

SEIKOH GIKEN

**SFP-70D POLISHING MACHINE
OPERATING MANUAL**

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1.0 GENERAL INFORMATION

THIS MANUAL FOR SFP-70D PC AND APC POLISHING MACHINE CONTAINS COMPLETE OPERATING AND MAINTENANCE PROCEDURES. PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATING THE POLISHING MACHINE.

1.1 SAFETY

- * ENSURE THAT THE POLISHING MACHINE IS CONNECTED TO A POWER SUPPLY OF THE CORRECT VOLTAGE AND THAT IT IS PROPERLY GROUNDED.

- * USE ONLY THE TYPE OF FUSE RECOMMENDED IN THIS MANUAL. DISCONNECT THE POLISHING MACHINE FROM THE POWER SUPPLY BEFORE REPLACING THE FUSE.

- * DO NOT STORE OR OPERATE THE POLISHING MACHINE IN WATER.

- * WEAR PROPER APPAREL. LOOSE-FITTING CLOTHING CAN GET CAUGHT IN THE ROTATING PARTS OF THE POLISHING MACHINE.

- * NEVER TOUCH THE ROTATING PARTS OF THE POLISHING MACHINE WHILE IT IS OPERATING.

- * TURN OFF THE POLISHING MACHINE WHEN NOT IN USE. DO NOT LET THE POLISHING MACHINE OPERATE UNATTENDED.

- * OPERATE AND STORE THE POLISHING MACHINE ON A STRONG, STABLE SURFACE.

- * THE SFP-70D POLISHING MACHINE CONTAINS NO USER-SERVICEABLE PARTS. DO NOT DISASSEMBLE THIS INSTRUMENT EXCEPT AS DESCRIBED IN THE MAINTENANCE SECTION OF THIS MANUAL.

- * WEAR PROTECTIVE GLOVES, AND FOLLOW MANUFACTURER'S INSTRUCTIONS WHEN HANDLING LUBRICANT.

- * FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN HANDLING EPOXY.

* THE POLISHING INSTRUCTIONS PROVIDED IN THIS MANUAL ARE INTENDED FOR USERS WHO ARE FAMILIAR WITH SAFE HANDLING TECHNIQUES FOR OPTICAL FIBER.

1.2 FEATURES

- * HIGH-QUALITY POLISHING OF OPTICAL CONNECTORS
- * SIMPLE OPERATION
- * CONSISTENT RESULTS
- * COMPACT AND LIGHT-WEIGHT
- * 12 VDC OPERATION FOR PORTABLE USE

2.0 SFP-70D EXTERNAL DESCRIPTION

2.1 NOMENCLATURE

FIGURE 1 TO 4 SHOW THE GENERAL ARRANGEMENT OF THE SFP-70D AND THE NAME OF THE PRINCIPAL PARTS.

