

PARTS LIST & INSTRUCTION

FX **SERIES**

Industrial Sewing Machines

*FX4404P,PMD,PSF,PE
FX4406P,PMD,PL,PE
FX4409P,PMD,PE
FX4412P,PMD,PL,PE
FX4404P/UTC
FX4406P/UTC
FX4408P,PL
FX4409P/UTC
FX4412P/UTC
FX4413P
FX4413P/UTC
FX4421P,PE
FX4423P,PMD*

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KANSAI
SPECIAL®

パーツブック御利用に際して

■このパーツブックは、2014年11月製造中のFXシリーズのデーターに基づいて作成されたものです。

■各機別に収録され、左側のページに分解イラスト図、右側のページに部品番号、名称、及び数量が記載されています。

■この本の最後に部品番号インデックスを記載しています。部品番号からの図解、名称の検索に御利用下さい。

■各部品は、予告なく変更される場合がありますので、あらかじめ御了承下さい。

INTRODUCTION

■This parts book is based on data current November 2014.

■Each mechanism is arranged on facing pages. You will find listed for parts number, names, and quantities.

■A parts number index is attached to the back of this book for convenience.

■Parts are subject to change without notice.

FXシリーズ 表示方法

■シリンダータイプを表します。
44 is cylinder type.

■04は4本針です。
04 is 4 Needle machine.
12は12本針です。
12 is 12 needle machine.



■針幅です。(インチ)

Needle width (inch)

■Pは後プーラー装置付です。

P is with rear puller.

PLはラインテープ 付け用です。

PL for line attaching.

PSFは前立て用です。

PSF for shirt-fronting.

PMDは前プーラー装置付です。PMD is with front puller.

PEは後スモースプーラー装置付です。

PE is with smooth rear puller.

■UTCはエア式糸切装置付ミシンです。

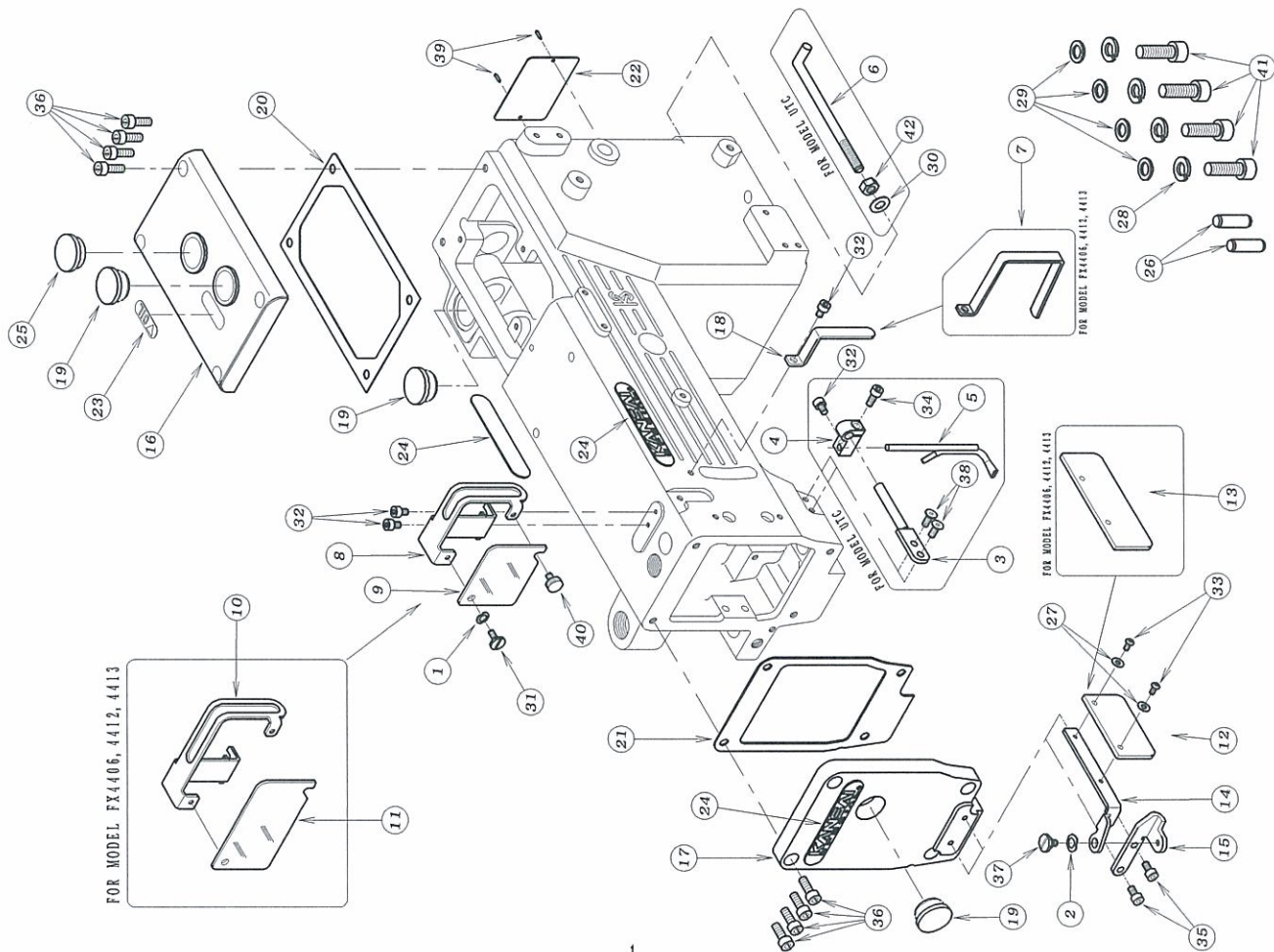
UTC is with thread trimmer unit.

(PNEUMATIC TYPE ONLY)

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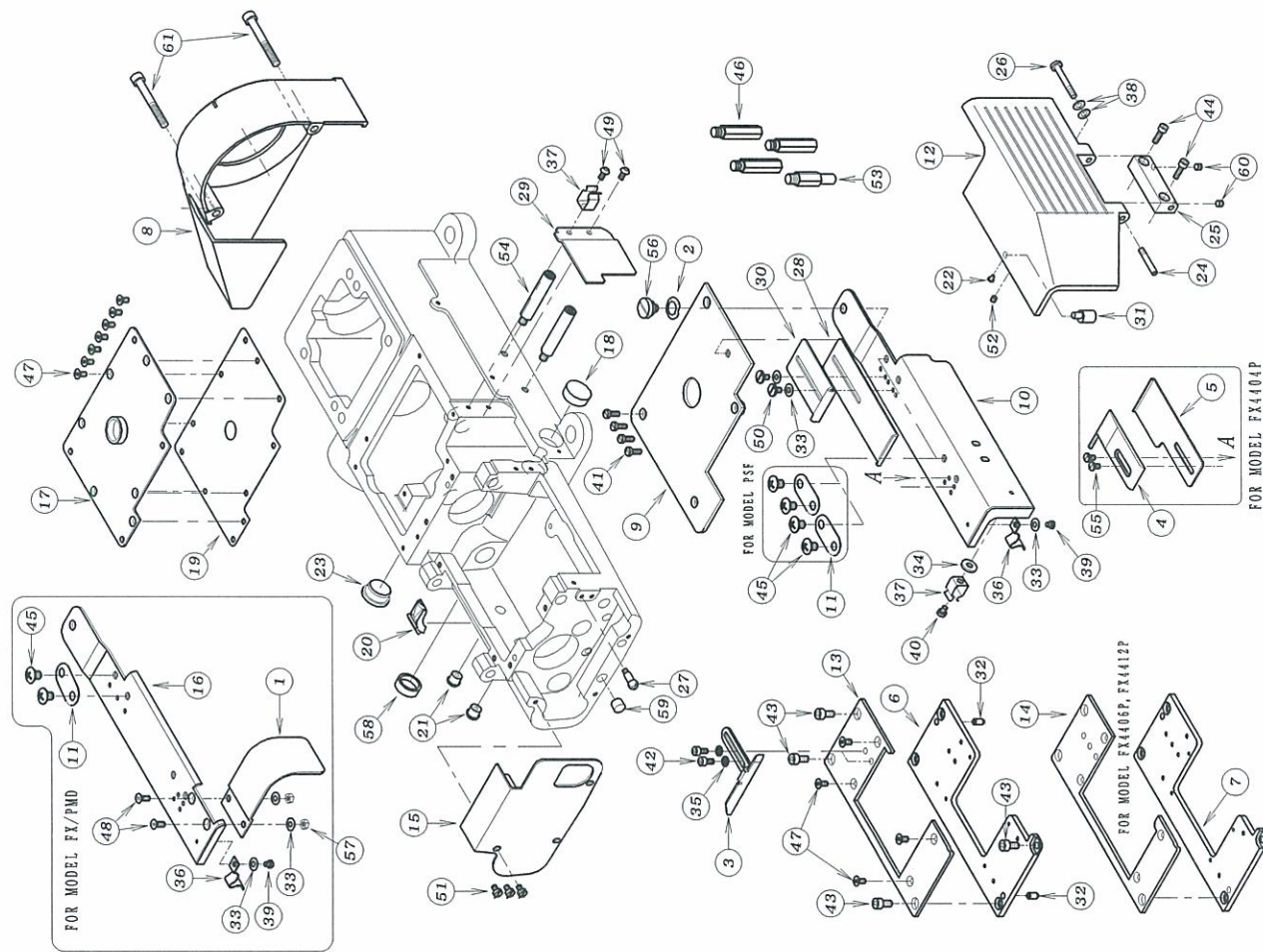
1. フレーム関係 (1) FRAME ASSEMBLY (1)



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
01-01	02-118	波ワッシャ	WASHER	1
01-02	02-119	波座金	WASHER	1
01-03	05-444	糸吹き取付ガイド	GUIDE	1
01-04	05-445	糸吹きブラケット	BRACKET	1
01-05	05-446	糸吹きパイプ	PIPE	1
01-06	05-558	検出器用止め金具	BAR	1
01-07	21-975	弓糸道保護カバー	COVER	1
01-08	21-264	針棒カバー	NEEDLE BAR COVER	1
01-09	21-265	保護カバー	COVER	1
01-10	21-266	針棒カバー	NEEDLE BAR COVER	1
01-11	21-267	保護カバー	COVER	1
01-12	21-273	保護カバー	EYE GUARD	1
01-13	21-274	保護カバー	EYE GUARD	1
01-14	21-275	保護カバー - 取り付板	BRACKET	1
01-15	21-276	保護カバー - プラケット	BRACKET	1
01-16	21-459	立ロッドカバー	TOP COVER	1
01-17	21-499	面版	HEAD COVER	1
01-18	21-711	保護カバー	COVER	1
01-19	23-427	コ'ム栓	PLUG	3
01-20	23-462	ハ'ッキン	GASKET	1
01-21	23-465	面版パッキン	GASKET	1
01-22	24-053	モ'ルスデッカー	TYPE PLATE	1
01-23	24-401	オイルマークシール	OIL MARK	1
01-24	24-052	KSマーク	KS MARK	3
01-25	39-502	オイルホ'ット窓	OIL SIGHT WINDOW	1
01-26	71-580	チーバーピン	PIN	2
01-27	75-224	ワッシャ	WASHER	2
01-28	75-225	スフ'リンク'ワッシャ	SPRING WASHER	4
01-29	75-436	ワッシャ	WASHER	4
01-30	75-452	ワッシャ	WASHER	1
01-31	84-396	段ネジ	SCREW	1
01-32	87-092	六角穴付きボルト	BOLT	4
01-33	87-099	ネジ	SCREW	2
01-34	87-113	六角穴付きボルト	BOLT	1
01-35	87-177	六角穴付きボルト	BOLT	2
01-36	87-224	六角穴付きボルト	BOLT	8
01-37	87-264	段ネジ	SCREW	1
01-38	87-270	ネジ	SCREW	2
01-39	93-701	ピン	PIN	2
01-40	87-409	ネジ	SCREW	1
01-41	87-661	六角穴付きボルト	BOLT	4
01-42	88-166	ナット	NUT	1

2. フレーム関係 (2) FRAME ASSEMBLY (2)

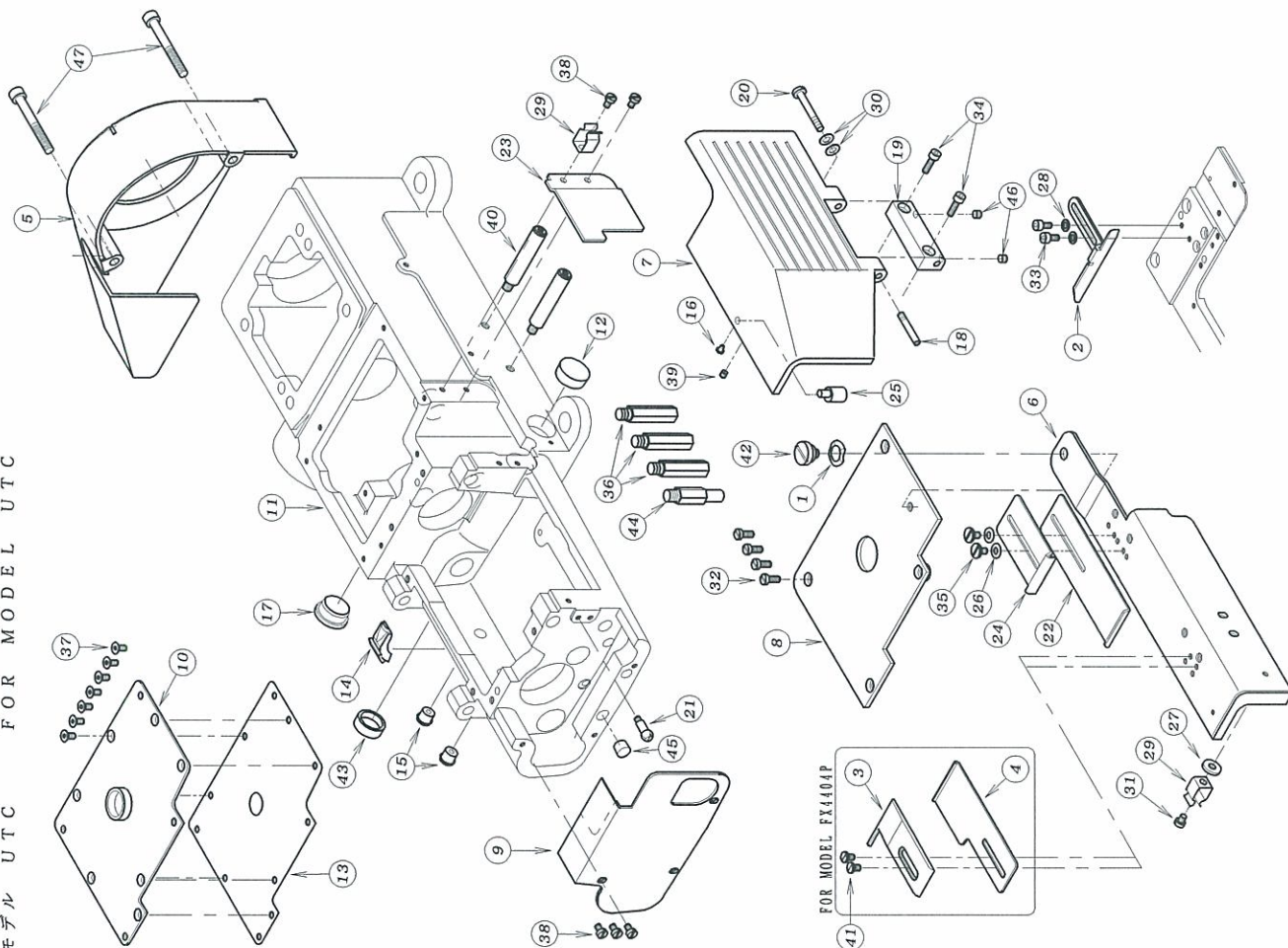
■ モデル UTC 除く EXCEPT MODEL UTC



REF. NO.	PART NO.	品名	DESCRIPTION	Q'TY
02-01	01-108	前フーラーカバー	COVER	1
02-02	02-112	波ワッシャー	WASHER	1
02-03	09-402	生地ガイド (右)	FABRIC GUIDE (RIGHT)	1
02-04	09-403	ゴムガイド (左)	TAPE GUIDE (LEFT)	1
02-05	09-404	ゴムガイド (右)	TAPE GUIDE (RIGHT)	1
02-06	14-438	針板土台	NEEDLE PLATE SUPPORT BRACKET	1
02-07	14-439	針板土台	NEEDLE PLATE SUPPORT BRACKET	1
02-08	27-147	プリーカーカバー	PULLEY COVER	1
02-09	21-269	上ベースカバー	UPPER COVER	1
02-10	21-270	前ベースカバー	FRONT PLATE COVER	1
02-11	26-712	取付金具	WASHER	1~2
02-12	21-272	前カバー	FRONT COVER	1
02-13	21-279	針板土台化粧カバー	COVER	1
02-14	21-280	針板土台化粧カバー	COVER	1
02-15	21-297	横カバー	COVER	1
02-16	21-298	前ベースカバー	FRONT COVER	1
02-17	21-460	上油カバー	COVER	1
02-18	23-166	プッシュ蓋ゴム	PLUG	1
02-19	23-463	上油カバーパッキン	GASKET	1
02-20	23-467	送り土台用コム栓	PLUG	1
02-21	23-501	コム栓	PLUG	2
02-22	23-512	クッションゴム	CUSHION RUBBER	1
02-23	23-427	シールキャップ	SEAL CAP	1
02-24	25-527	カバーヒンジネジ	SCREW	1
02-25	25-516	定規台ヒンジ	HINGE	1
02-26	25-517	ヒンジネジ	SCREW	1
02-27	25-522	カバーストップネジ	SCREW	1
02-28	09-407	コムガイド (左)	ELASTICGUIDE (L)	1
02-29	35-416	オイルフェンス	OIL FENCE	1
02-30	09-408	コムガイド (右)	ELASTICGUIDE (R)	1
02-31	71-116	ピン	PIN	1
02-32	71-579	ノックピン	PIN	2
02-33	75-455	ワッシャー	WASHER	6
02-34	75-456	ワッシャー	WASHER	1
02-35	75-468	ワッシャー	WASHER	2
02-36	79-521	板ネ	SPRING	2
02-37	79-912	板ネ	SPRING	2
02-38	79-922	板ネ	SPRING	2
02-39	84-364	ネジ	SCREW	2
02-40	87-098	ネジ	SCREW	1
02-41	87-145	ネジ	SCREW	4
02-42	87-177	六角穴付きボルト	BOLT	2
02-43	87-213	六角穴付きボルト	BOLT	4
02-44	87-214	六角穴付きボルト	BOLT	2
02-45	85-181	ネジ	SCREW	2~4
02-46	87-258	スタンプピン	PIN	3
02-47	87-269	ネジ	SCREW	11
02-48	87-270	ネジ	SCREW	2
02-49	87-272	ネジ	SCREW	2
02-50	87-414	ネジ	SCREW	2
02-51	87-284	ネジ	SCREW	3
02-52	87-286	ネジ	SCREW	1
02-53	87-410	スタンプピン	PIN	1
02-54	87-411	支柱ネジ	SCREW	2
02-55	87-415	ネジ	SCREW	2
02-56	87-418	段ネジ	SCREW	1
02-57	88-146	ナット	NUT	2
02-58	94-506	オイルシール	OIL SEAL	1
02-59	23-528	プラグ	PLUG	1
02-60	87-274	ネジ	SCREW	2
02-61	87-435	六角穴付きボルト	BOLT	2

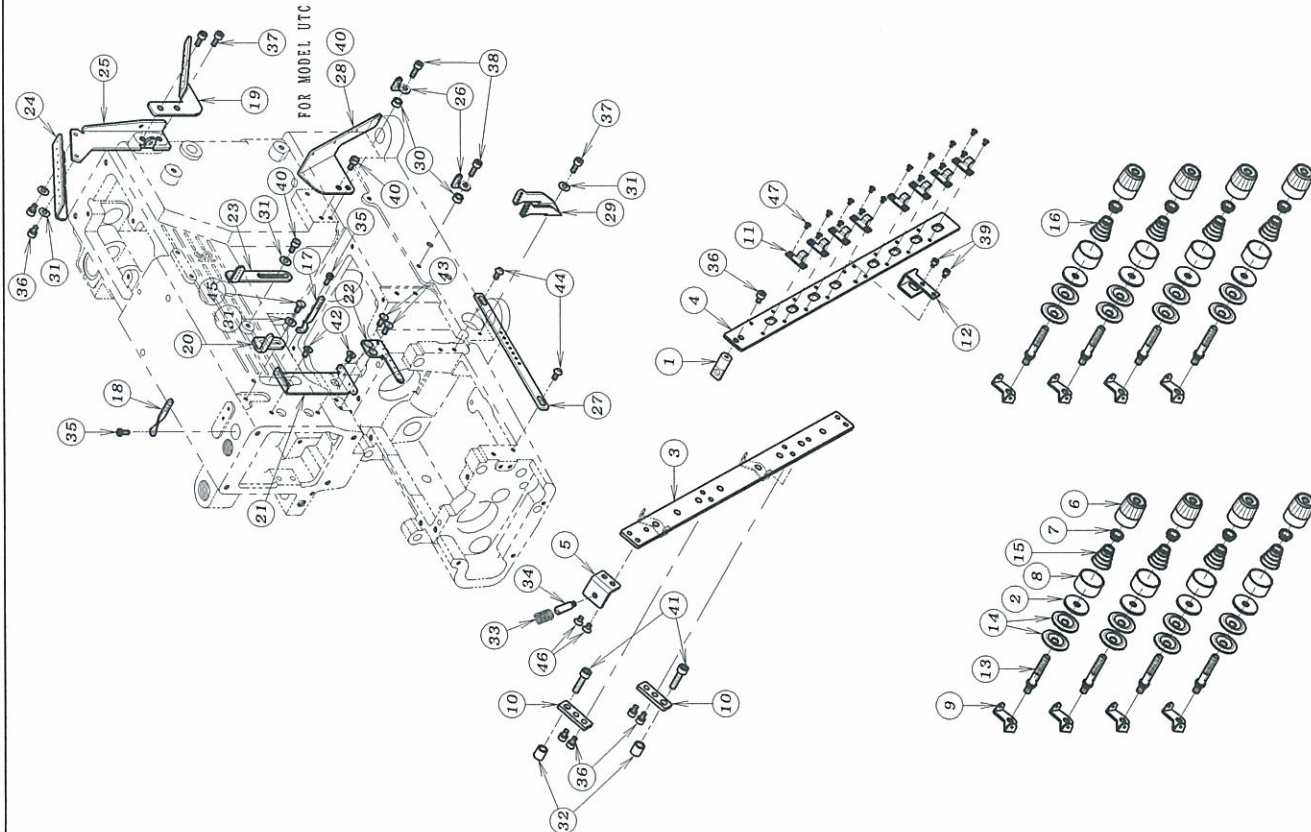
3. フレーム関係 (3) FRAME ASSEMBLY (3)

■モデル UTC FOR MODEL UTC



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
03-01	02-112	緩ワッシャー	WASHER	1
03-02	09-402	生地ガイド (右)	FABRIC GUIDE (RIGHT)	1
03-03	09-403	ゴムガイド (左)	TAPE GUIDE (LEFT)	1
03-04	09-404	ゴムガイド (右)	TAPE HOLDER	1
03-05	27-147	プリーカー	PULLEY COVER	1
03-06	21-270	前ベースカバー	FRONT PLATE COVER	1
03-07	21-272	前カバー	FRONT COVER	1
03-08	21-277	上ベースカバー	UPPER COVER	1
03-09	21-278	横カバー (UTC)	SIDE COVER	1
03-10	21-460	上油カバー	COVER	1
03-11	22-407	シリンドー加工	SYLINDER BED	1
03-12	23-166	プッシュ蓋ゴム	PLUG	1
03-13	23-463	上油カバーパッキン	GASKET	1
03-14	23-467	送り土台用コゝム栓	PLUG	1
03-15	23-501	コゝム栓	PLUG	2
03-16	23-512	クッションゴゝム	CUSHION RUBBER	1
03-17	23-427	シールキャップ	SEAL CAP	1
03-18	25-527	カバー・ヒンジ' ネジ'	SCREW	1
03-19	25-516	定規台ヒンジ'	HINGE	1
03-20	25-517	ヒンジ' ネジ'	SCREW	1
03-21	25-522	カバー・ストップ' ネジ'	SCREW	1
03-22	09-407	ゴゝムガイド' (左)	ELASTIC GUIDE (L)	1
03-23	35-416	オイルフェンス	OIL FENCE	1
03-24	09-408	ゴゝムガイド' (右)	ELASTIC GUIDE (R)	1
03-25	71-116	ピン	PIN	1
03-26	75-455	ワッシャー	WASHER	2
03-27	75-456	ワッシャー	WASHER	1
03-28	75-468	ワッシャー	WASHER	2
03-29	79-912	バネ	SPRING	2
03-30	79-922	皿バネ	SPRING	2
03-31	87-098	ネジ'	SCREW	1
03-32	87-145	ネジ'	SCREW	4
03-33	87-177	六角穴付きボルト	BOLT	2
03-34	87-214	六角穴付きボルト	BOLT	2
03-35	87-414	ネジ'	SCREW	2
03-36	87-258	スタント' ヒ'ン	PIN	3
03-37	87-269	ネジ'	SCREW	7
03-38	87-284	ネジ'	SCREW	5
03-39	87-286	ネジ'	SCREW	1
03-40	87-411	支柱ネジ	SCREW	2
03-41	87-415	ネジ'	SCREW	2
03-42	87-418	股ネジ'	SCREW	1
03-43	94-506	オイルシール	OIL SEAL	1
03-44	87-410	スタント' ヒ'ン	PIN	1
03-45	23-528	プラグ'	PLUG	1
03-46	87-274	ネジ'	SCREW	2
03-47	87-435	六角穴付きボルト	BOLT	2

4. 糸調子機構 (FX4404) THREAD TENSION MECHANISM

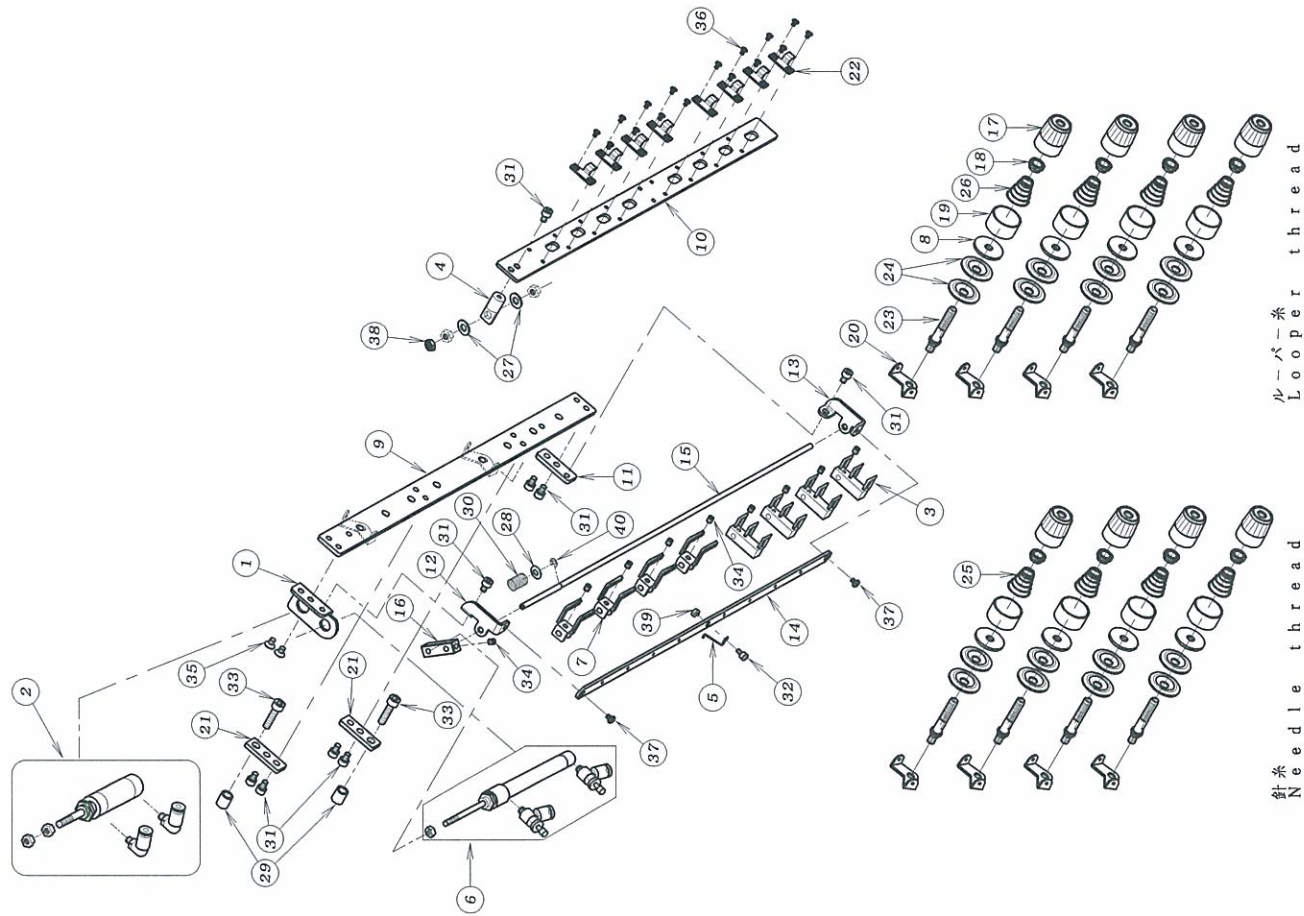


針
Needle thread

ルーパー糸
Looper thread

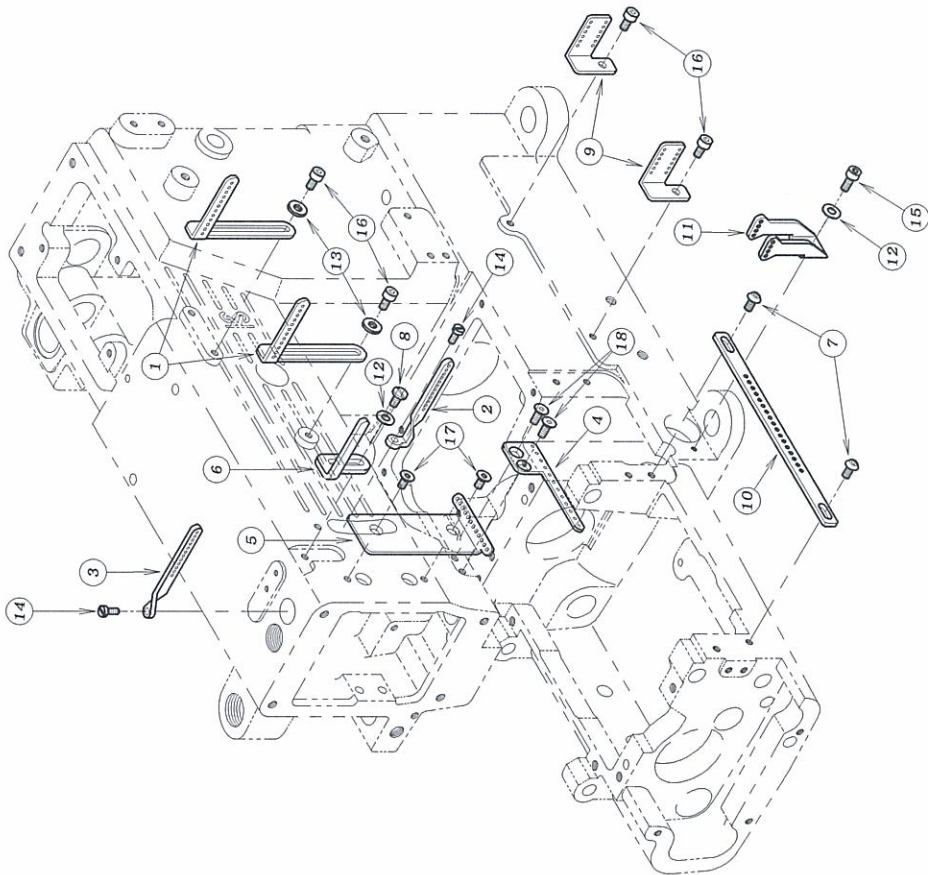
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
04-01	05-531	エア-シリコンタ'-連結金具	BRACKET	1
04-02	23-324	フェルト	FELT	8
04-03	41-029	チャンボ' ン台	PLATE	1
04-04	41-030	糸緩めプ' レート	PLATE	1
04-05	41-031	防威用取付金具	BRACKET	1
04-06	41-101	チャンボン皿小ケース	THREAD TENSION NUT	8
04-07	41-105	チャンボン皿ラチェット	SPRING POST	8
04-08	41-107	大ケース	SPRING CUP	8
04-09	41-115	糸道 (上)	THREAD GUIDE	8
04-10	41-473	取付金具 B	BRACKET B	2
04-11	41-476	糸緩め爪 (小)	NAIL (S)	8
04-12	41-478	糸緩め金具	PLATE	1
04-13	41-508	調子棒 (中)	SCREW STUD	1
04-14	41-509	チャンボン皿	TENSION DISC	16
04-15	41-701	チャンボン調子パネ (弱)	SPRING (HEAVY)	4
04-16	41-702	チャンボン調子パネ (弱)	SPRING (LIGHT)	4
04-17	45-123	弓糸道	THREAD EYELET	1
04-18	45-133	針棒糸道	THREAD EYELET	1
04-19	45-428	糸ガイド	THREAD EYELET	1
04-20	45-429	上糸受け	THREAD TAKE-UP PLATE	1
04-21	45-430	上糸ガイド	THREAD EYELET	1
04-22	45-431	上糸糸道 (下)	THREAD EYELET	1
04-23	45-438	上糸糸道	THREAD EYELET	1
04-24	45-546	糸カ' イト'	THREAD GUIDE	1
04-25	45-547	糸カ' イト' プ' ラケット	BRACKET	1
04-26	47-104	糸道	THREAD EYELET	2
04-27	47-411	下糸側き糸案内糸道	THREAD EYELET	1
04-28	47-412	糸緩めプレート	THREAD EYELET	1
04-29	47-413	下糸側き糸道	THREAD EYELET	1
04-30	75-394	糸道台ワッシャ	COLLAR	2
04-31	75-455	ワッシャ	WASHER	5
04-32	75-943	カラ-	COLLAR	2
04-33	79-163	ハ' ネ	SPRING	1
04-34	84-537	段ネジ'	SCREW	1
04-35	87-010	ネジ'	SCREW	2
04-36	87-092	六角穴付きボルト	BOLT	7
04-37	87-113	六角穴付きボルト	BOLT	3
04-38	87-129	六角穴付きボルト	BOLT	2
04-39	87-142	ネジ	SCREW	2
04-40	87-177	六角穴付きボルト	BOLT	2
04-41	87-246	六角穴付きボ' ルト	BOLT	2
04-42	87-269	ネジ'	SCREW	2
04-43	87-270	ネジ'	SCREW	2
04-44	87-272	ネジ'	SCREW	2
04-45	87-288	ネジ'	SCREW	1
04-46	87-293	ネジ'	SCREW	2
04-47	87-338	十字穴付皿小ネジ M2. 5	SCREW	16

