

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, UTA
FX4406P/UTC
FX4408P, PL
FX4409P/UTC
FX4412P/UTC, UTA
FX4413P
FX4413P/UTC
FX4418P, 4423P/UTA
FX4421P, PE
FX4423P, PMD
FX4418SPF-SA

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No. 160017

KANSAI
SPECIAL®

■このパーツブックは、2016年03月製造中のFXシリーズのデータに基づいて作成されたものです。

■各機構別に収録され、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。

■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。

■This parts book is based on data current March 2016.

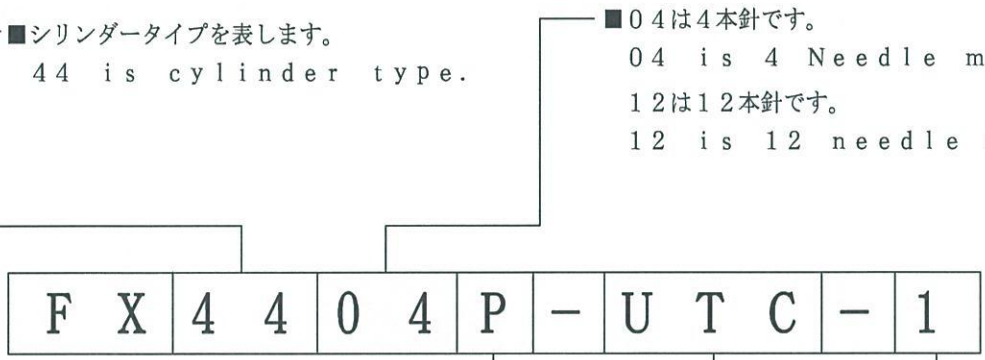
■Each mechanism is arranged on facing pages. You will find listed for parts number, names, and quantities.

■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

FX SERIES INFORMATION



■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.

■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は後スムーズフ[°] ーラー装置付です。
PE is with smooth rear puller.

■SPFは プ[°] ーラーシフト機構付の腰裏用カーブ縫いです。
SPF for stitching curved waist bands with puller sift mechanism.

■針幅です。(インチ)
Needle width (inch)

(PNEUMATIC TYPE ONLY)

■UTCはエア[°]式糸切装置付マシンです。
UTC is with thread trimmer unit.

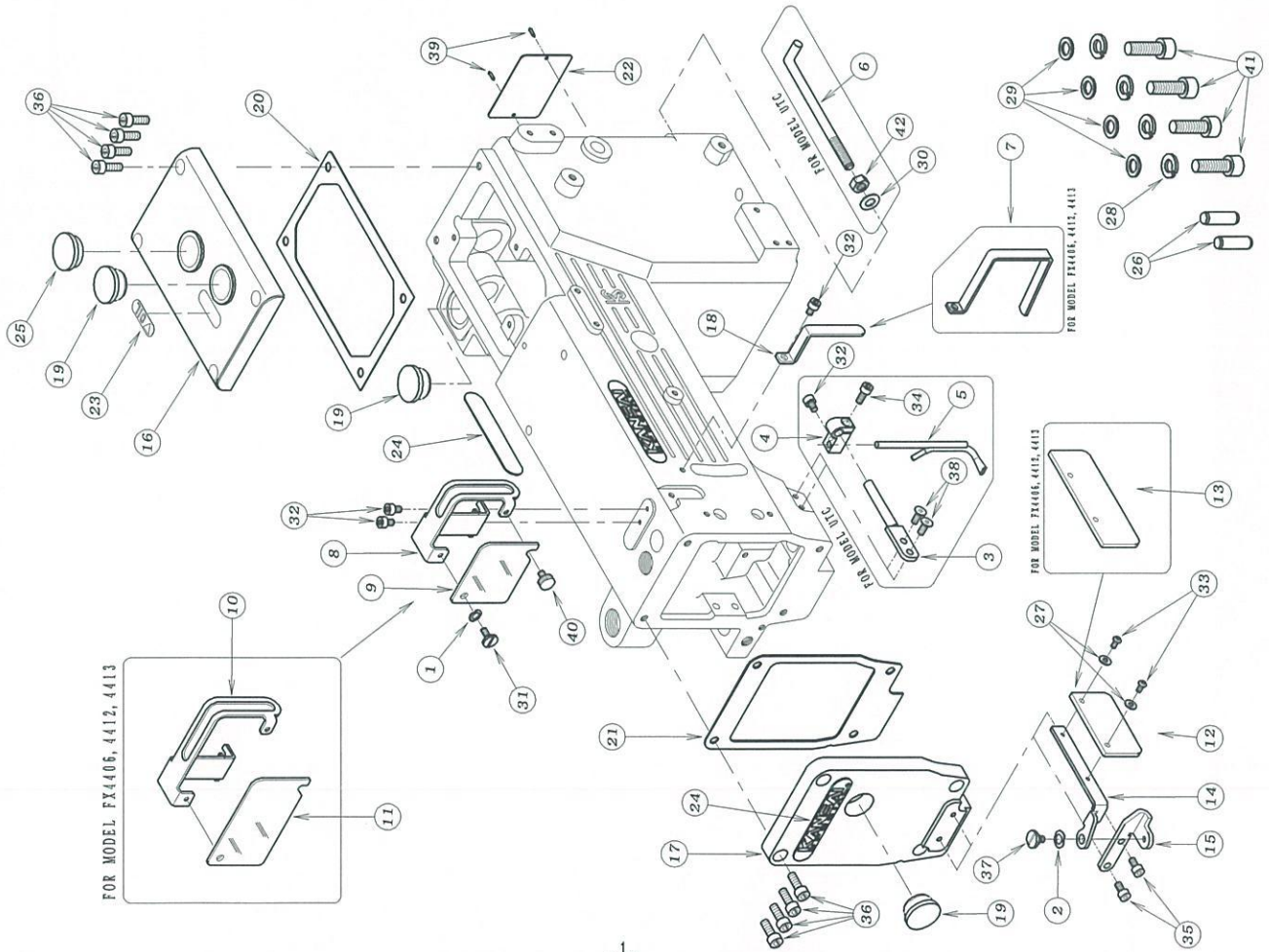
■UTAはスレット[°] キーパ[°] ー機構付糸切装置付マシンです。
UTA is thread trimmer unit with thread keeper mechanism.