FIGURE 1 TOP VIEW WITH POLISHING HOLDER REMOVED

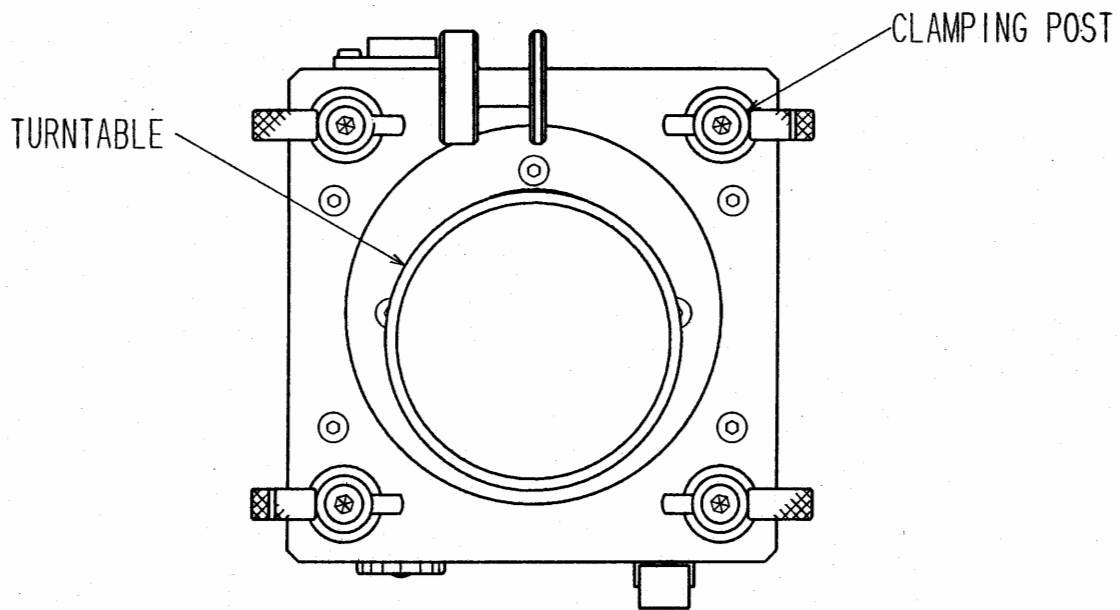


FIGURE 2 TOP VIEW WITH POLISHING HOLDER INSTALLED

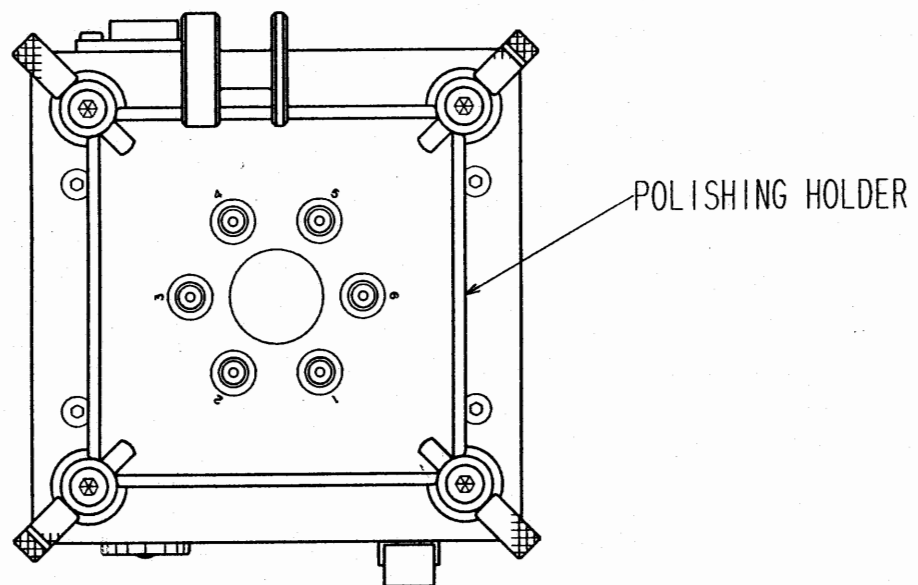


FIGURE 3 FRONT VIEW

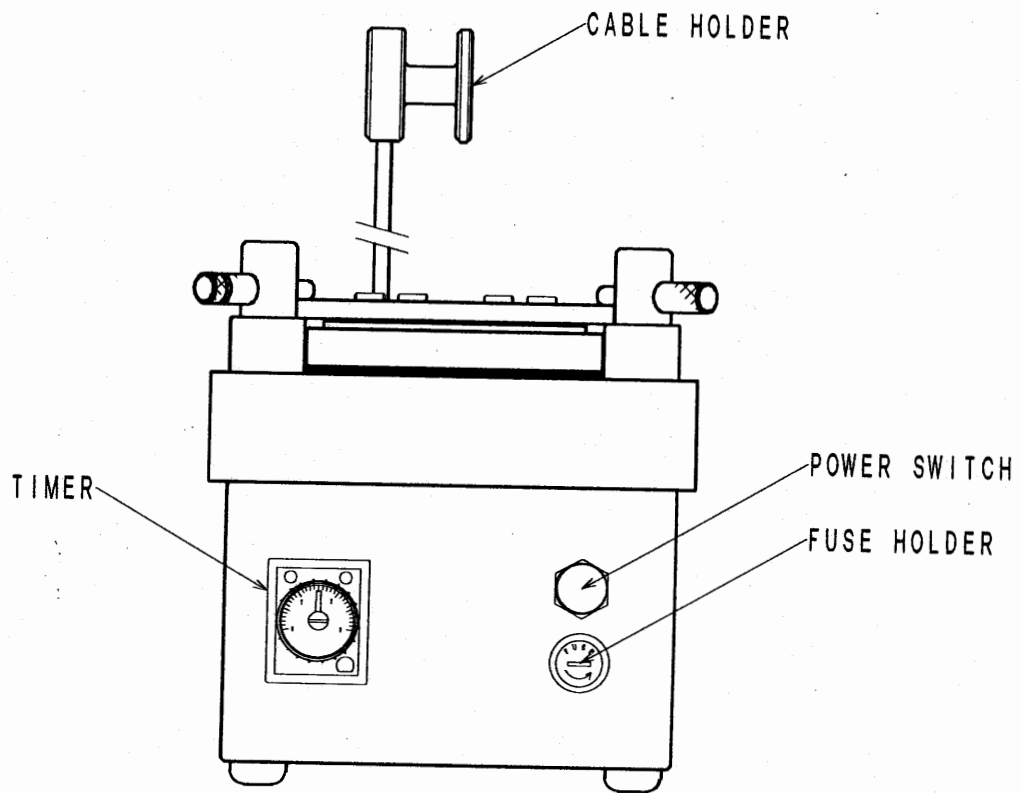
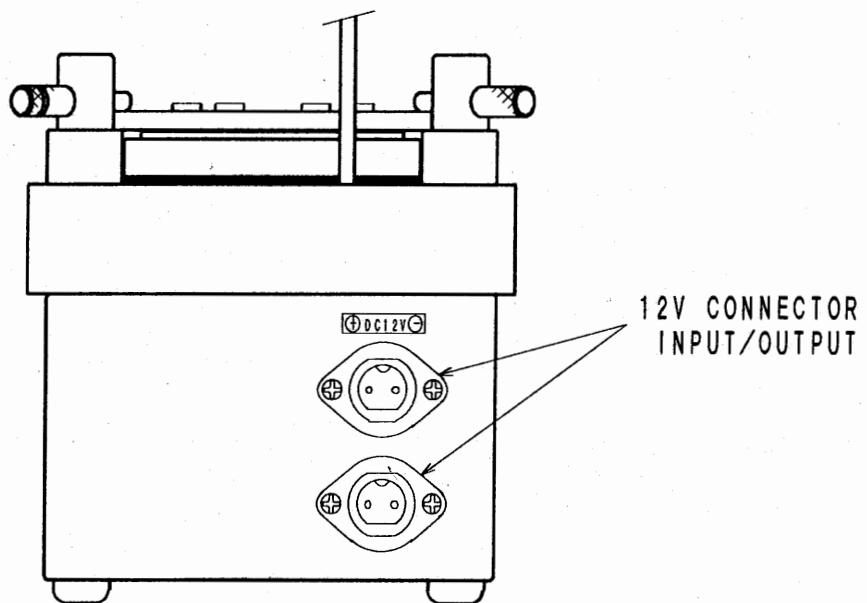


FIGURE 4 REAR VIEW



3.0 SPECIFICATION AND ACCESSORIES

3.1 SFP-70D SPECIFICATION

| | |
|--|---|
| ELECTRICAL: POLISHING MACHINE FUSE AC/DC ADAPTER | 12 VDC, 8W (APPROXIMATELY) 1 AMP, AGW-1 100 VAC TO 240 VAC, 50/60 HZ INPUT VOLTAGE 12 VDC OUTPUT VOLTAGE |
| TIMER | VARIABLE RANGES |
| CONNECTOR CAPACITY | 1 TO 6 (STANDARD 6 POSITIONS) |
| DIMENSIONS: SIZE (W x D x H) WEIGHT | 130 mm X 130 mm X 145 mm (NOT INCLUDING HOLDER CLAMPS) 2.9 KG (NOT INCLUDING CONNECTOR HOLDER) |

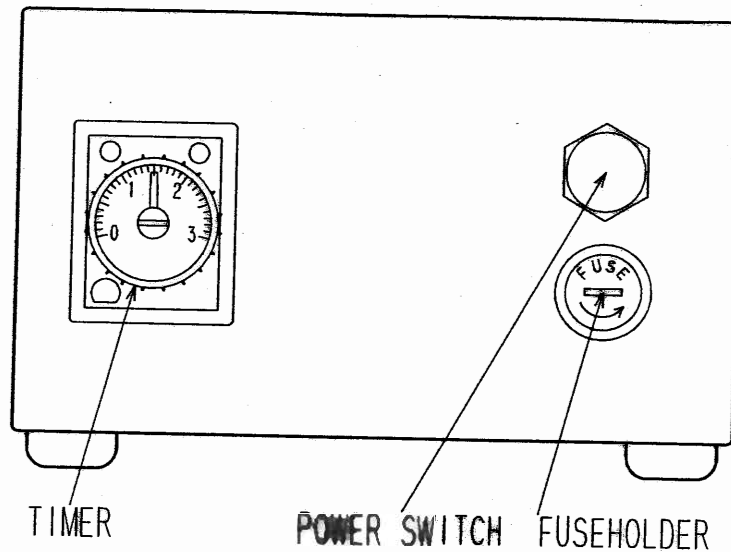
3.2 SFP-70D STANDARD ACCESSORIES

| PART | PART NUMBER | QUANTITY |
|--|-------------|----------|
| 5.00 mm PAD FOR CONVEX POLISHING | PR07-500 | 4 |
| 4.90 mm PAD FOR FLAT POLISHING | PG07-490 | 2 |
| 50 μ m SPACER FILM FOR REPOLISHING | SP07-005 | 2 |
| EPOXY REMOVAL FILM | GA07 | 20 |
| DIAMOND ROUGH POLISH FILM | DR07 | 2 |
| DIAMOND MEDIUM POLISH FILM | DM07-BL | 2 |
| FINAL POLISH FILM | SF07 | 20 |
| CABLE HOLDER | FP-CH | 1 |
| ALLEN WRENCH SET | FP-TS | 1 |
| PLASTIC WATER BOTTLE | FP-WB | 2 |
| DOUBLE-SIDED TAPE | FP-DST | 1 |
| AC/DC ADAPTER | AD20 | 1 |
| 1 AMP FUSE | FP-F1A | 10 |
| NYE RHEOLUBE 363 AX-1 GREASE | FP-GS | 1 |
| TRANSIT CASE | FP-CB07 | 1 |
| SHOULDER STRAP FOR TRANSIT CASE | FP-SS | 1 |
| OPERATING MANUAL | FP-IM07 | 1 |

4.0 OPERATING CONTROLS

4.1 FRONT PANEL LAYOUT

FIGURE 5 FRONT PANEL LAYOUT



THE FRONT PANEL INCLUDES THE MAIN POWER SWITCH AND THE TIMER USED TO PRE-SET THE DESIRED POLISHING TIMES.

4.2 OPERATION OF THE FRONT PANEL CONTROLS

4.2.1 POWER SWITCH

TO TURN ON THE POWER TO THE SFP-70D, PUSH THE POWER SWITCH (RED) FIRMLY. THE RED "POWER ON" INDICATOR WILL LIGHT AND THE COOLING FAN WILL BE STARTED. PUSH THE TIMER SWITCH (GREEN) IN ORDER TO START THE TURNTABLE. WHEN THE RED SWITCH PUSHES, THE POWER IS TURNED OFF.

4.2.2 TIMER SWITCH

THE TIMER IS PROVIDED TO ENABLE POLISHING TIMES TO BE CONTROLLED PRECISELY. THE TIMER CAN BE SET IN INCREMENTS OF 1 SECOND UP TO A MAXIMUM OF 3 MINUTES.

TO SET THE TIMER, SELECT EITHER SECONDS OR MINUTES ON THE MODE SELECTOR BELOW THE TIMER DIAL, ON THE LEFT.

SET THE DESIRED POLISHING TIME ON THE TIMER DIAL.

TO START THE POLISHING CYCLE, PRESS THE GREEN TIMER SWITCH FIRMLY. THE GREEN INDICATOR LIGHT WILL COME ON AND THE TURNTABLE WILL BEGIN TO ROTATE. THE POLISHING CYCLE WILL STOP AFTER THE TIME SET ON THE TIMER HAS ELAPSED.

TO BEGIN ANOTHER POLISHING CYCLE, PRESS THE GREEN SWITCH ONCE TO END THE FIRST CYCLE AND THEN ONCE AGAIN TO START A NEW CYCLE.

TO CHANGE THE POLISHING CYCLE, RE-SET THE TIMER AFTER THE GREEN SWITCH HAS BEEN PRESSED ONCE, AND BEFORE IT IS PRESSED THE SECOND TIME.

4.2.3 EMERGENCY STOP

IN CASE OF EMERGENCY, PRESS THE POWER SWITCH (RED) TO STOP THE TURNTABLE.

4.2.4 TIMER SWITCH OFF

THE TIMER ALLOWS POLISHING TIMES TO BE PRECISELY CONTROLLED.