5. 糸調子機構 (FX4404UTC) THREAD TENSION MECHANISM



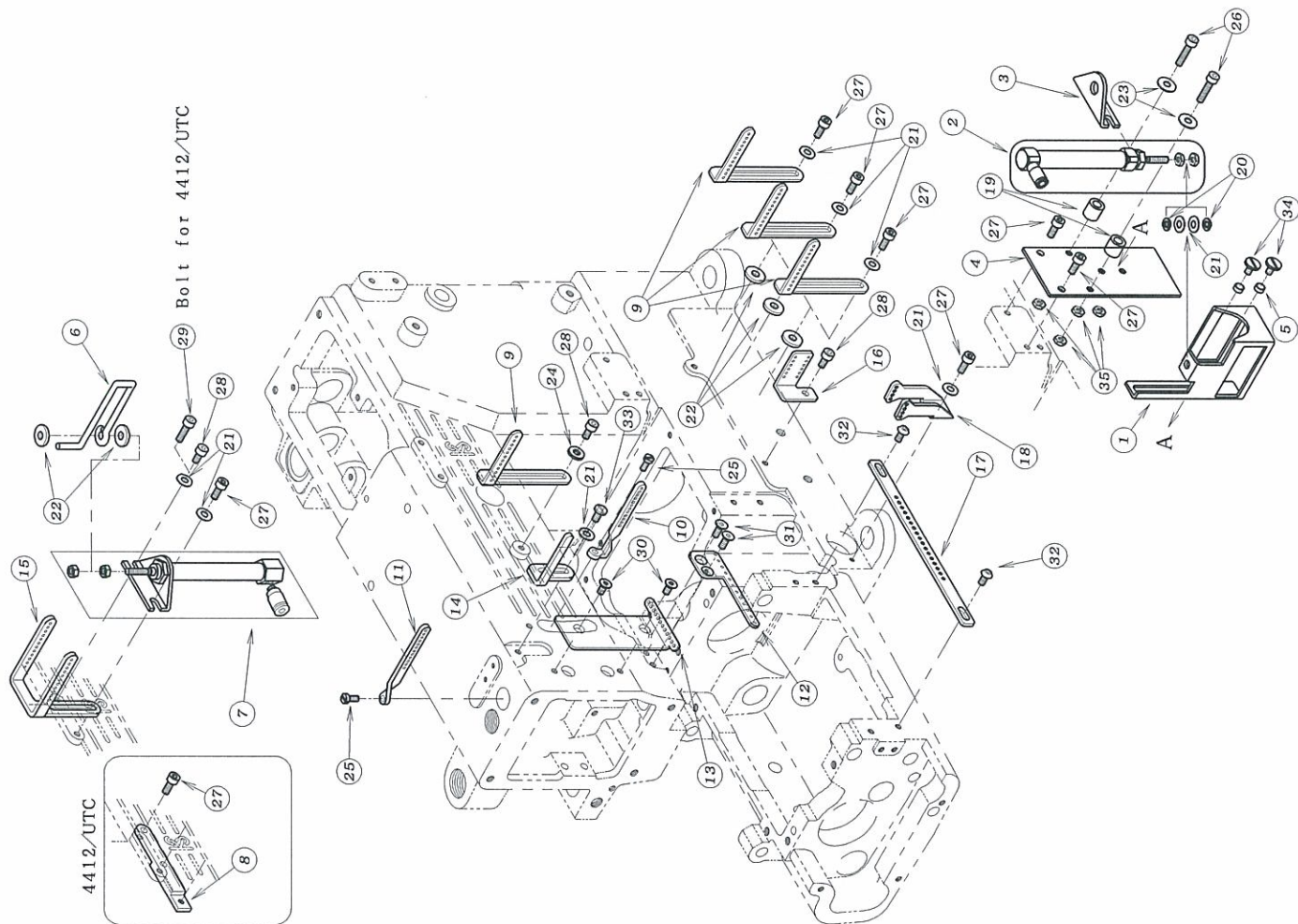
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
05-01	05-046	エアシリンダー-取付金具	AIR CYLINDER CLAMP	1
05-02	05-450	エアシリンダー-	AIR CYLINDER	1
05-03	05-478	糸緩めブロック	BRACKET	4
05-04	05-531	エアシリンダー-連結金具	BRACKET	1
05-05	05-560	糸緩め防振ハネ	SPRING	1
05-06	05-587	糸緩めシリンダー	AIR CYLINDER ASS'Y	1
05-07	05-850	糸緩めブロック	HOLDER	4
05-08	23-324	フェルト	FELT	8
05-09	41-029	チャンボ-ン台	PLATE	1
05-10	41-030	糸緩めフ-レート	PLATE	1
05-11	41-032	糸緩め取付金具	BRACKET	1
05-12	41-033	糸道取付ブラケットA	BRACKET	1
05-13	41-034	糸道取付ブラケットB	BRACKET	1
05-14	41-035	糸道糸道	THREAD RELEASE	1
05-15	41-036	糸緩め棒	BAR	1
05-16	41-037	糸緩め金具	BRACKET	1
05-17	41-101	チャンボン皿小ケース	THREAD TENSION NUT	8
05-18	41-105	チャンボン皿ラチェット	SPRING POST	8
05-19	41-107	大ケース	SPRING CUP	8
05-20	41-115	糸道 (上)	THREAD GUIDE	8
05-21	41-473	取付金具B	BRACKET B	2
05-22	41-476	糸緩め爪 (小)	NAIL (S)	8
05-23	41-508	調子棒 (中)	SCREW STUD	8
05-24	41-509	チャンボン皿	TENSION DISC	16
05-25	41-701	チャンボン調子バネ (強)	SPRING (HEAVY)	4
05-26	41-702	チャンボン調子バネ (弱)	SPRING (LIGHT)	4
05-27	75-453	ワッシャ	WASHER	2
05-28	75-455	ワッシャ	WASHER	1
05-29	75-943	カラー	COLLAR	2
05-30	79-540	糸緩め棒防振バネ	SPRING	1
05-31	87-092	六角穴付きボルト	BOLT	9
05-32	87-123	六角穴付きボルト	BOLT	1
05-33	87-246	六角穴付きボ-ルト	BOLT	2
05-34	87-286	ネジ	SCREW	9
05-35	87-293	ネジ	SCREW	2
05-36	87-338	十字穴付皿小ネジM2.5	SCREW	16
05-37	87-339	十字穴付皿小ネジM3	SCREW	2
05-38	88-018	六角ナット	NUT	1
05-39	88-137	ナット	NUT	1
05-40	93-201	Eリング	E-RING	1

6. 糸調子機構 (FX4406~4412) THREAD TENSION MECHANISM



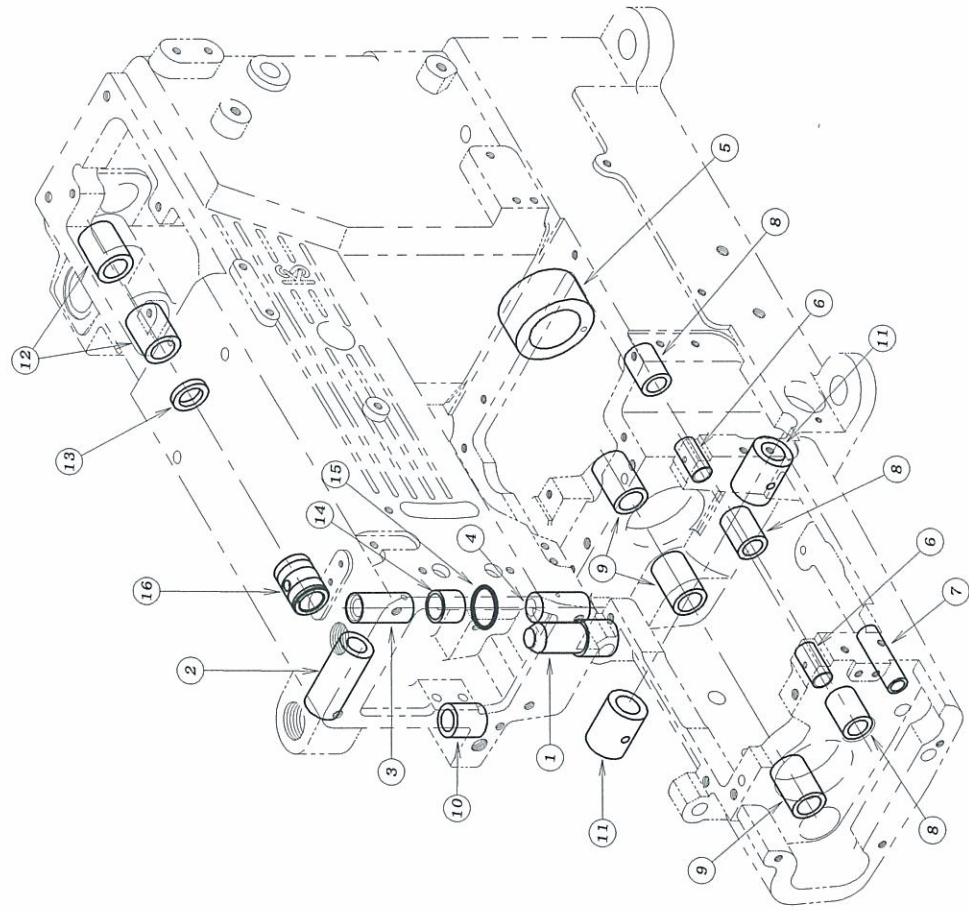
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
06-01	45-107	糸道	THREAD EYELET	2
06-02	45-127	糸道	THREAD EYELET	1
06-03	45-432	針棒糸道	THREAD EYELET	1
06-04	45-433	上糸道 (下)	THREAD EYELET	1
06-05	45-434	上糸ガイド	THREAD EYELET	1
06-06	45-435	上糸受け	THREAD TAKE-UP PLATE	1
06-07	87-272	ネジ	SCREW	2
06-08	87-288	ネジ	SCREW	1
06-09	47-409	糸道	THREAD EYELET	2
06-10	47-410	下糸捌き糸案内糸道	THREAD EYELET	1
06-11	47-413	下糸捌き糸道	THREAD EYELET	1
06-12	75-455	ワッシャ	WASHER	2
06-13	75-522	ワッシャ	WASHER	2
06-14	87-010	ネジ	SCREW	2
06-15	87-113	六角穴付きボルト	BOLT	1
06-16	87-177	六角穴付きボルト	BOLT	4
06-17	87-269	ネジ	SCREW	2
06-18	87-270	ネジ	SCREW	2

7. 糸調子機構 (FX4406UTC~4413UTC) THREAD TENSION MECHANISM



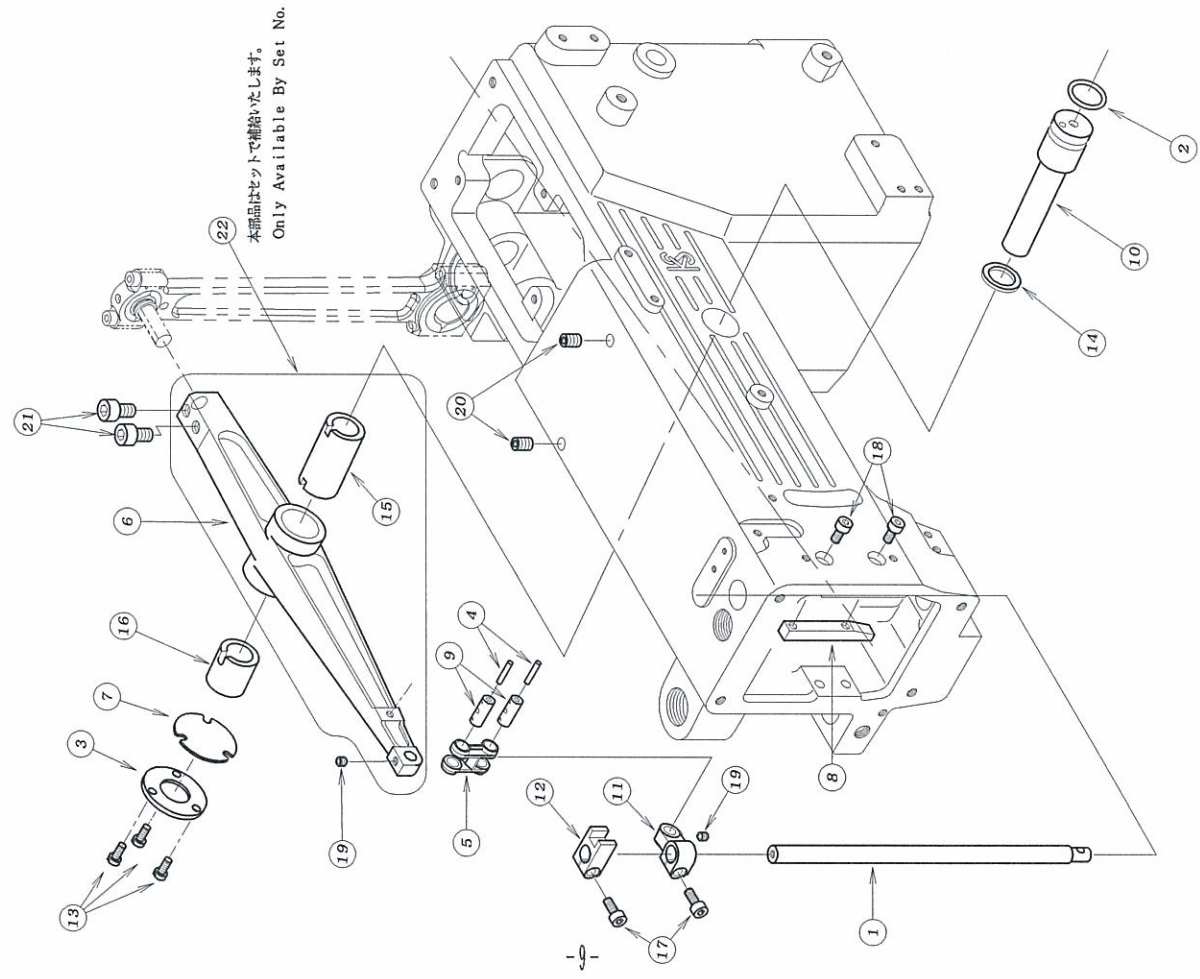
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
07-01	05-379	下糸緩めプレート	PLATE	1
07-02	05-380	下糸緩めシリンダーセット	AIR CYLINDER	1
07-03	05-381	下糸緩めシリンダーフックラケット	BRACKET	1
07-04	05-391	シリンダー取付土台プレート	PLATE	1
07-05	05-430	ガイドローラー (小)	GUIDE ROLLER (S)	2
07-06	05-442	糸緩め棒	BAR	1
07-07	05-443	糸緩めシリンダー	AIR CYLINDER	1
07-08	05-555	上糸緩めフックラケット	BRACKET	1
07-09	45-107	糸道	THREAD EYELET	4
07-10	45-127	針棒糸道	THREAD EYELET	1
07-11	45-432	上糸道 (下)	THREAD EYELET	1
07-12	45-433	上糸道 (下)	THREAD EYELET	1
07-13	45-434	上糸ガイド	THREAD EYELET	1
07-14	45-435	上糸受け	THREAD TAKE-UP PLATE	1
07-15	45-436	糸道	THREAD EYELET	1
07-16	47-409	糸道	THREAD EYELET	1
07-17	47-410	下糸割き糸案内糸道	THREAD EYELET	1
07-18	47-413	下糸割き糸道	THREAD EYELET	1
07-19	51-145	スベースカラー	COLLAR	1
07-20	75-410	スプリングワッシャー	SPRING WASHER	2
07-21	75-455	ワッシャー	WASHER	9
07-22	75-456	ワッシャー	WASHER	5
07-23	75-467	ワッシャー	WASHER	2
07-24	75-522	ワッシャー	WASHER	1
07-25	87-010	ネジ	SCREW	2
07-26	87-112	六角穴付きボルト	BOLT	2
07-27	87-113	六角穴付きボルト	BOLT	8
07-28	87-177	六角穴付きボルト	BOLT	3
07-29	87-214	六角穴付きボルト	BOLT	1
07-30	87-269	ネジ	SCREW	2
07-31	87-270	ネジ	SCREW	2
07-32	87-272	ネジ	SCREW	2
07-33	87-288	ネジ	SCREW	1
07-34	87-414	ネジ	SCREW	2
07-35	88-147	六角ナット	NUT	4

8. ブッシュ機構 BUSHING



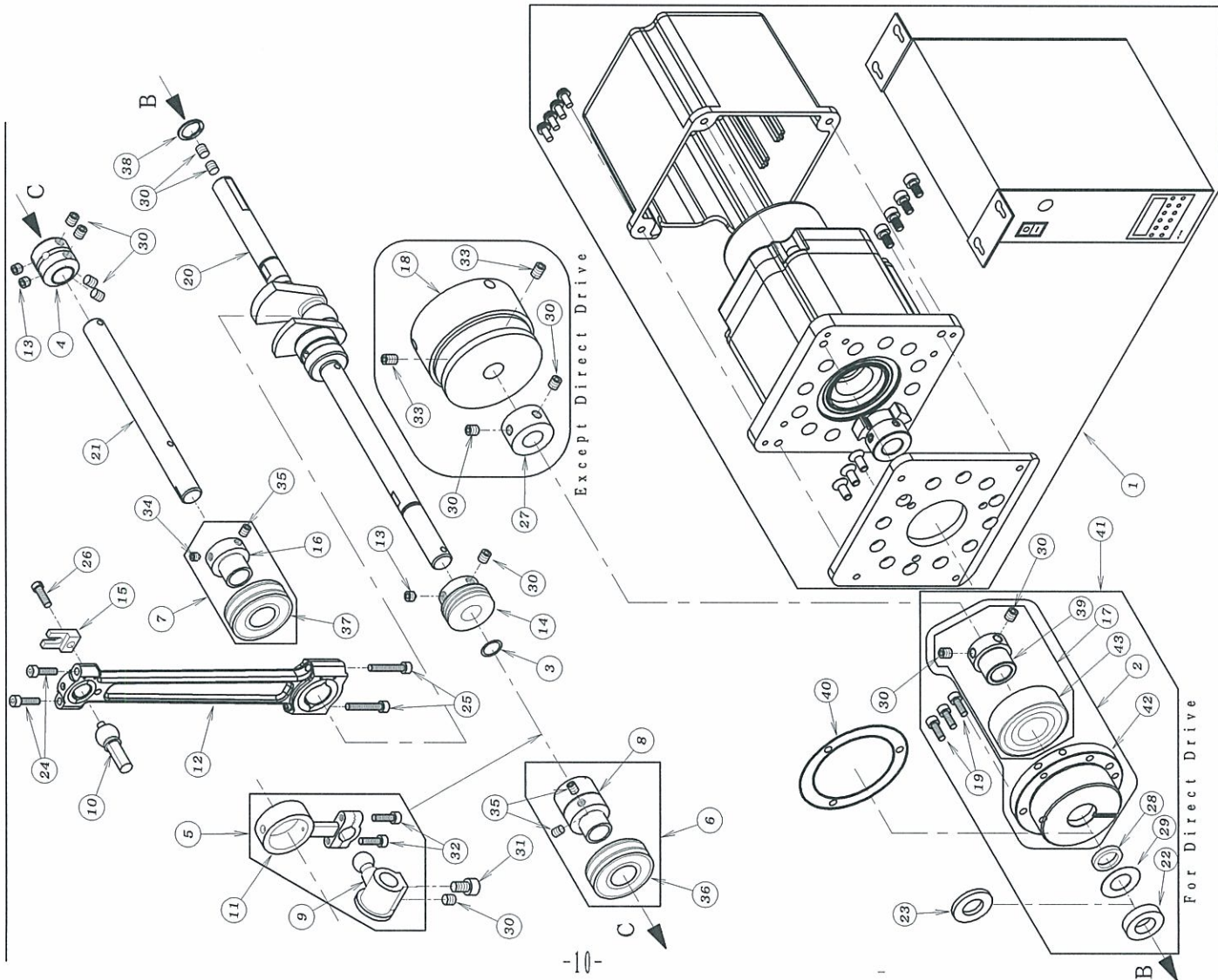
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
08-01	81-407	押え棒ブッシュ	BUSHING	1
08-02	81-408	後プーラー掲げブッシュ	BUSHING	1
08-03	81-425	針棒ブッシュ上	BUSHING	1
08-04	81-426	針棒ブッシュ下	BUSHING	1
08-05	81-427	クランク軸ブッシュ	BUSHING	1
08-06	81-428	ブッシュ	BUSHING	2
08-07	81-429	ブッシュ	BUSHING	1
08-08	81-430	ブッシュ	BUSHING	3
08-09	81-432	ブッシュ	BUSHING	3
08-10	81-433	ブッシュ	BUSHING	1
08-11	81-517	ブッシュ	BUSHING	2
08-12	81-559	ブッシュ	BUSHING	2
08-13	94-502	オイルシール	OIL SEAL	1
08-14	39-006	オイルガード	OIL GUARD	1
08-15	53-169	結束バンド	BAND	1
08-16	81-474	ブッシュ	BUSHING	1

9. 針棒. 弓機構 NEEDLE BAR MECHANISM



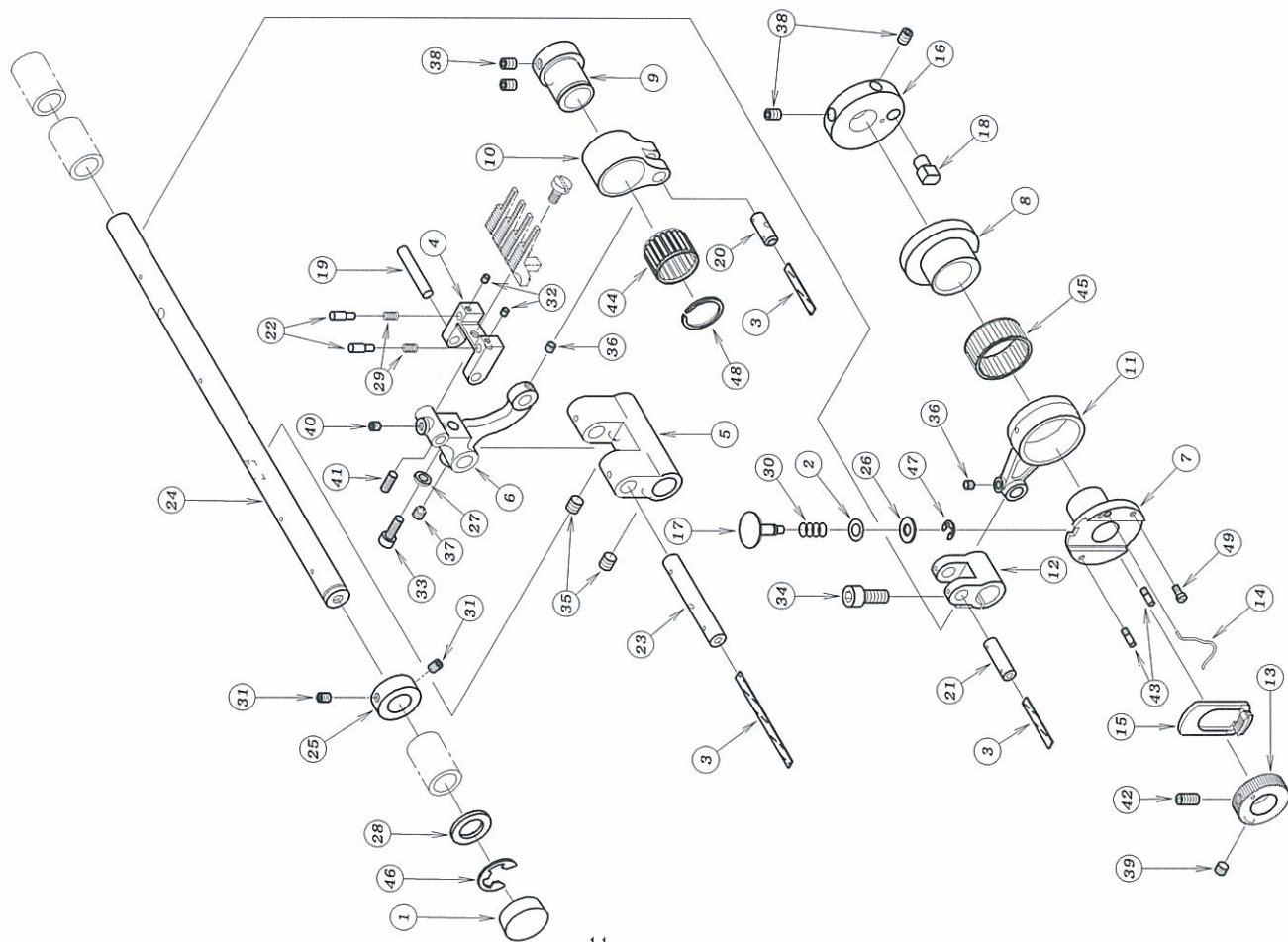
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
09-01	11-407	針棒	NEEDLE BAR	1
09-02	23-195	O-リング*	O-RING	1
09-03	39-003	油止め板	COVER	1
09-04	23-555	フェルト	FELT	2
09-05	66-404	針棒リンク	LINK	1
09-06	69-444	弓ピン	NEEDLE LEVER	1
09-07	23-049	弓ピン油止めパッキン	GASKET	1
09-08	69-438	針棒案内板	NEEDLE BAR GUIDE	1
09-09	71-485	リンクピン	PIN	2
09-10	71-495	弓ピン	NEEDLE LEVER STUD	1
09-11	73-402	針棒コネクタ'イト'	NEEDLE BAR CLAMP	1
09-12	73-403	針棒ガイド	BRACKET	1
09-13	87-010	ネジ	SCREW	3
09-14	75-486	ワッシャ	WASHER	1
09-15	81-409	弓ブッシュ	BUSHING	1
09-16	81-410	弓ピンブッシュ	BUSHING	1
09-17	87-113	六角穴付きボルト	BOLT	2
09-18	87-177	六角穴付きボルト	BOLT	2
09-19	87-233	ネジ*	SCREW	2
09-20	87-242	ネジ*	SCREW	2
09-21	87-203	六角穴付きボルト	BOLT	2
09-22	69-4440-2	弓ブッシュ付	NEEDLE LEVER (WITH BUSHING)	1

10. 下軸機構 CRANKSHAFT MECHANISM



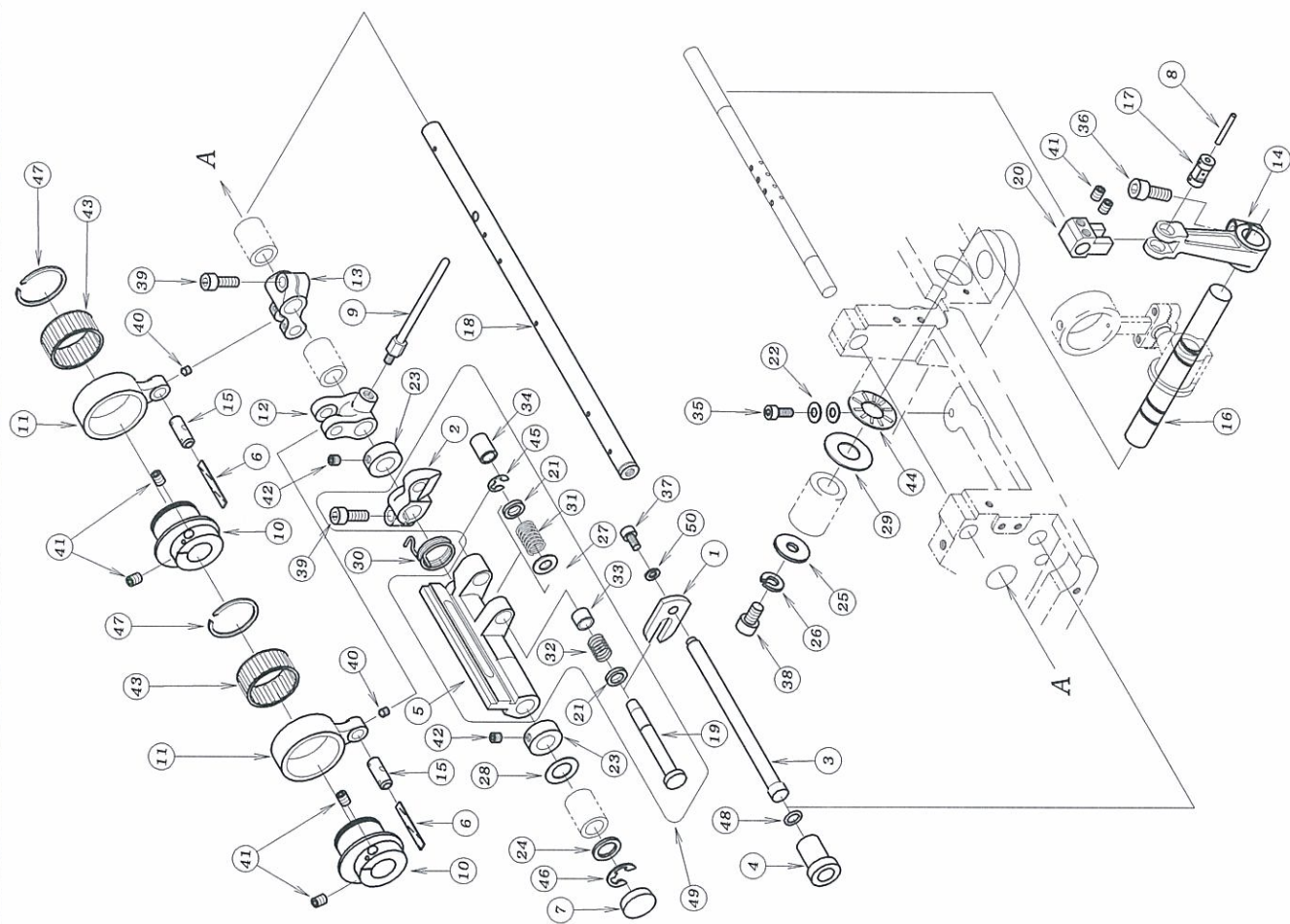
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
10-01	59-024	UTCダイレクトモーターセット	DIRECT MOTOR ASS'Y (FOR UTC)	1
10-02	60-9790	フレンジセット	FLANGE ASS'Y	1
10-03	23-466	オリング	O-RING	1
10-04	75-101	ジョイントカラー	JOINT COLLAR	1
10-05	60-4080	糸番ロッドセット	CONNECTING ROD ASS'Y	1
10-06	60-4100	ベアリングセット	BEARING ASS'Y	1
10-07	60-4130	ベアリングセット	BEARING ASS'Y	1
10-08	61-415	糸番エキセン	ECCENTRIC	1
10-09	61-416	振元ロッド玉	CRANK ROD	1
10-10	61-711	立ロッド玉	CONNECTING ROD BALL	1
10-11	63-422	糸番せ運結ロッド	CONNECTING ROD	1
10-12	63-386	針棒クランクロッド	CRANK ROD	1
10-13	87-259	ネジ	SCREW	3
10-14	31-155	ポンプ駆動ギア	OIL PUMP DRIVING WARM	1
10-15	69-120	ロッド止め	GUIDE	1
10-16	69-440	ベアリングスリーブ	SLEEVE	1
10-17	60-9800	ベアリングセット	BEARING ASS'Y	1
10-18	69-446	プーリー	PULLEY	1
10-19	87-129	六角穴付きボルト	BOLT	3
10-20	71-428	クランクシャフト (34.5)	CRANK SHAFT (34.5)	1
10-21	71-429	主軸	SHAFT	1
10-22	75-352	スベサ	WASHER	1
10-23	75-329	ワッシャ	WASHER	1
10-24	87-299	六角穴付きボルト	BOLT	2
10-25	87-285	六角穴付きボルト	BOLT	2
10-26	84-567	ネジ	SCREW	1
10-27	75-353	スベサ	SPACER	1
10-28	94-214	オイルシール	OIL SEAL	1
10-29	75-351	ワッシャ	WASHER	1
10-30	87-172	ネジ	SCREW	12
10-31	87-203	六角穴付きボルト	BOLT	1
10-32	87-214	六角穴付きボルト	BOLT	2
10-33	87-242	ネジ	SCREW	2
10-34	87-253	ネジ	SCREW	1
10-35	87-254	ネジ	SCREW	3
10-36	91-403	ボールベアリング	BEARING	1
10-37	91-404	ボールベアリング	BEARING	1
10-38	93-264	止め輪	RING	1
10-39	69-462	ベアリングスリーブ	SLEEVE	1
10-40	23-663	パッキン	GASKET	1
10-41	60-9780	ベアリングフレンジセット	BEARING FLANGE SET	1
10-42	69-461	ベアリングフレンジ	FLANGE	1
10-43	91-995	ベアリング	BEARING	1