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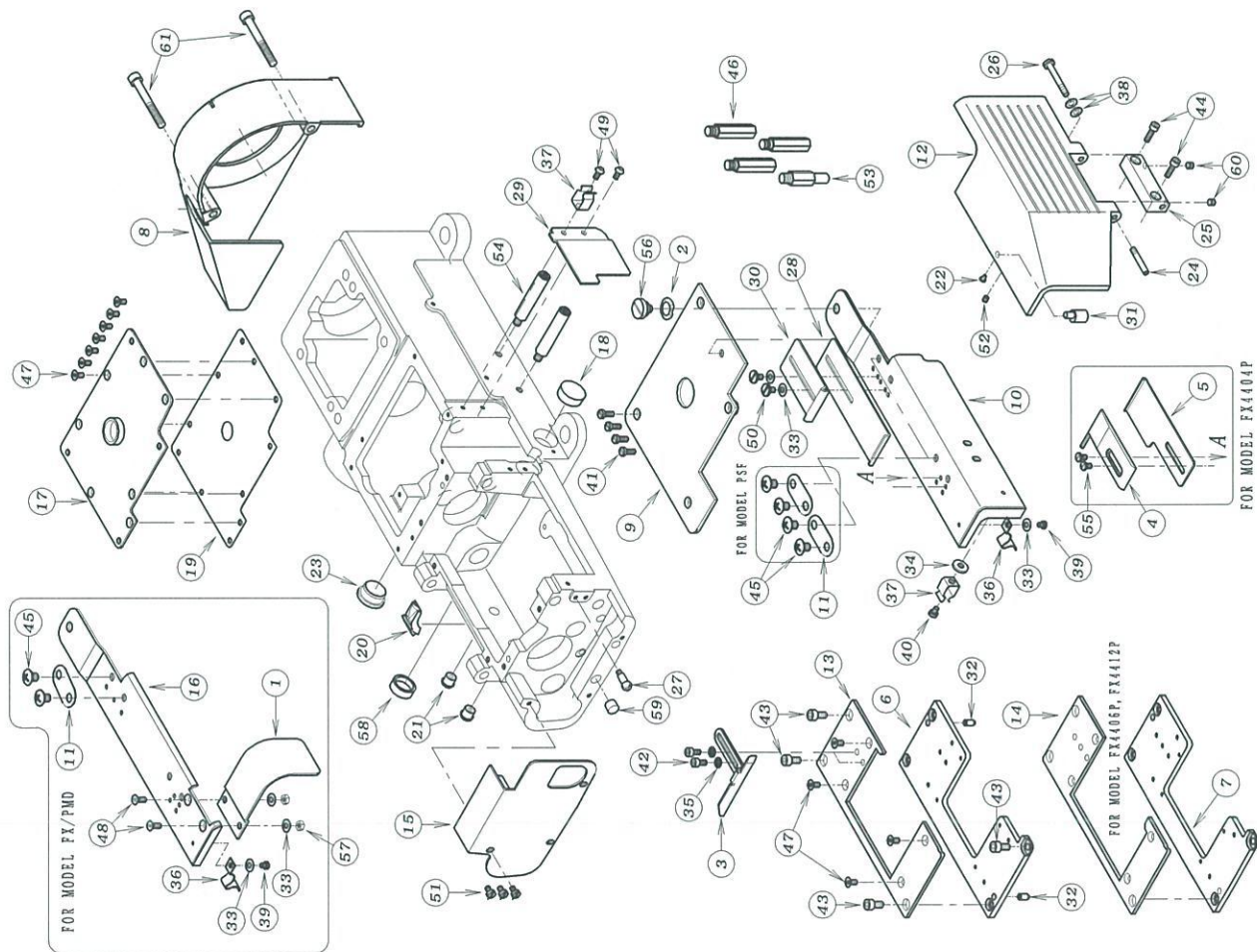
1. フレーム関係 (1) FRAME ASSEMBLY (1)



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|--------------|------------------|------|
| 01-01 | 02-118 | 波ワッシャ | WASHER | 1 |
| 01-02 | 02-119 | 波紙金 | 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 | 検出器止め金具 | COVER | 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-ブローケット | BRACKET | 1 |
| 01-16 | 21-459 | 立ロットカバー | 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 | コネクタ | PLUG | 3 |
| 01-20 | 23-462 | ハッソキン | GASKET | 1 |
| 01-21 | 23-465 | 面版パッキン | GASKET | 1 |
| 01-22 | 24-053 | モジュールステッカー | TYPE PLATE | 1 |
| 01-23 | 24-401 | オイルマーシール | OIL MARK | 1 |
| 01-24 | 24-052 | KSマーク | KS MARK | 2 |
| 01-25 | 39-502 | オイルホット窓 | OIL SIGHT WINDOW | 1 |
| 01-26 | 71-580 | チーパビン | PIN | 2 |
| 01-27 | 75-224 | ワッシャ | WASHER | 2 |
| 01-28 | 75-225 | スプリングワッシャ | 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 | 六角穴付きボルト | 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 | 2 |
| 01-35 | 87-177 | 六角穴付きボルト | BOLT | 1 |
| 01-36 | 87-224 | 六角穴付きボルト | BOLT | 2 |
| 01-37 | 87-264 | 六角穴付きボルト | BOLT | 8 |
| 01-38 | 87-270 | 六角穴付きボルト | SCREW | 1 |
| 01-39 | 93-701 | ネジ | SCREW | 2 |
| 01-40 | 87-409 | ネジ | PIN | 2 |
| 01-41 | 87-661 | 六角穴付きボルト | SCREW | 1 |
| 01-42 | 88-166 | ナット | BOLT | 4 |
| | | | NUT | 1 |