4.2.5 POWER SWITCH OFF

TO TURN OFF THE POWER, FIRST ENSURE THAT THE GREEN TIMER SWITCH IS OFF BY CHECKING THAT THE GREEN INDICATOR LIGHT IS NO LONGER ILLUMINATED, AND THEN PUSH THE RED POWER SWITCH.

OBSERVE THAT THE RED INDICATOR IS NOW OFF.

4.3 REAR PANEL LAYOUT

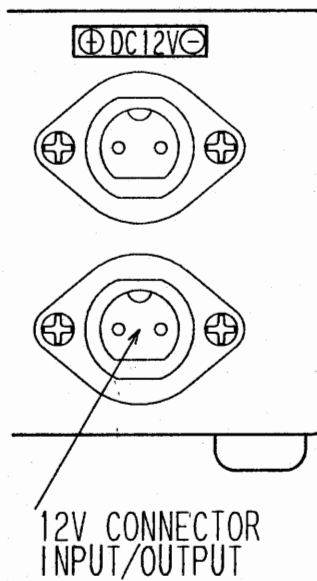
FUSE HOLDER

TO CHANGE A FUSE, REMOVE THE FUSE HOLDER BY TURNING IT IN THE DIRECTION SHOWN.

POWER RECEPTACLE

TO INSTALL THE POWER CORD, INSERT IT INTO THE RECEPTACLE AND SCREW ON THE COUPLING NUT.

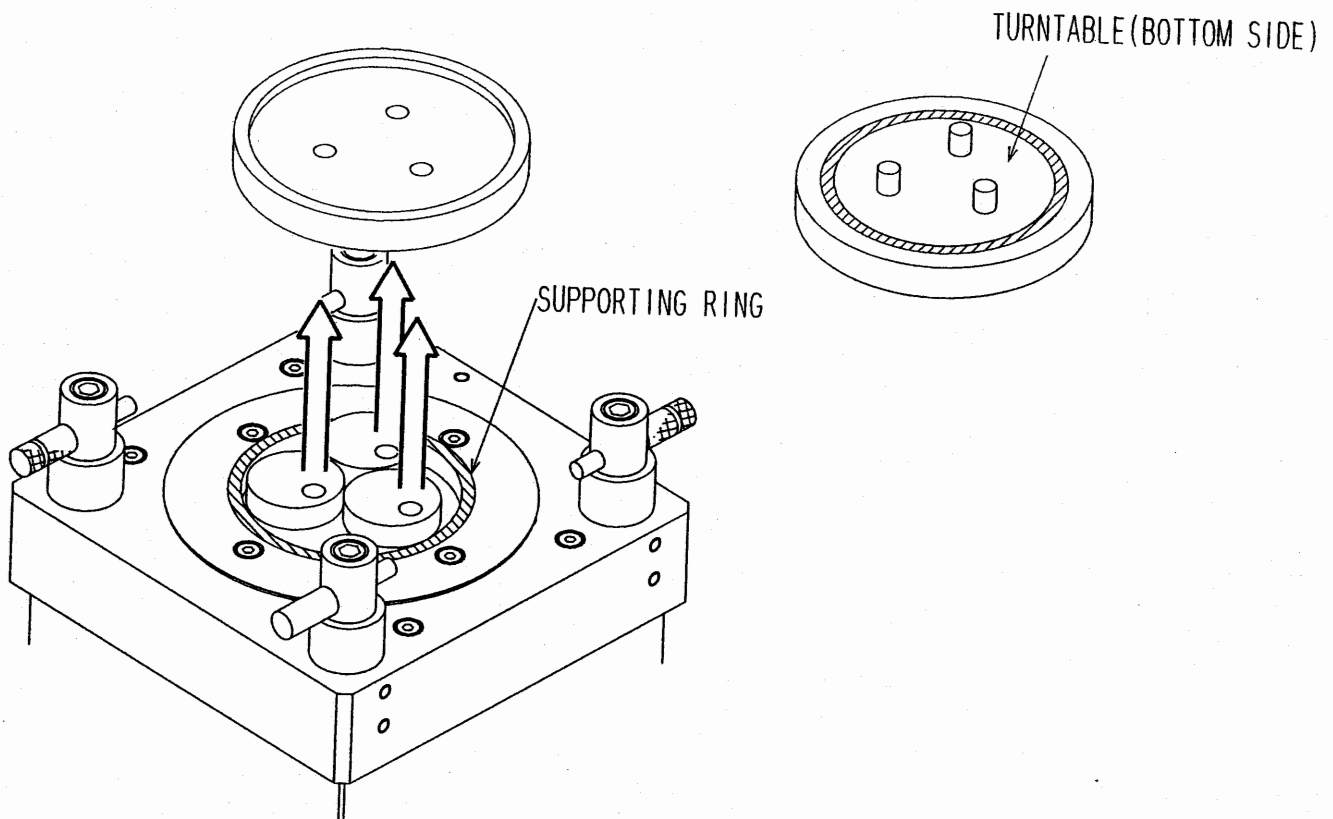
FIGURE 6 REAR PANEL LAYOUT



5.0 TURNTABLE

5.1 DESIGN

FIGURE 7 TURNTABLE DESIGN



5.2 MAINTENANCE REQUIREMENTS

NO MAINTENANCE IS NECESSARY IN NORMAL USE, HOWEVER THE MECHANISM SHOULD BE CLEANED AT LEAST ANNUALLY.

FOR COMPLETE MAINTENANCE PROCEDURES FOR THE SFP-70D, PLEASE REFER TO THE SECTION 9 (REGULAR MAINTENANCE).

NOTE : DO NOT ATTEMPT ANY PROCEDURES WHICH ARE NOT DESCRIBED IN THE SECTION 9 (REGULAR MAINTENANCE).

6.0 POLISHING MATERIALS

6.1 POLISHING FILMS

THERE ARE SEVERAL TYPES OF POLISHING FILM FOR DIFFERENT APPLICATIONS. THEY ARE LABELED AND COLOR CODED FOR EASY IDENTIFICATION.

| POLISHING FILM | APPLICATION | USAGE |
|----------------|---|---------------|
| GA07 | COARSE POLISHING (EPOXY REMOVAL & CONVEX FORMING) | 1 TIME |
| DR07 | ROUGH POLISHING | 10 - 20 TIMES |
| DM07-BL | MEDIUM POLISHING | 10 - 20 TIMES |
| SF07 | FINAL POLISHING | 1 TIME |

HANDLE THE POLISHING FILMS WITH CARE.

6.2 POLISHING PADS

POLISHING PADS OF DIFFERENT THICKNESS, MATERIAL AND HARDNESS ARE AVAILABLE, LABELED FOR EASY IDENTIFICATION.

USE THE NEOPRENE POLISHING PAD FOR CONVEX POLISHING.

USE THE GLASS POLISHING PAD FOR FLAT POLISHING.

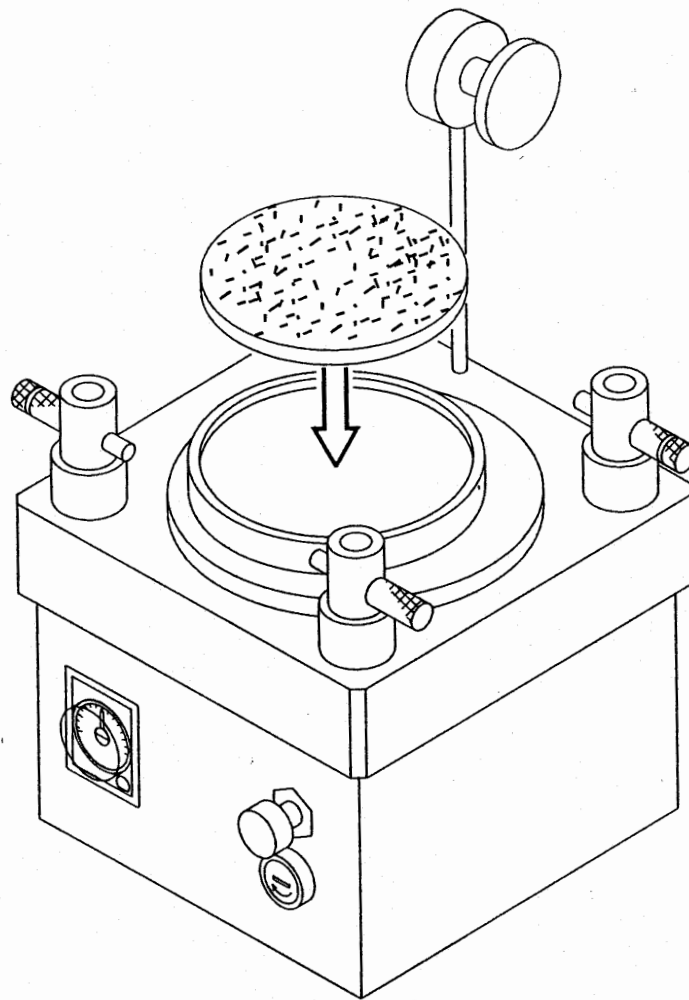
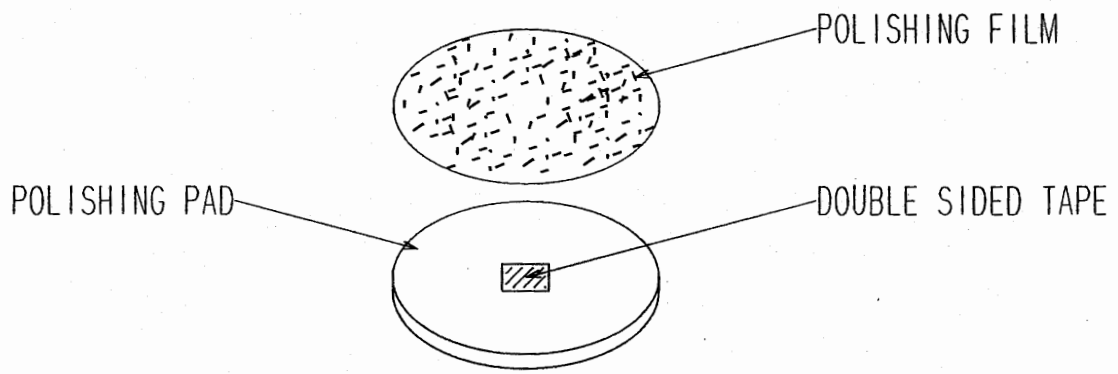
6.3 INSTALLATION