11. 送り機構 FEED MECHANISM



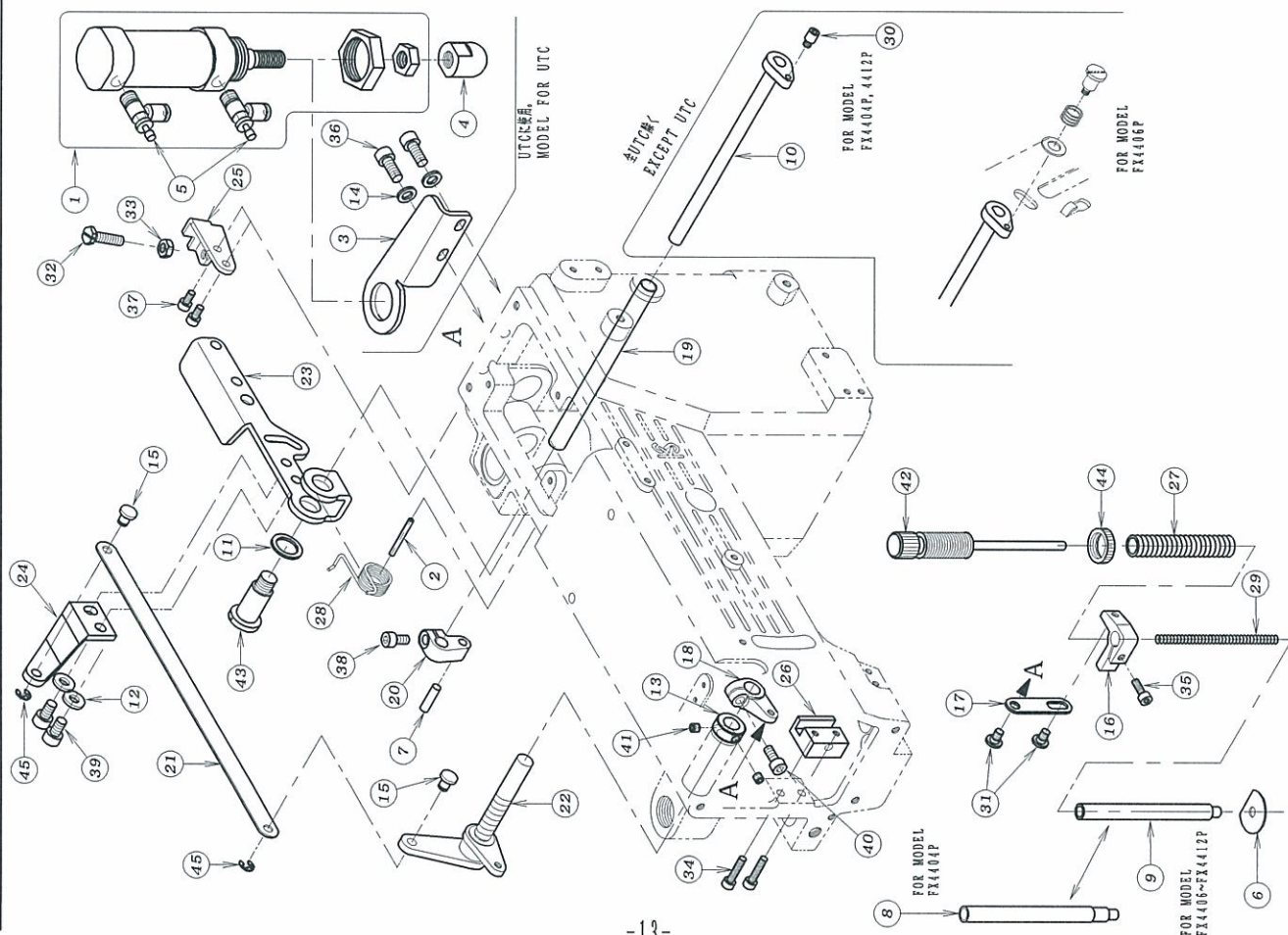
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
11-01	23-166	ブッシュ蓋ゴマ	PLUG	1
11-02	23-183	O-リング	O-RING	1
11-03	23-341	フェルト	FELT	3
11-04	55-430	送り歯取付け台	FEED DOG HOLDER	1
11-05	55-431	送り元台	FEED ROCKER	1
11-06	55-432	送り土台	FEED ROCKER	1
11-07	61-410	送り調節エキセン	FEED ECCENTRIC	1
11-08	61-411	送りエキセン	ECCENTRIC	1
11-09	61-026	送リ上下エキセン玉	ECCENTRIC	1
11-10	63-420	送リ上下エキセンダ'ルマ	LINK	1
11-11	63-423	送り連結ロット	CONNECTING ROD	1
11-12	67-423	送り前後レバー	LEVER	1
11-13	69-431	送り調節ギア'ア'	REGULATING GEAR	1
11-14	69-432	送り調節エキセンバ'ネ	SPRING	1
11-15	69-433	送り調節ギア'プレート	REGULATING PLATE	1
11-16	69-434	送りエキセンピ'ン土台	ECCENTRIC COLLAR	1
11-17	69-435	プ'ッシホ'タン	PUSH BUTTON	1
11-18	69-442	エキセンピ'ン	PIN	1
11-19	71-351	シャフト	SHAFT	1
11-20	71-431	ピ'ン	PIN	1
11-21	71-434	シャフト	SHAFT	1
11-22	71-487	送り歯上下ピン	PIN	2
11-23	71-488	送り元台ピ'ン	SHAFT	1
11-24	71-491	送りシャフト	SHAFT	1
11-25	75-189	カラ-	COLLAR	1
11-26	75-453	ワッシャ	WASHER	1
11-27	75-482	ワッシャ	WASHER	1
11-28	75-509	ワッシャ	WASHER	1
11-29	79-420	送り上下ピンバネ	SPRING	2
11-30	79-421	プ'ッシホ'タンバ'ネ	SPRING	1
11-31	84-521	ネジ	SCREW	2
11-32	87-104	ネジ	SCREW	2
11-33	87-129	六角穴付きボルト	BOLT	1
11-34	87-171	六角穴付きボルト	BOLT	1
11-35	87-172	ネジ	SCREW	2
11-36	87-233	ネジ	SCREW	2
11-37	87-253	ネジ	SCREW	1
11-38	87-254	ネジ	SCREW	4
11-39	87-274	ネジ	SCREW	1
11-40	87-286	ネジ	SCREW	1
11-41	87-401	ネジ	SCREW	1
11-42	87-407	六角穴付き止メネジ	SCREW	1
11-43	87-408	ネジ	SCREW	1
11-44	91-005	ベ'アリング	BEARING	2
11-45	91-430	ニードルベ'アリング	NEEDLE BEARING	1
11-46	93-202	E-リング	E-RING	1
11-47	93-205	E-リング	E-RING	1
11-48	93-406	ストッパ'リング	C-RING	1
11-49	87-317	平頭付段ネジ	SCREW	1

12. ルーパ-機構 LOOPER MECHANISM



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
12-01	104-111	ルーパ-台引出し板	PLATE	1
12-02	104-444	ルーパ-台ストップ台	LOOPER ROCKER STOPPER	1
12-03	104-445	ルーパ-引き出しシャフト	SHAFT	1
12-04	104-446	ルーパ-引き出しピン	STUD	1
12-05	119-475	ルーパ-元台	LOOPER ROCKER	1
12-06	23-341	フェルト	FELT	2
12-07	23-519	コ'ム栓	PLUG	1
12-08	23-534	フェルト	FELT	1
12-09	47-218	下系割き棒	TAKE-UP ROD	1
12-10	161-425	エキセン玉	ECCENTRIC	2
12-11	163-419	連結タルマ	ECCENTRIC LINK	2
12-12	167-421	サバギ棒連結レバ-	TAKE-UP DRIVE LEVER	1
12-13	167-422	ルーパ-前後レバ-	LOOPER DRIVE LEVER	1
12-14	167-425	糸寄せレバ-	LEVER	1
12-15	171-431	ピン	PIN	2
12-16	171-478	振元軸	SHAFT	1
12-17	171-479	連結ピン	PIN	1
12-18	171-489	ルーパ-駆動シャフト	SHAFT	1
12-19	171-911	シャフト	SHAFT	1
12-20	73-404	糸寄せ棒抱き	RETAINER BAR HOLDER	1
12-21	175-381	ワッシャ	WASHER	2
12-22	75-455	ワッシャ	WASHER	2
12-23	75-483	カラ-	COLLAR	2
12-24	75-504	ワッシャ	WASHER	1
12-25	75-515	ワッシャ	WASHER	1
12-26	75-527	スプ'リンク' ワッシャ	SPRING WASHER	1
12-27	75-452	ワッシャ	WASHER	1
12-28	75-675	ワッシャ	WASHER	1
12-29	75-901	ワッシャ	WASHER	1
12-30	79-161	ハ'ネ	SPRING	1
12-31	79-163	ハ'ネ	SPRING	1
12-32	79-164	ハ'ネ	SPRING	1
12-33	81-142	ブッシュ	BUSHING	1
12-34	81-143	ブッシュ	BUSHING	1
12-35	87-113	六角穴付きボルト	BOLT	1
12-36	87-171	六角穴付きボルト	BOLT	1
12-37	87-177	六角穴付きボルト	BOLT	1
12-38	87-203	六角穴付きボルト	BOLT	1
12-39	87-224	六角穴付きボルト	BOLT	1
12-40	87-233	ネジ	SCREW	2
12-41	87-254	ネジ	SCREW	2
12-42	87-274	ネジ	SCREW	6
12-43	91-430	ニト'ルーパ'アリンク'	NEEDLE BEARING	2
12-44	92-233	スラスト'ルーパ'アリンク'	BEARING	2
12-45	93-211	E-リング	E-RING	1
12-46	93-222	Eリング	E-RING	1
12-47	93-402	ストップ'リンク'	C-RING	2
12-48	98-871	O リング	O-RING	1
12-49	19-4750-2	FXルーパ-元台セット	LOOPER ROCKER ASS'Y	1
12-50	75-410	スプ'リンク' ワッシャ	SPRING WASHER	1

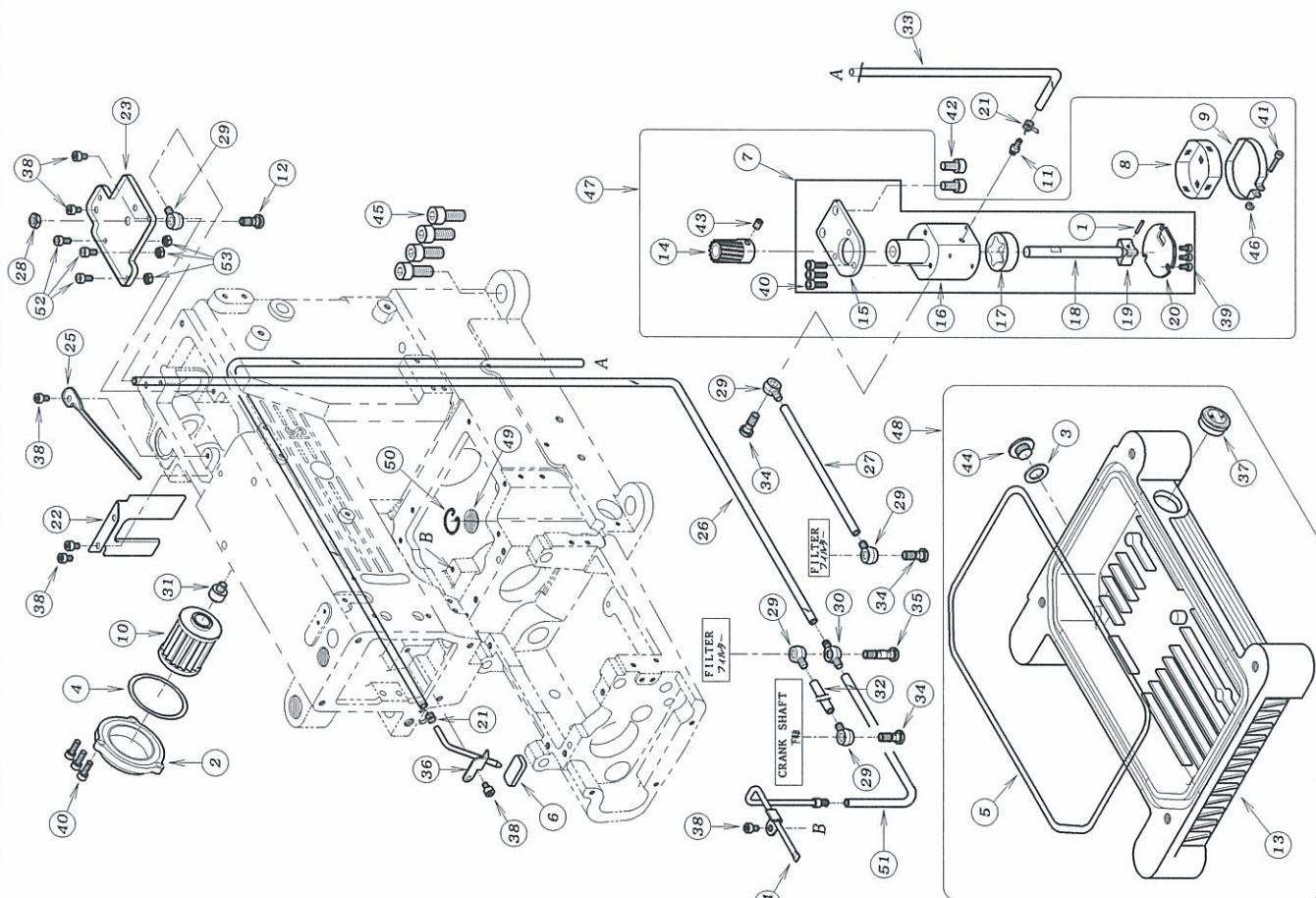
13. 押え揚げ機構 PRESSER FOOT MECHANISM



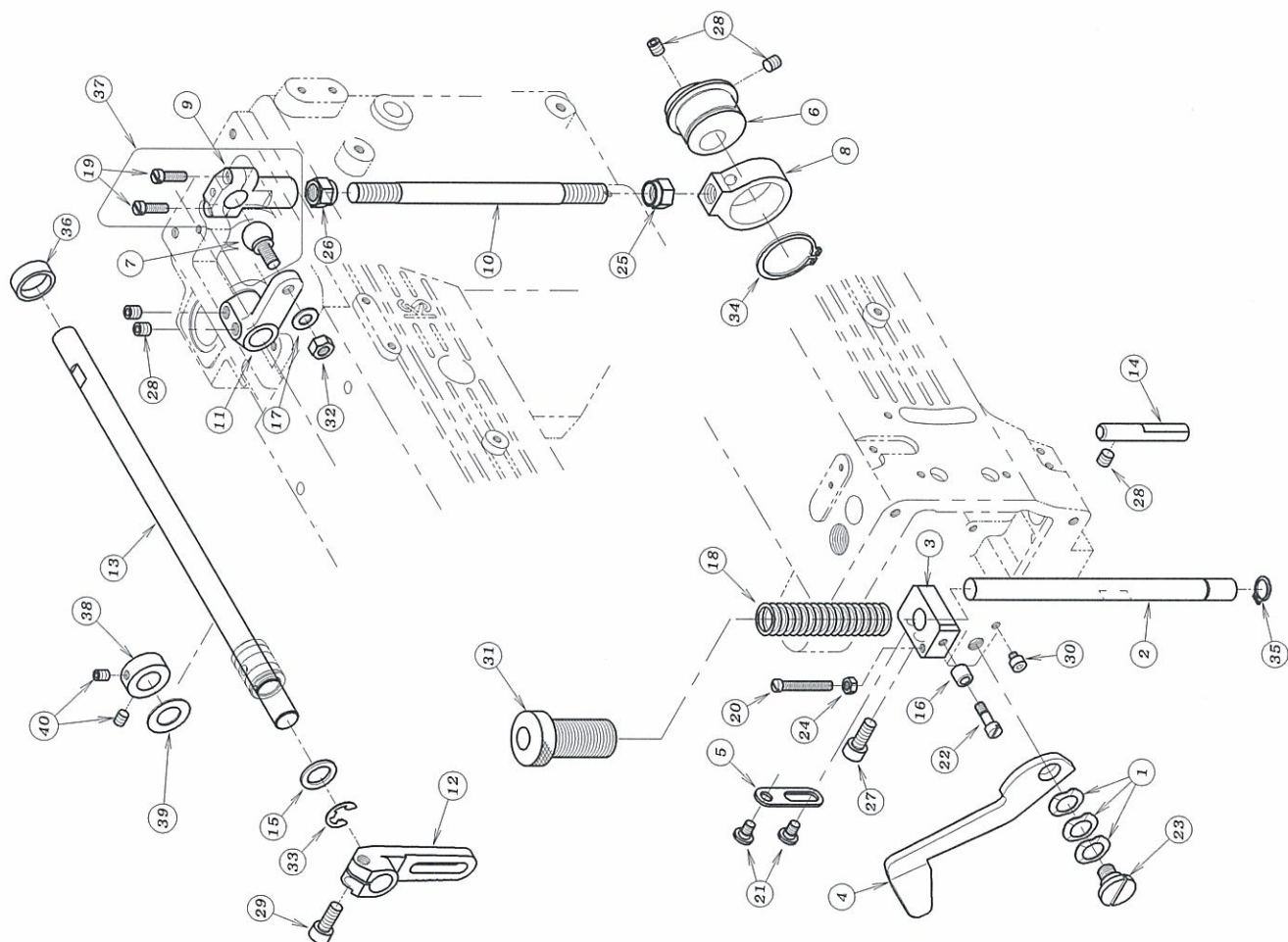
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
13-01100-6082		押え揚げシリンダー・一セット	AIR CYLINDER ASS'Y	1
13-02105-404		スプリングピン	SPRING PIN	1
13-03105-586		押握シリンダーブラケット	BRACKET	1
13-04105-897		シリンダー作動チップ	CHIP	1
13-05106-580		スピード・コントローラー	SPEED CONTROLLER	2
13-06123-018		押え棒油止シール	SEAL	1
13-07171-203		平行ピン	PIN	1
13-08171-446		押え棒	PRESSER BAR	1
13-09171-492		押え棒	PRESSER BAR	1
13-10171-507		糸緩め軸	SHAFT	1
13-11175-332		ワッシャ	WASHER	1
13-12175-458		ワッシャ	WASHER	2
13-13175-537		カラー	COLLAR	1
13-14175-552		ワッシャ	WASHER	2
13-15177-419		押え棒げ連結ピン	PIN	2
13-16177-422		押え棒ダギ	PRESSER BAR CLAMP	1
13-17177-423		押え棒連結プレート	PLATE	1
13-18177-427		レバー	LEVER	1
13-19177-428		押え棒げパイプ	PIPE	1
13-20177-429		押え棒げクランク	CRANK LEVER	1
13-21177-443		押え棒げ連結板	PLATE	1
13-22177-444		後プーラー・押え棒げレバー	LIFTER LEVER	1
13-23177-447		押え棒げレバー	LEVER	1
13-24177-448		押え棒げ連結板	CONNECT PLATE	1
13-25177-509		ブラケット	BRACKET	1
13-26177-511		押え棒ガイド	GUIDE	1
13-27179-422		押え棒バネ (大)	SPRING	1
13-28179-423		巻きバネ	SPRING	1
13-29179-519		押え棒バネ (小)	SPRING	1
13-30184-561		ネジ	SCREW	1
13-31184-581		段ネジ	SCREW	2
13-32184-813		ネジ	SCREW	1
13-33186-411		ナット	NUT	1
13-34187-112		六角穴付きボルト	BOLT	2
13-35187-129		六角穴付きボルト	BOLT	1
13-36187-171		六角穴付きボルト	BOLT	2
13-37187-177		六角穴付きボルト	BOLT	2
13-38187-213		六角穴付きボルト	BOLT	1
13-39187-203		六角穴付きボルト	BOLT	2
13-40187-252		六角穴付きボルト	BOLT	1
13-41187-274		ネジ	SCREW	1
13-42187-403		押え棒端ネジ	SCREW	2
13-43187-404		段付ネジ	SCREW	1
13-44188-003		端ネジ・ナット	NUT	1
13-45193-205		E-リング	E-RING	2

14. 給油機構 LUBRICATION MECHANISM

REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
14-01	17-8010-G	ピ ン	PIN	1
14-02	21-632	オイルフィルターキャップ	OIL FILTER CAP	1
14-03	23-304	シール	SEAL	1
14-04	23-506	O-リング	O-RING	1
14-05	23-508	O-リング	O-RING	1
14-06	23-067	フェルト	FELT	1
14-07	30-0130	ポンプ セット	PUMP ASS'Y	1
14-08	31-156	ポンプ メッシュ	PUMP MESH	1
14-09	31-157	ポンプ メッシュ止メ金具	CLAMP	1
14-10	31-222	フィルター	OIL FILTER	1
14-11	31-314	継手	JOINT	1
14-12	35-539	管継手ボルト	JOINT SCREW	1
14-13	31-507	オイルタンク	OIL RESERVOIR	1
14-14	31-702	ポンプ キー	PUMP GEAR	1
14-15	31-703	ポンプ 取付板	PLATE	1
14-16	31-704	トロイト ポンプ ハウジング	PUMP HOUSING	1
14-17	31-705	アウトローター	OUTER ROTER	1
14-18	31-706	ポンプ 軸	PUMP SHAFT	1
14-19	31-707	インナーローター	INNER ROTER	1
14-20	31-708	ポンプ 裏板	PLATE	1
14-21	35-413	止め金具	CLAMP	2
14-22	35-414	オイルフエンス	OIL FENCE	1
14-23	35-415	油受	OIL RELEASER	1
14-24	35-417	下軸給油配管	OIL DISTRIBUTOR	1
14-25	35-418	ロビン配管	OILER	1
14-26	35-421	ヒールチューブ	TUBE	1
14-27	35-420	ヒールチューブ	TUBE	1
14-28	88-165	六角ナット	NUT	1
14-29	35-505	片口継手	JOINT	5
14-30	35-506	両口管継手	JOINT	1
14-31	35-509	継手	JOINT	1
14-32	35-519	ヒールチューブ	TUBE	1
14-33	35-521	ヒールチューブ	TUBE	1
14-34	35-528	管継手ボルト	JOINT SCREW	3
14-35	35-529	管継手ボルト	JOINT SCREW	1
14-36	39-404	リターン配管	OIL RETURN PIPE	1
14-37	39-504	オイルゲージ	OIL SIGHT GAUGE	1
14-38	87-092	六角穴付きボルト	BOLT	7
14-39	87-123	六角穴付きボルト	BOLT	3
14-40	87-129	六角穴付きボルト	BOLT	6
14-41	87-140	六角穴付きボルト	BOLT	1
14-42	87-225	六角穴付きボルト	BOLT	2
14-43	87-254	ネジ	SCREW	1
14-44	87-311	フタネジ	SCREW	1
14-45	87-663	六角穴付きボルト	BOLT	4
14-46	88-137	ナット	NUT	1
14-47	30-0131	ポンプ セット	PUMP ASS'Y	1
14-48	30-5070	RXオイルタンクセット	OIL TANK ASS'Y	1
14-49	31-503	濾過網	OIL FILTER SCREEN	1
14-50	39-503	濾過網押え	CLAMP	1
14-51	35-518	ヒールチューブ	TUBE	1
14-52	87-177	六角穴付きボルト	BOLT	3
14-53	88-146	ナット	NUT	3

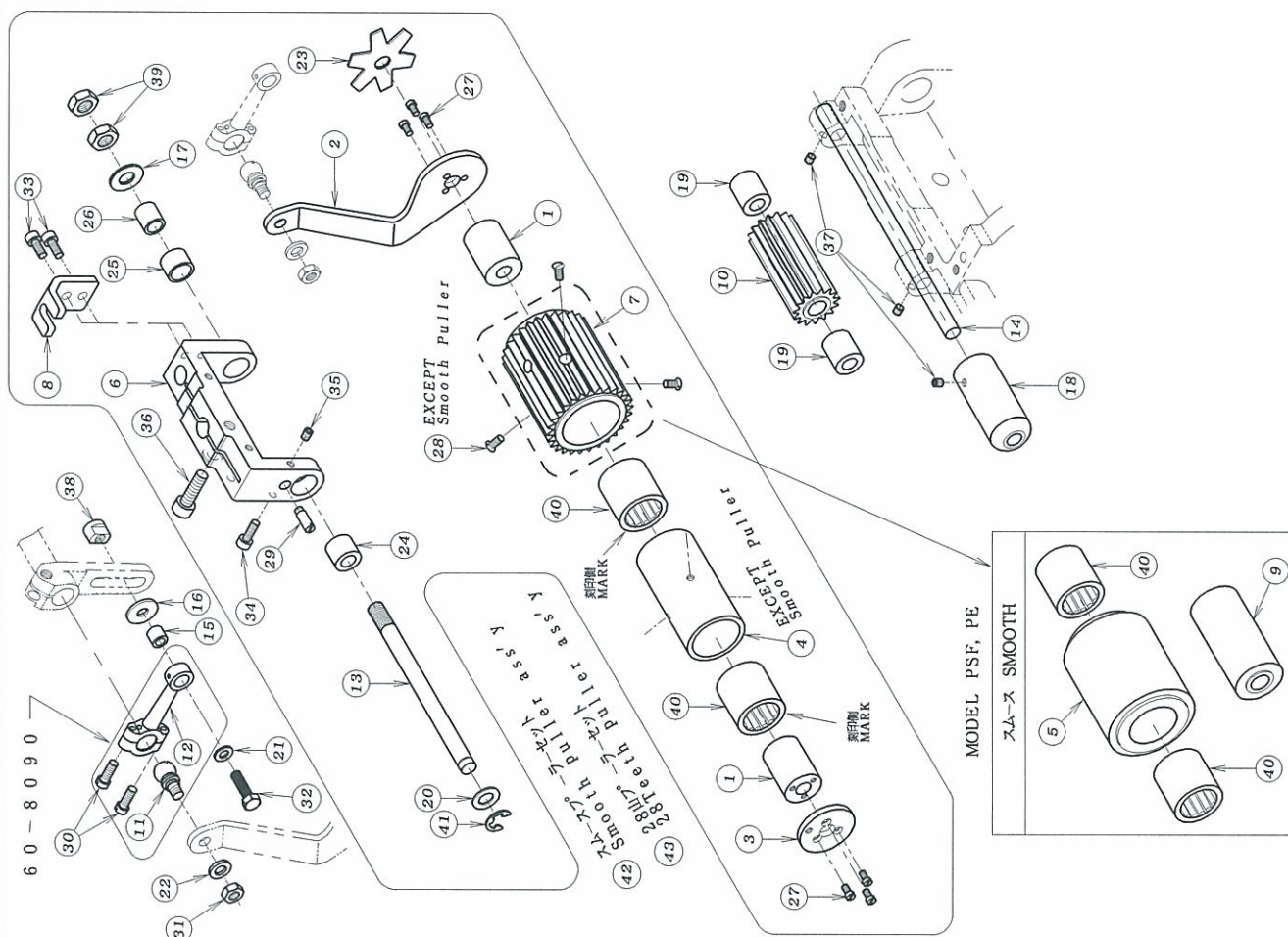


15. 後プーラー機構 REAR PULLER MECHANISM



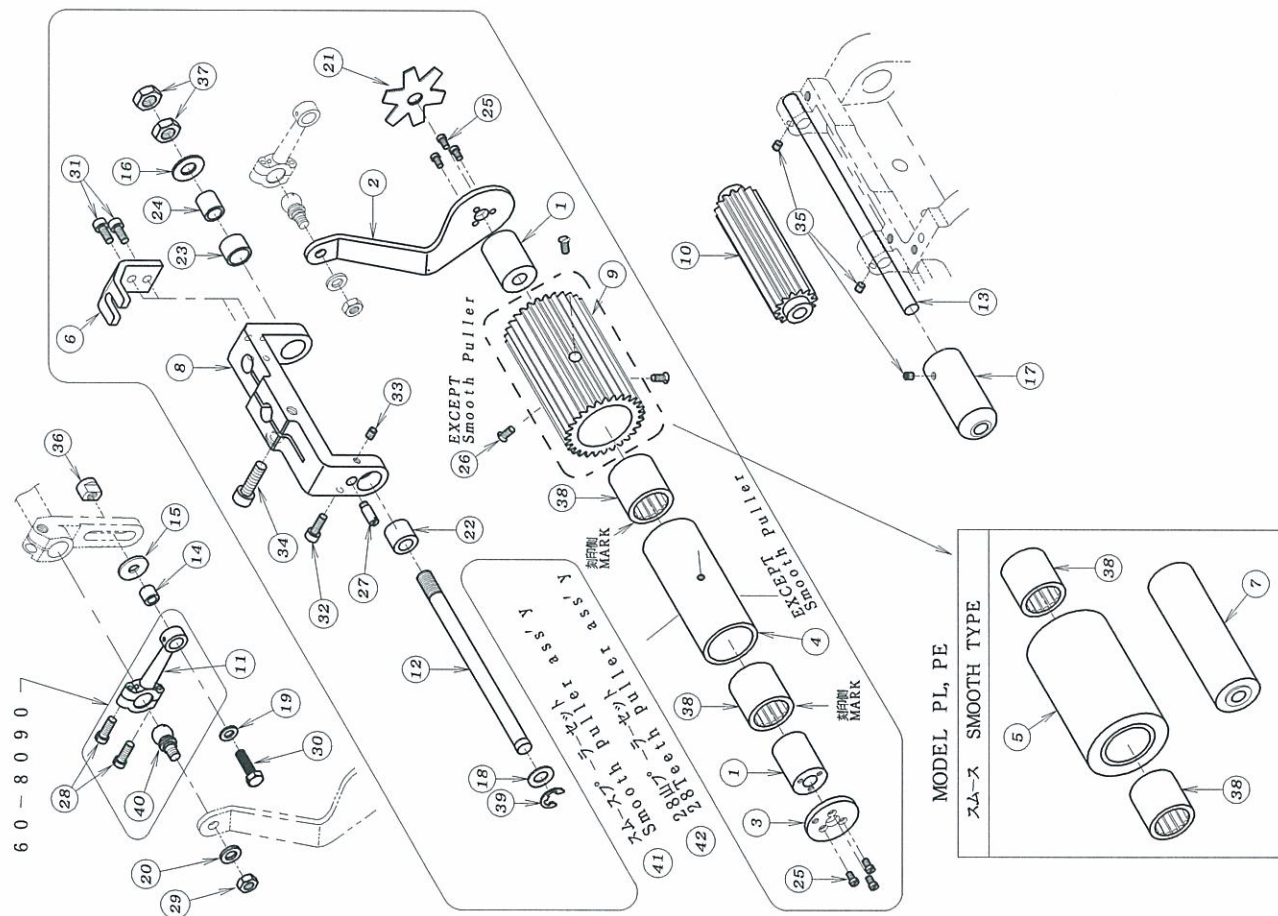
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
15-01	02-030	後プーラー	WASHER	3
15-02	71-462	後プーラーシャフト	SHAFT	1
15-03	02-407	後プーラーシャフト抱き	BRACKET	1
15-04	02-029	手掛け用具	LEVER	1
15-05	02-409	連結プレート	PLATE	1
15-06	61-209	上シャフト連結エキセン玉	PULLER DRIVING ECCENTRIC	1
15-07	61-418	ロット玉	BALL JOINT	1
15-08	63-208	上シャフト連結タ'ルマ	CONNECTING LINK	1
15-09	63-711	立ロット (小)	BALL JOINT	1
15-10	65-306	上シャフト連結棒	CONNECTING BAR	1
15-11	67-426	上プーラー振りレバー	LEVER	1
15-12	67-529	上プーラー駆動レバー	LEVER	1
15-13	71-291	上プーラー駆動軸	SHAFT	1
15-14	71-729	プーラー回り止ピン	GUIDE PIN	1
15-15	75-187	ワッシャ	WASHER	1
15-16	75-211	カラー	COLLAR	1
15-17	75-452	ワッシャ	WASHER	1
15-18	79-425	プーラー圧縮バネ	SPRING	1
15-19	84-567	ネジ	SCREW	2
15-20	84-569	ネジ	SCREW	1
15-21	84-581	段ネジ	SCREW	2
15-22	84-582	段ネジ	SCREW	1
15-23	85-002	段ネジ	SCREW	1
15-24	86-311	ナット	NUT	1
15-25	86-741	ナット	NUT	1
15-26	86-742	ナット	NUT	1
15-27	87-171	六角穴付きボルト	BOLT	1
15-28	87-172	ネジ	SCREW	5
15-29	87-171	六角穴付きボルト	BOLT	1
15-30	87-287	六角穴付きボルト	BOLT	1
15-31	87-754	プーラー筒ネジ	SCREW	1
15-32	88-166	ナット	NUT	1
15-33	93-223	E型止メ輪	E-RING	1
15-34	93-258	輪用止め輪	SNAP RING	1
15-35	93-261	Cリング	C-RING	1
15-36	94-506	オイルシール	OIL SEAL	1
15-37	60-3780	上シャフト連結レバ' - ロットセット	BALL JOINT ASS'Y	1
15-38	75-018	カラー	COLLAR	1
15-39	75-021	ワッシャ	WASHER	1
15-40	87-254	ネジ	SCREW	2