2. フレーム関係 (2) FRAME ASSEMBLY (2)

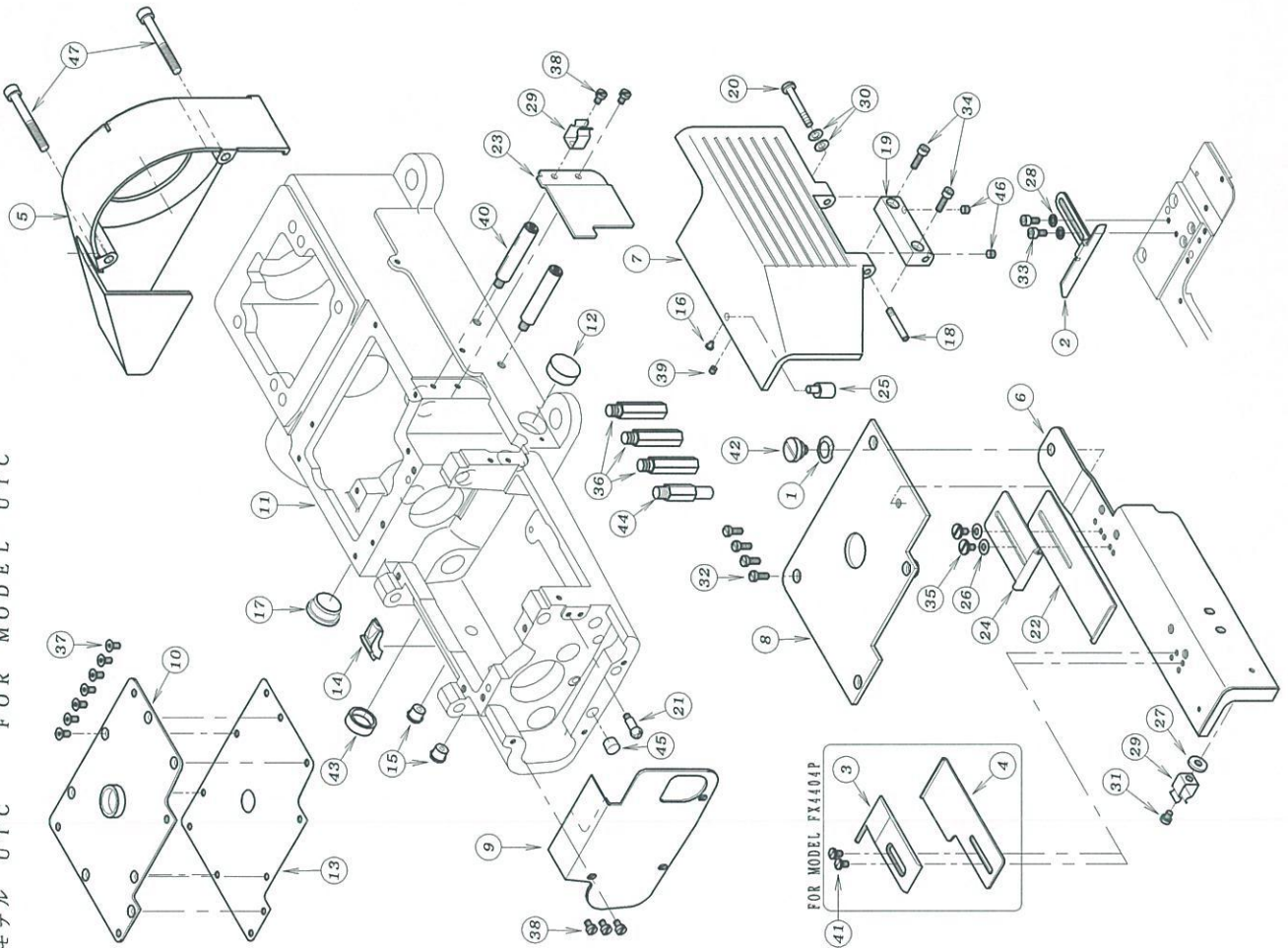
■モデル UTC 除く EXCEPT MODEL UTC



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|--------------|------------------------------|------|
| 02-01 | 101-1108 | 前フ-ラーカハ- | COVER | 1 |
| 02-02 | 102-1112 | 液ワッシャー | WASHER | 1 |
| 02-03 | 109-402 | 生地ガイド (右) | FABRIC GUIDE (RIGHT) | 1 |
| 02-04 | 109-403 | ゴムガイド (左) | TAPE GUIDE (LEFT) | 1 |
| 02-05 | 109-404 | ゴムガイド (右) | TAPE HOLDER | 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 | 127-147 | プ-リ-カハ- | PULLEY COVER | 1 |
| 02-09 | 21-269 | 上ベ-スカハ- | UPPER COVER | 1 |
| 02-10 | 21-270 | 前ベ-スカハ- | FRONT PLATE COVER | 1 |
| 02-11 | 26-712 | 取付金具 | WASHER | 1~2 |
| 02-12 | 21-272 | 前カハ- | FRONT COVER | 1 |
| 02-13 | 21-279 | 針板土台化粧カハ- | COVER | 1 |
| 02-14 | 21-280 | 針板土台化粧カハ- | COVER | 1 |
| 02-15 | 21-297 | 機カハ- | COVER | 1 |
| 02-16 | 21-298 | 前ベ-スカハ- | FRONT COVER | 1 |
| 02-17 | 21-460 | 上油カハ- | COVER | 1 |
| 02-18 | 23-166 | プツシユ蓋ゴ-ム | PLUG | 1 |
| 02-19 | 23-463 | 上油カハ-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 | クッションコ-ム | CUSHION RUBBER | 1 |