* REFER TO THE MARKINGS ON THE CENTRE OF THE POLISHING PAD TO ENSURE THAT THE PAD IS THE APPROPRIATE THICKNESS.

* WIPE THE POLISHING FILMS, THE POLISHING PAD AND THE TURNTABLE WITH A LINT-FREE TISSUE AND DENATURED ALCOHOL TO ENSURE THAT ALL SURFACES ARE SMOOTH AND CLEAN.

* PLACE A SMALL PIECE OF DOUBLE-SIDED TAPE ON THE REFERENCE CIRCLE OF THE POLISHING PAD. THE TAPE MUST FIT COMPLETELY WITHIN THE BOUNDARIES OF THIS REFERENCE CIRCLE, SO THAT THE CONNECTORS DO NOT PASS OVER ANY PART OF THE TAPE DURING POLISHING.

* PLACE THE POLISHING FILM ON THE POLISHING PAD, WITH THE ABRASIVE SIDE FACING UP.



7.0 POLISHING HOLDERS

7.1 POLISHING HOLDER DESIGN

THERE ARE TWO BASIC TYPES OF POLISHING HOLDER;

- * RIGHT ANGLE FOR FLAT OR CONVEX POLISHING
- * ANGLED FOR FLAT OR CONVEX POLISHING

EACH HOLDER IS AVAILABLE TO SUIT DIFFERENT CONNECTOR TYPES.

THE POLISHING HOLDERS ARE AVAILABLE WITH EITHER 1 OR 6 POSITIONS.

THE POLISHING HOLDER ARE DESIGNED SO THAT THE EXPOSED LENGTH OF THE INSTALLED FERRULES IS 0.5 mm. THIS DIMENSION IS CRITICAL TO THE ACCURACY OF THE POLISHING PROCESS. IT IS IMPORTANT TO ENSURE THAT THE POLISHING HOLDERS ARE PERFECTLY CLEAN BEFORE INSTALLING CONNECTORS SO THAT THE FERRULES SEAT PROPERLY.

7.2 MAINTENANCE REQUIREMENTS

THE POLISHING HOLDERS ARE MADE OF STAINLESS STEEL, HOWEVER IT IS RECOMMENDED THAT ALL TRACES OF WATER BE REMOVED AFTER USE.

CARE MUST BE TAKEN TO PROTECT THE POLISHING HOLDER FROM DAMAGE CAUSED BY ACCIDENTAL CONTACT WITH HARD OBJECTS.

7.3 INSTALLATION OF POLISHING HOLDERS

THE POLISHING HOLDERS ARE HELD IN PLACE BY FOUR SPRING LOADED CLAMPS LOCATED AT EACH CORNER OF THE POLISHING MACHINE. THE HEIGHT OF THE CORNER POSTS IS SET TO PROVIDE A 0.1 mm DEEP IMPRESSION OF THE FERRULES INTO THE POLISHING FILM.

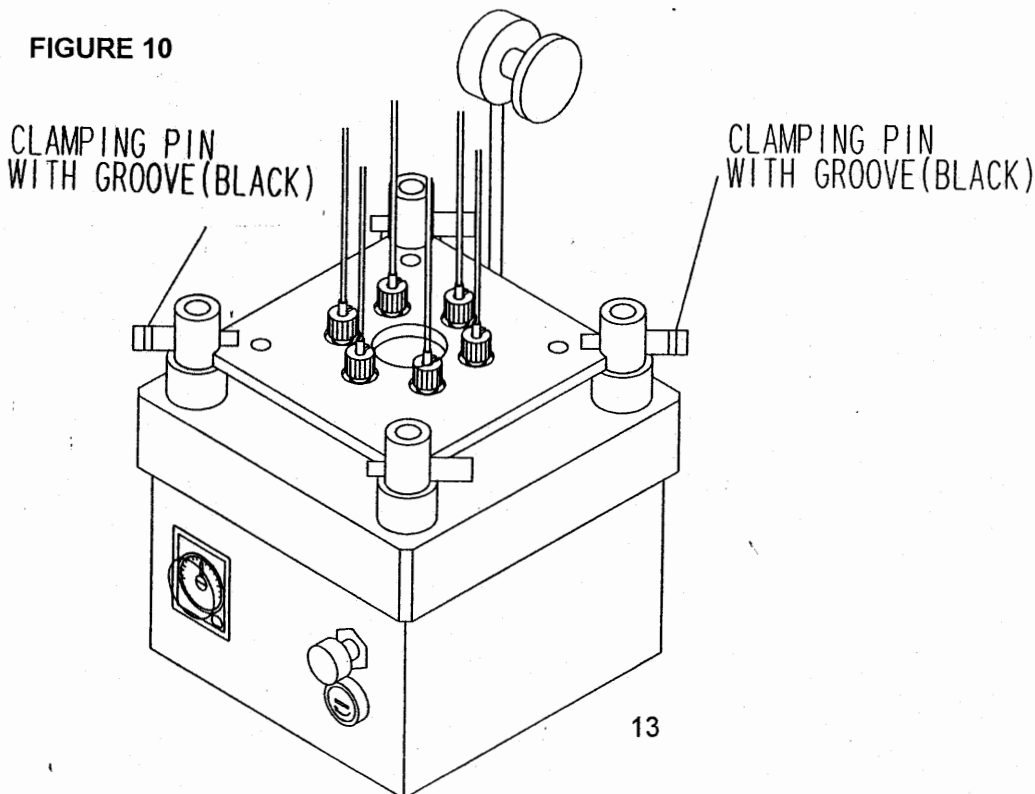
THE CORNER POSTS SHOULD ONLY BE DISASSEMBLED IF IT BECOMES NECESSARY TO ADJUST THIS SETTING. PLEASE REFER TO THE MAINTENANCE MANUAL FOR THE CORRECT DISASSEMBLY AND ADJUSTMENT PROCEDURES.

TO INSTALL THE POLISHING HOLDER ON TO THE DRIVE UNIT:

- * LOAD THE POLISHING HOLDER WITH CONNECTORS
- * TURN THE CLAMPING LEVERS SO THAT THEIR PRESSURE PINS ARE CLEAR OF THE POLISHING HOLDER AREA
- * PLACE THE POLISHING HOLDER ON THE POLISHING MACHINE, BETWEEN THE CLAMPS
- * TURN THE FOUR CLAMPING LEVERS UNTIL THEIR PRESSURE PINS ARE FULLY OVER THE POLISHING PLATE.

FIGURES 10 SHOW THE CLAMPING METHOD.

TO REMOVE THE POLISHING HOLDER, REVERSE THE ABOVE PROCEDURE.



8.0 POLISHING PROCEDURES

NOTE :

POLISHING PROCEDURES MAY VARY WITH DIFFERENT FERRULE SHAPES AND MATERIALS AND WITH DIFFERENT CONNECTOR TYPES. THE POLISHING PROCEDURES DESCRIBED IN 8.1 AND 8.2 BELOW ARE BASED ON THE USE OF SEIKOH GIKEN FERRULES, WITH 6 FERRULES POLISHING SIMULTANEOUSLY. FOR OTHER CONDITION, THESE PROCEDURES MAY NEED TO BE MODIFIED BASED ON EXPERIENCE.