16. 後プーラー機構 (FX4404) REAR PULLER MECHANISM



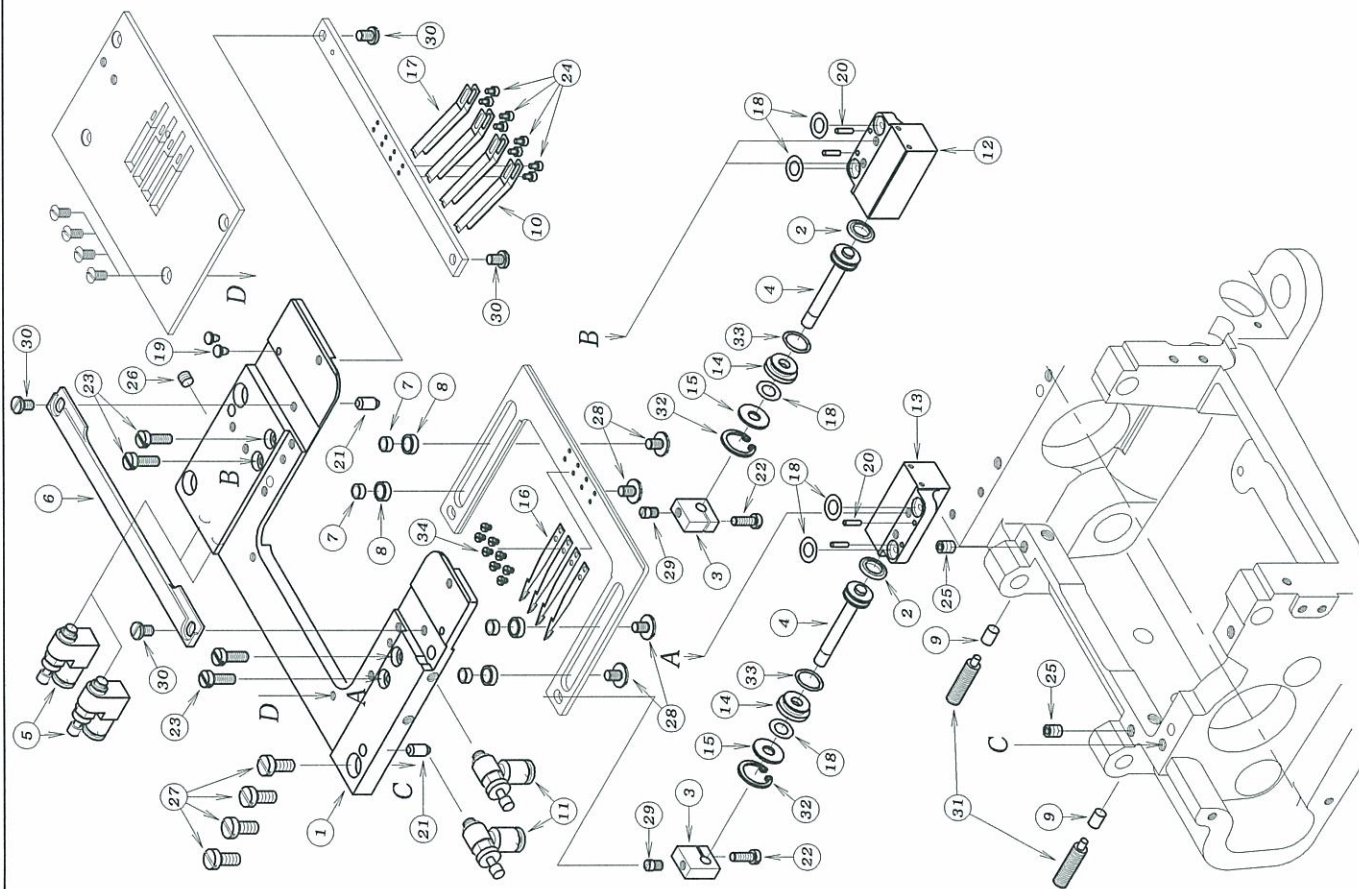
REF.NO.	PART NO.	品 名	DESCRIPTION	Q'TY
16-01	01-115	スリーブ	SLEEVE	2
16-02	02-017	後プーラー連結板	CONNECTING PLATE	1
16-03	02-117	後プーラーハブ [°] イ [°] フタ	PLATE	1
16-04	02-123	ワシケイラック用ハブ [°] シ [°] リ [°] (中)	CLUTCH HOUSING	1
16-05	02-136	スムース (中)	REAR PULLER (SMOOTH)	1
16-06	02-158	後プーラー台	REAR PULLER HOLDER	1
16-07	02-178	後プーラーギヤ-28山	UPPER REAR PULLER28	1
16-08	02-250	回り止 [°] ラケット	BRACKET	1
16-09	02-415	下ローラー-4本針スムース	REAR PULLER (SMOOTH)	1
16-10	02-417	下ローラー-4本針15山	REAR PULLER GEAR (15TEETH)	1
16-11	161-810	フーラー連結ロッド [°] 玉	CONNECTING ROD BALL	1
16-12	163-809	プーラー連結ロッド	BALL JOINT	1
16-13	171-444	後プーラー台シャフト (中)	SHAFT	1
16-14	171-490	下ローラーシャフト	SHAFT	1
16-15	175-247	連結メカ [°] ネローラー	ROLLER	1
16-16	175-407	ワッシャ	WASHER	1
16-17	175-451	ワッシャ	WASHER	1
16-18	175-484	ガイドカラ-	GUIDE COLLAR	1
16-19	175-485	スベサ-	COLLAR	2
16-20	175-519	ワッシャ	WASHER	1
16-21	175-520	ワッシャ	WASHER	1
16-22	175-552	ワッシャ	WASHER	1
16-23	179-551	フーラー板ハ [°] ネ	PULLER PLATE SPRING	1
16-24	181-321	ブッシュ	BUSHING	1
16-25	181-322	ブッシュ	BUSHING	1
16-26	181-323	ブッシュ	BUSHING	1
16-27	184-162	ネジ [°]	SCREW	6
16-28	184-462	ネジ [°]	SCREW	3
16-29	184-573	歯ネジ [°]	SCREW	1
16-30	184-635	ネジ [°]	SCREW	2
16-31	186-411	ナット	NUT	1
16-32	187-015	ネジ	SCREW	1
16-33	187-113	六角穴付きボルト	BOLT	2
16-34	187-129	六角穴付きボルト	BOLT	1
16-35	187-181	ネジ [°]	SCREW	1
16-36	187-173	六角穴付きボルト	BOLT	1
16-37	187-286	ネジ [°]	SCREW	3
16-38	188-005	ナット	NUT	1
16-39	188-179	ナット	NUT	2
16-40	191-407	ワシケイラック	BEARING	4
16-41	193-221	ストップ [°] リング [°]	E-RING	1
16-42	00-2008	スムースプーラーセツト	SMOOTH PULLER ASS'Y	1
16-43	00-3282	28山プーラーセツト	28TEETH PULLER ASS'Y	1

17. 後プーラー機構 (FX4406~4413) REAR PULLER MECHANISM



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
17-01	01-115	スリープ	SLEEVE	2
17-02	02-018	後プーラー連結板	CONNECTING PLATE	1
17-03	02-117	後プーラーハブ	PLATE	1
17-04	02-124	ワンウェイクラッチ用ハブ	HOUSING	1
17-05	02-138	後プーラー (コ・A)	REAR PULLER	1
17-06	02-246	回り止プーラー	BRACKET	1
17-07	02-420	ドロラー (12本針スラス)	REAR PULLER GEAR (SMOOTH)	1
17-08	02-159	後プーラー上キ	BRACKET	1
17-09	02-494	後プーラー下キ	REAR PULLER	1
17-10	02-496	後プーラー下キ	REAR PULLER	1
17-11	63-809	プーラー連結ロッド	BALL JOINT	1
17-12	71-445	後プーラー台シャフト (大)	SHAFT	1
17-13	71-490	ドロラーシャフト	SHAFT	1
17-14	75-247	連結メカ	ROLLER	1
17-15	75-407	ワッシャ	WASHER	1
17-16	75-451	ワッシャ	WASHER	1
17-17	75-484	ガイドカラー	GUIDE COLLAR	1
17-18	75-519	ワッシャ	WASHER	1
17-19	75-520	ワッシャ	WASHER	1
17-20	75-552	ワッシャ	WASHER	1
17-21	79-551	プーラー板ハネ	PULLER PLATE SPRING	1
17-22	81-321	ブッシュ	BUSHING	1
17-23	81-322	ブッシュ	BUSHING	1
17-24	81-323	ブッシュ	BUSHING	1
17-25	84-162	ネジ	SCREW	6
17-26	84-462	ネジ	SCREW	3
17-27	84-573	段ネジ	SCREW	1
17-28	84-635	ネジ	SCREW	2
17-29	86-411	ナット	NUT	1
17-30	87-015	ネジ	SCREW	1
17-31	87-113	六角穴付きボルト	BOLT	2
17-32	87-129	六角穴付きボルト	BOLT	1
17-33	87-181	ネジ	SCREW	1
17-34	87-173	六角穴付きボルト	BOLT	1
17-35	87-286	ネジ	SCREW	3
17-36	88-005	ナット	NUT	1
17-37	88-179	ナット	NUT	2
17-38	91-407	ワンウェイクラッチ	BEARING	4
17-39	93-221	ストッパ	E-RING	1
17-40	61-810	プーラー連結ロッド玉	CONNECTING ROD BALL	1
17-41	00-4283	スラスプーラーセット	SMOOTH PULLER ASS'Y	1
17-42	00-3223	28山プーラーセット	28 TEETH PULLER ASS'Y	1

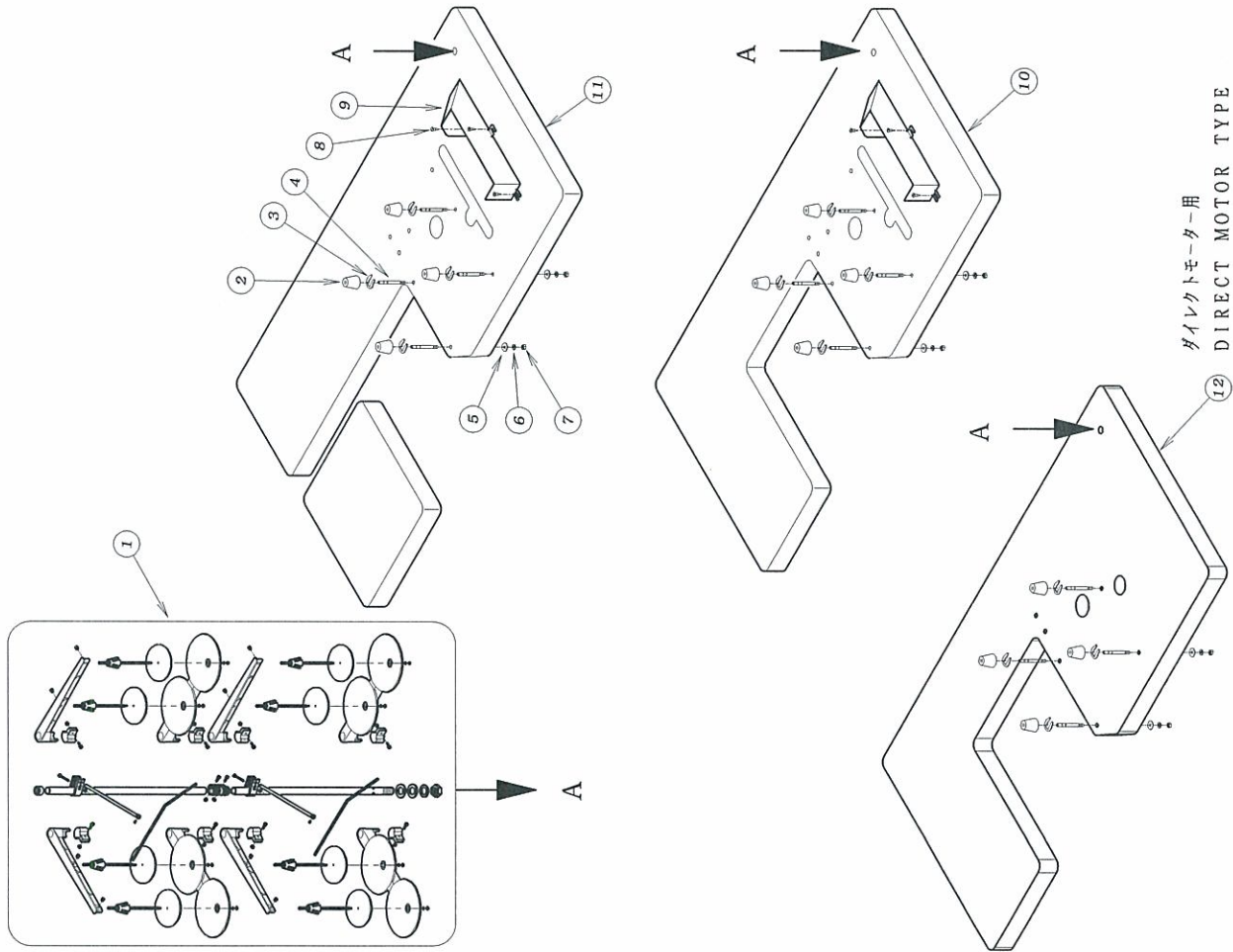
18. UTC系切り装置 UTC KNIFE MECHANISM



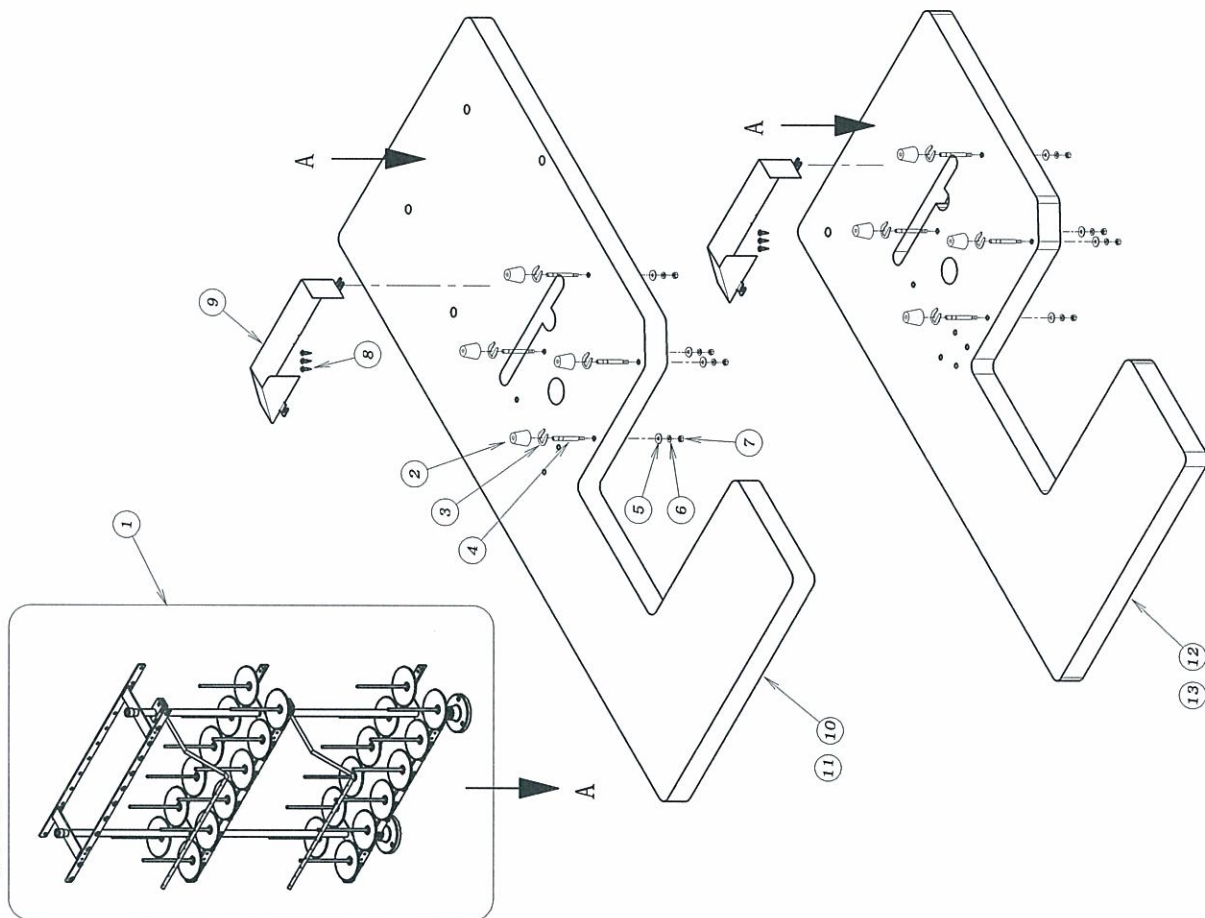
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
18-01	05-395	針板土台	NEEDL PLATE SUPPORT BRACKET	1
18-02	05-420	ハッキソ	SEAL	2
18-03	05-421	案内フプレート	GUIDE BRACKET	2
18-04	05-426	ピストンロッド	ROD	2
18-05	05-428	スピードコントロールローラー	SPEED CONTROLER	2
18-06	05-429	固定メス	UPPER KNIFE	1
18-07	05-430	ガイドローラー (小)	GUIDE ROLLER (S)	4
18-08	05-431	ガイドローラー (大)	GUIDE ROLLER (L)	4
18-09	05-433	ストップパネ	STOPPER	2
18-10	05-447	裏ハネ (F)	LEAF SPRING	4
18-11	05-997	スピードコントロールローラー	SPEED CONTROLER	2
18-12	05-544	シリンダー - 本体 (右)	AIR CYLINDER	1
18-13	05-545	シリンダー - 本体 (左)	AIR CYLINDER	1
18-14	05-546	ロッドカバー	COVER	2
18-15	05-547	ロッドプレート	PLATE	2
18-16	05-548	可動メス	LOWER KNIFE	4
18-17	05-549	裏ハネ (上)	LEAF SPRING (UPPER)	4
18-18	23-183	Oリング	O-RING	6
18-19	23-512	クッションゴム	CUSHION RUBBER	2
18-20	71-201	ピン	PIN	4
18-21	71-579	ノックピン	PIN	2
18-22	87-011	ネジ	SCREW	2
18-23	87-097	ネジ	SCREW	4
18-24	87-100	六角穴付きボルト	BOLT	8
18-25	87-254	ネジ	SCREW	2
18-26	87-274	ネジ	SCREW	1
18-27	87-278	ネジ	SCREW	4
18-28	87-412	ネジ	SCREW	4
18-29	87-413	ネジ	SCREW	2
18-30	87-415	ネジ	SCREW	4
18-31	87-416	ストップパネ - ネジ	SCREW	2
18-32	93-236	穴用止め輪	C-RING	2
18-33	98-857	Oリング	O-RING	2
18-34	87-091	ネジ	SCREW	8

19. 糸立て及びテーブル (FX4404) THREAD STAND AND TABLE

REF. NO.	PART NO.	品 名	DESCRIPTION	Qty
19-01	42-718	8本立て	THREAD STAND ASSEMBLY 8	1
19-02	23-509	クッションゴム	CUSHION RUBBER	4
19-03	93-501	U型止め輪	U-RING	4
19-04	42-501	クッションゴム取付ネジ	SCREW	4
19-05	75-536	平ワッシャー	WASHER	4
19-06	75-527	M6用ベネ盤金	WASHER	4
19-07	88-166	固定ナット	NUT	4
19-08	87-901	ネジ	SCREW	3
19-09	21-629	補助カバー	COVER	1
19-10	21-032	シリンダーブラケットテーブル	FLAT TABLE	1
19-11	21-025	補助テーブル	WITH ASSISTANCE TABLE	1
19-12	27-345	ブラケットテーブル (ダイレクトモーター用)	FLAT TABLE (DIRECT MOTOR)	1



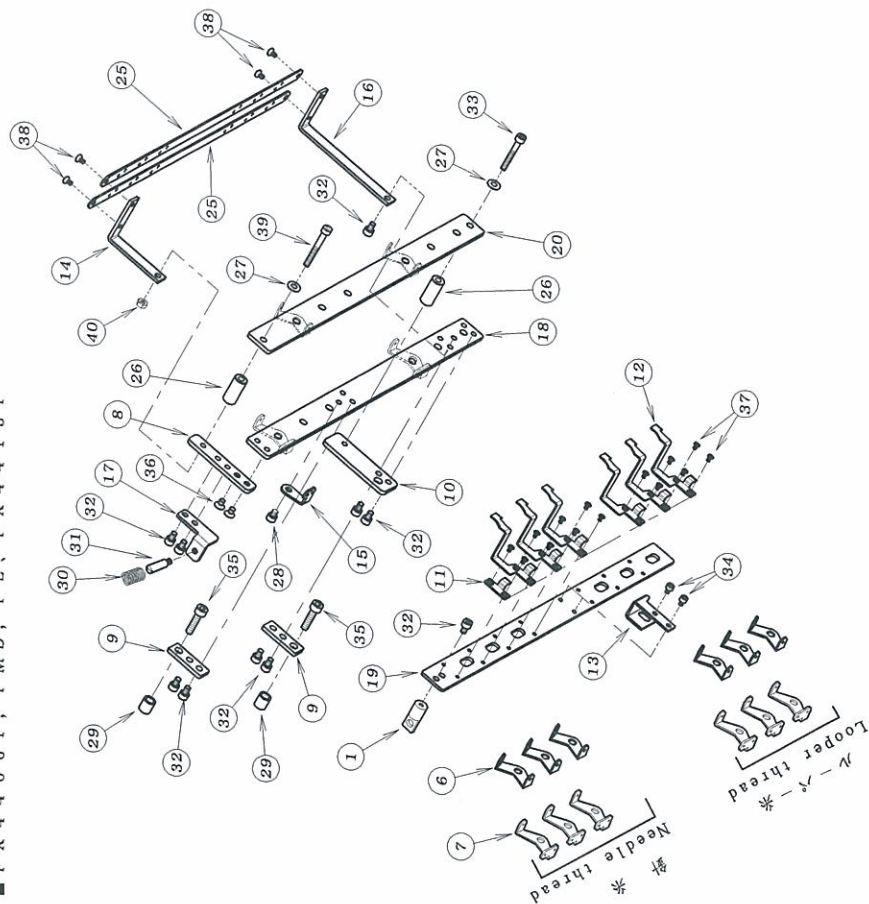
FX4406P, PMD, PL
FX4412



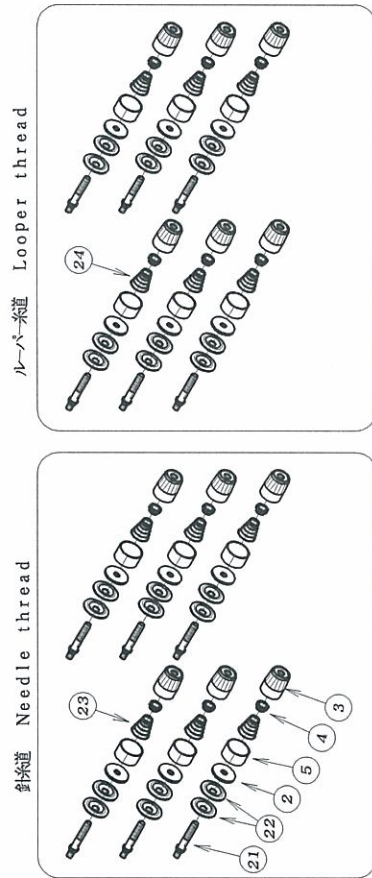
REF. NO.	PART NO.	品名	DESCRIPTION	Qty
20-01	42-024	24本糸立て (垂直タイプ)	THREAD STAND ASSEMBLY 24	1
20-02	23-509	クッションゴム	CUSHION RUBBER	4
20-03	93-501	U型止め輪	U-RING	4
20-04	42-501	クッションゴム 取付ネジ	SCREW	4
20-05	75-536	平ワッシャー	WASHER	4
20-06	75-527	M6用バネ板金	WASHER	4
20-07	88-166	固定ナット	NUT	4
20-08	87-901	ネジ	SCREW	3
20-09	21-629	補助カバー	COVER	1
20-10	21-085	シリンダー フラットテーブル	FLAT TABLE	1
20-11	21-084	補助テーブル	WITH ASSISTANCE TABLE	1
20-12	21-032	シリンダー フラットテーブル	FLAT TABLE	1
20-13	21-025	補助テーブル	WITH ASSISTANCE TABLE	1

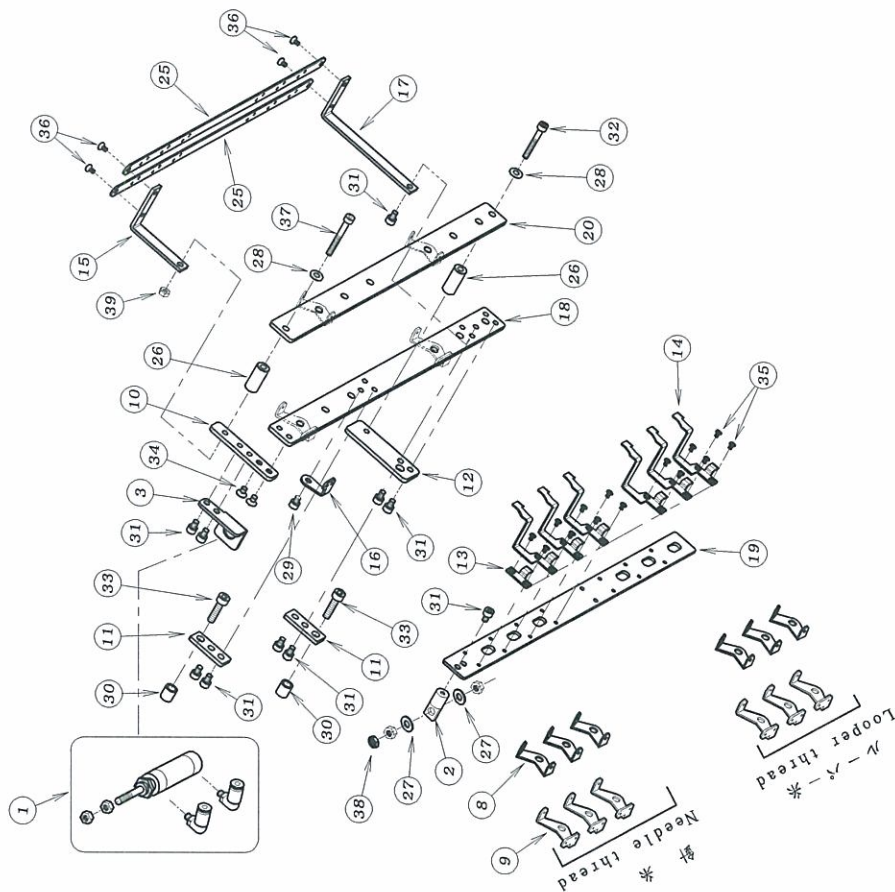
21. 糸調子機構 (FX4406, 4413) THREAD TENSION MECHANISM

■ FX4406P, PMD, PL, FX4413P

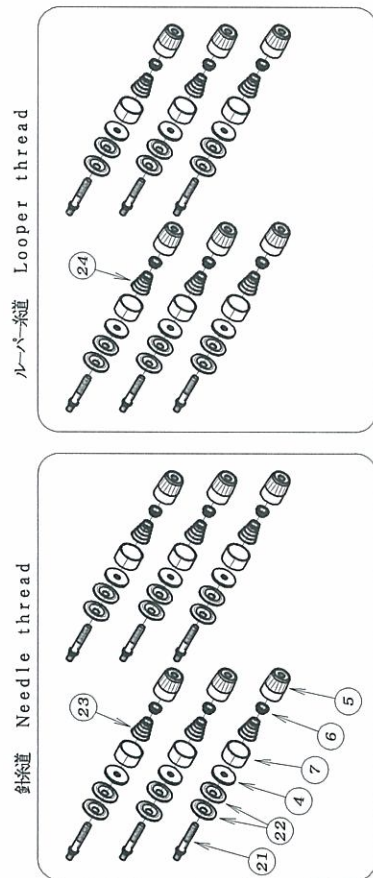


REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
21-01	05-531	エア-シリンドラ* -連結金具	BRACKET	1
21-02	23-324	フェルト	FELT	12
21-03	41-101	チャンポン皿小ケース	THREAD TENSION NUT	12
21-04	41-105	チャンポン皿ラチェット	SPRING POST	12
21-05	41-107	大ケース	SPRING CUP	12
21-06	41-115	糸道 (上)	THREAD GUIDE	6
21-07	41-466	チャンボ* ン皿糸道	THREAD EYELET	6
21-08	41-472	取付金具A	BRACKET A	1
21-09	41-473	取付金具B	BRACKET B	2
21-10	41-474	取付金具C	BRACKET C	1
21-11	41-476	糸緩め爪 (小)	NAIL (S)	1
21-12	41-477	糸緩め爪 (大)	NAIL (L)	6
21-13	41-478	糸緩め金具	PLATE	1
21-14	41-480	糸ガイド取付金具	BRACKET	1
21-15	41-487	糸道	THREAD EYELET	1
21-16	41-482	糸ガイド取付金具	BRACKET	1
21-17	41-483	防振用取付金具	BRACKET	1
21-18	41-484	チャンポン台 (下)	BRACKET	1
21-19	41-485	糸緩めプレート	THREAD RELEASE PLATE	1
21-20	41-486	チャンポン台 (上)	BRACKET	1
21-21	41-508	調子機 (中)	SCREW STUD	12
21-22	41-509	チャンポン皿	TENSION DISC	24
21-23	41-701	チャンポン調子パネ (弱)	SPRING (HEAVY)	6
21-24	41-702	チャンポン調子パネ (強)	SPRING (LIGHT)	6
21-25	45-472	糸ガイド	THREAD EYELET	2
21-26	75-427	スペースカラー	COLLAR	2
21-27	75-455	ワッシャ	WASHER	2
21-28	87-067	六角穴付きボルト	BOLT	1
21-29	75-943	カラ-	COLLAR	2
21-30	79-163	ハ' ネ	SPRING	1
21-31	84-537	段ネジ'	SCREW	1
21-32	87-092	六角穴付きボルト	BOLT	10
21-33	87-120	六角穴付きボルト	BOLT	1
21-34	87-142	ネジ	SCREW	2
21-35	87-246	六角穴付きボ' ルト	BOLT	2
21-36	87-293	ネジ'	SCREW	2
21-37	87-338	十字穴付皿小ネジM2. 5	SCREW	14
21-38	87-339	十字穴付皿小ネジM3	SCREW	4
21-39	87-903	六角穴付きボルト	BOLT	1
21-40	88-146	ナット	NUT	1