| 02-23 | 23-427 | シ-ルキャップ | SEAL CAP | 1 |
| 02-24 | 25-527 | カハ-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 | カハ-ストップ'ネジ' | SCREW | 1 |
| 02-28 | 109-407 | コ-ムカ'イト' (左) | ELASTICGUIDE (L) | 1 |
| 02-29 | 35-416 | オイルフェンス | OIL FENCE | 1 |
| 02-30 | 109-408 | コ-ムカ'イト' (右) | ELASTICGUIDE (R) | 1 |
| 02-31 | 171-116 | ヒ-ン | PIN | 1 |
| 02-32 | 171-579 | ノックヒ-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 | 振ハ'ネ | SPRING | 2 |
| 02-37 | 79-912 | ハ'ネ | SPRING | 2 |
| 02-38 | 79-922 | 皿ハ'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 | 4 |
| 02-45 | 85-181 | ネジ' | SCREW | 2~4 |
| 02-46 | 87-258 | スタント'ヒ-ン | PIN | 3 |
| 02-47 | 87-269 | ネジ' | SCREW | 1 |
| 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 | スタント'ヒ-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 | 取付ネジ' | SCREW | 1 |
| 02-57 | 188-146 | ナット | NUT | 2 |
| 02-58 | 94-506 | オイルシ-ル | OIL SEAL | 1 |
| 02-59 | 123-528 | フ-ラク' | PLUG | 1 |
| 02-60 | 87-274 | ネジ' | SCREW | 2 |
| 02-61 | 87-435 | 六角穴付きボルト | BOLT | 2 |

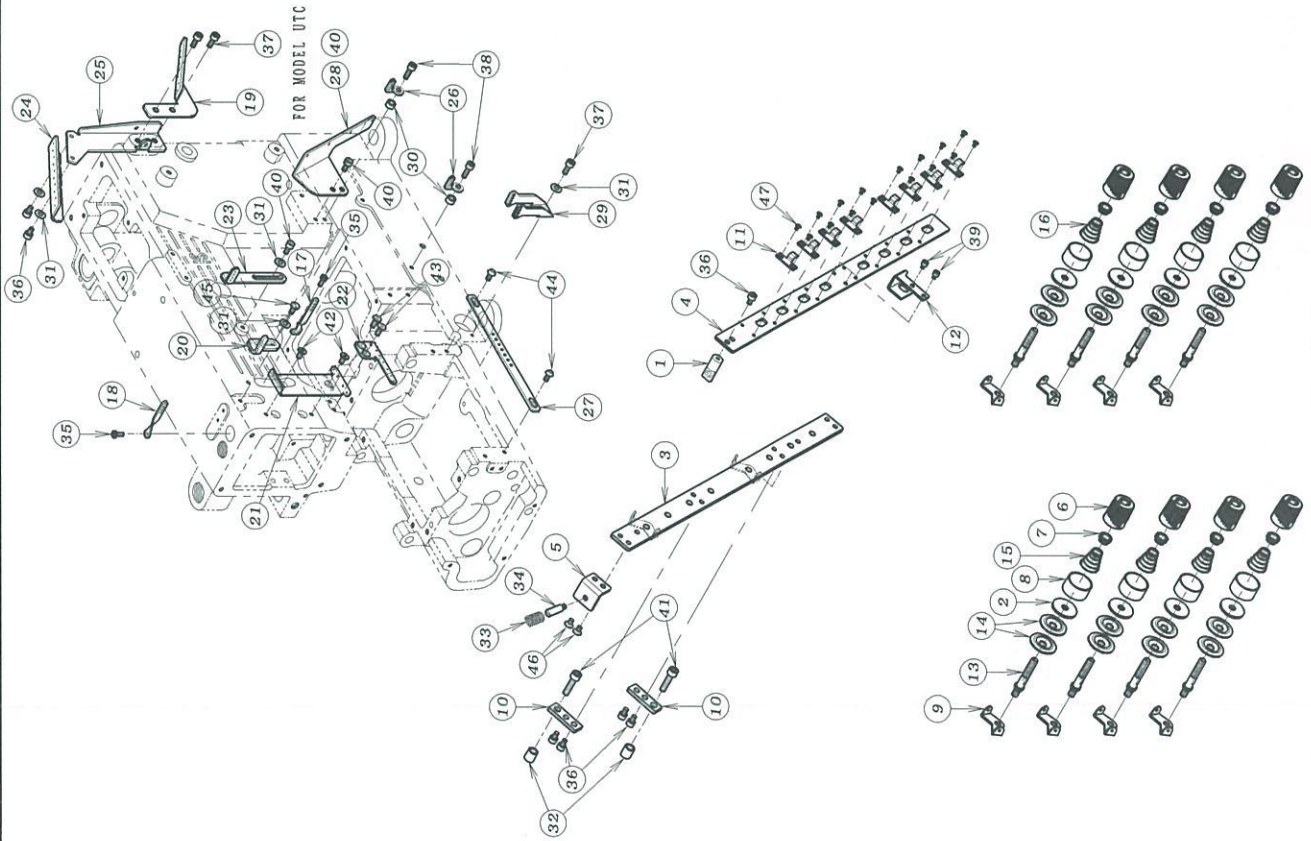
3. フレーム関係 (3) FRAME ASSEMBLY (3)