8.1 BASIC PROCEDURES

THE FOLLOWING STEPS APPLY TO ALL POLISHING PROCEDURES:

LOADING THE POLISHING HOLDER

WHEN LOADING THE POLISHING HOLDER WITH CONNECTORS, CHECK THAT ALL FERRULES PROTRUDE FROM THE UNDERSIDE OF THE HOLDER BY THE REQUIRED 0.5 mm.

IF POLISHING LESS THAN A FULL PLATE OF CONNECTORS, IT IS IMPORTANT THAT THEY ARE LOADED IN A SYMMETRICAL PATTERN. ANY UNUSED POSITIONS MUST BE EVENLY SPACED AROUND THE CIRCLE.

DO NOT INSERT OR REMOVE CONNECTORS DURING THE POLISHING PROCESS.

CLEANING REQUIREMENTS

IT IS VERY IMPORTANT THAT THE CONNECTORS FIT PROPERLY IN EACH POSITION OF THE POLISHING HOLDER. IF THERE IS ANY DEBRIS ON THE CONNECTORS OR INSIDE THE MOUNTING HOLES IN THE POLISHING HOLDER, THE FERRULES MAY NOT EXTEND THE REQUIRED 0.5 mm.

USE ALCOHOL AND A LINT FREE TISSUE TO THOROUGHLY CLEAN THE CONNECTORS AND POLISHING HOLDER BEFORE LOADING THE CONNECTORS. CLEAN THE POLISHING FILM WITH ALCOHOL AND A LINT FREE TISSUE AFTER EACH USE.

FERRULE INSPECTION

AFTER THE CONNECTORS ARE POLISHED, A MICROSCOPE MUST BE USED TO INSPECT THE SURFACE OF THE FERRULES FOR SIGNS OF DAMAGE OR DEGRADATION.

8.2 REPOLISHING PROCEDURES

SCRATCHES OR OTHER DAMAGE TO A FERRULE OR FIBER MAY BE CORRECTED BY REPOLISHING.

HOWEVER, IF A FERRULE LENGTH HAS BEEN REDUCED BY MORE THAN 50 μm DURING POLISHING, PLACE THE SPACER FILM (SP07-005) BETWEEN THE TURNTABLE AND THE POLISHING PAD TO INCREASE THE POLISHING PRESSURE DURING REPOLISHING.

IF THE DESIRED POLISHING RESULTS CANNOT BE ACHIEVED, IT MAY BE NECESSARY TO CHANGE THE POLISHING FILM. IF PROBLEMS PERSIST AFTER CHANGING THE FILM, ADJUSTMENTS TO THE POLISHING HOLDER CLAMPS MAY BE REQUIRED. PLEASE REFER TO THE MAINTENANCE MANUAL FOR THE CORRECT PROCEDURES.

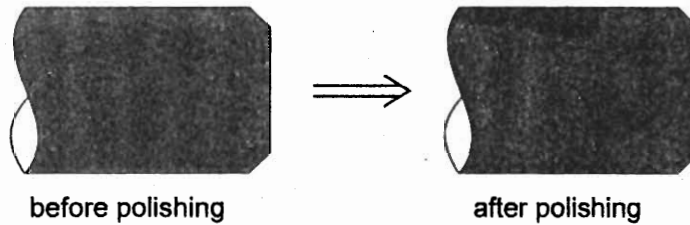
8.3 POLISHING SPECIFICATIONS

POLISHING SPECIFICATIONS ARE PROVIDED FOR VARIOUS TYPES OF SEIKOH GIKEN CONNECTORS. PLEASE REFER TO THE FOLLOWING TABLES AND THE PARTS DESCRIPTIONS TO IDENTIFY THE PROCEDURE REQUIRED.

- 8-3-1. FLAT POLISHING USING NON PRE-RADIUSED FERRULES
- 8-3-2. CONVEX PC POLISHING USING NON PRE-RADIUSED FERRULES
- 8-3-3. CONVEX PC POLISHING USING PRE-RADIUSED FERRULES
- 8-3-4. CONVEX APC POLISHING USING NON PRE-ANGLED STEP-DOWN FERRULES
- 8-3-5. CONVEX APC POLISHING USING PRE-ANGLED STEP-DOWN FERRULES

THE FOLLOWING POLISHING INFORMATION IS PROVIDED FOR REFERENCE PURPOSES ONLY. ADJUSTMENTS MAY BE NECESSARY DEPENDING ON NUMEROUS VARIABLES. SOME TRIAL AND ERROR MAY BE REQUIRED TO DETERMINE THE OPTIMUM POLISHING PROCEDURE.

8-3-1. FLAT POLISHING USING NON PRE-RADIUSED FERRULES



Seikoh Giken Part

| Connector Type | Connector Housing | Ferrule | Required Holder |
|----------------|-------------------|----------|-----------------|
| FC | PF11, PF13, PF23 | FF3M | PH07-FP |
| SC | PC11, PC12, PC13 | FF3M | PH07-CP |
| ST | PS3M | included | PH07-SP |

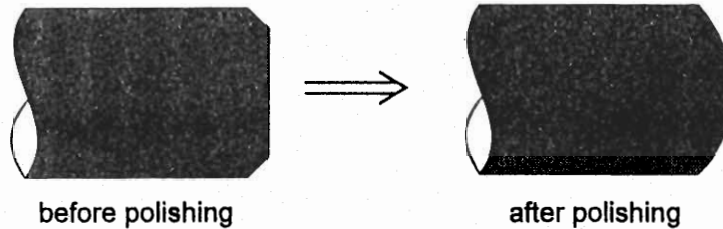
| Polishing Step | Polishing Pad | Polishing Film | Polishing Fluid | Polishing Time (min.) |
|----------------------------|----------------------------------|-------------------|-----------------|-----------------------|
| Epoxy removal ¹ | PG07-490 | GA07 | distilled water | 0.5 |
| Coarse polishing | PG07-490 | GA07 ² | distilled water | 0.5 |
| Rough polishing | PG07-490 + SP07-005 ³ | DR07 | distilled water | 0.5 |
| Medium polishing | PG07-490 + SP07-005 | DM07-BL | distilled water | 0.5 |
| Final polishing | PG07-490 + SP07-005 | SF07 | distilled water | 0.5 |

¹ For this step only, do not clamp the holder for first 20 rotations of the turntable.

² Clean the GA07 film with a lint-free tissue and alcohol. Inspect the surface for visible damage, and replace the film only if necessary.

³ Place the spacer film under the polishing pad.

8-3-2. CONVEX PC POLISHING USING NON PRE-RADIUSED FERRULES



Seikoh Giken Part

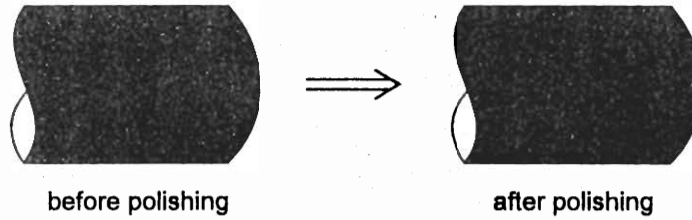
| Connector Type | Connector Housing | Ferrule | Required Holder |
|----------------|-------------------|------------|-----------------|
| FC/PC | PF11, PF13, PF23 | FF3S, FF3M | PH07-FP |
| SC/PC | PC11, PC12, PC13 | FF3S, FF3M | PH07-CP |
| ST/PC | PS3S, PS3M | included | PH07-SP |

| Polishing Step | Polishing Pad | Polishing Film | Polishing Fluid | Polishing Time (min.) |
|-------------------------------|---------------|----------------|-----------------|-----------------------|
| Epoxy removal ¹ | PG07-490 | GA07 | distilled water | 0.5 |
| Coarse polishing ² | PG07-490 | GA07 | distilled water | 0.5 |
| Convex forming | PR07-500 | GA07 | distilled water | 0.5 |
| Rough polishing | PR07-500 | DR07 | distilled water | 2.0 |
| Medium polishing | PR07-500 | DM07-BL | distilled water | 0.5 |
| Final polishing | PR07-500 | SF07 | distilled water | 0.5 |

¹ For this step only, do not clamp the holder for first 20 rotations of the turntable.

² Clean the GA07 film with a lint-free tissue and alcohol. Inspect the surface for visible damage, and replace the film only if necessary.