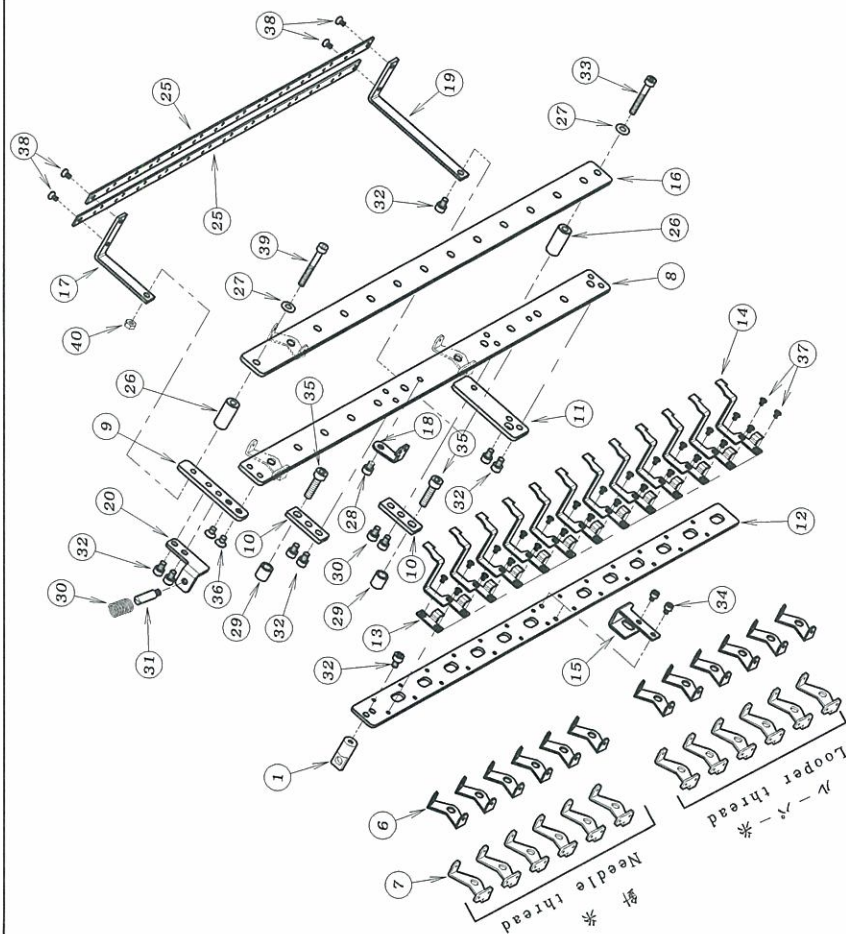
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
22-01	05-450	エア-シリンダ' -	AIR CYLINDER	1
22-02	05-531	エア-シリンダ' -連結金具	BRACKET	1
22-03	05-585	エア-シリンダ' -取付金具	BRACKET	1
22-04	23-324	フェルト	FELT	12
22-05	41-101	チャンポン皿小ケース	THREAD TENSION NUT	12
22-06	41-105	チャンポン皿ラチェット	SPRING POST	12
22-07	41-107	大ケース	SPRING CUP	12
22-08	41-115	糸道 (上)	THREAD GUIDE	6
22-09	41-466	チャンボ' ン皿糸道	THREAD EYELET	6
22-10	41-472	取付金具A	BRACKET A	1
22-11	41-473	取付金具B	BRACKET B	2
22-12	41-474	取付金具C	BRACKET C	1
22-13	41-476	糸締め爪 (小)	NAIL (S)	1
22-14	41-477	糸締め爪 (大)	NAIL (L)	6
22-15	41-480	糸ガイド取付金具	BRACKET	1
22-16	41-487	糸道	THREAD EYELET	1
22-17	41-482	糸ガイド取付金具	BRACKET	1
22-18	41-484	チャンポン台 (下)	BRACKET	1
22-19	41-485	糸締めプレート	THREAD RELEASE PLATE	1
22-20	41-486	チャンポン台 (上)	BRACKET	1
22-21	41-508	調子棒 (中)	SCREW STUD	12
22-22	41-509	チャンポン皿	TENSION DISC	24
22-23	41-701	チャンポン調子バネ (強)	SPRING (HEAVY)	6
22-24	41-702	チャンポン調子バネ (弱)	SPRING (LIGHT)	6
22-25	45-472	糸ガイド	THREAD EYELET	2
22-26	75-427	スペースカラー	COLLAR	2
22-27	75-453	ワッシャ	WASHER	2
22-28	75-455	ワッシャ	WASHER	2
22-29	87-067	六角穴付きボルト	BOLT	1
22-30	75-943	カラー	COLLAR	2
22-31	87-092	六角穴付きボルト	BOLT	10
22-32	87-120	六角穴付きボルト	BOLT	1
22-33	87-246	六角穴付きボ' ルト	BOLT	2
22-34	87-293	ネジ	SCREW	2
22-35	87-338	十字穴付皿小ネジM2. 5	SCREW	14
22-36	87-339	十字穴付皿小ネジM3	SCREW	4
22-37	87-903	六角穴付きボルト	BOLT	1
22-38	88-018	六角ナット	NUT	1
22-39	88-146	ナット	NUT	1



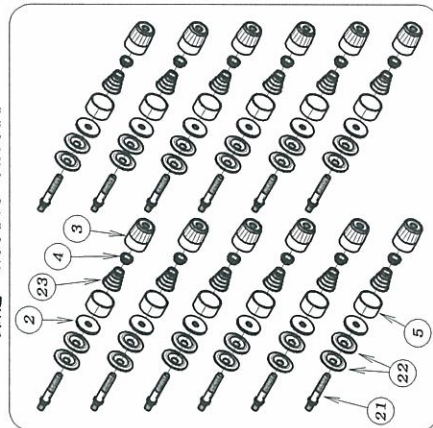
ループ糸道 Looper thread

針糸道 Needle thread

23. 糸調子機構 (FX4412) THREAD TENSION MECHANISM



針糸道 Needle thread

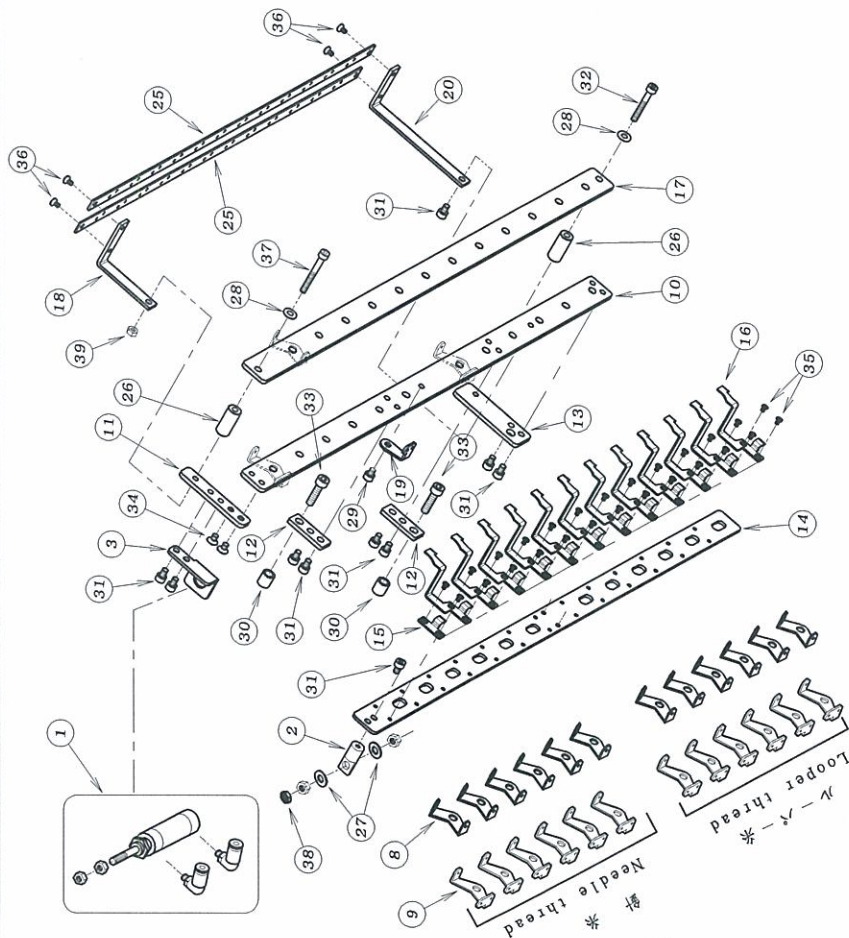


ループ糸道 Looper thread

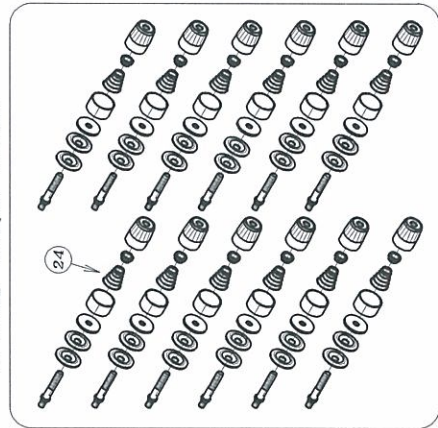


REF. NO.	PART NO.	品名	DESCRIPTION	Q'TY
23-01	105-531	エア-リシington' -連結金具	BRACKET	1
23-02	23-324	フェルト	FELT	24
23-03	41-101	チャンポン皿小ケース	THREAD TENSION NUT	24
23-04	41-105	チャンポン皿ラチェット	SPRING POST	24
23-05	41-107	大ケース	SPRING CUP	24
23-06	41-115	糸道 (上)	THREAD GUIDE	12
23-07	41-466	チャンボ' ン皿糸道	THREAD EYELET	12
23-08	41-471	チャンポン台 (下)	BRACKET	1
23-09	41-472	取付金具A	BRACKET A	1
23-10	41-473	取付金具B	BRACKET B	2
23-11	41-474	取付金具C	BRACKET C	1
23-12	41-475	糸緩めプレート	THREAD RELEASE PLATE	1
23-13	41-476	糸緩め爪 (小)	NAIL (S)	1
23-14	41-477	糸緩め爪 (大)	NAIL (L)	12
23-15	41-478	糸緩め金具	PLATE	1
23-16	41-479	チャンポン台 (上)	BRACKET	1
23-17	41-480	糸ガイド取付金具	BRACKET	1
23-18	41-487	糸道	THREAD EYELET	1
23-19	41-482	糸ガイド取付金具	BRACKET	1
23-20	41-483	防振用取付金具	BRACKET	1
23-21	41-508	調子棒 (中)	SCREW STUD	1
23-22	41-509	チャンポン皿	TENSION DISC	24
23-23	41-701	チャンポン調子バネ (強)	SPRING (HEAVY)	48
23-24	41-702	チャンポン調子バネ (弱)	SPRING (LIGHT)	12
23-25	45-471	糸ガイド	THREAD EYELET	2
23-26	75-427	スペースカラー	COLLAR	2
23-27	75-455	ワッシャ	WASHER	2
23-28	87-067	六角穴付きボルト	BOLT	1
23-29	75-943	カラー	COLLAR	2
23-30	79-163	ハ' ネ	SPRING	1
23-31	84-537	段ネジ'	SCREW	1
23-32	87-092	六角穴付きボルト	BOLT	10
23-33	87-120	六角穴付きボルト	BOLT	1
23-34	87-142	ネジ	SCREW	2
23-35	87-246	六角穴付きボ' ルト	BOLT	2
23-36	87-293	ネジ'	SCREW	2
23-37	87-338	十字穴付皿小ネジM2. 5	SCREW	26
23-38	87-339	十字穴付皿小ネジM3	SCREW	4
23-39	87-903	六角穴付きボルト	BOLT	1
23-40	88-146	ナット	NUT	1

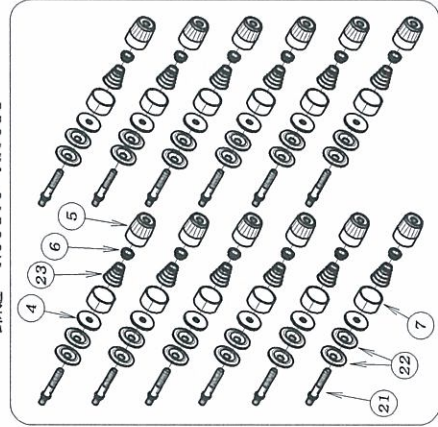
24.糸調子機構 (FX4412UTC) THREAD TENSION MECHANISM



ループ糸道 Looper thread

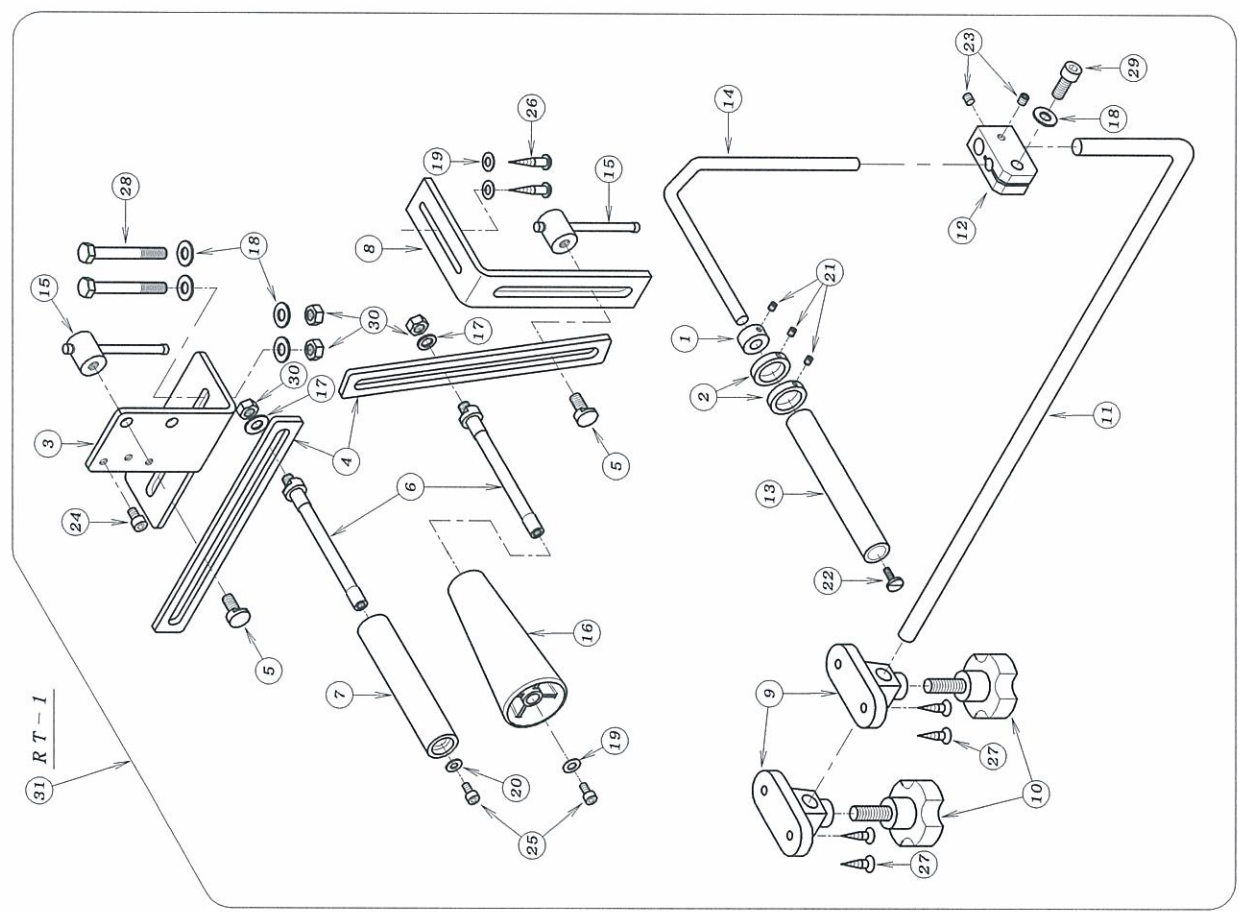


針糸道 Needle thread



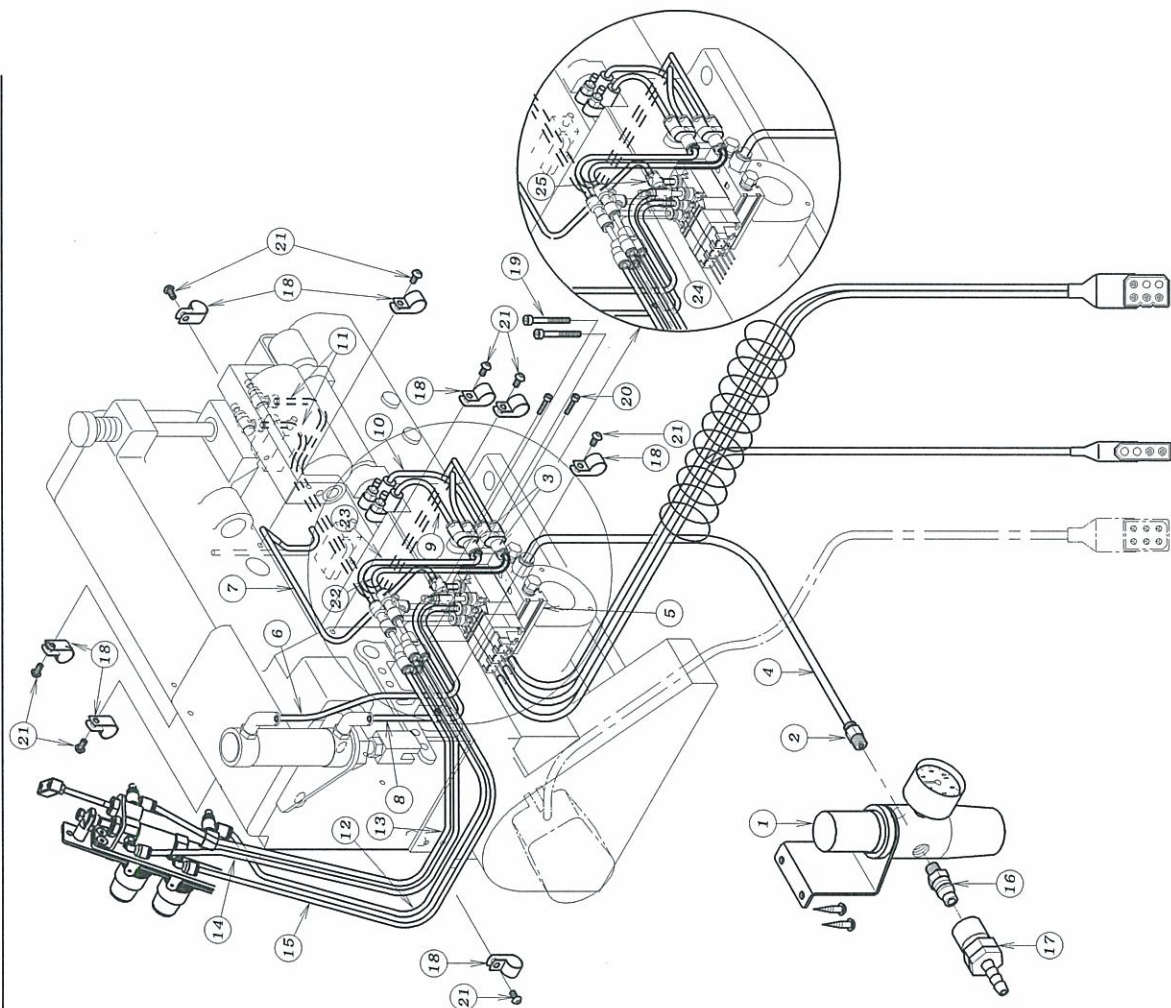
REF. NO.	PART NO.	品名	DESCRIPTION	Q'TY
24-01	05-450	エア-シリンダ' -	AIR CYLINDER	1
24-02	05-531	エア-シリンダ' -連結金具	BRACKET	1
24-03	05-585	エア-シリンダ' -取付金具	BRACKET	1
24-04	23-324	フェルト	FELT	24
24-05	41-101	チャンボン皿小ケース	THREAD TENSION NUT	24
24-06	41-105	チャンボン皿ラチェット	SPRING POST	24
24-07	41-107	大ケース	SPRING CUP	24
24-08	41-115	糸道 (上)	THREAD GUIDE	12
24-09	41-466	チャンボン皿糸道	THREAD EYELET	12
24-10	41-471	チャンボン台 (下)	BRACKET	1
24-11	41-472	取付金具A	BRACKET A	1
24-12	41-473	取付金具B	BRACKET B	2
24-13	41-474	取付金具C	BRACKET C	1
24-14	41-475	糸緩めプレート	THREAD RELEASE PLATE	1
24-15	41-476	糸緩め爪 (小)	NAIL (S)	1
24-16	41-477	糸緩め爪 (大)	NAIL (L)	12
24-17	41-479	チャンボン台 (上)	BRACKET	1
24-18	41-480	糸ガイド取付金具	BRACKET	1
24-19	41-487	糸道	THREAD EYELET	1
24-20	41-482	糸ガイド取付金具	BRACKET	1
24-21	41-508	調子棒 (中)	SCREW STUD	24
24-22	41-509	チャンボン皿	TENSION DISC	48
24-23	41-701	チャンボン調子バネ (軸)	SPRING (HEAVY)	12
24-24	41-702	チャンボン調子バネ (弱)	SPRING (LIGHT)	12
24-25	45-471	糸ガイド	THREAD EYELET	2
24-26	75-427	スベ-スカラー	COLLAR	2
24-27	75-453	ワッシャ	WASHER	2
24-28	75-455	ワッシャ	WASHER	2
24-29	87-067	六角穴付きボルト	BOLT	1
24-30	75-943	カラー	COLLAR	2
24-31	87-092	六角穴付きボルト	BOLT	10
24-32	87-120	六角穴付きボルト	BOLT	1
24-33	87-246	六角穴付きボルト	BOLT	2
24-34	87-293	ネジ	SCREW	2
24-35	87-338	十字穴付皿小ネジM2.5	SCREW	26
24-36	87-339	十字穴付皿小ネジM3	SCREW	4
24-37	87-903	六角穴付きボルト	BOLT	1
24-38	88-018	六角ナット	NUT	1
24-39	88-146	ナット	NUT	1

25. ゴム張り機構 GUIDE ROLLER MECHANISM



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
25-01	09-145	カラー	COLLAR	1
25-02	09-147	カラー	COLLAR	2
25-03	09-519	リアローラー・ラケット	REAR ROLLER BRACKET	1
25-04	09-521	リアローラー・スライト	SLIDE PLATE	2
25-05	09-522	リアローラー・止めネジ	SCREW	2
25-06	09-523	リアローラー・調整軸	SHAFT	2
25-07	09-524	リアローラー	REAR ROLLER	1
25-08	09-525	ランション・ラケット	BRACKET	1
25-09	09-526	ローラー・ラケット	BRACKET	2
25-10	09-527	ノブ	KNOB	2
25-11	09-528	ローラー・ラケット ハ'	BAR	1
25-12	09-529	ローラー・軸継手	JOINT BLOCK	1
25-13	09-530	前ローラー	ROLLER	1
25-14	09-531	ローラー・ラケット ハ'	BAR	1
25-15	09-553	ハンドル	HANDLE	2
25-16	09-727	テーパローラー	TAPER ROLLER	1
25-17	75-451	ワッシャ	WASHER	2
25-18	75-451	ワッシャ	WASHER	5
25-19	75-452	ワッシャ	WASHER	3
25-20	75-453	ワッシャ	WASHER	1
25-21	84-521	ネジ	SCREW	3
25-22	84-570	ネジ	SCREW	1
25-23	87-172	ネジ	SCREW	2
25-24	87-203	六角穴付きボルト	BOLT	1
25-25	87-213	六角穴付きボルト	BOLT	2
25-26	87-501	丸木ネジ	SCREW	2
25-27	87-502	皿木ネジ	SCREW	4
25-28	87-503	六角ボルト	BOLT	2
25-29	87-663	六角穴付きボルト	BOLT	1
25-30	88-176	ナット	NUT	4
25-31	15019XX	ゴム張りセット	GUIDE ROLLER ASS'Y	1

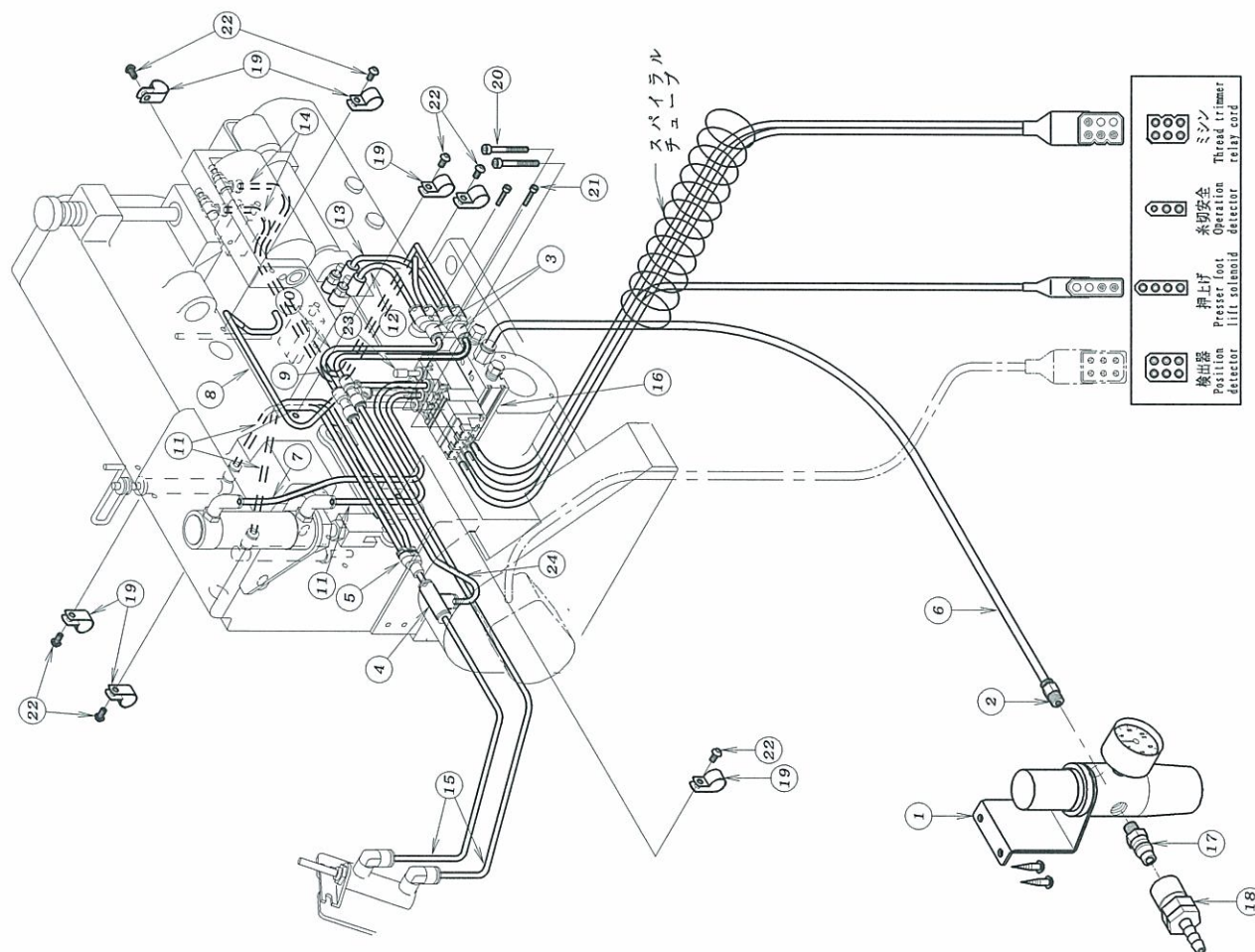
26. 配管、配線図 (FX4404UTC) WIRING AND PIPING



検出器 Position detector	押上げ Presser foot lift solenoid	糸切安全 Operation detector	ミシン Thread trimmer relay cord
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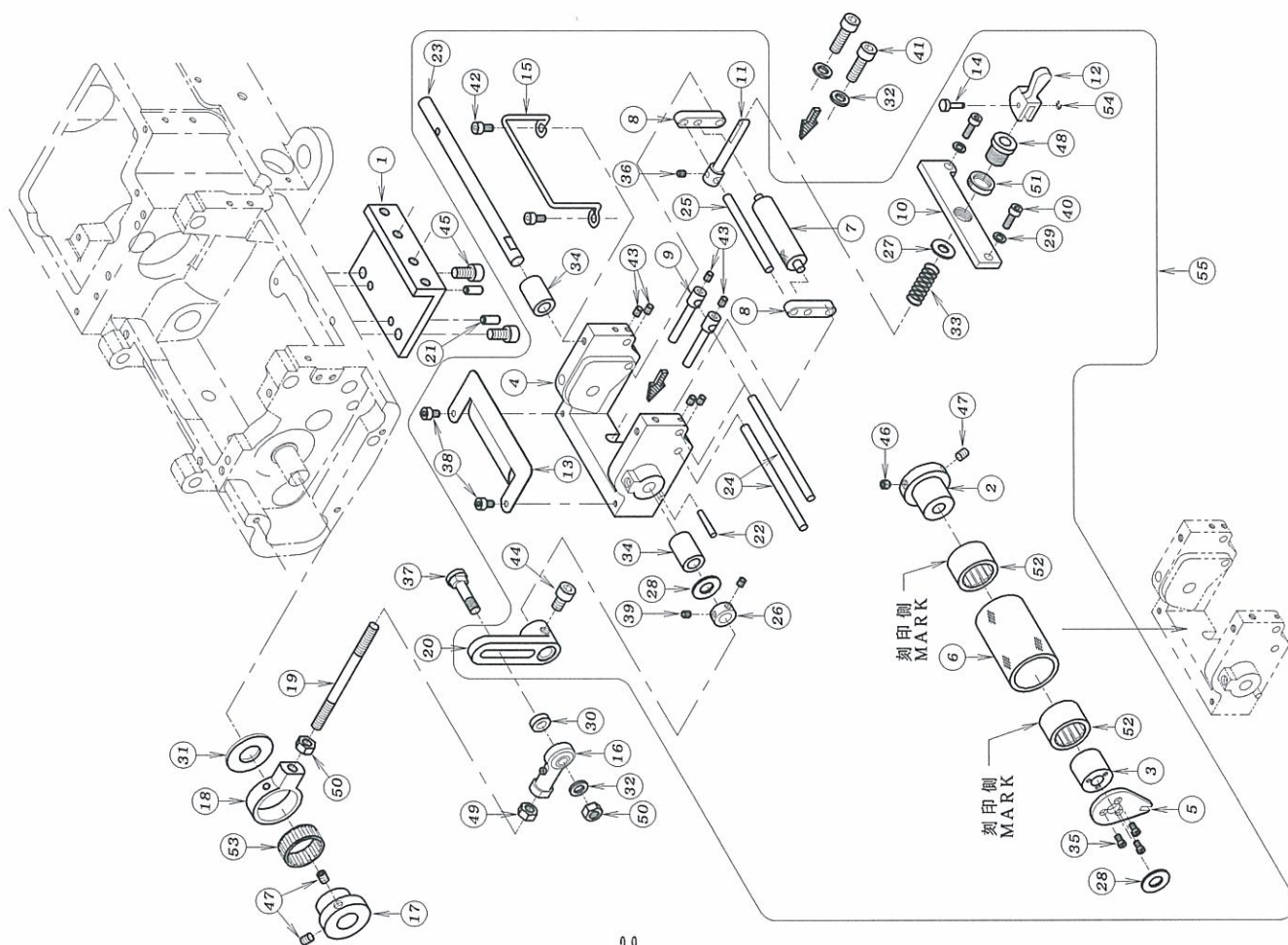
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
26-01	05-212	フィルタレキ・ユレータ	REGULATOR	1
26-02	05-218	レキ・ユレータ-用継手	JOINT	1
26-03	05-482	ユニオンワイ	JOINT	2
26-04	05-486	チューブ	TUBE	1
26-05	05-996	電磁弁3連セット	SOLENOID VALVE ASS'Y	1
26-06	05-492	チューブ	TUBE	1
26-07	05-493	チューブ	TUBE	1
26-08	05-499	チューブ	TUBE	1
26-09	05-505	チューブ	TUBE	1
26-10	05-506	チューブ	TUBE	1
26-11	05-508	チューブ	TUBE	1
26-12	05-517	チューブ	TUBE	1
26-13	05-516	チューブ	TUBE	1
26-14	05-977	チューブ	TUBE	1
26-15	05-977	チューブ	TUBE	1
26-16	06-516	カプ・ラメス	CONNECTOR	1
26-17	06-517	カプ・ラメス	CONNECTOR	1
26-18	06-928	ナイロンクリップ	CLAMP	8
26-19	87-903	六角穴付きボルト	BOLT	2
26-20	87-140	六角穴付きボルト	BOLT	2
26-21	87-272	ネジ	SCREW	8
26-22	05-494	チューブ	TUBE	1
26-23	05-495	チューブ	TUBE	1
26-24	05-221	スピード・コントローラー	SPEED CONTROLLER	1
26-25	06-597	プラグ	PLUG	1

