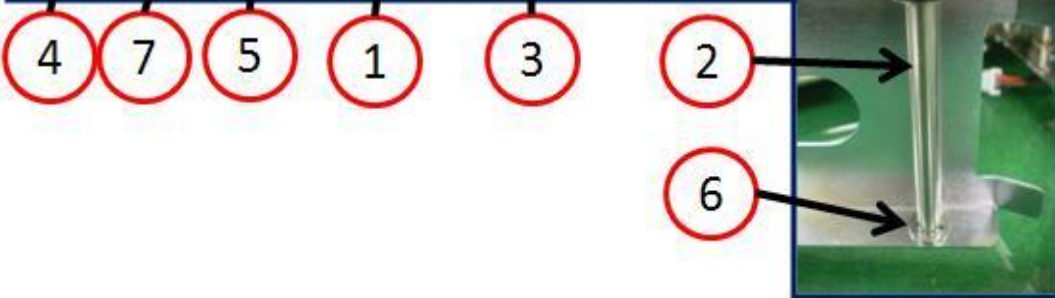
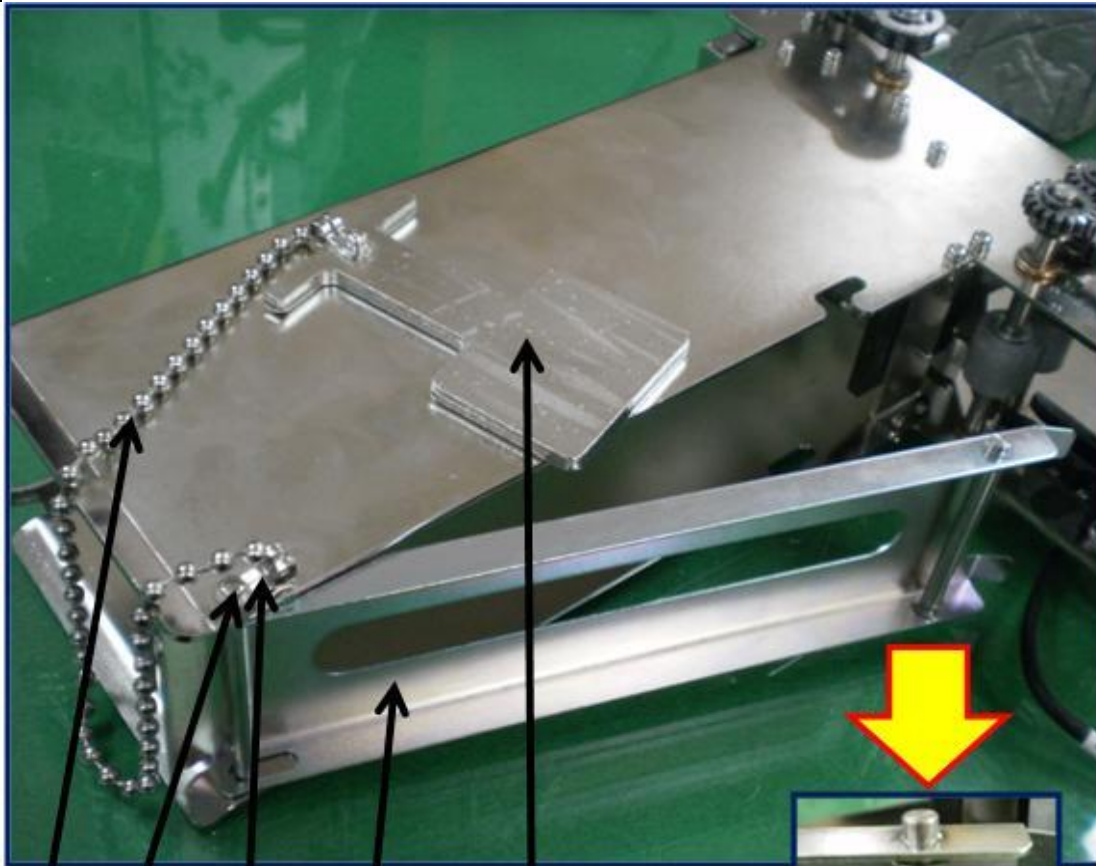
NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	69010086	A	BASE BRKT	1
2	60917061	A	SCREW M3*6 PH FZY (SEMS SMALL)	4

- Sequence
- 1. Unscrew SCREW(2), and then disassemble BASE BRKT(1).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y FRONT DOOR Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	69020005	A	FRONT DOOR 200PCS	1
	69020006	A	FRONT DOOR 300PCS	1
	69020007	A	FRONT DOOR 500PCS	1
2	70230009	A	LOCK PIN	1
3	70040002	A	WEIGHT	1
4	74250005	A	BALL CHAIN 240mm	1
5	72110001	A	CHAIN CLIP	2
6	76210013	A	E-RING PI 4.0 SUS	2
7	60917062	A	SCREW PH M3*6L FNW (SEMS)	2