8-3-3. CONVEX PC POLISHING USING PRE-RADIUSED FERRULES



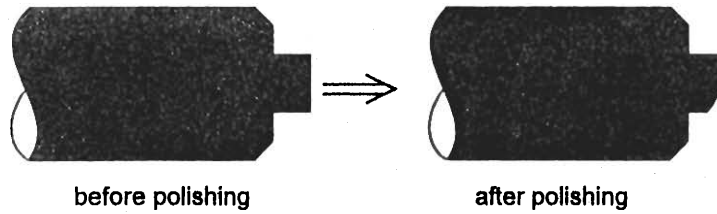
Seikoh Giken Part

| Connector Type | Connector Housing | Required Holder |
|----------------------|-------------------|-----------------|
| FC/PC Quick Assembly | PF31P, PF33P | PH07-FP |
| SC/PC Quick Assembly | PC31P, PC33P | PH07-CP |
| ST/PC Quick Assembly | PS3P | PH07-SP |

| Polishing Step | Polishing Pad | Polishing Film | Polishing Fluid | Polishing Time (min.) |
|----------------------------|---------------|----------------|-----------------|-----------------------|
| Epoxy removal ¹ | PR07-500 | GA07 | distilled water | 0.5 |
| Rough polishing | PR07-500 | DR07 | distilled water | 0.5 |
| Medium polishing | PR07-500 | DM07-BL | distilled water | 0.5 |
| Final polishing | PR07-500 | SF07 | distilled water | 0.5 |

¹ For this step only, do not clamp the holder for first 20 rotations of the turntable.

8-3-4. CONVEX APC POLISHING USING NON PRE-ANGLED STEP-DOWN FERRULES



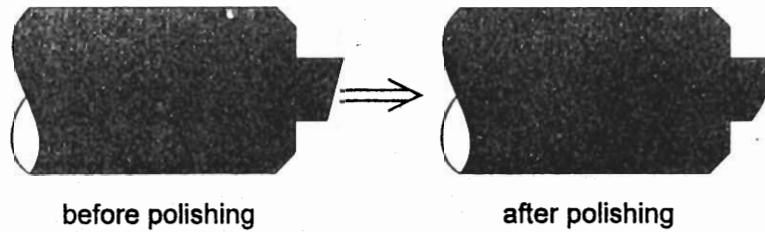
Seikoh Giken Part

| Connector Type | Connector Housing | Ferrule | Required Holder (step 1) | Required Holder (steps 3,4) |
|----------------|-------------------|---------|--------------------------|-----------------------------|
| FC/APC | PF11A, PF13A | FF3A | PH07-FP | PH07-FP8A |
| SC/APC | PC11A, PC13A | FF3A | PH07-CP | PH07-CP8A |

| Polishing Step | Polishing Pad | Polishing Film | Polishing Fluid | Polishing Time (min.) |
|---|---------------|----------------|-----------------|-----------------------|
| 1. Polish with PC holder | | | | |
| Epoxy removal ¹ + convex forming | PR07-480 | GA07 | distilled water | 1.0 |
| Rough polishing | PR07-480 | DR07 | distilled water | 0.5 |
| Medium polishing | PR07-480 | DM07-BL | distilled water | 0.5 |
| Final polishing | PR07-480 | SF07 | distilled water | 0.5 |
| 2. Tune ferrule for minimum insertion loss | | | | |
| 3. Polish with angled holder to form angle | | | | |
| Angle forming ¹ | PG07-490 | GA07 | distilled water | 1.0 |
| Angle forming | PG07-490 | GA07 | distilled water | 1.0 |
| 4. Polish with angled holder | | | | |
| Angled convex forming ¹ | PR07-500 | GA07 | distilled water | 1.0 |
| Rough polishing | PR07-500 | DR07 | distilled water | 0.5 |
| Medium polishing | PR07-500 | DM07-BL | distilled water | 0.5 |
| Final polishing | PR07-500 | SF07 | distilled water | 0.5 |

¹ For this step only, do not clamp the holder for first 20 rotations of the turntable.

8-3-5. CONVEX APC POLISHING USING PRE-ANGLED STEP-DOWN FERRULES



Seikoh Giken Part

| Connector Type | Connector Housing | Required Holder |
|---------------------------------|-------------------|-----------------|
| FC/APC Quick Assembly Connector | PF31A, PF33A | PH07-FP8A |
| SC/APC Quick Assembly Connector | PC31A, PC33A | PH07-CP8A |
| ST/APC Quick Assembly Connector | PS3A | PH07-SP8A |

| Polishing Step | Polishing Pad | Polishing Film | Polishing Fluid | Polishing Time (min.) |
|------------------------------------|---------------|----------------|-----------------|-----------------------|
| Angled convex forming ¹ | PR07-500 | GA07 | distilled water | 1.0 |
| Rough polishing | PR07-500 | DR07 | distilled water | 0.5 |
| Medium polishing | PR07-500 | DM07-BL | distilled water | 0.5 |
| Final polishing | PR07-500 | SF07 | distilled water | 0.5 |

¹ For this step only, do not clamp the holder for first 20 rotations of the turntable.

9.0 REGULAR MAINTENANCE

WARNING : DO NOT ATTEMPT ANY PROCEDURE THAT IS NOT DESCRIBED IN THE MAINTENANCE OR OPERATION MANUALS. DISCONNECT THE POWER SUPPLY TO THE SFP-70D POLISHING MACHINE BEFORE ATTEMPTING ANY MAINTENANCE PROCEDURE!

9.1 INSPECTING THE TURNTABLE

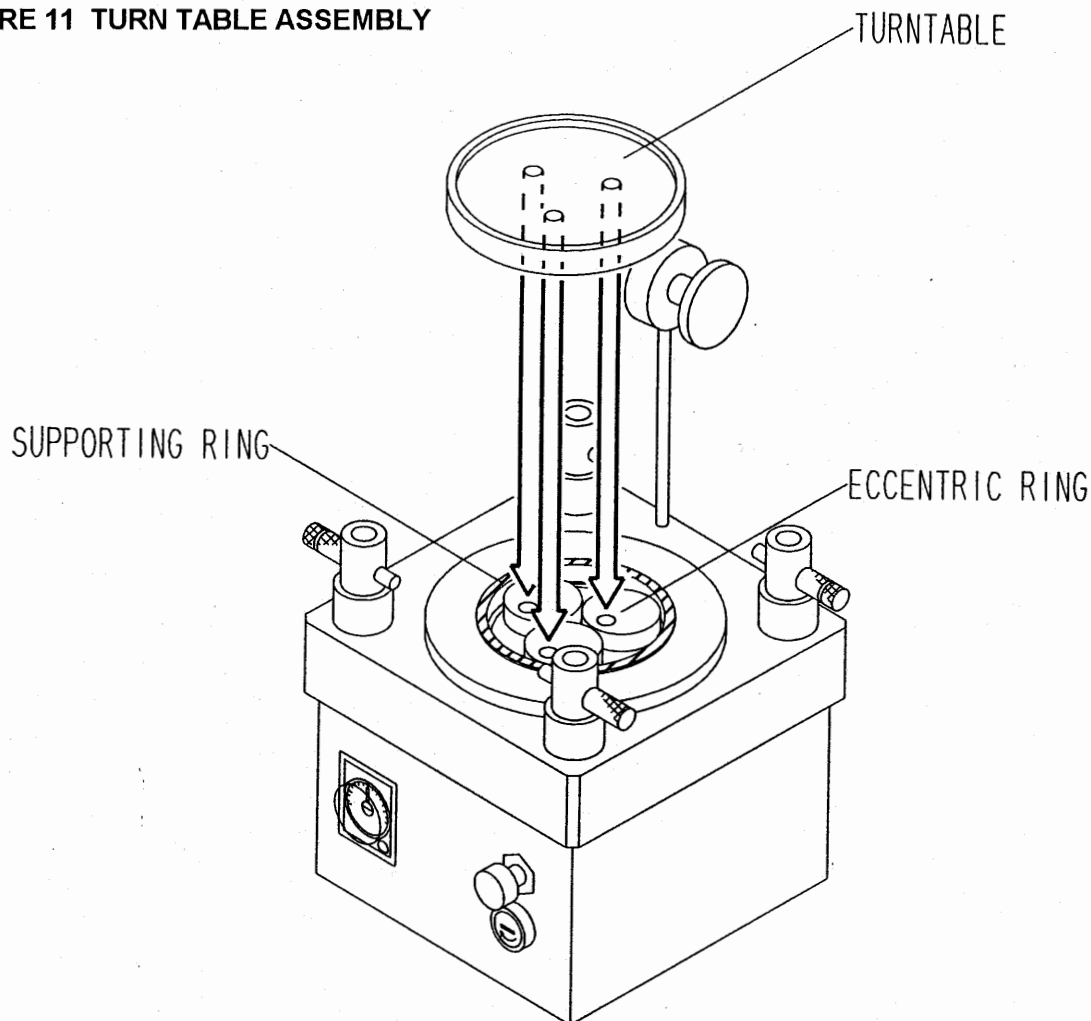
INSPECT THE TURNTABLE AFTER EVERY 50 HOURS OF OPERATION (APPROXIMATELY TWO WEEKS.)