27. 配管、配線図 (FX4406UTC, 4412UTC, 4413UTC) WIRING AND PIPING



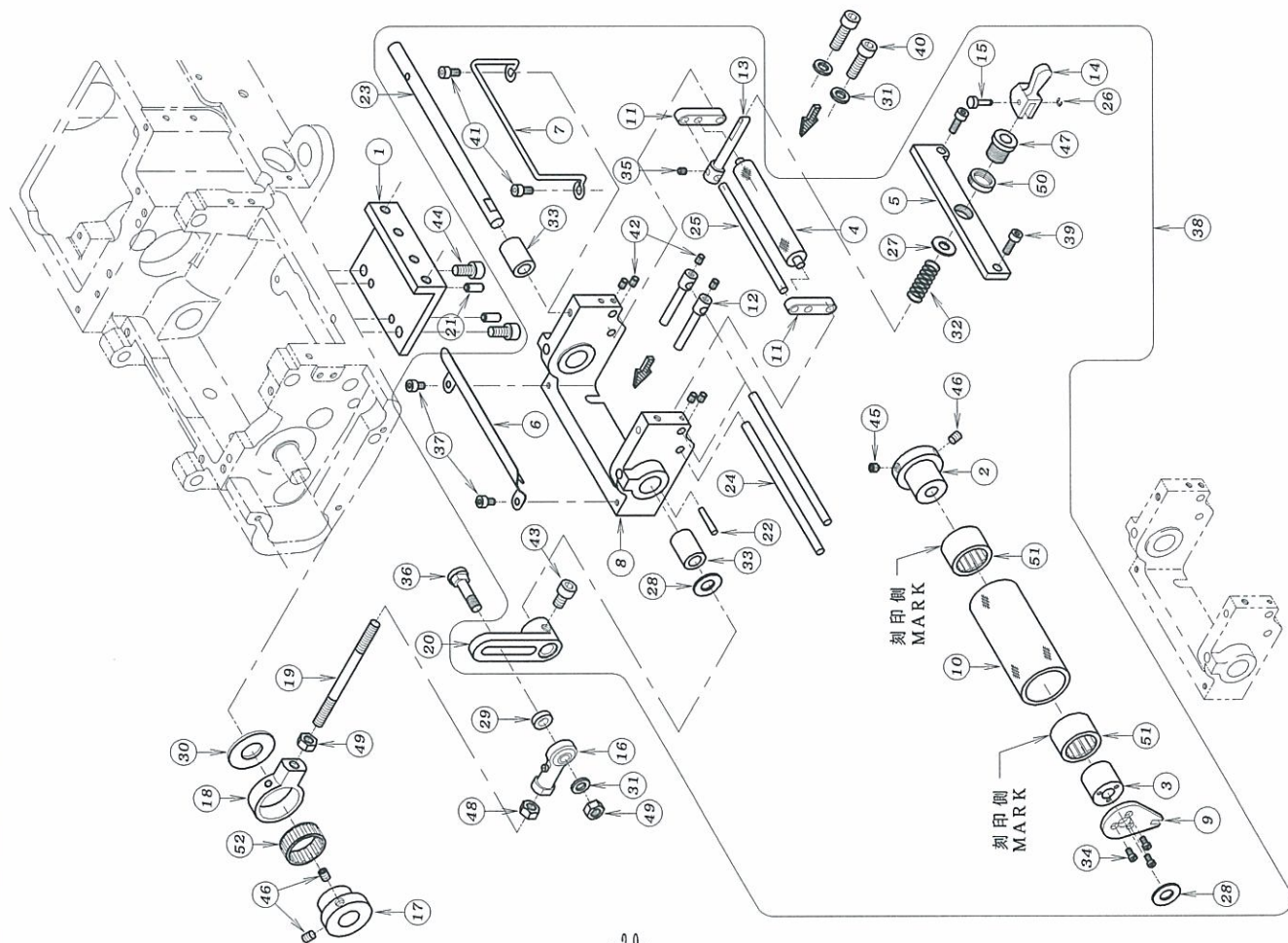
REF. NO.	PART NO.	品名	DESCRIPTION	Q'TY
27-01	05-212	フィルタレギ ユレター	REGULATOR	1
27-02	05-218	レギ ユレター用継手	JOINT	1
27-03	05-482	ユニオンワイ	JOINT	2
27-04	05-483	ユニオンワイ	JOINT	1
27-05	05-484	プランチユニオンワイ	JOINT	1
27-06	05-486	チューブ	TUBE	1
27-07	05-492	チューブ	TUBE	1
27-08	05-493	チューブ	TUBE	1
27-09	05-495	チューブ	TUBE	1
27-10	05-495	チューブ	TUBE	1
27-11	05-499	チューブ	TUBE	1
27-12	05-505	チューブ	TUBE	1
27-13	05-506	チューブ	TUBE	1
27-14	05-508	チューブ	TUBE	1
27-15	05-510	チューブ	TUBE	1
27-16	05-996	電磁弁3連セット	SOLENOID VALVE ASS'Y	1
27-17	06-516	カフ ラメス	CONNECTOR	1
27-18	06-517	カフ ラメス	CONNECTOR	1
27-19	06-928	ナイロンクリップ	CLAMP	7
27-20	87-903	六角穴付きボルト	BOLT	2
27-21	87-140	六角穴付きボルト	BOLT	2
27-22	87-272	ネジ	SCREW	7
27-23	06-597	プラグ	PLUG	1
27-24	05-490	チューブ	TUBE	1

228. PMD機構 (FX4404) METERING DEVICE MECHANISM



REF.NO.	PART NO.	品 名	DESCRIPTION	Q'TY
228-01	01-101	前フ°-ラー取付け土台	BRACKET	1
228-02	01-102	フタ側スリーブ	SLEEVE	1
228-03	01-103	連結板側スリーブ°	SLEEVE	1
228-04	01-111	前フ°-ラー土台	BRACKET	1
228-05	01-116	前フ°-ラー回り止め蓋	PLATE	1
228-06	01-132	前フ°-ラーローレット	PULLER	1
228-07	01-134	前フ°-ラー小ローラー	LOWER ROLLER	1
228-08	01-136	前フ°-ラー小ローラー取付金具	ROLLER HOLDER	2
228-09	01-138	前フ°-ラーコ°ム案内金具	PIVOT SHAFT HOLDER	2
228-10	01-141	前フ°-ラー締め金具	RUBBER TIGHTENER	1
228-11	01-143	小ローラー締め金具	ROLLER CONTROLLER	1
228-12	01-145	ワンドタッチ レハ°-	LEVER	1
228-13	01-146	前フ°-ラーカバ°-	COVER	1
228-14	01-147	レハ°-連結ピン	PIN	1
228-15	01-152	カ°イト°	GUIDE	1
228-16	05-954	ロット°エント°	ROD	1
228-17	61-409	前フ°-ラーエキセン	ECCENTRIC	1
228-18	63-425	前フ°-ラーロッド	CONNECTING ROD	1
228-19	65-335	前フ°-ラー連結棒	CONNECTING BAR	1
228-20	67-419	前フ°-ラー連結レバ°	LEVER	1
228-21	71-208	ノックピン	PIN	2
228-22	71-227	チ°ハ°-ピン	PIN	1
228-23	71-353	前フ°-ラー土台シャフト	SHAFT	1
228-24	71-361	案内棒大	PIVOT SHAFT (LARGE)	2
228-25	71-362	案内棒小	PIVOT SHAFT (SMALL)	1
228-26	75-152	カラー	COLLAR	1
228-27	75-446	ワッシャ	WASHER	1
228-28	75-451	ワッシャ	WASHER	2
228-29	75-468	ワッシャ	WASHER	2
228-30	75-480	ワッシャ	WASHER	1
228-31	75-490	前フ°-ラーベアリングワッシャ	WASHER	1
228-32	75-552	ワッシャ	WASHER	3
228-33	79-171	圧縮ハ°ネ	SPRING	1
228-34	81-125	ブッシュ	BUSHING	2
228-35	84-162	ネジ°	SCREW	3
228-36	84-314	ネジ°	SCREW	1
228-37	87-006	ロットエント°止ネジ°	SCREW	1
228-38	87-092	六角穴付きボルト	BOLT	2
228-39	87-106	ネジ	SCREW	2
228-40	87-129	六角穴付きボルト	BOLT	2
228-41	87-173	六角穴付きボルト	BOLT	2
228-42	87-177	六角穴付きボルト	BOLT	2
228-43	87-181	ネジ°	SCREW	6
228-44	87-203	六角穴付きボルト	BOLT	1
228-45	87-225	六角穴付きボルト	BOLT	2
228-46	87-253	ネジ°	SCREW	1
228-47	87-254	ネジ°	SCREW	3
228-48	87-456	調節ネジ°	SCREW	1
228-49	88-161	ナット	NUT	1
228-50	88-166	ナット	NUT	2
228-51	88-456	ナット	NUT	1
228-52	91-405	ワングエイクラッチ	BEARING	2
228-53	91-411	前メスバ°アリソク°	BEARING	1
228-54	93-200	ストッパ° リンク°	E-RING	1
228-55	00-1402	PMD装置 (組)	METERING DEVICE ASS'Y	1

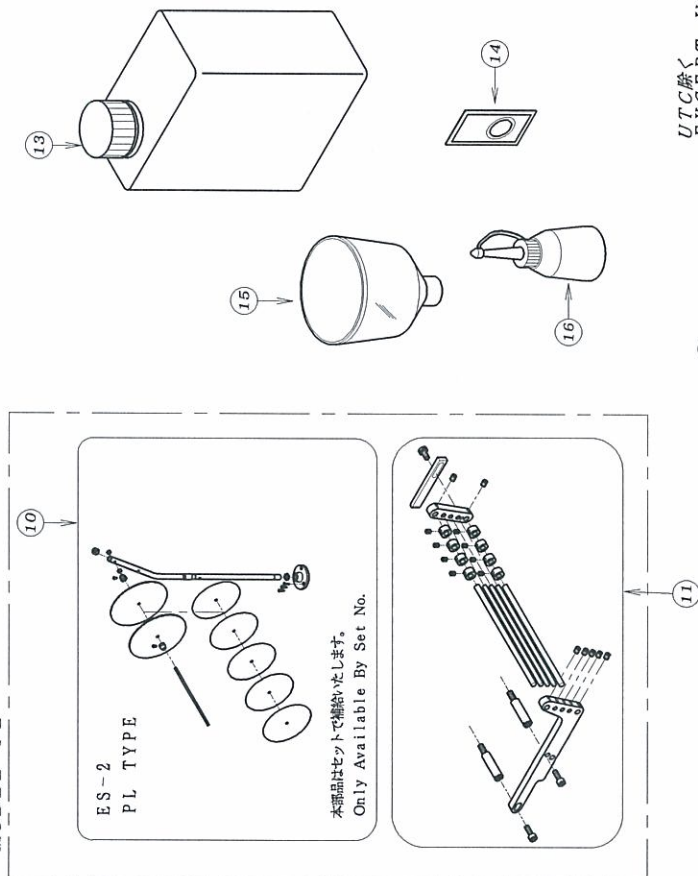
29. PMD機構 (FX4406-12) METERING DEVICE MECHANISM



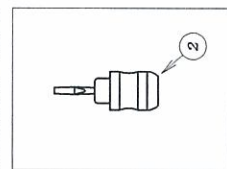
REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
29-01	01-101	前フーラー取付け台	BRACKET	1
29-02	01-102	フタ側スリーブ	SLEEVE	1
29-03	01-103	連結板側スリーブ	SLEEVE	1
29-04	01-104	前フーラー-小ローラー (幅広)	LOWER ROLLER	1
29-05	01-105	前フーラー-縮メ器具 (幅広)	RUBBER TENSIONER	1
29-06	01-106	前フーラー-カバー (幅広)	PULLER COVER	1
29-07	01-107	前フーラー-台取付ガイド (幅広)	GUIDE WIRE	1
29-08	01-112	前フーラー-土台 (幅広)	PULLER ROCKER	1
29-09	01-116	前フーラー-回り止め蓋	PLATE	1
29-10	01-133	前フーラー-ローレット	PULLER	1
29-11	01-136	前フーラー-小ローラー-取付金具	ROLLER HOLDER	2
29-12	01-138	前フーラー-ゴム案内金具	PIVOT SHAFT HOLDER	2
29-13	01-143	小ローラー-締め金具	ROLLER CONTROLER	1
29-14	01-145	ワンタッチレバー	LEVER	1
29-15	01-147	レバー-連結ピン	PIN	1
29-16	05-954	ロッド-セント	ROD	1
29-17	61-409	前フーラー-エキセン	ECCENTRIC	1
29-18	63-425	前フーラー-ロッド	CONNECTING ROD	1
29-19	65-335	前フーラー-連結棒	CONNECTING BAR	1
29-20	67-419	前フーラー-連結レバー	LEVER	1
29-21	71-208	ノックピン	PIN	2
29-22	71-227	テーパー-ピン	PIN	1
29-23	71-354	前フーラー-土台シャフト	SHAFT	1
29-24	71-355	案内棒大 (幅広)	SHAFT	2
29-25	71-356	案内棒小 (幅広)	SHAFT	1
29-26	93-200	ストップリンク	E-RING	1
29-27	75-446	ワッシャ	WASHER	1
29-28	75-451	ワッシャ	WASHER	2
29-29	75-480	ワッシャ	WASHER	1
29-30	75-490	前フーラー-ベアリングワッシャ	WASHER	1
29-31	75-552	ワッシャ	WASHER	3
29-32	79-171	圧縮ハネ	SPRING	1
29-33	81-125	ブッシュ	BUSHING	2
29-34	84-162	ネジ	SCREW	3
29-35	84-314	ネジ	SCREW	1
29-36	87-006	ロットメント 止ネジ	SCREW	1
29-37	87-092	六角穴付きボルト	BOLT	2
29-38	00-1403	PMD装置 (組)	METERING DEVICE ASS'Y	1
29-39	87-129	六角穴付きボルト	BOLT	2
29-40	87-173	六角穴付きボルト	BOLT	2
29-41	87-177	六角穴付きボルト	BOLT	2
29-42	87-181	ネジ	SCREW	6
29-43	87-203	六角穴付きボルト	BOLT	1
29-44	87-225	六角穴付きボルト	BOLT	2
29-45	87-253	ネジ	SCREW	1
29-46	87-254	ネジ	SCREW	3
29-47	87-456	調節ネジ	SCREW	1
29-48	88-161	ナット	NUT	1
29-49	88-166	ナット	NUT	2
29-50	88-456	ナット	NUT	1
29-51	91-405	ワンウェイクラッチ	BEARING	2
29-52	91-411	前メスベアリング	BEARING	1

30. アクセサリー - ACCESSORIES

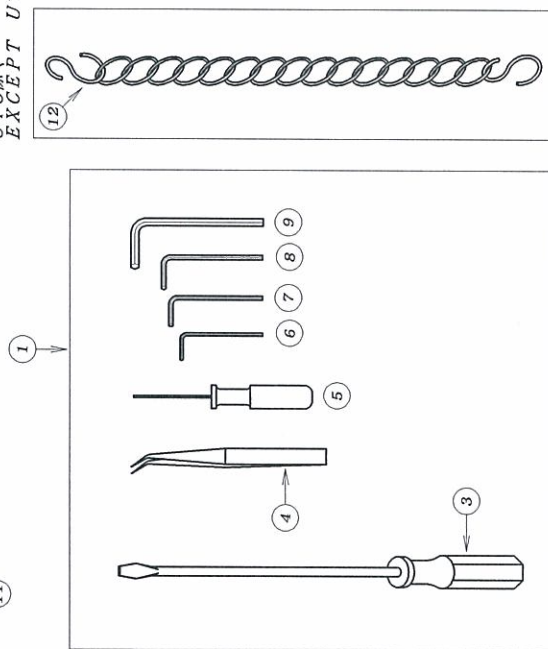
MODEL PL



MODEL UTC



UTC 除く
EXCEPT UTC

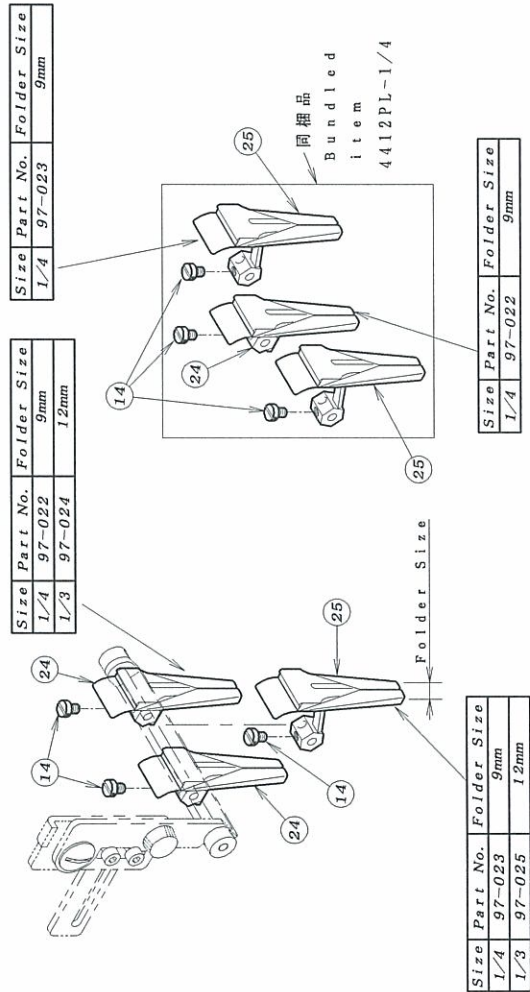
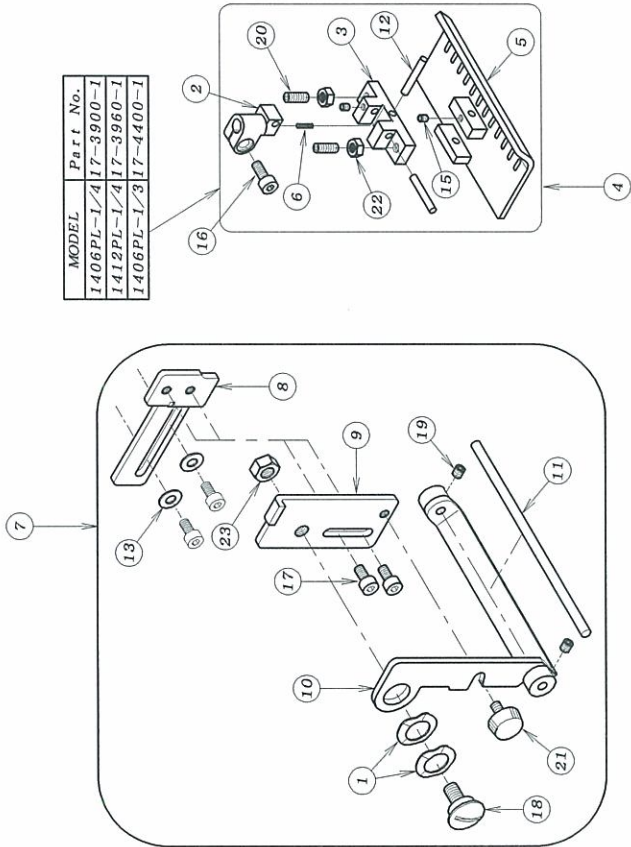


REF. NO.	PART NO.	品 名	DESCRIPTION	Q' TY
30-01	20-0010	附属品ケース	ACCESSORIES	1
30-02	28-454	ドライバ - (I)	DRIVER (S)	1
30-03	28-452	ドライバ - (A)	DRIVER (L)	1
30-04	28-011	ピンセット	TWEZERS	1
30-05	28-317	ダ リップ 付六角レンチ 1.5mm	ALLEN KEY (1.5mm)	1
30-06	28-311	六角レンチ 2mm	ALLEN KEY (2mm)	1
30-07	28-312	六角レンチ 2.5mm	ALLEN KEY (2.5mm)	1
30-08	28-313	六角レンチ 3mm	ALLEN KEY (3mm)	1
30-09	28-314	六角レンチ 5mm	ALLEN KEY (5mm)	1
30-10	20-6010	テープ 立て	TAPE STAND	1
30-11	20-6460	テープ ガイ ド セット	TAPE GUIDE ASS' Y	1
30-12	28-920	運動クサリ	CHAIN	1
30-13	28-618	シンナー油	OIL	1
30-14	13-0540-5	針 DV×57 #14	NEEDLE	10
30-15	28-615	シ ョ ッ プ	OIL FUNNEL	1
30-16	28-614	油差し	OILER	1

31. PL 専用部品 MODEL PL EXCLUSIVE PARTS

REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
31-01	02-112	波ワッシャー	WASHER	2
31-02	*	押エボス	SHANK	1
31-03	17-3710-C	押エボス取り付台	BRACKET	1
31-04	*	押えセット	PRESSER FOOT ASS'Y	1
31-05	*	押エ足	BOTTOM	1
31-06	17-8190-F	ハネ	SPRING	1
31-07	20-6510	ホルダー調節ガイドセット	MOUNTING BASE ASS'Y FOR HOLDER	1
31-08	26-754	ブラケットA	BRACKET	1
31-09	26-755	ブラケットB	BRACKET	1
31-10	26-756	ホルダー取付ブラケット	MOUNTING BASE FOR HOLDER	1
31-11	26-757	ホルダー取付軸	HOLDER SHAFT	1
31-12	71-215	ピン	PIN	2
31-13	75-455	ワッシャ	WASHER	2
31-14	87-098	ネジ	SCREW	6
31-15	87-104	ネジ	SCREW	2
31-16	87-113	六角穴付きボルト	BOLT	1
31-17	87-177	六角穴付きボルト	BOLT	2
31-18	87-280	ネジ	SCREW	1
31-19	87-286	ネジ	SCREW	2
31-20	87-289	ネジ	SCREW	2
31-21	87-292	調節ネジ	SCREW	1
31-22	88-146	ナット	NUT	2
31-23	88-166	ナット	NUT	1
31-24	*	ホルダーA	HOLDER	3
31-25	*	ホルダーB	HOLDER	3

* 各ゲージ部品の品番は、34、35ページのゲージパーツ表を参照して下さい。
 * Please refer to Page 34, 35 GAUGE PARTS LIST



32. 押え揚げ装置 (エア-式) FL-2, FL-5

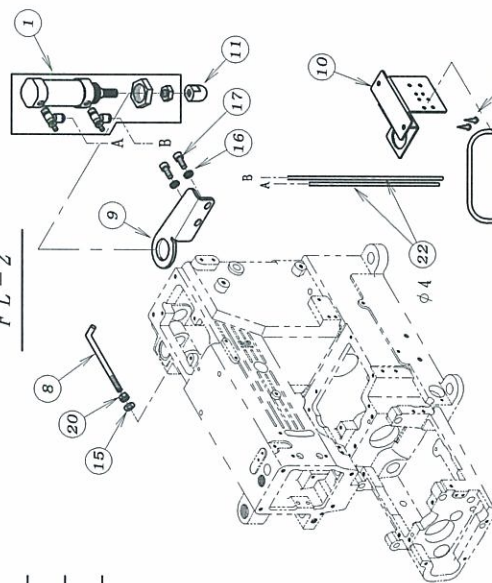
FOOT LIFTER MECHANISM (PNEUMATIC TYPE) FL-2, FL-5

オプション (OPTION)

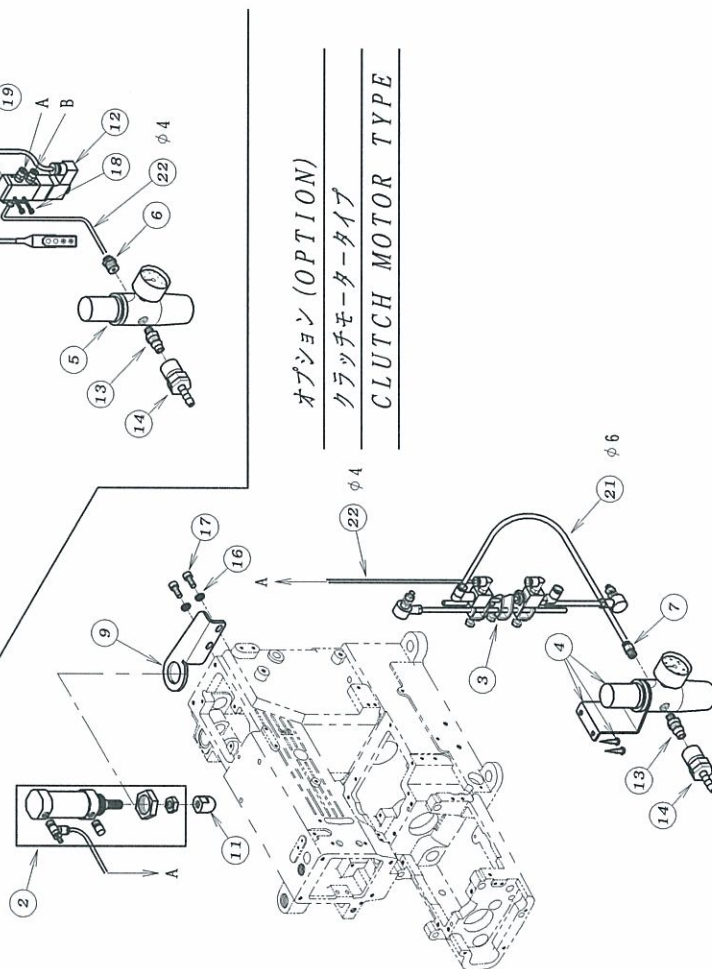
サーボモータータイプ

SERVO MOTOR TYPE

FL-2



FL-5



オプション (OPTION)

クラッチモータータイプ

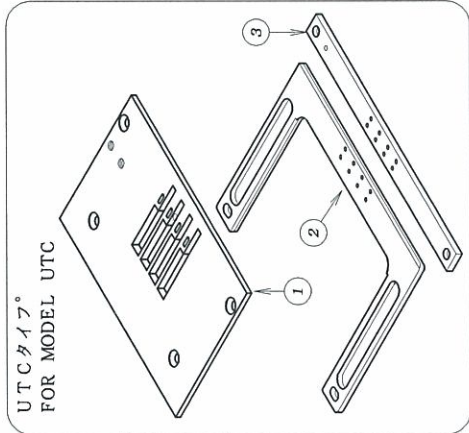
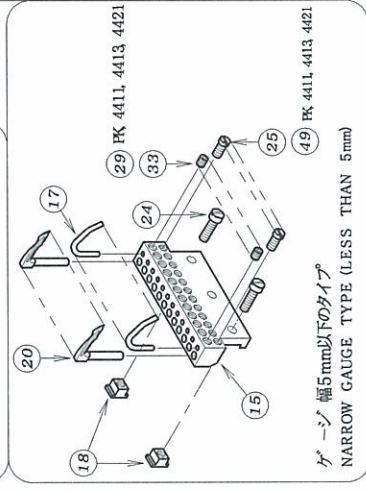
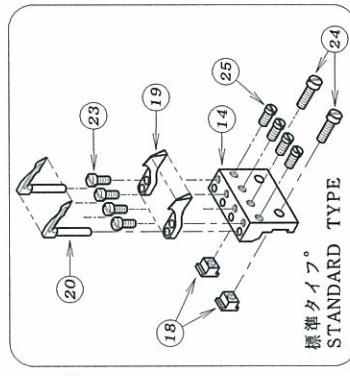
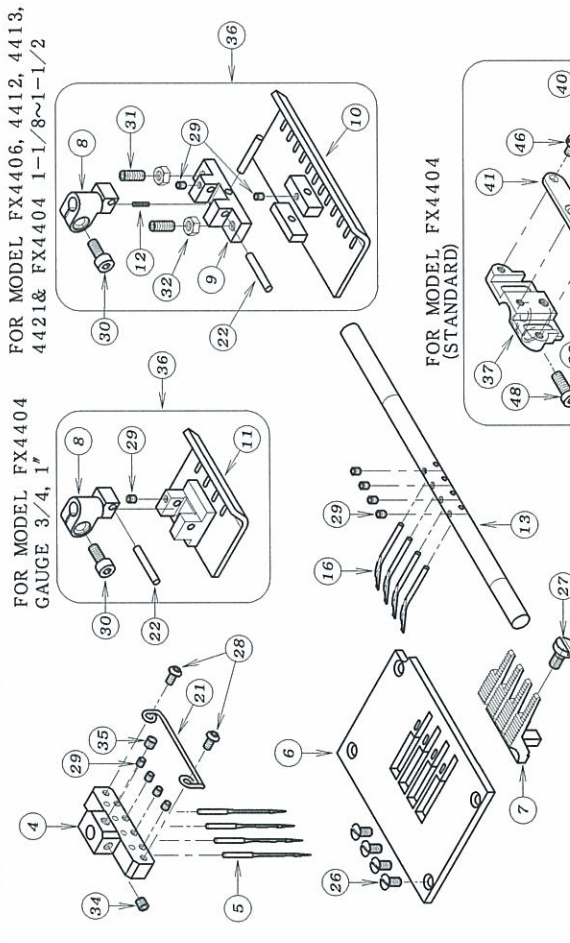
CLUTCH MOTOR TYPE

REF. NO.	PART NO.	品名	DESCRIPTION	Q'TY
32-01	00-6082	押えフ-ラ-揚げシリンダ'-セット	AIR CYLINDER ASS' Y	1
32-02	00-6130	押え揚げシリンダ'-セット	AIR CYLINDER ASS' Y	1
32-03	00-8040	吸込押え上げバルブセット	AIR SWITCH ASSEMBLY	1
32-04	05-212	フィルタレキ'-ユレ-タ	REGULATOR	1
32-05	05-2120-A	フィルタレキ'-ユレ-タ	REGULATOR	1
32-06	05-217	ハ-フユニオン	JOINT	1
32-07	05-218	レキ'-ユレ-タ-用継手	JOINT	1
32-08	05-558	ホ°シ'ショナ'-ハ'-	BAR	1
32-09	05-586	押揚シリンダ'-ブラケット	BRACKET	2
32-10	05-644	電磁弁ブラケット	BRACKET	1
32-11	05-897	シリンダ'-作動チップ	CHIP	2
32-12	05-982	押え揚げ電磁弁セット	SOLENOID VALVE ASS' Y	1
32-13	06-516	カフ'ラメス	CONNECTOR	2
32-14	06-517	カフ'ラオス	CONNECTOR	2
32-15	75-452	ワッシャ	WASHER	1
32-16	75-552	ワッシャ	WASHER	4
32-17	87-171	六角穴付きボルト	BOLT	4
32-18	87-438	六角穴付きボルト	BOLT	2
32-19	87-902	本ねじ	SCREW	2
32-20	88-166	ナット	NUT	1
32-21	05-486	チューブφ6x1000mm	TUBE (φ6x1000L)	1~2
32-22	05-979	チューブφ4x700mm	TUBE (φ4x700L)	1