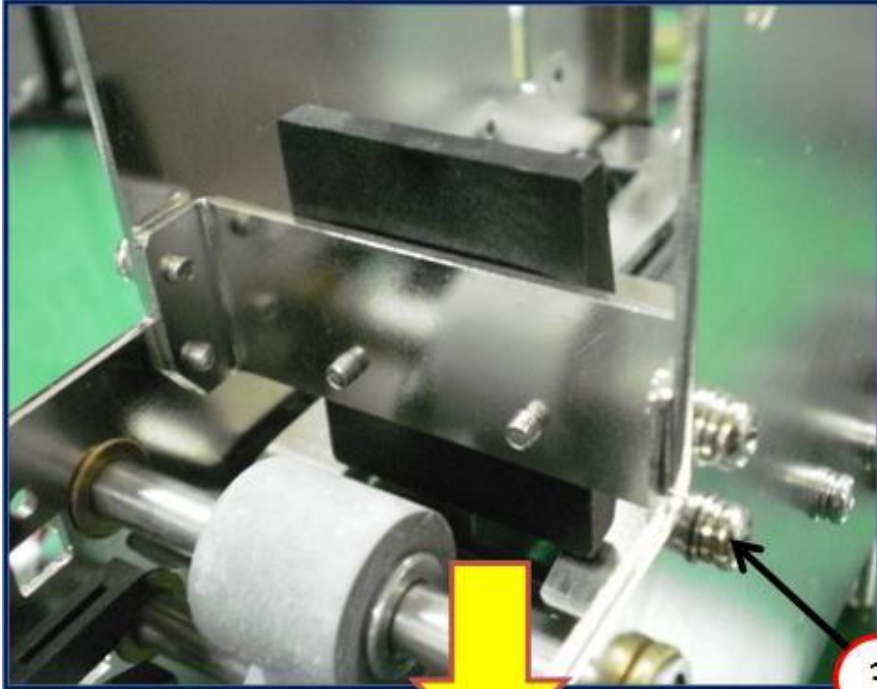
● Sequence

1. Unscrew SCREW(7), and then disassemble both FRONT DOOR(3) and WEIGHT(4).
2. Remove E-ring(6) by using pincette, and then pull out LOCK PIN(2).

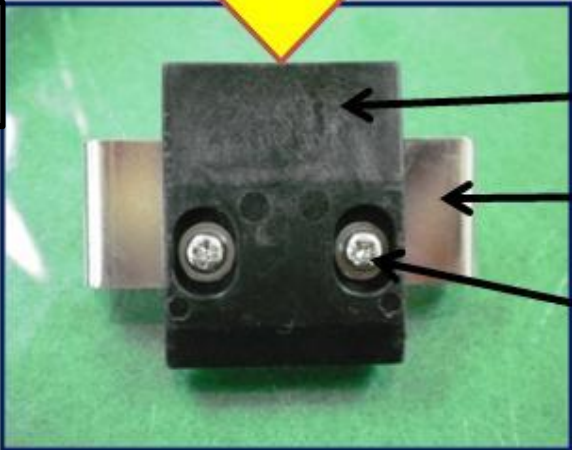
TOOL	+ SCREW DRIVER , PINCETTE
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y STOPPER Disassembly
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**89140011
ASS'Y STOPPER**



- 3
- 2
- 1
- 4

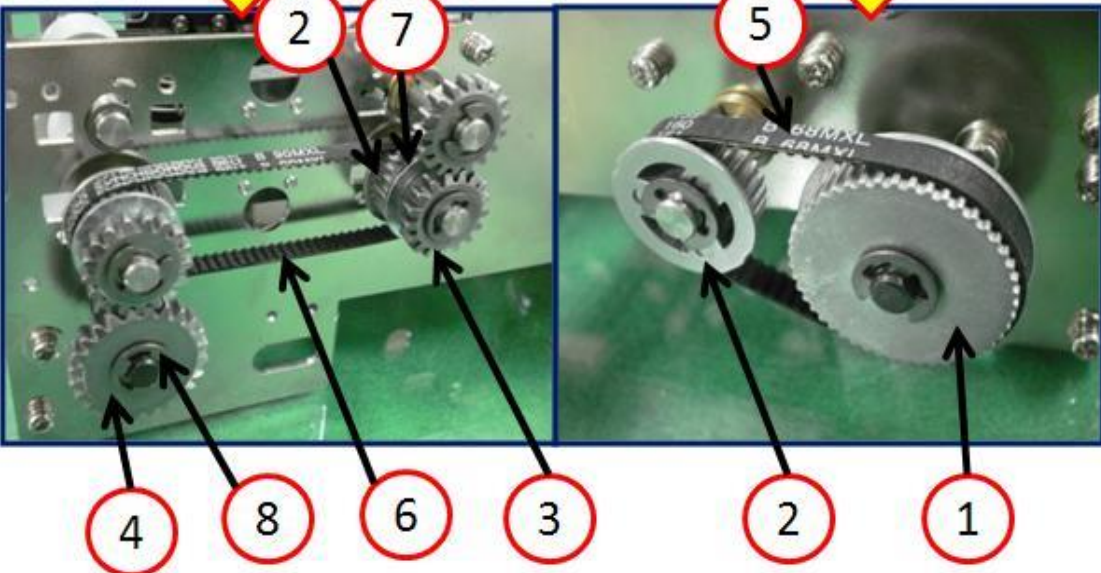
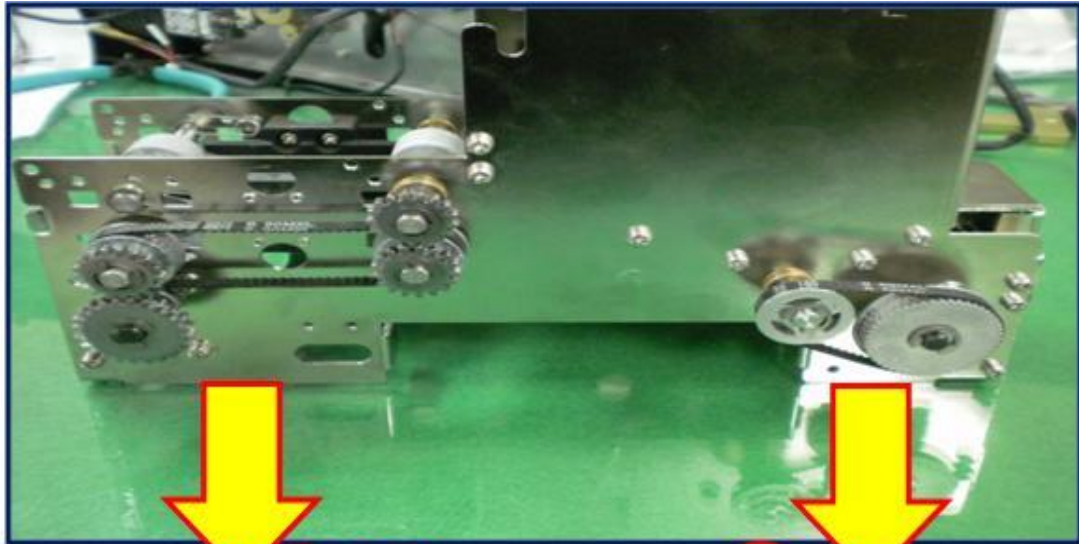
NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70000123	A	STOPPER BRKT	1
2	72250002	A	STOPPER	1
3	60917063	A	SCREW PH M3*6L FNW (SEMS SMALL)	4
4	60917085	A	SCREW PH M3*8L FNW (SEMS)	2