- * LIFT THE TURNTABLE OFF ITS BASE.
- * INSPECT THE UNDERSIDE OF THE TURNTABLE FOR WEAR, DAMAGE OR MOISTURE.

- * *MOISTURE INDICATES THAT EXCESS WATER HAS PENETRATED THE POLISHING MACHINE.*

- * INSPECT THE ECCENTRIC DRIVE RINGS FOR SMOOTH ROTATION.
- * INSPECT THE SURFACE OF THE SUPPORTING RING FOR WEAR OR DAMAGE.
- * APPLY LUBRICANT IF NECESSARY.

FIGURE 11 TURN TABLE ASSEMBLY



9.2 LUBRICATING THE UNDERSIDE OF THE TURNTABLE

THE UNDERSIDE OF THE TURNTABLE SHOULD BE CLEANED AND THEN LUBRICATED WITH NYE RHEOLUBE 363AX-1 GREASE (FP-GS), OR WITH A GOOD-QUALITY GREASE (LITHIUM-SOAP BASE) WITH ADDED CORROSION INHIBITORS. LUBRICATE THE TURNTABLE BEFORE USE.

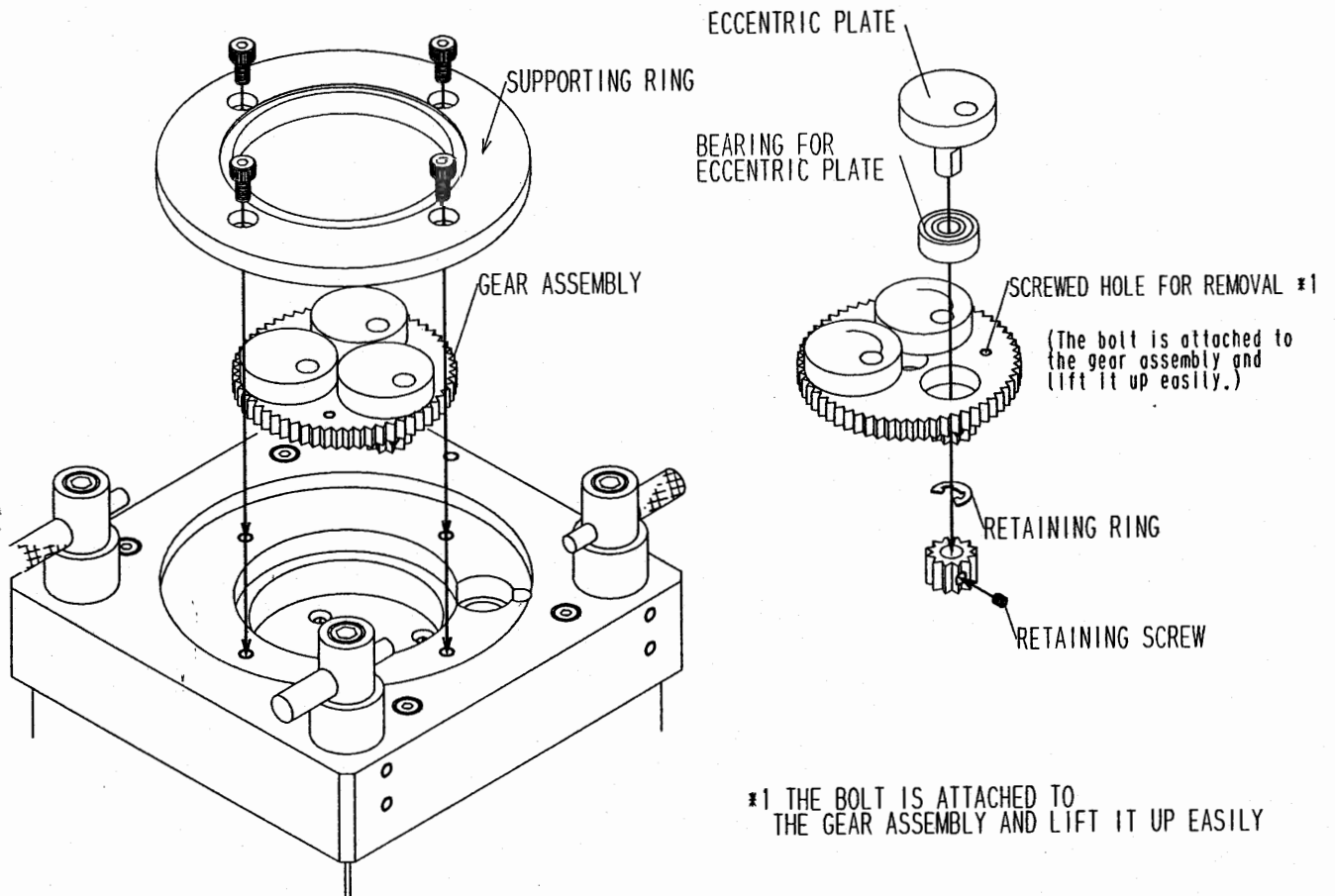
- * LIFT THE TURNTABLE OFF ITS BASE.
- * CLEAN THE UNDERSIDE OF THE TURNTABLE, WIPING OFF THE SURFACE GREASE.
- * APPLY LUBRICANT IN FOUR QUARTER-INCH DOTS AROUND THE UNDERSIDE OF THE TURNTABLE.
- * REPLACE THE TURNTABLE, ADJUSTING THE DRIVE RINGS SO THAT THE THREE DRIVE PINS, LOCATED ON THE UNDERSIDE OF THE TURNTABLE, INSERT INTO THE SLOTS OF THE DRIVE RINGS AT THE SAME TIME.
- * CLEAN THE SUPPORTING RING AND APPLY LUBRICANT.

9.3 INSPECTING THE LARGE GEAR ASSEMBLY

THE LARGE GEAR ASSEMBLY MUST ONLY BE REMOVED IF NECESSARY.

- * REMOVE THE SUPPORTING RING.
- * INSPECT THE UNDERSIDE OF THE SUPPORTING RING FOR WEAR AND DAMAGE.
- * REMOVE THE LARGE GEAR ASSEMBLY.
- * INSPECT THE LARGE GEAR ASSEMBLY FOR SMOOTH ROTATION, WEAR OR DAMAGE.
- * LUBRICATE ALL BEARING SURFACES ON THE LARGE GEAR ASSEMBLY IF NECESSARY.

FIGURE 12 LARGE GEAR ASSEMBLY



9.4 ECCENTRIC DRIVE PINS

THE ECCENTRIC DRIVE PINS ARE SECURED TO THE LARGE GEAR ASSEMBLY BY C-RINGS. IF THE ECCENTRIC DRIVE PINS DO NOT ROTATE SMOOTHLY, INSPECT THE BEARING ON THE LARGE GEAR ASSEMBLY.

- * REMOVE THE ECCENTRIC DRIVE PINS USING THE APPROPRIATE TOOLS.
- * INSPECT THE BEARING FOR SMOOTH ROTATION, WEAR OR DAMAGE.
- * LUBRICATE THE BEARING IF NECESSARY.

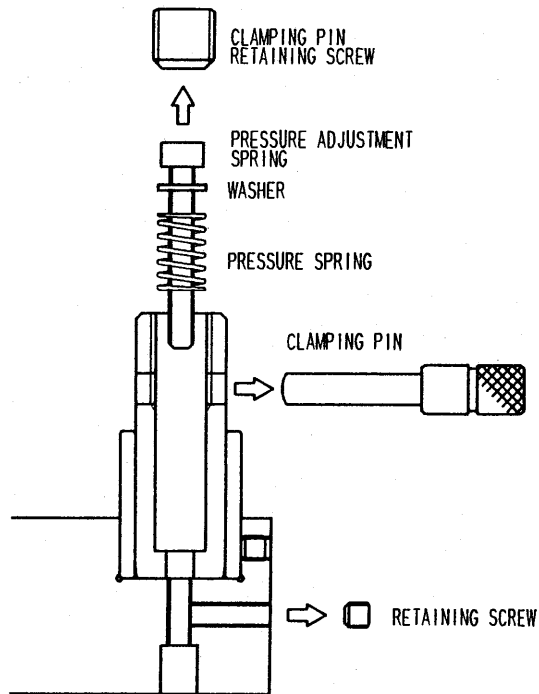
9.5 CLAMPING POSTS

FOR OPTIMUM POLISHING RESULTS, THE DISTANCE BETWEEN THE TOP OF THE CLAMPING POST AND THE TOP OF THE PRESSURE PIN MUST BE 21 MM.