33. ガージパーツ GAUGE PARTS

FOR MODEL FX4404
GAUGE 3/4, 1"

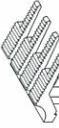
FOR MODEL FX4406, 4412, 4413,
4421& FX4404 1-1/8~1-1/2



REF. NO.	PART NO.	品 名	DESCRIPTION	Q'TY
33-01*		針板	NEEDLE PLATE	1
33-02*		可動マスヘース	LOWER KNIFE BASE	1
33-03*		ハ'ネヘース	SPRING BASE	1
33-04*		針株	NEEDLE CLAMP	1
33-05	13-0540-5	針 (DVX57 #14)	NEEDLE	*
33-06*		針板	NEEDLE PLATE	1
33-07*		送布	FEED DOG	1
33-08	17-3710-A	押エボス	SHANK	2
33-09	17-3710-C	押エボス取り付け台	BRACKET	1
33-10*		押エ足	BOTTOM	1
33-11*		押エ足	BOTTOM	1
33-12	17-8190-F	ハ'ネ	SPRING	1
33-13*		糸寄せ棒	RETAINER HOLDER	1
33-14*		ルーバー台	LOOP HOLDER	1
33-15*		糸寄せルーバー	RETAINER HOLDER	1
33-16	19-404	糸寄せルーバー	RETAINER HOLDER	*
33-17	19-405	針受け	NEEDLE GUIDE	*
33-18	19-406	ルーバー台止め金具	BRACKET	2
33-19	19-416	針受	NEEDLE GUARD	*
33-20*		ルーバー	LOOP	*
33-21*		針株糸カ'イト'	THREAD GUIDE	1
33-22	71-215	ピン	PIN	*
33-23	84-164	ネジ	SCREW	*
33-24	84-367	ネジ	SCREW	2
33-25	84-380	ネジ	SCREW	*
33-26	84-464	ネジ	SCREW	4
33-27	84-588	ネジ	SCREW	1
33-28	87-099	ネジ	SCREW	2
33-29	87-104	ネジ	SCREW	*
33-30	87-113	六角穴付きボルト	BOLT	*
33-31	87-289	ナット	NUT	2
33-32	88-146	ネジ	SCREW	2
33-33	84-314	ネジ	SCREW	*
33-34	87-106	ネジ	SCREW	1
33-35	87-233	ネジ	SCREW	1
33-36*		押え組	PRESSER FOOT ASS'Y	1
33-37	17-4210-A	押エボス	BRACKET	1
33-38*		押え足	BOTTOM	1
33-39	17-4210-C	取付金具	BRACKET	2
33-40	17-4210-E	底押エリンクプレート	LINK PLATE	1
33-41	17-4210-G	スライド押エプレート	SLIDE PLATE	1
33-42	17-5810-D	押エ足取付ピン	PIN	2
33-43	17-5810-F	リンクネジ	SCREW	1
33-44	79-282	フィンカ'ーガ'ート'	FINGER GUARD	2
33-45	84-114	ネジ	SCREW	2
33-46	84-361	ネジ	SCREW	2
33-47	84-364	ネジ	SCREW	3
33-48	84-591	六角穴付きボルト	BOLT	1
33-49	87-071	ネジ	SCREW	12-13

* 各ゲージ部品の品番は、34、35ページのゲージパーツ表を参照して下さい。
* Please refer to Page 34, 35 GAUGE PARTS LIST

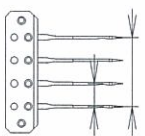
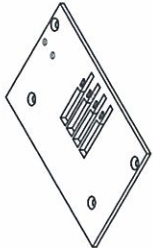
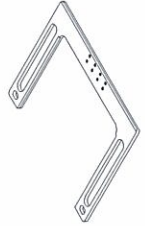
34. ゲージ部品一覽表 GAUGE PARTS TABLE

モデル MODEL	ゲージサイズ (インチ) GAUGE SIZE (INCH)	針株 NEEDLE HOLDER	針株糸ガイド THREAD EYELET	押え組 PRESSER FOOT ASSEMBLY	針板 NEEDLE PLATE	送歯 FEED DOG	ルーパー台 LOOPER HOLDER	糸寄せ棒 RETAINER BAR	針受 NEEDLE GUARD	糸寄せ ルーパー RETAINER LOOPER	ルーパー LOOPER		
4404P	3/4	12-3510-1	45-371										
	1	12-3520-1			14-418	15-418	19-418	18-375	19-416	19-404	19-431		
	1-1/8	12-3530-1			14-421	15-421	19-421	18-371					
	1-1/4	12-3540-1			14-423	15-423	19-423	18-373					
	1-1/2	12-3550-1			14-424	15-424	19-424	18-374					
4404PE	1	12-3520-1	45-371		14-421	15-421	19-421	18-371					
4404PSF	1/4-3/4-1/4	12-3620-1	45-381		14-427	15-427	19-427	18-377	19-405	19-404	19-431		
	1/4-1-1/4	12-3630-1			14-431	15-431	19-429	18-381					
4412P	3/16	12-3580-1	45-397		14-497	15-497	19-397	18-397	19-405	19-404	19-431		
	1/4	12-3590-1	45-396		14-496	15-496	19-496	18-396	19-416				
4412PE	5mm	12-3600-1	45-397		14-045	15-045	19-045	18-398	19-405			19-404	19-431
	1/4	12-3590-1	45-396		14-496	15-496	19-496	18-396	19-416				
4406P (E)	1/4	12-3560-1	45-381		14-443	15-443	19-443	18-390	19-416			19-404	19-431
4408P	1/4	12-3610-1	45-397		14-465	15-465	19-496	18-396					
4409P (E)	1/4	12-3570-1	45-397		14-470	15-470	19-470	18-394	19-416	19-404	19-431		
4406PL	1/4	12-3560-1	45-381		14-443	15-443	19-443	18-390					
	1/3	12-3640-1	45-397		14-440	15-440	19-440	18-391	19-416	19-404	19-431		
4412PL	1/4	12-3590-1	45-396		14-496	15-496	19-496	18-396					
4413P, PN	*	12-3670-1	45-396		14-367	15-367	19-367	18-367	19-405	19-404	19-433		
4418P	*	12-3680-1	45-396		14-395	15-395	19-368	18-368					
4421P, PE	1/8	12-3680-1	45-396		14-368	15-368	19-368	18-368	19-405	19-404	19-433		
4423P	1/8	12-3690-1	45-396		14-369	15-369	19-369	18-369					
4423PMD	1/8	12-3690-1	45-396		14-369	15-369	19-369	18-369	19-405	19-404	19-433		

*4413P, PN-1/4-1/8-1/4-1/4-1/8-1/4-1/4-1/8-1/4-1/8-1/4-1/8-1/4

*4418P-1/8X14-1/4X3

35. UTC ケーシング 専用部品一覧表 UTC GAUGE PARTS TABLE

モデル MODEL	ゲージサイズ GAUGE SIZE (インチ) (INCH) 	針板 NEEDLE PLATE 	可動メスベース LOWER KNIFE BASE 	バネベース SPRING BASE 
FX4404P	3/4	05-351	05-451	05-452
	1	05-352	05-453	05-454
	1-1/8	05-353	05-455	05-456
	1-1/4	05-354	05-457	05-458
	1-1/2	05-355	05-382	05-383
FX4412P	3/16	05-356	05-467	05-468
	1/4	05-357	05-469	05-470
	5mm	05-358	05-471	05-472
FX4406P	1/4	05-359	05-463	05-464
FX4409P	1/4	05-360	05-465	05-466
FX4418P	*	05-362	05-386	05-387

*4418P-1/8X14-1/4X3

INDEX 1

REF. NO.	PART NO. 品番	REF. NO.	PART NO. 品番	REF. NO.	PART NO. 品番	REF. NO.	PART NO. 品番	REF. NO.	PART NO. 品番
28-55	00-1402	16-06	02-158	27-24	05-490	30-10	20-6010	03-17	23-427
29-38	00-1403	17-08	02-159	26-06	05-492	31-01	20-6460	01-20	23-462
16-42	00-2008	16-07	02-178	32-14	06-580	30-17	20-6510	02-19	23-463
17-42	00-3223	17-06	02-246	26-25	06-597	19-11	21-0255	03-13	23-463
16-43	00-3282	16-08	02-250	27-23	06-597	20-13	21-0255	01-21	23-465
17-41	00-4283	15-03	02-407	26-23	05-494	19-10	21-0322	10-03	23-466
13-01	00-6082	15-05	02-409	27-19	06-928	20-12	21-0332	02-20	23-467
32-01	00-6082	16-09	02-415	25-01	09-145	20-11	21-084	03-14	23-467
32-02	00-6130	16-10	02-417	25-02	09-147	20-10	21-085	02-21	23-501
32-03	00-8040	17-07	02-420	26-08	05-499	01-08	21-264	03-15	23-501
28-01	01-101	17-09	02-494	27-11	05-499	01-09	21-265	14-04	23-506
29-01	01-101	17-10	02-496	26-09	05-505	01-10	21-266	14-05	23-508
28-02	01-102	12-01	04-111	27-12	05-505	01-11	21-267	19-02	23-509
29-02	01-102	12-02	04-444	26-10	05-506	02-09	21-269	20-02	23-509
28-03	01-103	12-03	04-445	27-13	05-506	02-10	21-270	02-22	23-512
29-03	01-103	12-04	04-446	26-11	05-508	03-06	21-270	03-16	23-512
29-04	01-104	05-01	05-046	27-14	05-508	02-12	21-272	18-19	23-512
29-05	01-105	26-01	05-212	27-15	05-510	03-07	21-272	12-07	23-519
29-06	01-106	27-01	05-212	26-13	05-516	01-12	21-273	03-45	23-528
29-07	01-107	32-04	05-212	26-12	05-517	01-13	21-274	14-27	35-420
02-01	01-108	32-05	05-2120-A	04-01	05-531	01-14	21-275	14-26	35-421
28-04	01-111	32-06	05-217	05-04	05-531	01-15	21-276	10-40	23-663
29-08	01-112	26-02	05-218	21-01	05-531	03-08	21-277	01-24	35-506
16-01	01-115	22-02	05-531	25-07	09-524	01-22	24-053	14-30	35-509
17-01	01-115	32-07	05-218	23-01	05-531	02-13	21-279	14-51	35-518
28-05	01-116	26-24	05-221	25-08	09-525	02-14	21-280	14-32	35-519
29-09	01-116	07-01	05-379	25-10	09-526	02-15	21-297	03-19	25-516
28-06	01-132	07-02	05-380	25-11	09-528	02-16	21-298	02-26	25-517
29-10	01-133	07-03	05-381	18-14	05-546	01-16	21-459	14-35	35-529
28-07	01-134	07-04	05-391	18-15	05-547	02-17	21-460	14-12	35-539
28-08	01-136	18-01	05-395	18-16	05-548	03-10	21-460	09-03	39-003
29-11	01-136	13-02	05-404	18-17	05-549	01-17	21-499	08-14	39-004
28-09	01-138	18-02	05-420	07-08	05-555	19-09	21-629	03-18	25-527
29-12	01-138	18-03	05-421	01-06	05-558	20-09	21-629	02-27	25-522
28-10	01-141	18-04	05-426	32-08	05-558	14-02	21-632	31-08	26-754
28-11	01-143	18-05	05-428	05-05	05-560	01-18	21-711	02-31	26-755
29-13	01-143	18-06	05-429	22-03	05-585	01-07	21-975	31-10	26-756
28-12	01-145	07-05	05-430	24-03	05-585	03-11	22-407	02-25	25-527
29-14	01-145	18-07	05-430	13-03	05-586	13-06	23-018	02-08	27-147
28-13	01-146	18-08	05-431	32-09	05-586	09-07	23-049	03-05	27-147
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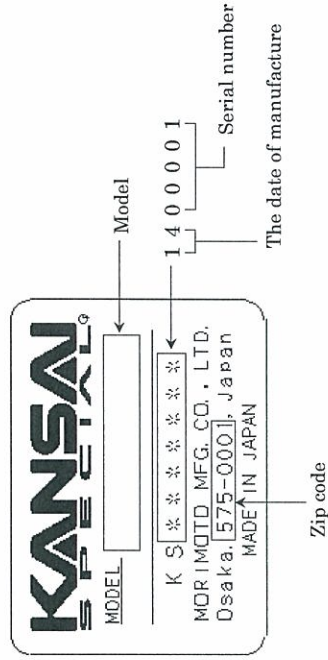
***FX** Series Instruction Manual*

INTRODUCTION

Thank you for your purchasing Kansai Special's FX,FX/UTC Series.
Read and study this instruction manual carefully before beginning any of the procedures and save it for later use.

1. This instruction manual describes adjustments and maintenance procedures on this machine.
2. Before starting the machine, check to make sure the pulley cover, safety cover, etc. are secured.
3. Before adjusting, cleaning, threading the machine or replacing the needle, be sure to turn off the power.
4. Never start the machine with no oil in the reservoir.
5. Refer to the parts list as well as this instruction manual before maintenance.
This instruction manual describes adjustments and maintenance procedures for the thread trimmer.
6. The contents described in this instruction manual are subject to change without notice.

Indication of serial number



FX/FXUTC
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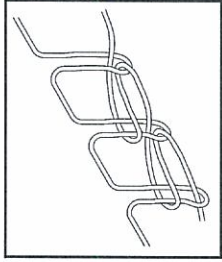
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[1] SPECIFICATIONS

1-1 Stitch type

JIS401 double chainstitch machines

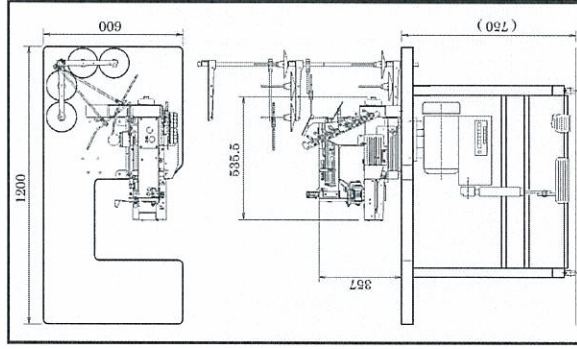


1-2 Models

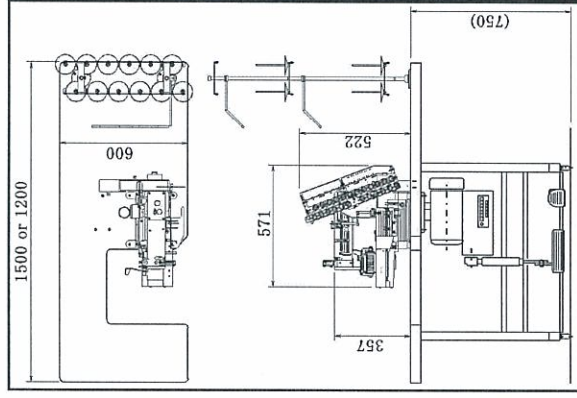
Model	FX4404P,4404P/UTC	FX4406P,4406P/UTC	FX4412P,4412P/UTC
No. of needles	2~4	5~6	7~12
No. of threads	4 needle threads 4 looper threads	6 needle threads 6 looper threads	12 needle threads 12 looper threads
Type of tension set	Mounted type		
Puller width	55mm	78mm	78mm
Minimum gauge width	3.2mm (1/8 inch)		
Maximum gauge width	50mm	70mm	

1-3 Diagrammatic sketch of the Series

< FX4404 >



< FX4412 >



[2] NEEDLES & THREADING THE MACHINE

2-1 Needles

DV×57 of Schmetz or Organ.

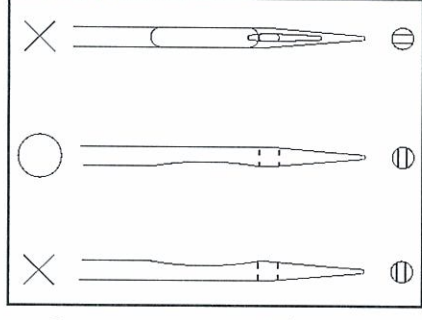
Select the proper needle for the fabric and thread to be used.

< Needle count comparison table >

Schmetz	Nm75	Nm80	Nm90	Nm100
Organ	#11	#12	#14	#16

2-2 Replacing the needle

When replacing the needle, check the needle carefully to see that the scarf is turned to the left (see the illustration).



< Note >

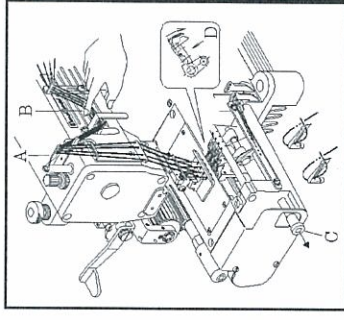
Be sure to turn off the machine before replacing the needle. A clutch motor continues running for a while after the machine is turned off. Therefore keep on pressing the pedal until the machine stops.

2-3 To thread the machine

Thread the machine correctly by referring to pages 3 to 5. Incorrect threading may cause skip stitching, thread breakage and/or uneven stitch formation. When threading the looper, tilt the looper holder toward the front of the machine using the looper drawing bar.

■ To tilt the looper toward the front

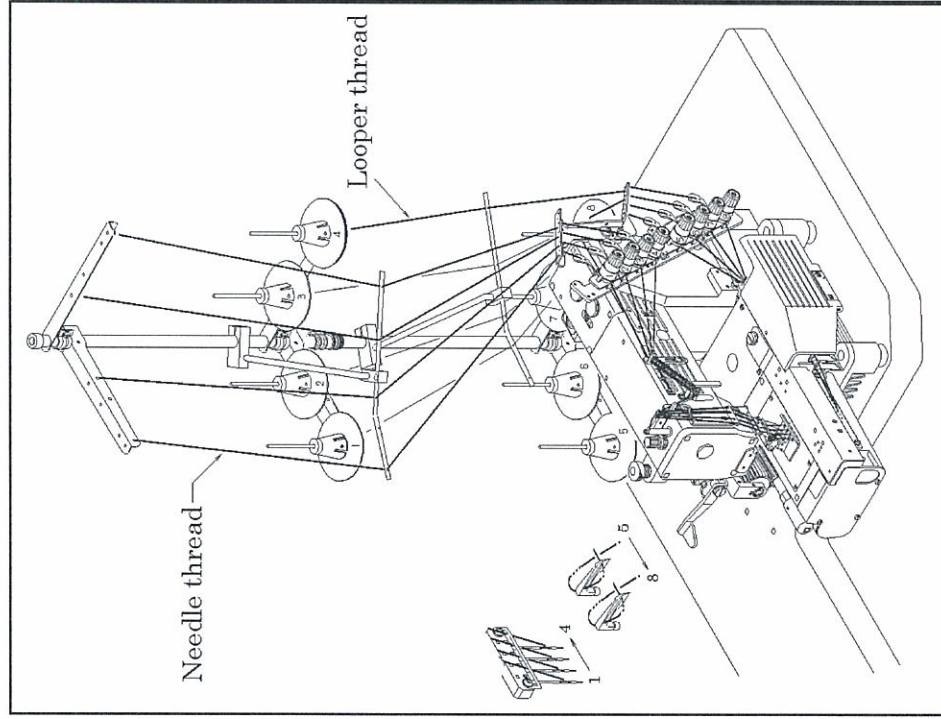
1. Bring needle bar A to the top of its stroke.
2. Pay out the needle thread from the spool by pressing a finger down on needle threads B.
3. Pull looper drawing bar knob C out to the left so that the looper holder is tilted toward the front of the machine.
4. After the machine is threaded, replace the looper by pressing looper holder D into the machine until it clicks.



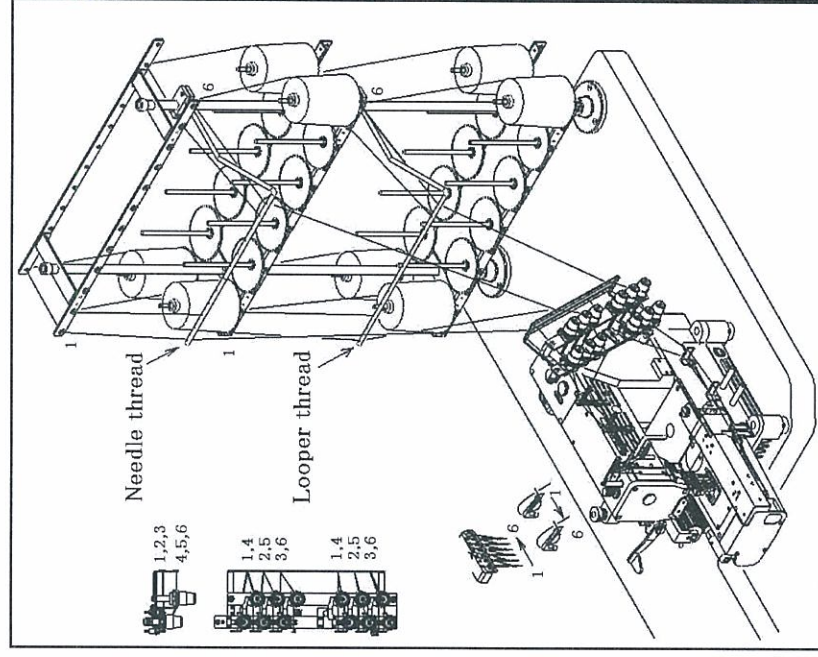
< Note >

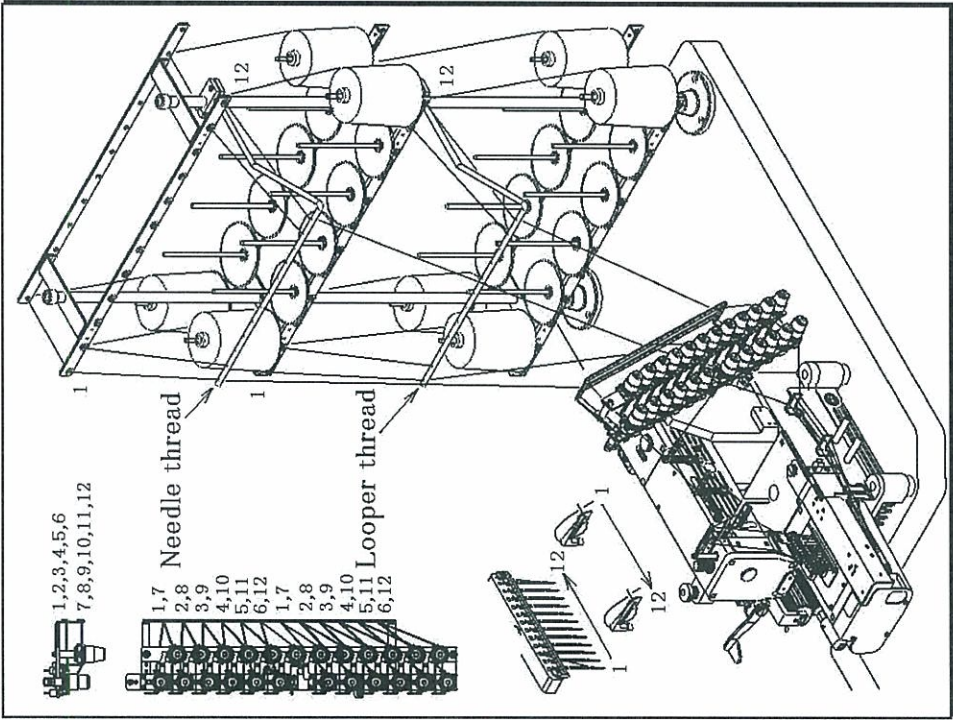
The looper pops out of the machine as soon as knob C is pulled, so do not bring your fingers close to the looper.

■ Threading diagram for FX4404



■ Threading diagram for FX4406

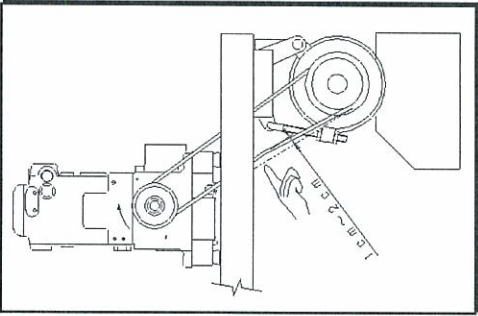




[3] MACHINE SPEED

3-1 Machine speed & direction in which the machine pulley runs

Refer to the table below for maximum and standard speeds of the Series. To extend machine life, run the machine approximately 15-20% below the maximum speed for the first 200 hours of operation (approx. 1 month). Then run the machine at the standard speed. The machine pulley turns clockwise as seen from the end of the machine pulley.



3-2 Motor & belt

Motor : 3-phase, 2-pole, 400W clutch motor
Belt : M type V belt

Select the proper motor pulley according to the machine speed (refer to the motor pulley outer diameter on the table below).
Adjust the position of the motor by pressing the finger onto the middle of the belt so that 1-2cm deflection can be achieved (see the illustration on the right).

< Machine speed >

Model	Maximum speed	Standard speed
FX4404P	4500	4000
FX4412P	4000	3500

< Motor pulley selection table >

Motor pulley outer diameter (mm)	Machine speed (SPM)	
	50Hz	60Hz
60	2500	2950
70	2900	3450
80	3300	3900
90	3700	4400
100	4100	(4900)
110	4500	(5400)

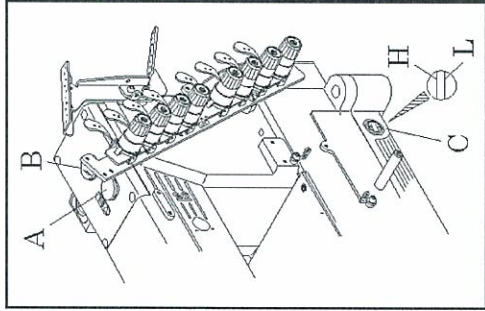
【4】 LUBRICATION

4-1 Oil

Use Kansai Special's genuine oil.
(Part No. 28-618 : 700 cc)

4-2 To fill the machine with oil

Remove rubber plug A from the oil hole.
Fill the machine with oil until the oil level is at the top line (see H in the illustration) on oil gauge C.
After the first lubrication, add oil so that the oil level will be between H and L.
After filling the machine with oil, run the machine to check the oil is splashing onto oil pot A.

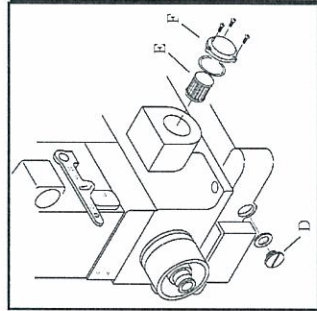


4-3 Replacing the oil and the oil element

To extend machine life, be sure to replace the oil after the first 250 hours of operation.

To replace the oil, follow the procedures below.

1. Remove the V belt from the motor pulley and then remove the machine from the table.
2. Remove screw D and then drain the oil.
Be careful not to stain V belt with the oil.
3. After draining the oil, be sure to tighten screw D.
4. Fill the machine with oil by referring to 4-2 shown above.



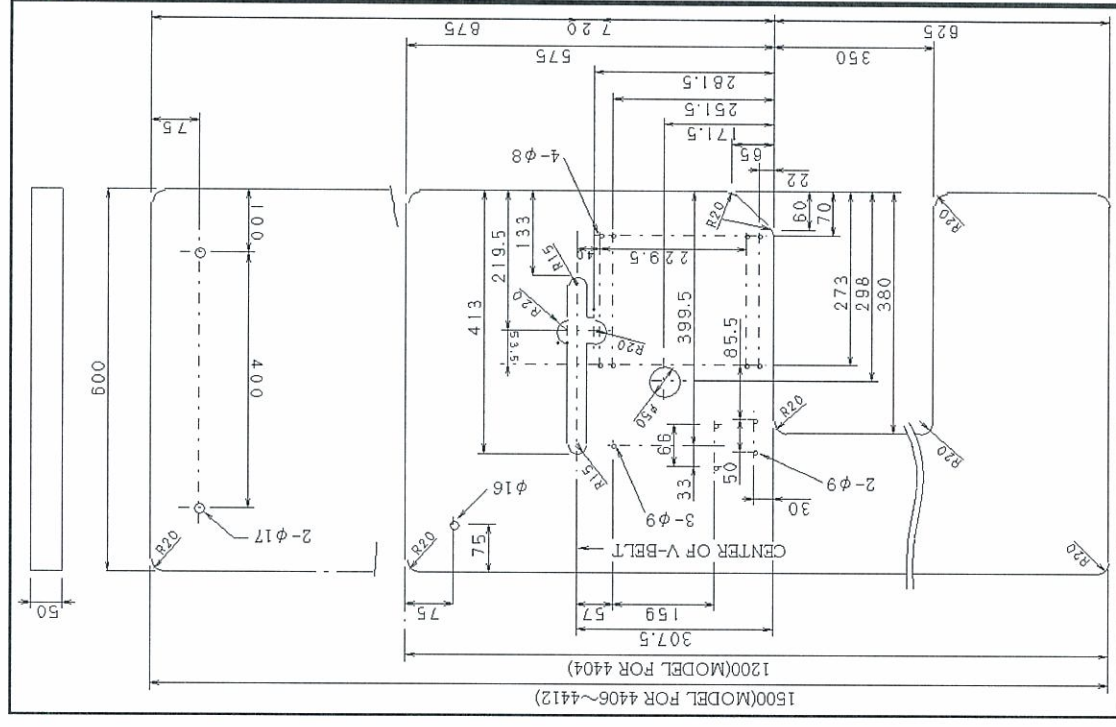
If element E is contaminated, proper oiling may not be performed.
Clean the filter element every six months. If just a little or no oil flows out from the nozzle with the proper amount of oil in the machine, check the element.
To do so, remove oil filter cap F. Replace the element if necessary.

< *Note* >

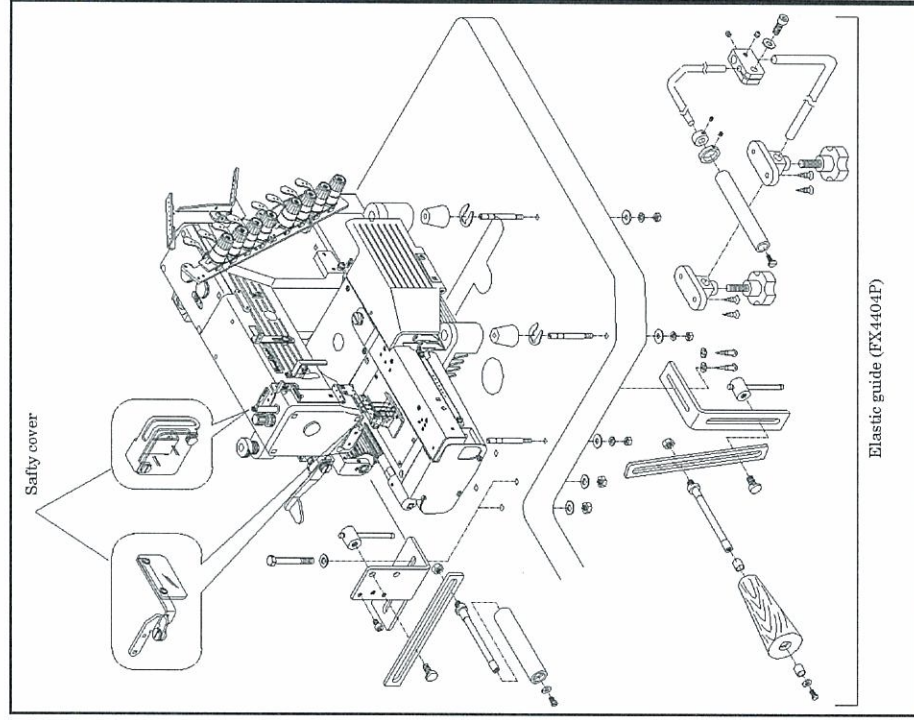
When the oil filter cap is removed, the oil collected on the element drips. Be careful.

【5】SEWING MACHINE INSTALLATION

5-1 Cutting the machine table



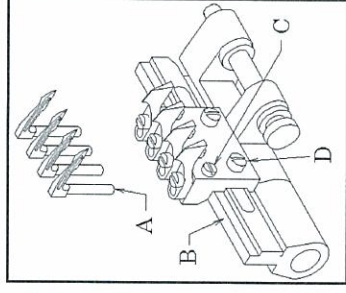
5-2 How to install the machine



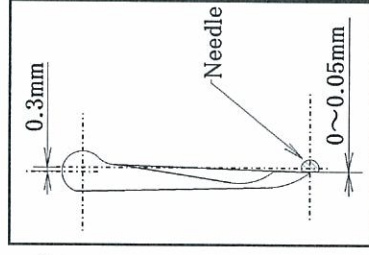
[6] TIMING OF THE LOOPER TO THE NEEDLE

6-1 Positioning the looper and the looper rocker

Insert the looper into the looper holder until bottom A of the looper touches to looper rocker B. Then tighten screw C.