- Sequence
- 1. Unscrew SCREW(3) by using plus driver, and then disassemble ASS'Y STOPPER.
- 2. Unscrew SCREW(4), and then disassemble both STOPPER BRKT(1) and STOPPER(2).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y PULLEY, GEAR Disassembly
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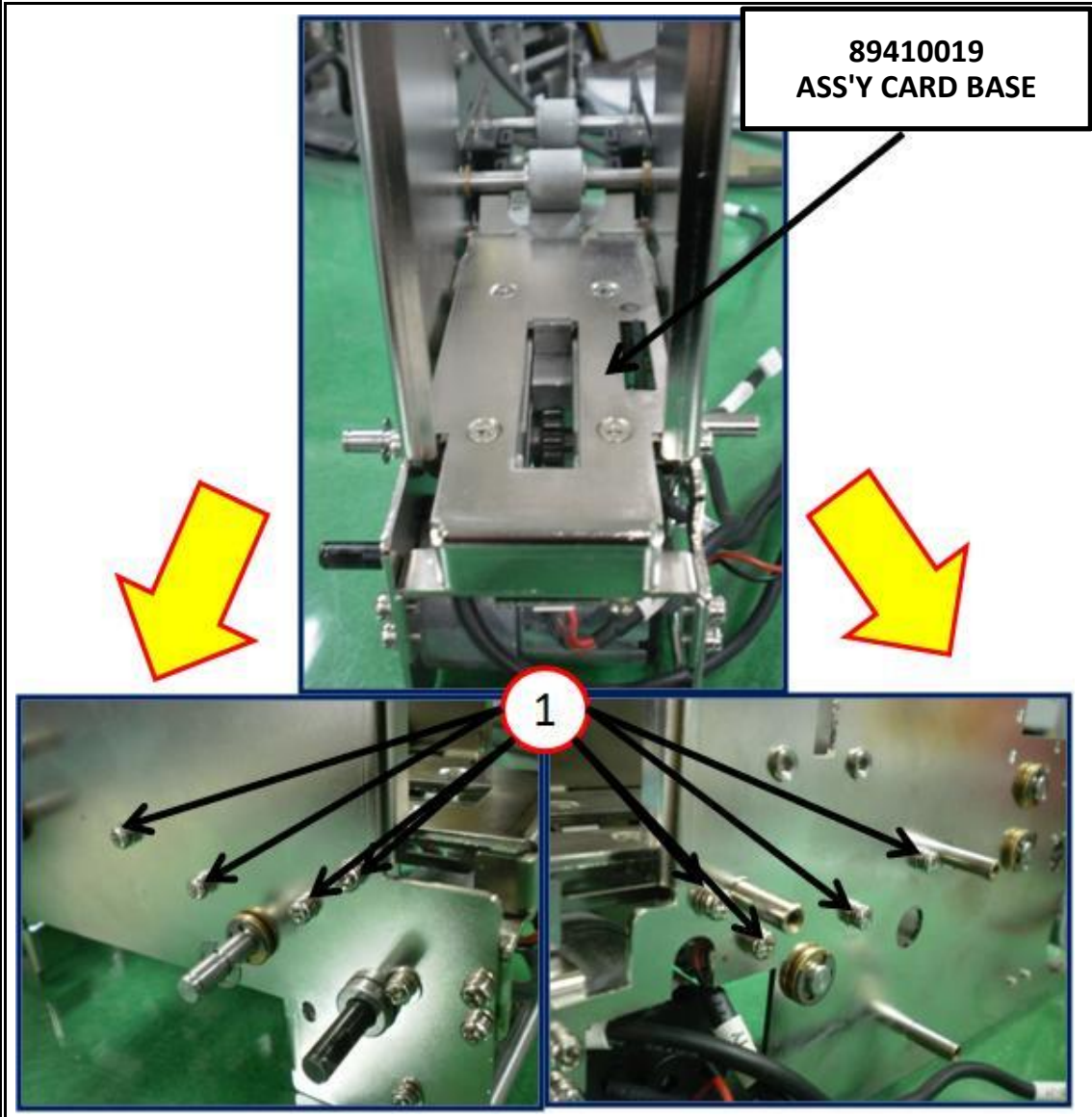
NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	74210016	A	TIMING PULLEY AL 47MXL	1
2	74210015	A	TIMING PULLEY AL 29MXL	3
3	74200004	B	FEED GEAR - 17	3
4	74200001	B	FEED GEAR - 24	1
5	74250038	A	BELT 68 MXL * 4.8	1
6	74250017	A	BELT 90 MXL * 4.8	1
7	63020012	A	PLATE WASHER	2
8	76210013	A	E-RING PI 4.0 SUS	6

- Sequence
1. Remove E-ring(8) by using pincette, and then pull out PULLEY(1), PULLEY(2) and BELT(5).
 2. Remove E-ring(8), and then disassemble both GEAR(3) and GEAR(4).
 3. Pull out WASHER(8), and then pull out PULLEY(2) and BELT(6).