■モデル UTC FOR MODEL UTC



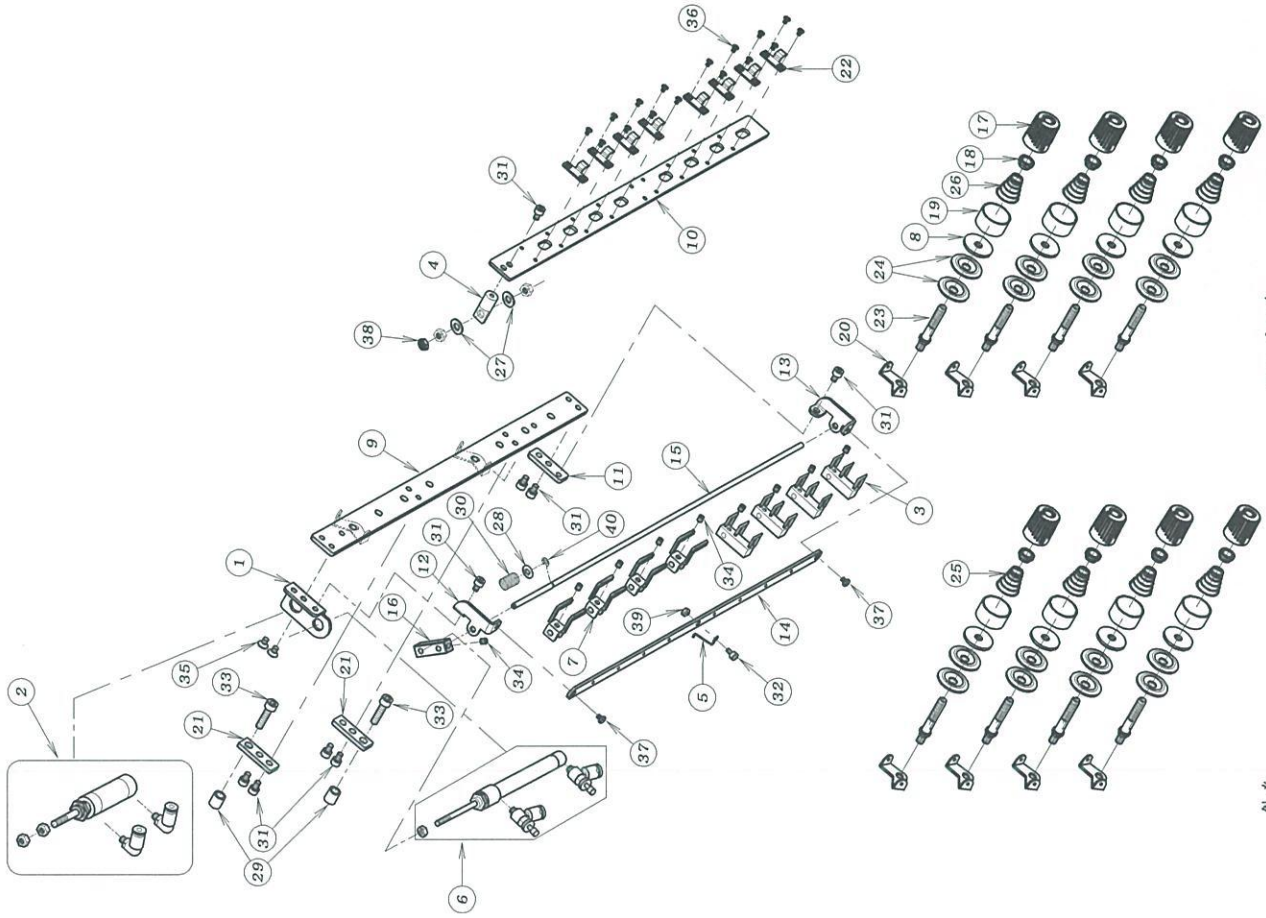
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|--------------|------------|----|----------------------|-----|
| 03-01102-112 | 緩ワッシャー | | WASHER | 1 |
| 03-02109-402 | 生地ガイド (右) | | FABRIC GUIDE (RIGHT) | 1 |
| 03-03109-403 | ゴムガイド (左) | | TAPE GUIDE (LEFT) | 1 |
| 03-04109-404 | ゴムガイド (右) | | TAPE HOLDER | 1 |
| 03-05127-147 | フリースカパー | | PULLEY COVER | 1 |
| 03-06121-270 | 前ベースカパー | | FRONT PLATE COVER | 1 |
| 03-07121-272 | 前カパー | | FRONT COVER | 1 |
| 03-08121-277 | 上ベースカパー | | UPPER COVER | 1 |
| 03-09121-278 | 横カパー (UTC) | | SIDE COVER | 1 |
| 03-10121-460 | 上油カパー | | COVER | 1 |
| 03-11122-407 | シリンダー加工 | | SYLINDER BED | 1 |
| 03-12123-166 | ブッシュ蓋ゴム | | PLUG | 1 |
| 03-13123-463 | 上油カパーパッキン | | GASKET | 1 |
| 03-14123-467 | 送り土台用ゴム栓 | | PLUG | 1 |
| 03-15123-501 | ゴム栓 | | PLUG | 2 |
| 03-16123-512 | クッションゴム | | CUSHION RUBBER | 1 |
| 03-17123-427 | シールキャップ | | SEAL CAP | 1 |
| 03-18125-527 | カパーヒンジネジ | | SCREW | 1 |
| 03-19125-516 | 花綱台ヒンジ | | HINGE | 1 |
| 03-20125-517 | ヒンジネジ | | SCREW | 1 |
| 03-21125-522 | カパーストップネジ | | SCREW | 1 |
| 03-22109-407 | ゴムガイド (左) | | ELASTIC GUIDE (L) | 1 |
| 03-23135-416 | オイルフェンス | | OIL FENCE | 1 |
| 03-24109-408 | ゴムガイド (右) | | ELASTIC GUIDE (R) | 1 |
| 03-25171-116 | ピン | | PIN | 1 |
| 03-26175-455 | ワッシャー | | WASHER | 2 |
| 03-27175-456 | ワッシャー | | WASHER | 2 |
| 03-28175-468 | ワッシャー | | WASHER | 2 |
| 03-29179-912 | スプリング | | SPRING | 2 |
| 03-30179-922 | スプリング | | SPRING | 2 |
| 03-31187-098 | ネジ | | SCREW | 1 |
| 03-32187-145 | ネジ | | SCREW | 4 |
| 03-33187-177 | 六角穴付きボルト | | BOLT | 2 |
| 03-34187-214 | 六角穴付きボルト | | BOLT | 2 |
| 03-35187-414 | ネジ | | SCREW | 2 |
| 03-36187-258 | スタッドピン | | PIN | 3 |
| 03-37187-269 | ネジ | | SCREW | 7 |
| 03-38187-284 | ネジ | | SCREW | 5 |
| 03-39187-286 | ネジ | | SCREW | 1 |
| 03-40187-411 | 支柱ネジ | | SCREW | 2 |
| 03-41187-415 | ネジ | | SCREW | 2 |
| 03-42187-418 | 股ネジ | | SCREW | 1 |
| 03-43194-506 | オイルシール | | OIL SEAL | 1 |
| 03-44187-410 | スタッドピン | | PIN | 1 |
| 03-45123-528 | プラグ | | PLUG | 1 |
| 03-46187-274 | ネジ | | SCREW | 2 |
| 03-47187-435 | 六角穴付きボルト | | BOLT | 2 |