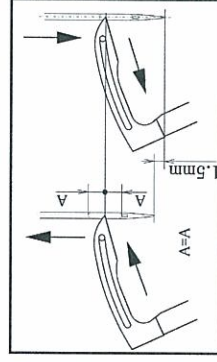
■ Location of looper holder have to be located in the point of needle have to be positioned with 0.3mm from center of back side of looper should be adjusted by screw D on looper holder. Then when the point of looper reach at needle scarf, the clearance should be 0~0.05mm is adjusted by screw C for fixing looper angle.



6-2 Looper left-to-right movement

The timing must be decided the difference of its height, when the pulley is moved regular turning and reverse turning as shown figure. Needle position should be 1.5mm lower when the looper returns by the center of the needle than when it goes by the right.

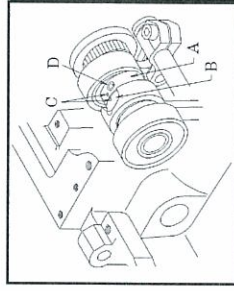
When the looper passes the needle, it points at the middle of concave (scarf) of the needle like the drawing below.



To make this adjustment, remove the top cover first.

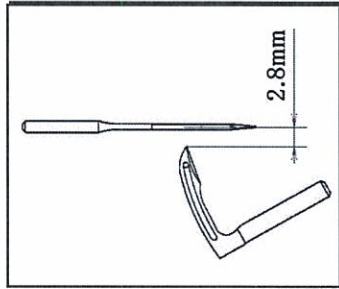
Loosen screw D. Then move eccentric A.

For standards, marks C is turned upward when the needle is at the top of its stroke (at the same position as eccentric B).

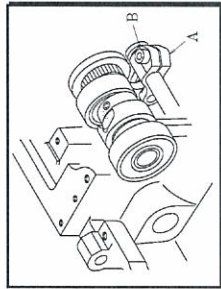


6-3 Loop setting distance

When the needle bar is at the bottom of its stroke, there should be a distance of 2.8mm from the point of the loop to the center of the needle bar.



Adjustment is made by removing the top cover and loosening screw B for lever A.

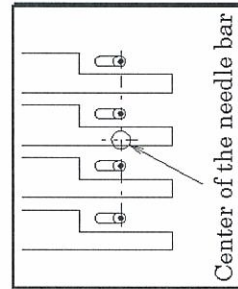
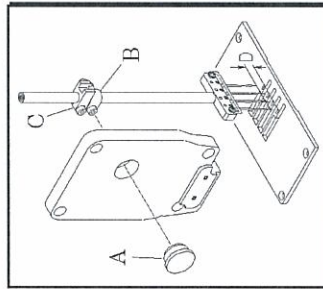


6-4 Needle height

When the needle bar is at the top of its stroke, remove plug A on the head plate, loosen needle bar clamp B with a hex. wrench and then move the needle bar up or down.

< Standard needle height (distance D) >		
Stroke	Standard model	With thread trimmer
34.5mm	13.5mm	12.5mm

< Note >
Do not loosen the screw on needle bar guide C.
If this screw is loosened, make sure each needle drops into the center of the needle drop hole and then retighten the screw.

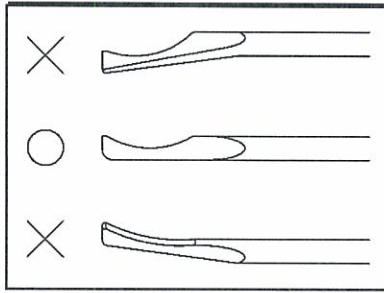
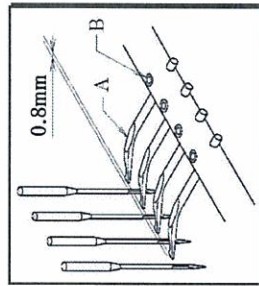


Center of the needle bar

[7] TIMING OF THE RETAINER LOOPER

7-1 Installing the retainer looper

Install retainer looper A with its flat surface turned upward. There should be a clearance of 0.8mm between the needle and the point of the retainer looper. After this adjustment, tighten screw B.

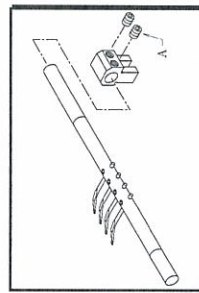
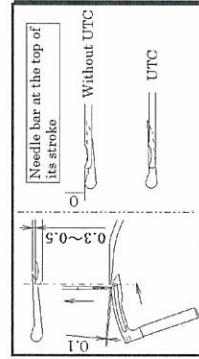


7-2 Timing of the retainer looper to the needle

When the looper's eye is close to the point of the retainer looper while the needle bar is ascending to the top of its stroke, there should be a clearance of 0.3~0.5mm between the right side of the retainer looper and that of the looper. When the needle bar is at the top of its stroke, there should be a clearance of 0mm between the right side of the retainer looper and that of the top surface (heel) of the looper blade.

■ UTC Model

At the highest point of the needle, the rightmost part of the looper mid body and the rightmost end of the spreader must be co-lined.

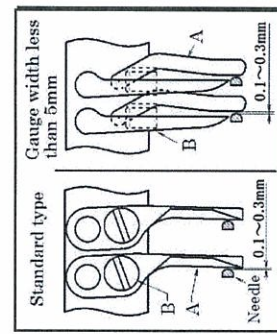


[8] ADJUSTING THE NEEDLE GUARD

8-1 Position of the needle guard

When the right side of the needle is the closest to needle guard A, there should be a clearance of 0.1~0.3mm between them. Adjustment is made by loosening screw B.

< Note >
For a standard type of needle guard, loosen the looper set screw after positioning the looper rocker, adjust the needle guard and then tighten screw B.



[9] ADJUSTING THE FEED DOG & STITCH LENGTH

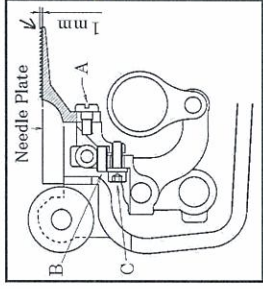
9-1 Feed dog height & tilt

When the feed dog teeth have reached the top surface of needle plate, the feed dog should be parallel with the top surface of the needle plate.

When the feed dogs are at the top of their stroke, the front end of feed dog teeth should be 1mm above the top surface of the needle plate.

Tilt adjustment is made by inserting a tool from D and adjusting screws B and C.

Height adjustment is made by loosening screw A.



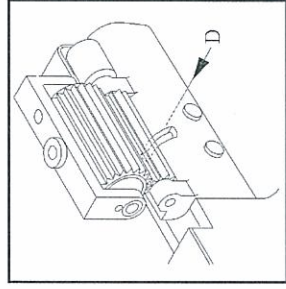
< Note >

When sewing for thinner fabric, adjust the tilting position of the feed dog.

When the feed dogs are at their top of their stroke, the feed dogs should be parallel with the top surface of the needle plate.

< Note >

Before adjusting the height of the feed dog, tilt the looper holder.



9-2 Stitch length

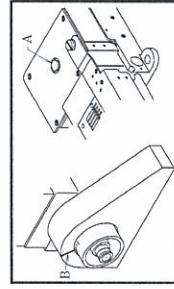
The stitch length can be adjusted from 2 to 5mm with no step.

The following table shows the stitch length with the number of stitches within 1 inch (25.4mm) and 30mm.

Position of pulley	Stitch length (mm)	No. of stitches			
		within 1"		within 30mm	
S	2	13	15		
M	3	8.5	10		
L	5	5	6		

■ To change the stitch length

1. Press push button A lightly with the right hand until the end of push button A touches an inside part and clicks.
2. With push button A depressed, turn the handwheel with the left hand until the push button goes further into the depth.
3. Press the push button strongly again. Then turn the machine pulley to select the stitch length as required.
4. Align the desired stitch length with alignment mark B. Then release the left hand.



< Note >

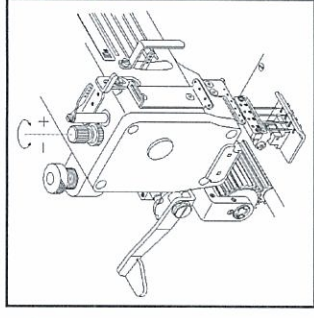
Before changing the stitch length, be sure to turn off the motor.

[10] ADJUSTING THE PRESSER FOOT

10-1 Presser foot pressure

The presser foot pressure should be as light as possible, yet be sufficient to feed the fabric and produce uniform stitches.

To increase the presser foot pressure, turn the adjusting knob clockwise (see the illustration).

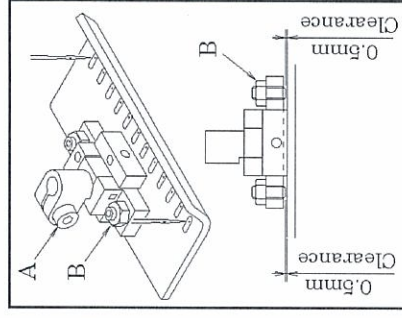


10-2 Position of the presser foot and foot lift

Fit the presser foot properly onto the presser bar.

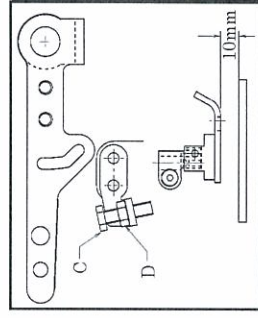
Make sure the needle is centered left to right in the needle drop hole on the presser foot when the needle is descending. Adjustment is made by loosening screw A. There should be a clearance of 0.5mm on both sides as shown in the illustration.

Adjustment is made by loosening nuts B (on FX4406-FX4412).



■ Foot lift

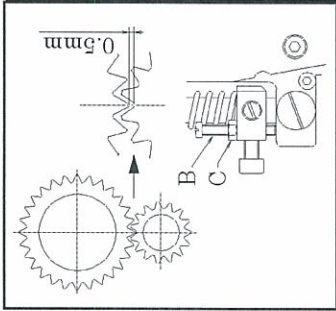
Position stopper C with the presser foot approximately 10mm above the top surface of the needle plate and then tighten nut D.



[11] ADJUSTING THE REAR PULLER DEVICE

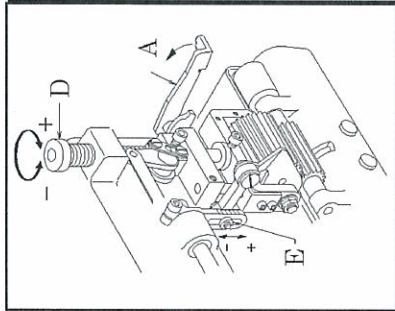
11-1 Manual lever and position of the stopper

To position or remove the fabric, raise manual lever A. With the manual lever lowered, hold stopper B so that the clearance between the upper and lower pullers is 0.5mm. Then tighten nut C.



11-2 To adjust the puller pressure

The puller pressure should be as light as possible, yet be sufficient to feed the fabric smoothly. To increase the pressure, turn adjusting knob D clockwise. To decrease the pressure, turn adjusting knob D counterclockwise.



11-3 To adjust the feeding amount of the rear puller

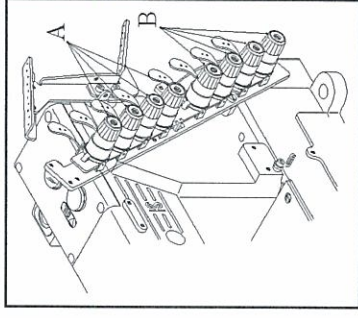
Adjust the feeding amount of the rear puller according to that of the feed dog. To increase the amount, loosen nut E and move it down. To decrease the amount, loosen nut E and move it up.

[12] ADJUSTING THE STITCH FORMATION

12-1 Thread tension adjustment

Thread tension varies according to sewing conditions such as the fabric, thread and stitch length to be used. Tension on the needle thread can be adjusted with nuts A. Tension on the looper thread can be adjusted with nuts B. To increase the tension, turn the nuts clockwise.

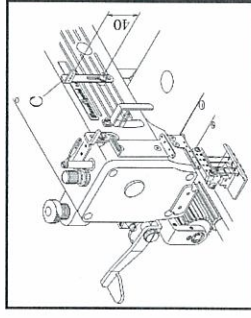
< Note >
The tension should be as light as possible, yet be sufficient to produce uniform stitches.



12-2 Position of the needle thread eyelet

Position needle thread eyelet C so that the distance from the center of the screw to the eyes of C is approximately 40mm.

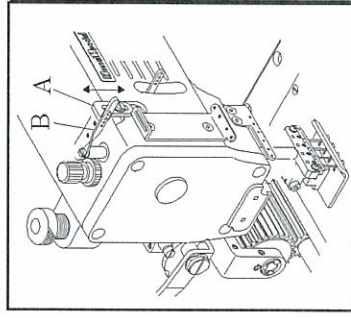
< Note >
Adjust the needle thread eyelet according to the thread to be used. To tighten the needle thread, raise the needle thread eyelet.



12-3 To adjust the needle thread guard

With the needle bar at the bottom of its stroke, the centers of the eyes on needle bar eyelet B should be level and parallel with the top surface of needle thread guard A.

< Note >
Raising needle thread guard A increases the size of the needle thread loop.
Lowering needle thread guard A decreases the size of the needle thread loop.

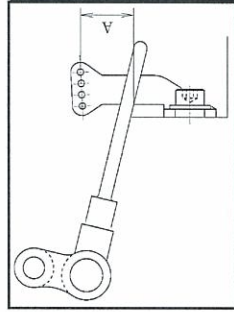
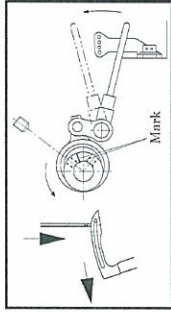


12-4 Position and timing of the looper thread take-up eyelet

When the point of the needle is level with the top surface of the looper while the needle bar is descending from the top to bottom of its stroke on the back side of the looper, the looper thread take-up bar should start ascending.

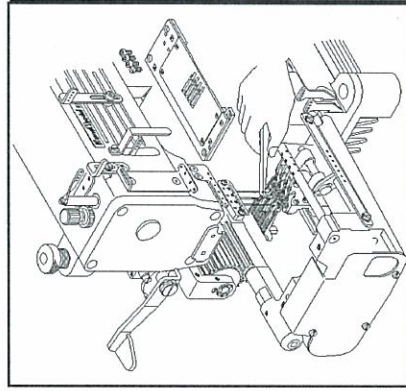
Adjustment is made by loosening the screw and aligning the mark on the eccentric with that on the main shaft. When the looper thread take-up bar is at the bottom of its stroke, adjust distance A from the eyes on the thread eyelet to the looper thread take-up bar by referring to the table below.

Thread type	Distance A
Polyester	8mm
Spun	10mm
Woolly	15mm



[13] CLEANING THE MACHINE

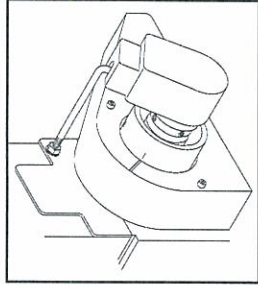
At the end of each day, remove the presser foot and the needle plate and then clean the slots of the needle plate and the area around the feed dogs.



THE THREAD TRIMMER FOR UTC MODEL

[14] INSTALLING THE POSITION DETECTOR

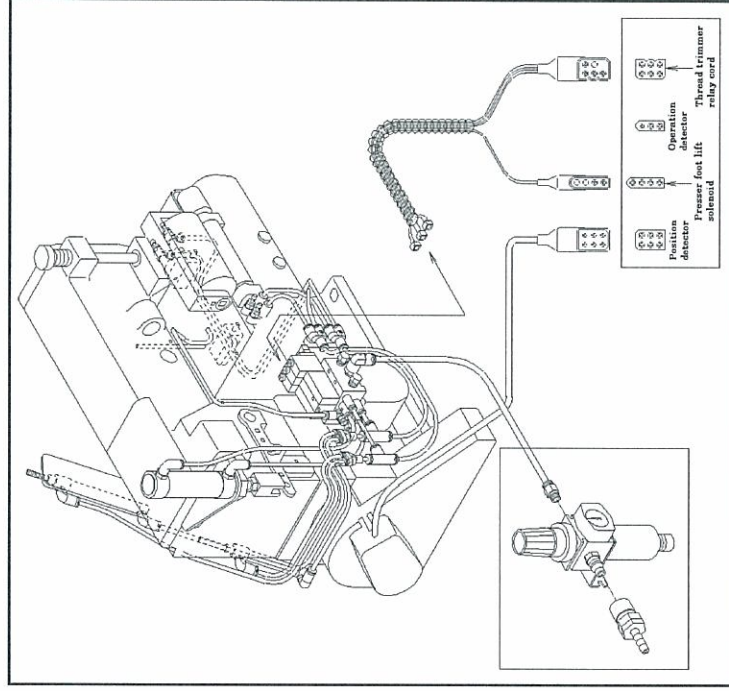
- Install the position detector by referring to the illustration on the right.

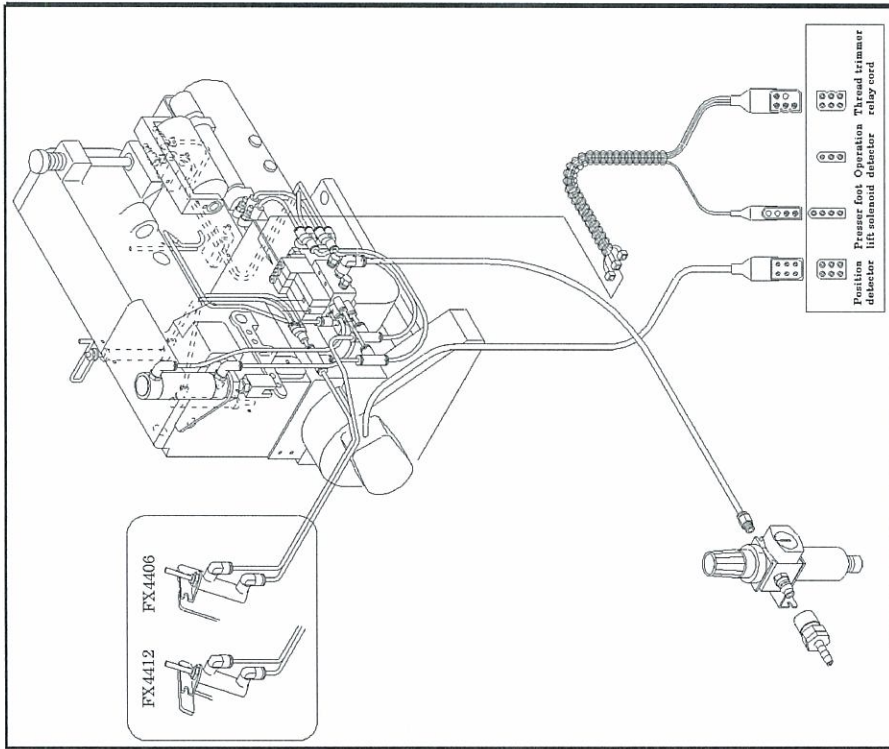


[15] CONNECTING RELAY CORDS AND AIR LINES

15-1 FX4404

- Connect relay cords and air lines correctly by referring to the illustration and parts list.



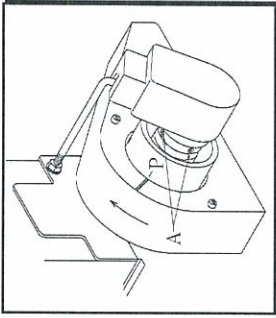


[16] ADJUSTING THE NEEDLE STOP POSITION

Adjust the motor so that the needle bar stops at the top of its stroke. Then start the machine and check to see if the needle bar stops at the top of its stroke. Loosen screws A on the position detector. Align mark P on the pulley with the alignment mark on the cover. Then tighten screws A. Check to make sure again the needle bar stops at the top of its stroke.

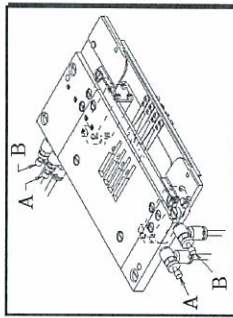
< Note >

Do not connect the relay cord to the motor until the stop position of the needle is adjusted.
Check to see if the thread trimmer knife is fully retracted. Adjust the motor so that the machine pulley turns clockwise.



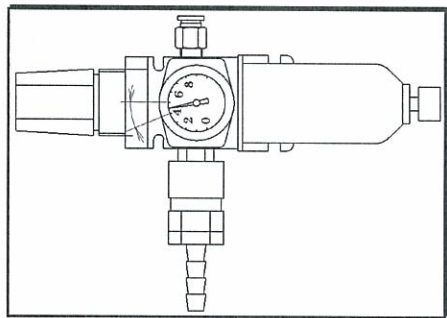
[17] ADJUSTING THE SPEED CONTROLLER AND AIR PRESSURE

Speed controller A controls the speed when the thread trimming knife holder protrudes.
Speed controller B controls the speed when the thread trimming knife holder retracts.
If screw A is too loosened, the knife holder will protrude too fast and then the position of the knife holder will become unstable, causing cutting errors.
If screw B is too loosened, the knife holder will retract too fast and then the looper thread may not be held properly (the speed controllers are factory-set).



< Note >

Set the regulator at 4~5kg/cm².
To increase the pressure, turn the adjusting knob clockwise. Excessive pressure will give a shock to movable parts and cause damage and trouble.



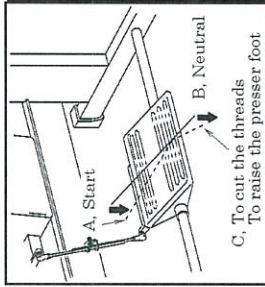
【18】HOW TO USE THE PEDAL

Pressing the pedal with toe (position A) starts the machine. Releasing the pedal (position B) stops the needle at the top/bottom of its stroke (adjustable with the motor). Pressing the pedal with heel (position C) raises the needle. As soon as the needle stops at the top of its stroke by pressing the pedal with heel, the thread trimmer gets actuated (if the needle stops at the top of its stroke as adjusted, the thread trimmer gets actuated without pressing the pedal with heel).

After the needle and looper threads are cut with the needle stopped at the top of its stroke, the looper thread is held by the clamp spring and the needle thread is moved up to the presser foot by the air wiper.

Keep on pressing the pedal with heel to raise the presser foot.

Then remove the fabric. If you want to raise the presser foot while the machine stops, press the pedal with heel (position C).



【19】ADJUSTING THE THREAD TRIMMER

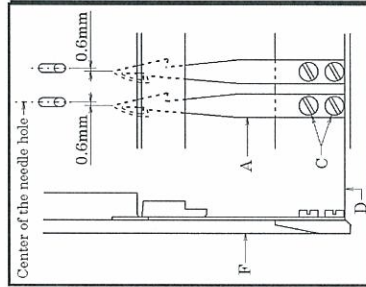
19-1 Position of the movable knife

Adjust movable knife A so that the bottom of movable knife base D is flush with that of movable knife A.

Adjustment is made by loosening two screws C.

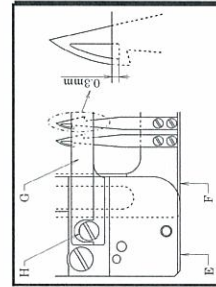
The point of the movable knife should be 0.6mm to the left of the center of the needle hole.

With the movable knife retracted, front E of the needle plate support bracket, should be almost aligned with front F of the movable knife base.



19-2 Position of the stationary knife

With the movable knife fully retracted, there should be a overlap of 0.3mm between stationary knife G and the movable knife. Adjustment is made by loosening screw H.



<Note >

If the gauge width is large, the overlap of the stationary knife and the right movable knife should be equal to that of the stationary knife and the left movable knife. To achieve this adjustment, check to see if the stationary knife is placed in a horizontal position.

19-3 Adjusting the back spring

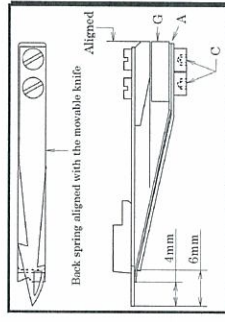
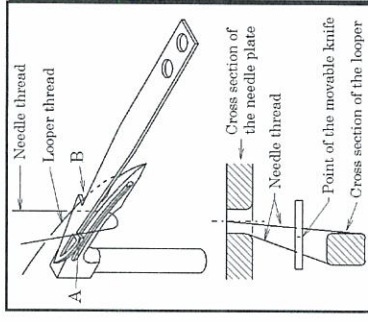
To cut the needle and looper threads, the movable knife moves to the stationary knife with the needle thread hooked on cutting edge A and the looper thread hooked on cutting edge B while entering the needle thread loop (see the illustration).

Then the looper thread is held by the stationary knife and the back spring.

Position the back spring by referring to the illustration and secure it with screws C.

<Note >

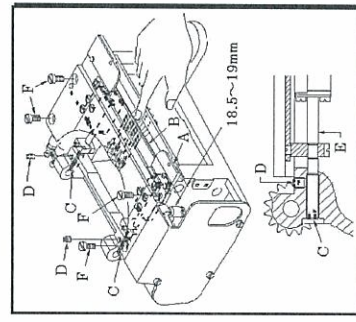
Adjust the back spring so that the back spring does not hold the needle thread after it is cut.



19-4 Adjusting the stopper

Stopper C adjust the position to which the movable knives protrude. With the needle bar at the top of its stroke, press the center of movable knife base B until the movable knives touch the stopper.

Loosen screws D. Adjust the movable knives so that they touch the stopper when the distance from bottom surface B of the movable knife base to bottom surface A of the needle plate is 18.5~19mm. Adjustment is made by loosening screws D.



<Note >

End E of the cylinder rod should tightly contact left and right stoppers C. Be sure to turn off the air when adjusting the stoppers.

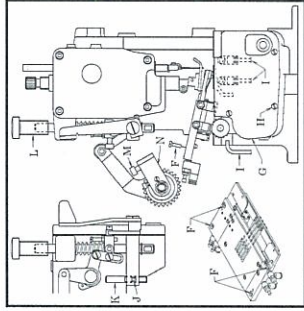
19-5 Disassembling and reassembling the knife assembly

The knife assembly is secured with four screws F.

Do not loosen other screws.

Perform preventive maintenance such as replacing the knife by following the procedures below.

1. Loosen screw H for front cover G.
Disconnect four air lines I.
2. Loosen four screws F with the needle plate set screw.
3. Loosen screw J and remove pin K.
4. Loosen screw L. Remove presser foot lift lever L.
Loosen screw M. move puller holder assembly N.
5. Remove the needle plate as shown in the illustration.
6. Reassemble the knife assembly by following the reverse procedures of the above after performing preventive maintenance.

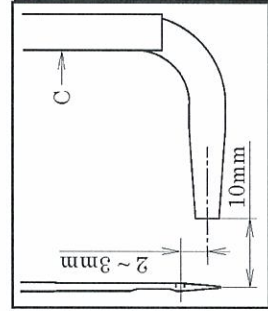
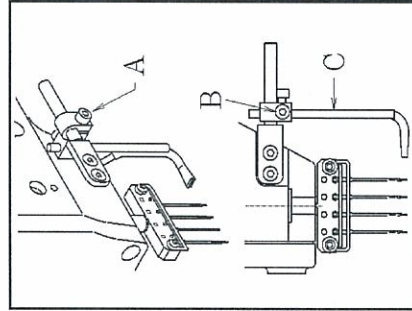
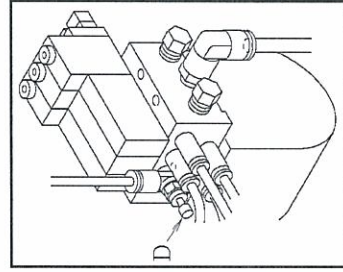


[20] ADJUSTING THE AIR WIPER

The outlet of air wiper C should be positioned approximately 10mm to the right of the right needle. Adjustment is made by loosening screw A.

The outlet should be 2~3mm below the eye of the needle. Adjustment is made by loosening screw B. The time when the air wiper is blowing is factory set at 2 sec. Adjustment can be made by changing the settings on the motor. Read the instruction manual for the motor carefully for more information. The amount of the air should be sufficient to remove the needle thread from the fabric.

Adjustment is made by turning speed control D as required (the amount of the air on FX4412P/UTC is fixed).

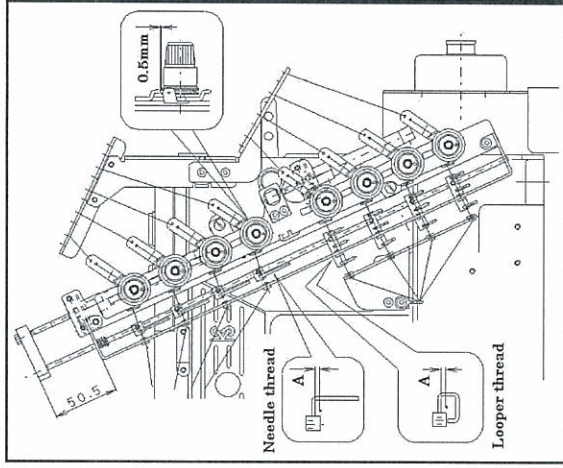


[21] THREADING & ADJUSTING THE THREAD RELEASER

21-1 For 4-needle machines

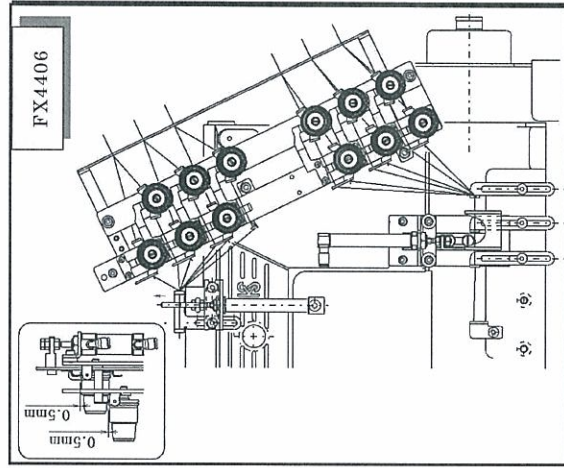
Thread the machine correctly by referring to the illustration on the right. Adjust the standby position of the releaser block for the needle and looper threads according to the distance in the illustration below. To increase the amount of the thread to be released, decrease distance A.

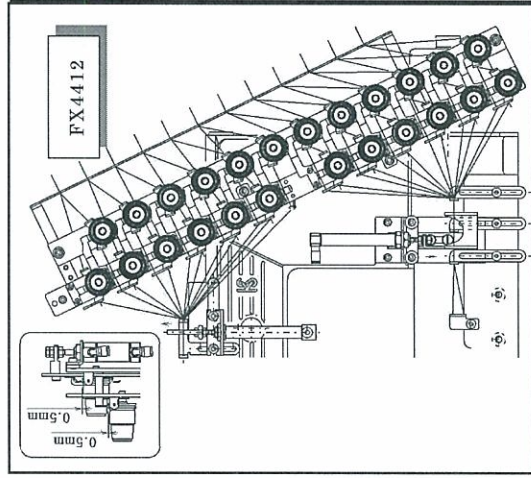
To decrease the amount of the thread to be released, increase distance A. If stretchable threads are used, decrease distance A.



21-2 For 6- to 12-needle machines

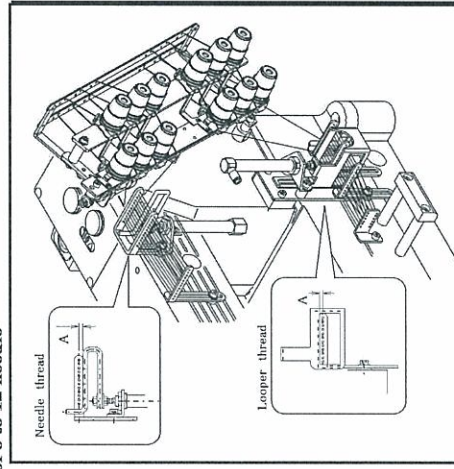
Thread the machine correctly by referring to the illustration on the right.





21-3 Adjustment for tension releaser of 6 to 12 needle

Thread the machine correctly by referring to the illustration on the right. Install the thread eyelets for the needle and looper threads according to the distance in the illustration below. To increase the amount of the thread to be released, decrease distance A. To decrease the amount of the thread to be released, increase distance A. If stretchable threads are used, decrease distance A.



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