TOOL	PINCETTE
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y CARD BASE Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	60917063	A	SCREW PH M3*6L FNW (SEMS SMALL)	8

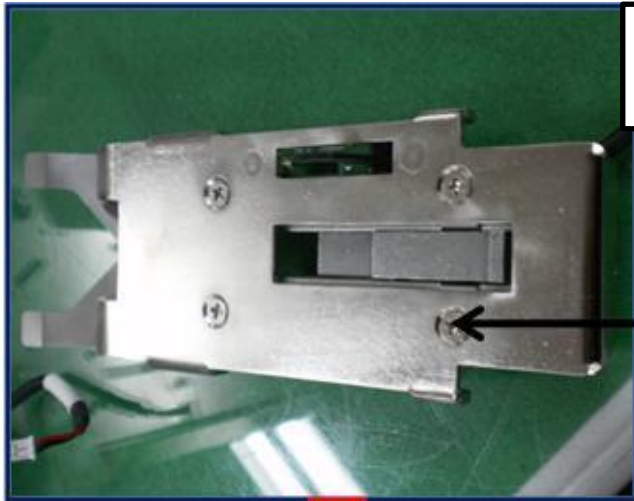
● Sequence

1. Unscrew SCREW(2) by using plus driver, and then disassemble ASS'Y CARD BASE BRKT.

TOOL	+ SCREW DRIVER
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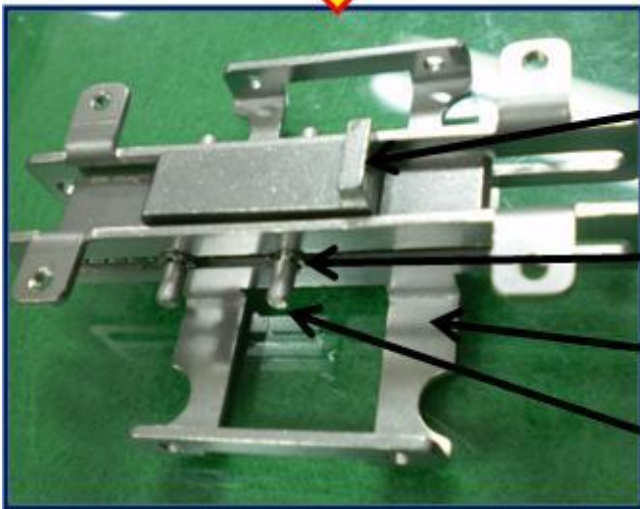
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y CARD BASE BRKT Disassembly
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**89410019
ASS'Y CARD BASE**

5



1

4

2

3

NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	74200005	B	RACK GEAR	1
2	74900003	B	SLIDE SUPPORT BRKT	2
3	70230061	A	PIN STOPPER	2
4	70610011	A	E-RING PI 2.0 SUS	4
5	60417049	A	SCREW FH M3*4L FNW	4

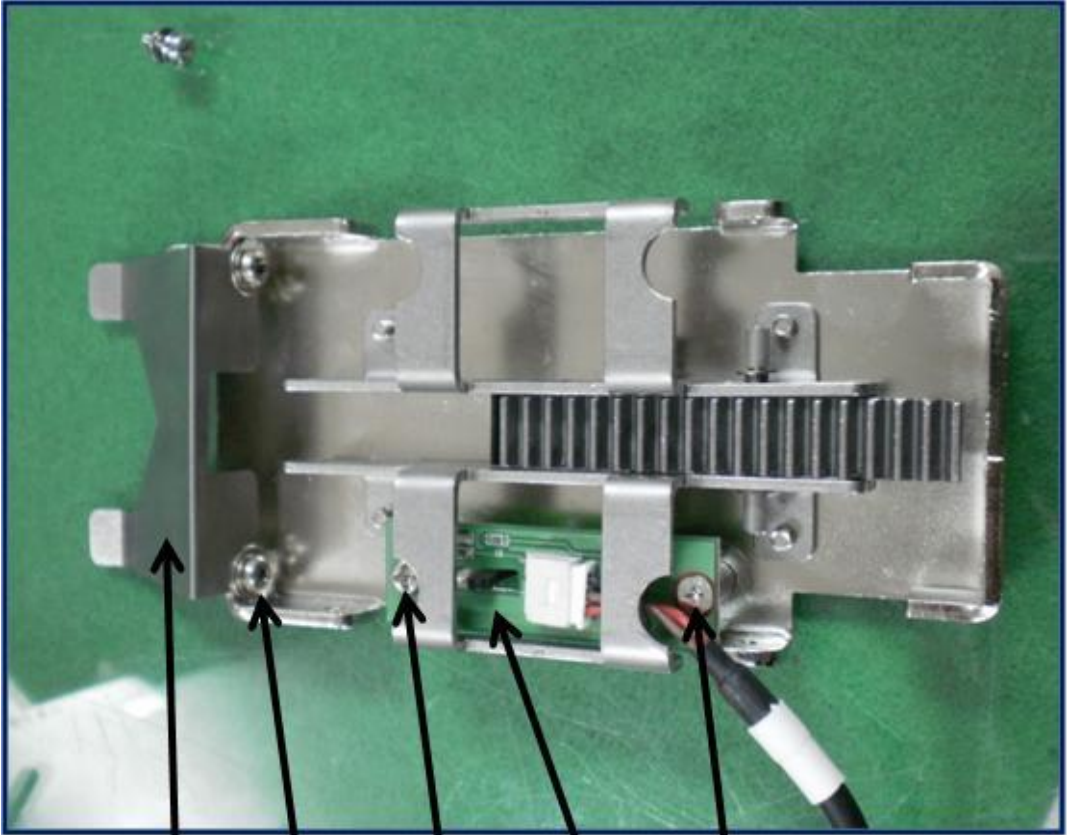
- Sequence
 1. Unscrew SCREW(5) by using plus driver, and then disassemble ASS'Y CARD BASE BRKT.
 2. Remove E-ring(6) by using pincette, and then disassemble both RACK GEAR(2) and BRKT(3).