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



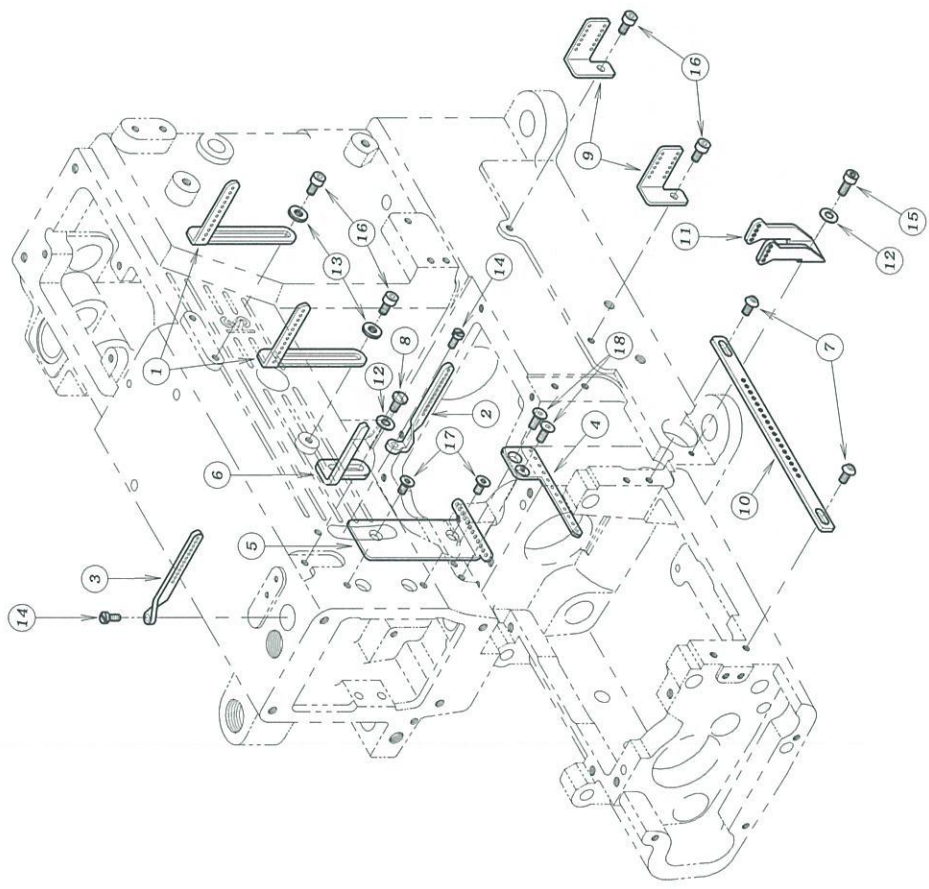
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|--------------|----------------|----------------------|-------------|-----|
| 04-01105-531 | エア-リリソタ'-運結金具 | BRACKET | | 1 |
| 04-0223-324 | フェルト | FELT | | 8 |
| 04-0341-029 | チャンボ'ン台 | PLATE | | 1 |
| 04-0441-030 | 糸繰めフ' レート | PLATE | | 1 |
| 04-0541-031 | 糸繰めフ' 金具 | BRACKET | | 1 |
| 04-0641-104 | チャンボ'ン皿小ケース | THREAD TENSION NUT | | 8 |
| 04-0741-105 | チャンボ'ン皿ワレット | SPRING POST | | 8 |
| 04-0841-106 | 大ケース | SPRING CUP | | 8 |
| 04-0941-115 | 糸道 (上) | THREAD GUIDE | | 8 |
| 04-1041-473 | 取付金具B | BRACKET B | | 2 |
| 04-1141-476 | 糸繰め爪 (小) | NAIL (S) | | 8 |
| 04-1241-478 | 糸繰め金具 | PLATE | | 1 |
| 04-1341-508 | 調子棒 (中) | SCREW STUD | | 8 |
| 04-1441-509 | チャンボ'ン皿 | TENSION DISC | | 16 |
| 04-1541-701 | チャンボ'ン調子パネ (強) | SPRING (HEAVY) | | 4 |
| 04-1641-702 | チャンボ'ン調子パネ (弱) | SPRING (LIGHT) | | 4 |
| 04-1745-123 | 白糸道 | THREAD EYELET | | 1 |
| 04-1845-133 | 針棒糸道 | THREAD EYELET | | 1 |
| 04-1945-428 | 糸ガイド | THREAD EYELET | | 1 |
| 04-2045-429 | 上糸受け | THREAD TAKE-UP PLATE | | 1 |
| 04-2145-430 | 上糸ガイド | THREAD EYELET | | 1 |
| 04-2245-431 | 上糸糸道 (下) | THREAD EYELET | | 1 |
| 04-2345-438 | 上糸糸道 | THREAD EYELET | | 1 |
| 04-2445-546 | 糸カ'イト' | THREAD GUIDE | | 1 |
| 04-2545-547 | 糸カ'イト' フ' ラケット | BRACKET | | 1 |
| 04-2647-104 | 糸道 | THREAD EYELET | | 2 |
| 04-2747-411 | 下糸調子糸案内糸道 | THREAD EYELET | | 1 |
| 04-2847-412 | 糸繰めプレート | THREAD EYELET | | 1 |
| 04-2947-413 | 下糸調子糸道 | THREAD EYELET | | 1 |
| 04-3075-394 | 糸道台ワッヂ | COLLAR | | 2 |
| 04-3175-455 | ワッヂ | WASHER | | 5 |
| 04-3275-943 | カラー | COLLAR | | 2 |
| 04-3379-163 | ハ'ネ | SPRING | | 1 |
| 04-3484-537 | 段ネジ' | SCREW | | 1 |
| 04-3587-010 | ネジ' | SCREW | | 2 |
| 04-3687-092 | 六角穴付きボルト | BOLT | | 7 |
| 04-3787-113 | 六角穴付きボルト | BOLT | | 3 |
| 04-3887-129 | 六角穴付きボルト | BOLT | | 2 |
| 04-3987-142 | ネジ' | SCREW | | 2 |
| 04-4087-177 | 六角穴付きボルト | BOLT | | 2 |
| 04-4187-246 | 六角穴付きボ'ルト | BOLT | | 2 |
| 04-4287-269 | ネジ' | SCREW | | 2 |
| 04-4387-270 | ネジ' | SCREW | | 2 |
| 04-4487-272 | ネジ' | SCREW | | 2 |
| 04-4587-288 | ネジ' | SCREW | | 1 |
| 04-4687-293 | ネジ' | SCREW | | 2 |
| 04-4787-338 | 十字穴皿小ネジM2.5 | SCREW | | 16 |