9.5.1 REPLACING THE PRESSURE SPRINGS

- * LOOSEN THE SCREWS ON THE CLAMPING POSTS.
- * REMOVE THE PRESSURE ADJUSTMENT BOLTS.
- * REMOVE THE PRESSURE SPRINGS.
- * INSERT NEW SPRINGS.
- * REPLACE THE PRESSURE ADJUSTMENT BOLTS.
- * ENSURE THAT THE CLAMPING LEVERS ROTATE SMOOTHLY.

FIGURE 14 PRESSURE SPRING REPLACEMENT

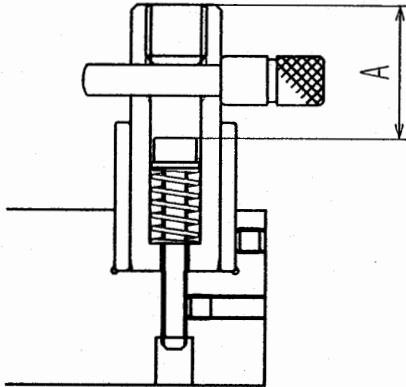


9.5.2 ADJUSTING THE HEIGHT OF THE CLAMPING POSTS

THE HEIGHT OF THE EACH CLAMPING POST MUST BE ADJUSTED IF THE DISTANCE BETWEEN THE FERRULE AND THE BOTTOM OF POLISHING HOLDER (L) IS GREATER THAN OR LESS THAN 0.5 mm.

- * LOOSEN THE RETAINING SCREW ON THE SIDE OF THE BASE PLATE.
- * REMOVE THE PRESSURE POST.
- * REPLACE THE ADJUSTMENT SPACER WITH ONE OF THE APPROPRIATE THICKNESS.
- * REPLACE THE CLAMPING POST.
- * ENSURE THAT ALL CLAMPING POSTS ARE AT THE SAME HEIGHT (H).
- * ENSURE THAT THE CLAMPING LEVERS ROTATE SMOOTHLY.

FIGURE 15 CLAMPING POST HEIGHT ADJUSTMENT



9.5.3 INSTALLING THE POLISHING HOLDER

THE POLISHING HOLDER IS HELD IN PLACE BY THE CLAMPING POSTS.

- * TURN THE PRESSURE ADJUSTMENT BOLT TO DEPTH A (21 mm).
- * PLACE THE POLISHING HOLDER BETWEEN THE CLAMPS.
- * ROTATE THE CLAMPING LEVERS TO ENGAGE THE CLAMPING PINS ON THE POLISHING HOLDER.
- * ENSURE THAT THE PRESSURE FORCE IS AT LEAST 2Kg.

SFP-70D

■ Specification

| Item | | Specification |
|--------------------|------------------------------------|---|
| Connector capacity | Capability | 1 to 6 connectors simultaneously |
| Polishing step | Quick assembly connector | 4 steps : 2.5 min.(SPC polishing) |
| | φ 2.5mm zirconia ferrule | 6 steps : 4.5 min (SPC polishing) |
| Electrical | AC adapter | Input : AC100~240V 50 / 60Hz Output : DC12V |
| | Battery / Cigarette lighter socket | Input : DC12V Battery cord as well as cigarette lighter socket are available for optional accessories. |
| Size | W x D x H | 130 x 130 x 145 mm (Not including holder clamps) |
| Weight | | 3.2 kg (Machine body only, not including holder) |

■ Standard Accessories

| Part code | Name of Part | Q'ty |
|-----------|----------------------------------|------|
| PR07-500 | Convex polishing pad | 4 |
| PG07-490 | Flat polishing pad | 2 |
| SP07-005 | 50um spacer film for repolishing | 2 |
| GA07 | Glue removal polishing film | 20 |
| DR07 | Rough polishing film | 2 |
| DM07-BL | Medium polishing film | 2 |
| SF07 | Final polishing film | 20 |
| FP-CH | Cable holder | 1 |
| FP-TS | Allen wrench set | 1 |
| FP-WB | Plastic water bottle | 2 |
| FP-F1A | 1 Amp fuse | 10 |
| FP-GS | Nye Rheolube 363 AX-1 grease | 1 |
| FP-DST | Double-sided adhesive tape | 1 |
| FP-SS | Shoulder strap for transit case | 1 |
| FP-CB07 | Transit case | 1 |
| AD20 | AC / DC adapter | 1 |
| - | AC / DC adapter cable | 1 |
| FP-IM07 | Operating manual | 1 |

■ Optional Accessories

| Part code | Name of Part | Q'ty |
|-----------|--|-----------------|
| * | PC polishing holder | 1 |
| * | APC polishing holder | 1 |
| PR07-500 | 5.0mm convex polishing pad | 6pieces / set |
| PR07-480 | 4.8mm convex polishing pad | 6pieces / set |
| PG07-490 | 4.9mm flat glass polishing pad | 6pieces / set |
| GA07 | Glue removal polishing film | 200sheets / set |
| DR07 | Rough polishing film | 20sheets / set |
| DM07-BL | Medium polishing film | 20sheets / set |
| SF07 | Final polishing film | 200sheets / set |
| AR07 | Polishing film for epoxy removal (pre-radius connectors) | 200sheets / set |
| SP07-005 | 50um spacer film for repolishing | 200sheets / set |
| FP-BC1 | Battery cord | 1 |
| FP-BC2 | Cigarette lighter cord | 1 |
| FP-07CS | Compression spring | 4 |
| FP-CH | Cable holder | 1 |
| FP-F1A | 1 Amp fuse | 10 |
| SAH-DAS | 4-position epoxy curing oven 120 VAC / 240VAC | 1 |
| SUT-MIC | 100x microscope | 1 |

■ Polishing holder

| PC polishing | |
|--------------|--------------------------------|
| Part code | Connector |
| PH07-FF | FC, SC ferrule holder (6 axis) |
| PH07-FP | FC connector holder (6 axis) |
| PH07-CP | SC connector holder (6 axis) |
| PH07-SP | ST connector holder (6 axis) |

| APC polishing | |
|---------------|--------------------------------|
| Part code | Connector |
| PH07-FF8A | FC, SC ferrule holder (6 axis) |
| PH07-FP8R | FC connector holder (6 axis) |
| PH07-CP8A | SC connector holder (6 axis) |

(Notes)

1. Polishing performance is dependent on quality of polishing film used. We only guarantee quality and specifications with our designated films.
2. Custom holders are available for a variety of applications.
3. ST^R is a registered trademark of AT & T.

Manufactured by : **SEIKOH GIKEN Co., Ltd.**

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SFP-70D

HPC Polishing, HF07 Film

User's Manual

Method • Conditions

in the FF3S Ferrule's case.

Polishing procedure is as shown below.

| Polishing Steps | Polishing Film Type (Polishing Cycles per Film) | Polishing Pad | Polishing Fluid | Polishing Time |
|-------------------|--|--------------------------------------|-----------------|----------------|
| Adhesive removal | GA07 *1 (1) | PG07-490 | none | 0.5min |
| Height adjustment | GA07 *2 (GA of used before) | PG07-490 | none | 0.5min |
| Convex forming | GA07 (1) | PR07-500 | none | 0.5min |
| Rough polishing | DR07 *3,4 (10~20) | PR07-500 | distilled water | 2.0min |
| Middle polishing | DM07 *4 (10~20) | PR07-500 | distilled water | 0.5min |
| Final polishing | HF07 *5,6 (1) | PR07-505 or PR07-500 +SP07-005 | distilled water | 3.0min |

- *1 Do not clamp the polishing holder down until the turntable completes first 20 rotations. And then load two clamp levers with groove (black). Next step, load four clamp levers from beginning.
- *2 Clean the GA07 film (used at the Adhesive removal) with alcohol, wiping with a lint-free tissue. Inspect the surface of the film for visible damage, and replace it only if necessary.
- *3 After rough polishing, ensure that ferrul endface has formed perfect convex. (If convex is not formed perfectly, repeat rough polishing process.)
- *4 After each use, clean the DR07 and DM07 films with alcohol, wiping with a lint free tissue.
- *5 Put the adherent side of the film up.
- *6 Do not allow any air bubbles to form between the polishing film and polishing pad.

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HANDLE WITH CARE

We discuss them in the paragraphs that follow.

cautions on storage

- Never leave the HF 0 7 film exposed to direct sunlight, and avoid freezing condition.
- The quality of HF 0 7 film is assured for 1 year after our shipment.

cautions on operation

- Keep HF 0 7 films in a sealed package until its use.

cautions on junking

- Treat the HF 0 7 films after use as industrial waste.

note) Above mentioned polishing methods and conditions are suggested for general connectors and ferrules, thus subject to change depending on material, shape and numbers of ferrules to be polished.

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