TOOL	PINCETTE, + SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y EMPTY SENSOR Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70010056	A	CAPTURE GUIDE	1
2	89280228	A	ASS'Y EMPTY SENSOR	1
3	60917062	A	SCREW PH M3*6 FNW (SEMS)	2
4	60917063	A	SCREW PH M3*6 FNW (SEMS SMALL)	1
5	60927063	A	SCREW CONTACT M3*5 FNW	1



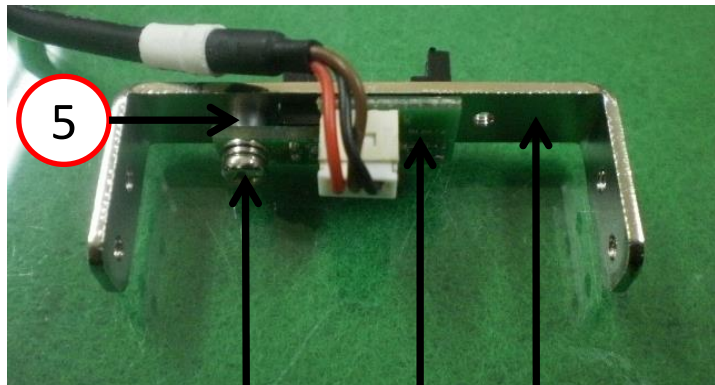
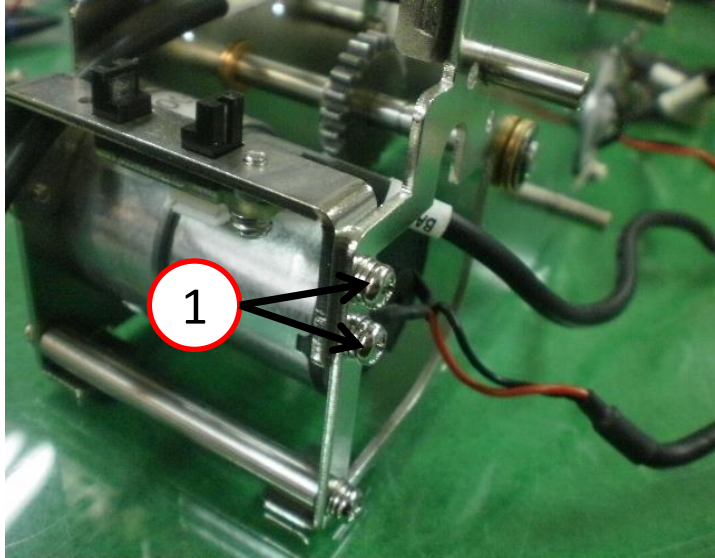
- 1
- 3
- 4
- 2
- 5

- Sequence
- 1. Unscrew SCREW(3) by using plus driver, and then pull out CAPTURE GUIDE(1).
- 2. Unscrew both SCREW(4) and SCREW(5), and then disassemble SENSOR(2).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y BACK SENSOR BRKT Disassembly
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2

3

4

NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	60917063	A	SCREW PH M3*6L FNW (SEMS SMALL)	4
2	60917083	A	SCREW PH M3*8L FNW (SEMS SMALL)	1
3	89220020	D	ASS'Y SENSOR SG-268 R	1
4	70000118	A	BACK SENSOR BRKT	1
5	70220043	A	SENSOR SPACER	1

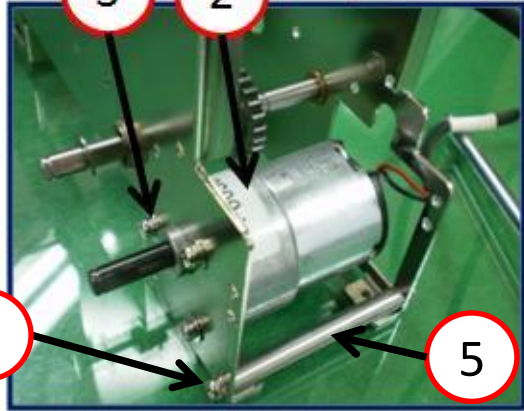
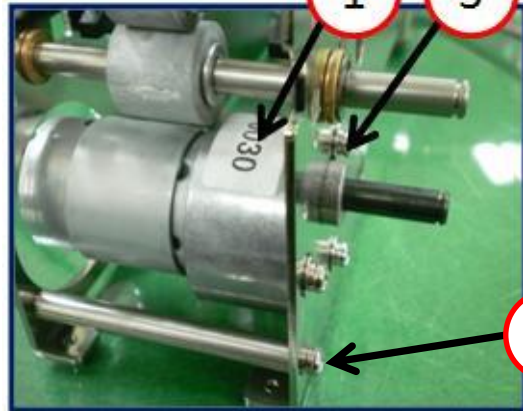
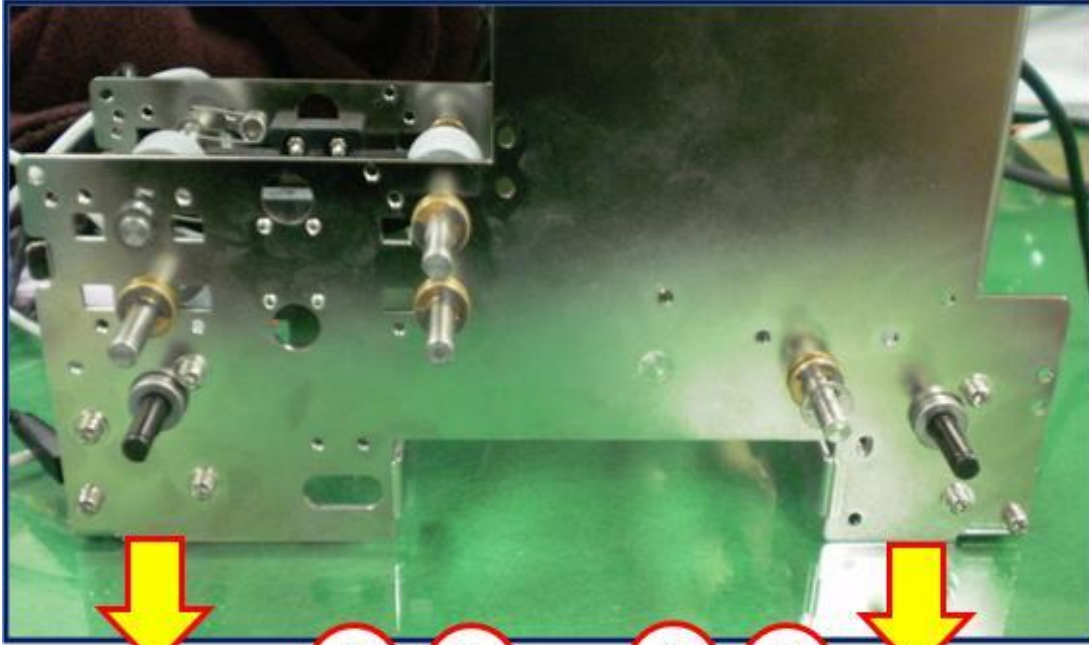
● Sequence