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



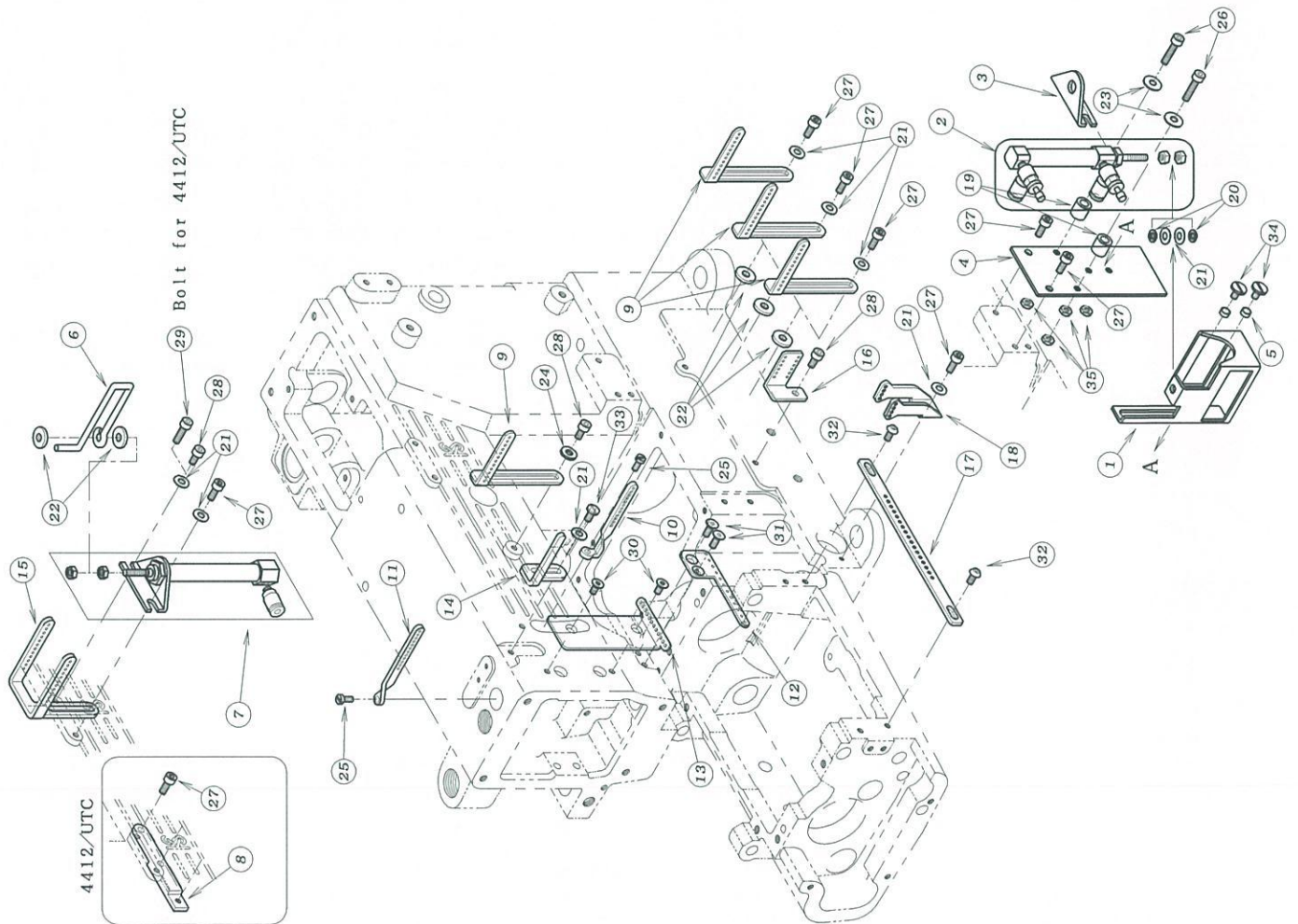
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|----------------|--------------------|-----|
| 05-01 | 105-046 | エアシリンダ' - 取付金具 | AIR CYLINDER CLAMP | 1 |
| 05-02 | 05-450 | エアシリンダ' - | AIR CYLINDER | 1 |
| 05-03 | 05-478 | 糸繰めブロック | BRACKET | 4 |
| 05-04 | 05-531 | エアシリンダ' - 連結金具 | BRACKET | 1 |
| 05-05 | 05-560 | 糸繰め防塵ハ'ネ | SPRING | 1 |
| 05-06 | 05-587 | 糸繰めシリンダ' | AIR CYLINDER ASS'Y | 1 |
| 05-07 | 05-850 | 糸繰めブロック | HOLDER | 4 |
| 05-08 | 23-324 | フェルト | FELT | 8 |
| 05-09 | 41-029 | チャンホ'ント | PLATE | 1 |
| 05-10 | 41-030 | 糸繰めプレート | PLATE | 1 |
| 05-11 | 41-032 | 糸繰め取付金具 | 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 | 糸繰め糸道 | THREAD RELEASE | 1 |
| 05-15 | 41-036 | 糸繰め棒 | BAR | 1 |
| 05-16 | 41-037 | 糸繰め金具 | BRACKET | 1 |
| 05-17 | 41-104 | 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 | 41-106 | 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 | 糸繰め爪 (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 | チャンボン調子ハネ (端) | SPRING (HEAVY) | 4 |
| 05-26 | 41-702 | チャンボン調子ハネ (柄) | 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 | 糸繰め棒防振ハネ | 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