1. Unscrew SCREW(1) by using plus driver, and then disassemble BACK SENSOR BRKT(4).
2. Unscrew SCREW(2) by using plus driver, and then disassemble ASS'Y SENSOR SG-268 R(3).

TOOL	PINCETTE, + SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y MOTOR, SPACER FRAME Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	89160016	A	ASS'Y FEEDER MOTOR	1
2	89160014	A	ASS'Y DISPENSER MOTOR	1
3	60917062	A	SCREW M3*6 PH FNW (SEMS)	6
4	60917063	A	SCREW PH M3*6L FNW (SEMS SMALL)	2
5	72310003	A	SPACER FRAME	1

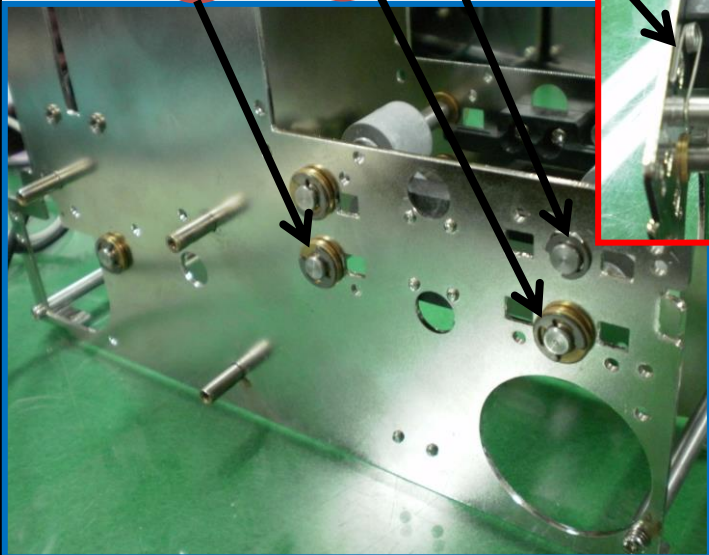
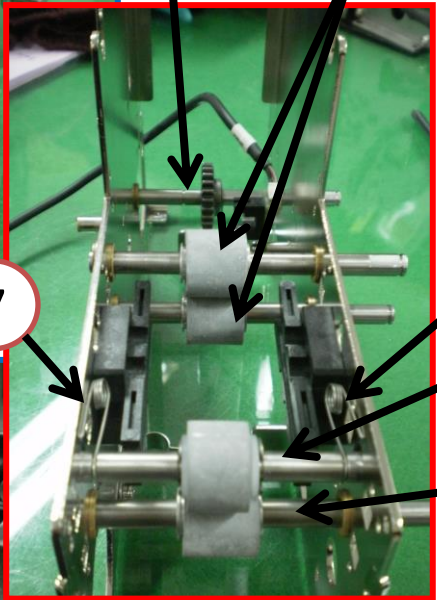
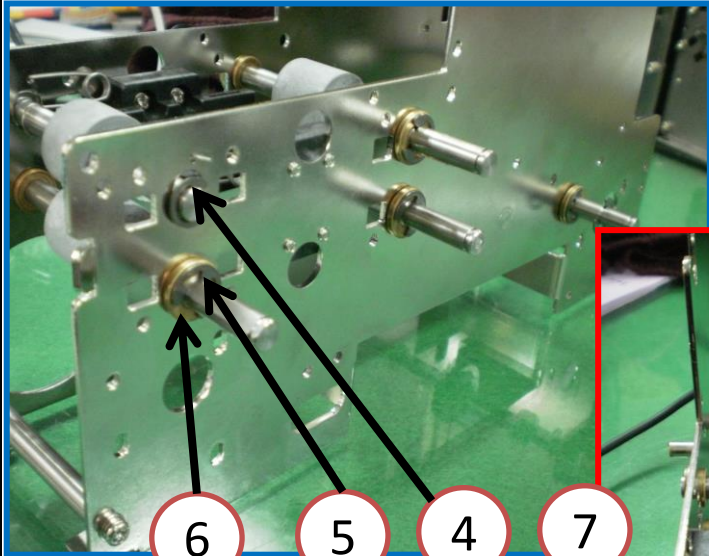
● Sequence

1. Unscrew SCREW(3) by using plus driver, and then disassemble both MOTOR(1) and MOTOR(2).
2. Unscrew SCREW(4) by using plus driver, and then disassemble SPACER FRAME(5).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y SHAFT Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	89110038	A	ASS'Y MAIN SHAFT	1
2	89110034	A	ASS'Y FEEDING SHAFT	3
3	89101234	B	ASS'Y IDLER SHAFT	1
4	76210013	A	E-RING PI 4.0	2
5	76210014	A	E-RING PI 5.0	8
6	70310002	A	OILLESS BEARING	8
7	76200031	A	IDLER SPRING-L	1
8	76200032	A	IDLER SPRING-R	1

- Sequence
- 1. Remove Spring(7), (8).
- 2. Remove E-ring(4), (5), and then disassemble OILLESS BEARING(6), ASS'Y SHAFT(1), (2), (3).

TOOL	PINCETTE
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y GUIDE BRKT Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70010059	A	GUIDE BRKT	2
2	89280230	B	ASS'Y SENSOR PCB-L	1
3	60917063	A	SCREW M3*6 PH FNW (SEMS SMALL)	5

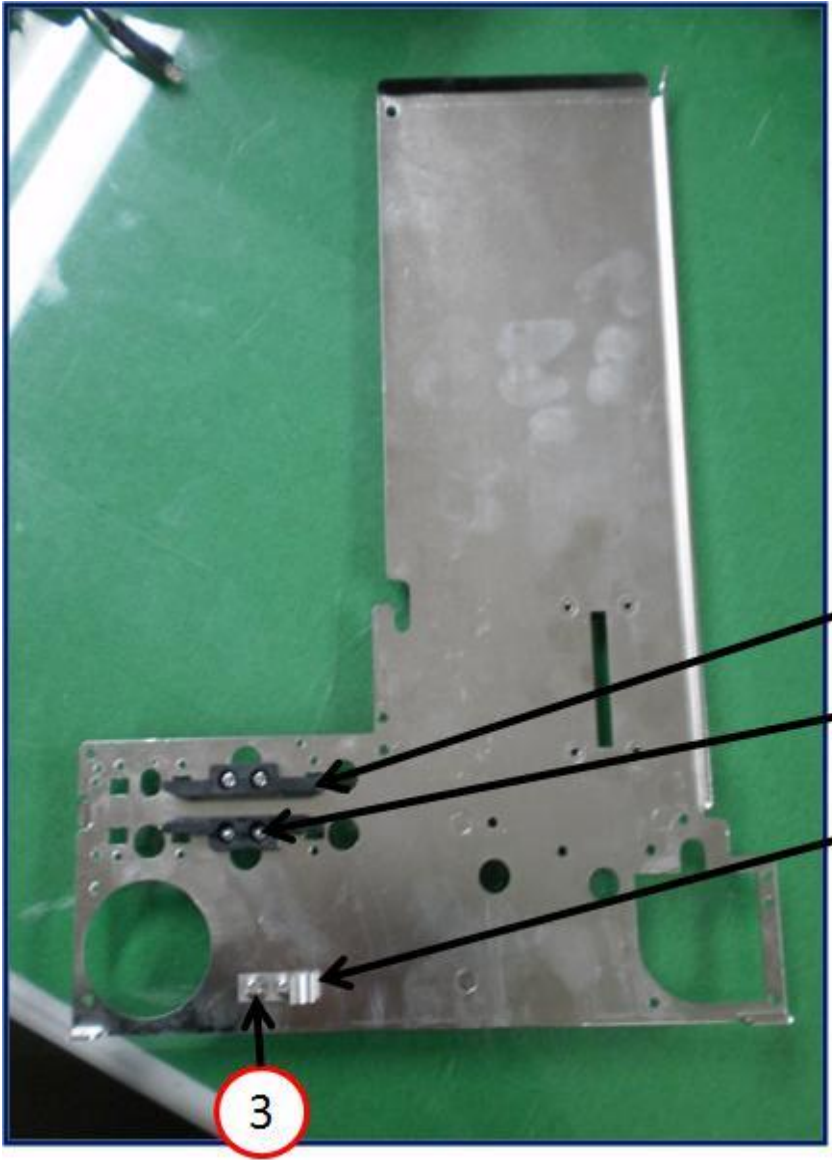
● Sequence

1. Unscrew SCREW(3) by using plus driver, and then disassemble GUIDE BRKT(1) and SENSOR(2).

TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y GUIDE Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70010059	A	GUIDE BRKT	2
2	76200040	A	PLATE SPRING	1
3	60917063	A	SCREW M3*6 PH FNW (SEMS SMALL)	6

● Sequence

1. Unscrew SCREW(3) by using plus driver, and then disassemble both GUIDE BRKT(1) and PLATE SPRING(2).

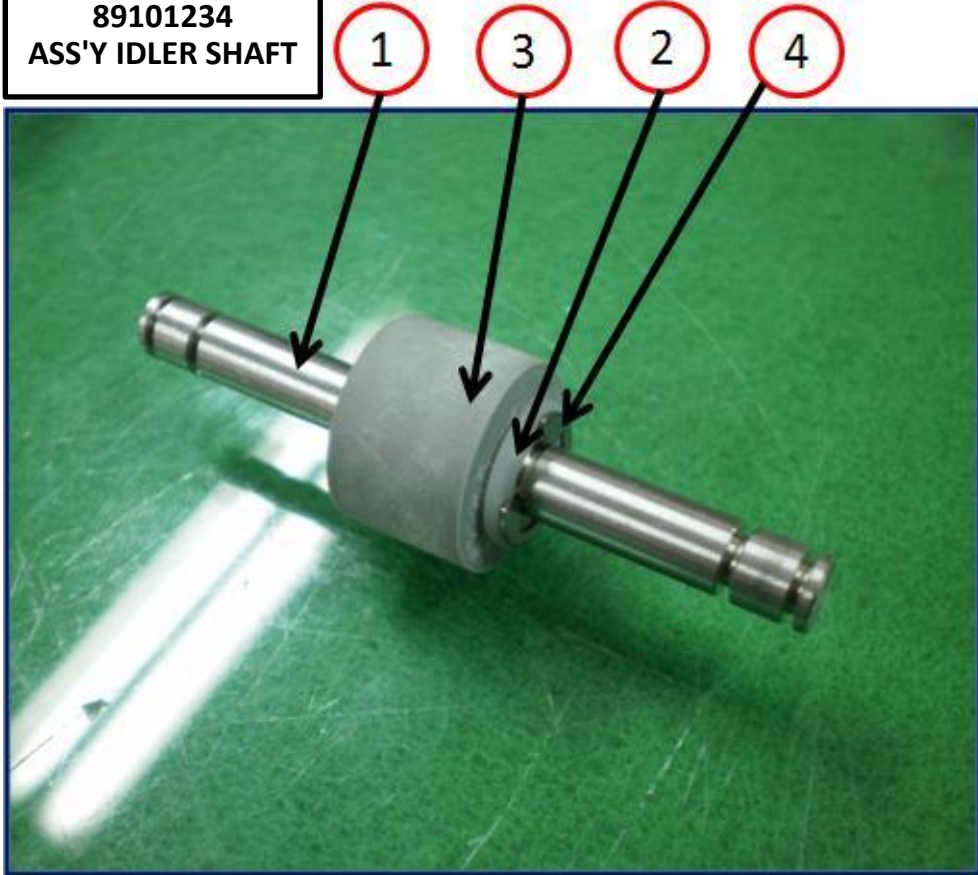
TOOL	+ SCREW DRIVER
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PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y IDLER SHAFT Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70220085	A	IDLER SHAFT	1
2	74120044	A	BOBBIN	1
3	74120002	B	FRONT ROLLER	1
4	76210014	A	E-RING PI 5.0	2

89101234
ASS'Y IDLER SHAFT



● Sequence
 1. Remove E-RING(4) by using pincette, and then disassemble both BOBBIN(2) and ROLLER(3).

TOOL	PINCETTE
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DOC NO	KHT-2200	REV	PAGE	DATE
8202-0011	SERVICE MANUAL	D	22 OF 27	2017.08.10

PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y MAIN SHAFT Disassembly
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NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70220103	A	MAIN SHAFT	1
2	74200001	B	FEED GEAR - 24	1
3	76210014	A	E-RING PI 5.0	1

● Sequence

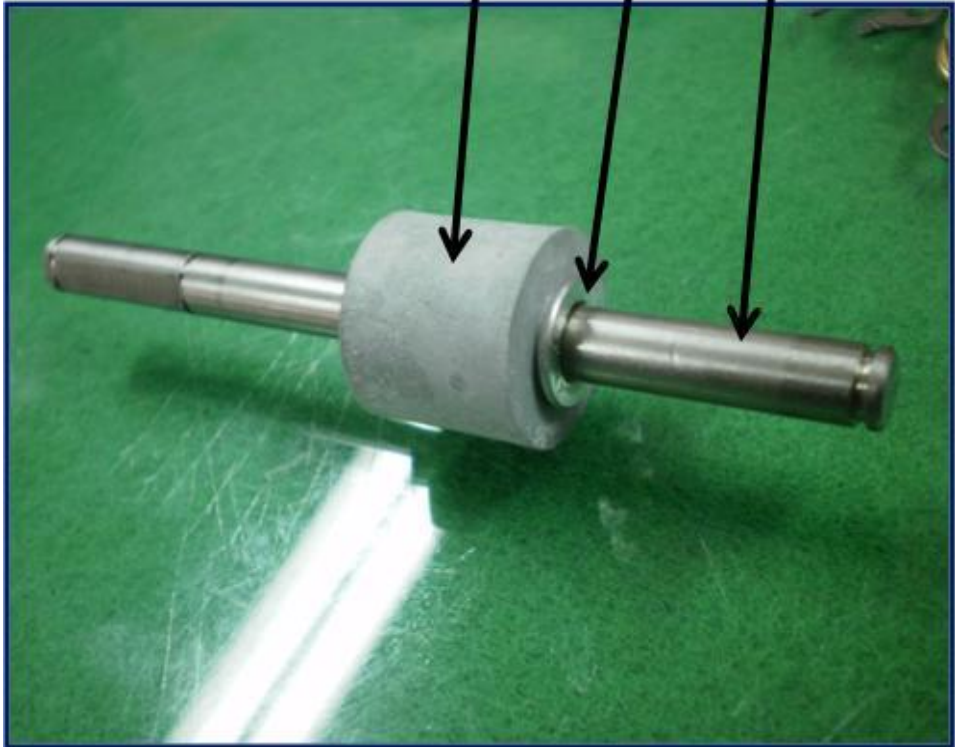
1. Remove E-ring(3), and then disassemble GEAR(2).

TOOL	PINCETTE
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DOC NO	KHT-2200	REV	PAGE	DATE
8202-0011	SERVICE MANUAL	D	23 OF 27	2017.08.10

PART (IV)	DISASSEMBLE & CHANGE	PROCESS	ASS'Y FEEDING SHAFT Disassembly
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89110034
ASS'Y FEEDING SHAFT

















NO	PART NO	REV	PART NAME / SPEC	Q'TY
1	70220102	B	FEEDING SHAFT	1
2	74120003	B	REAR ROLLER	1
3	74120046	A	BOBBIN	1

● Sequence

TOOL	
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DOC NO	KHT-2200 SERVICE MANUAL	REV	PAGE	DATE
8202-0011		D	24 OF 27	2017.08.10
PART (V)	SPARE PART LIST	PROCESS	CARD DISPENSER	

● CARD DISPENSER PART											
NO	PART NAME	OUTLINE DRAWING	QTY / UNIT	PRICE EURO / PC	LIFE LENGTH	NO	PART NAME	OUTLINE DRAWING	QTY / UNIT	PRICE EURO / PC	LIFE LENGTH
	(PART NUMBER)						(PART NUMBER)				
1	89520606 Mainboard (RS-232C Interface)		1			8	74200005 Rack Gear		1		
2	76200032 Idler Spring - R (SUS304 PI 0.6)		1			9	70310002 Oilless bearing		8		
3	76200031 Idler Spring - L (SUS304 PI 0.6)		1			10	74250017 Timing belt 90MXL*4.8		1		5,000Hrs at continuous operation
4	74210015 Timing pulley AL 29MXL		3			11	74250038 Timing belt 68MXL*4.8		1		5,000Hrs at continuous operation
5	74210016 Timing pulley AL 47MXL		1			12	89280211 Ass'y Sensor-L B/D SG-268 L		2		
6	74200004 Feed gear-17 (PCD 17.0*M)		3			13	89280210 Ass'y Sensor-R B/D SG-268 R		2		
7	74200001 Feed gear-24 (PCD 24.0*5.0*12.0)		1			14	89280229 Ass'y Warning Sensor		1		