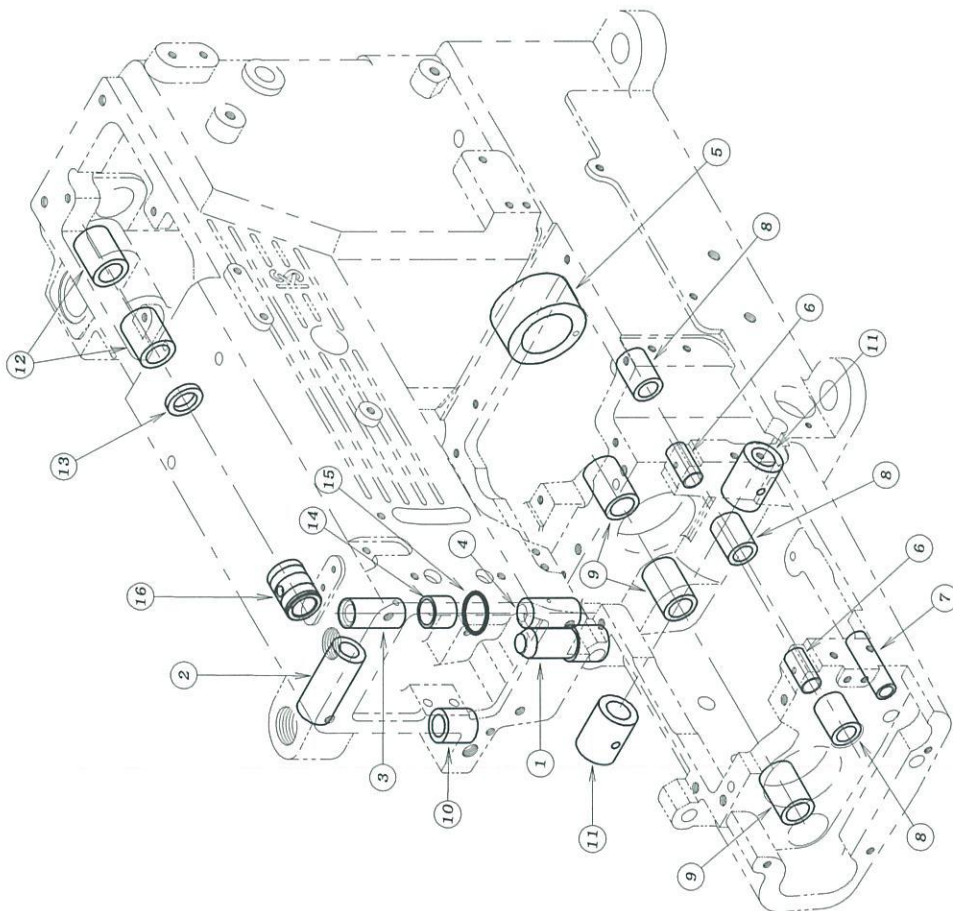
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|-----------|----------------------|------|
| 06-01 | 45-107 | 糸道 | THREAD EYELET | 2 |
| 06-02 | 45-127 | 糸道 | THREAD EYELET | 1 |
| 06-03 | 45-432 | 針棒糸道 | THREAD EYELET | 1 |
| 06-04 | 45-433 | 上糸道 (F) | THREAD EYELET | 1 |
| 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 | 187-272 | ネジ* | SCREW | 2 |
| 06-08 | 187-288 | ネジ* | SCREW | 1 |
| 06-09 | 147-409 | 糸道 | THREAD EYELET | 2 |
| 06-10 | 147-410 | 下糸廻き糸案内糸道 | THREAD EYELET | 1 |
| 06-11 | 147-413 | 下糸廻き糸道 | THREAD EYELET | 1 |
| 06-12 | 75-455 | ワッシャ | WASHER | 2 |
| 06-13 | 175-522 | ワッシャ | WASHER | 2 |
| 06-14 | 187-010 | ネジ* | SCREW | 2 |
| 06-15 | 187-113 | 六角穴付きボルト | BOLT | 1 |
| 06-16 | 187-177 | 六角穴付きボルト | BOLT | 4 |
| 06-17 | 187-269 | ネジ* | SCREW | 2 |
| 06-18 | 187-270 | ネジ* | SCREW | 2 |

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



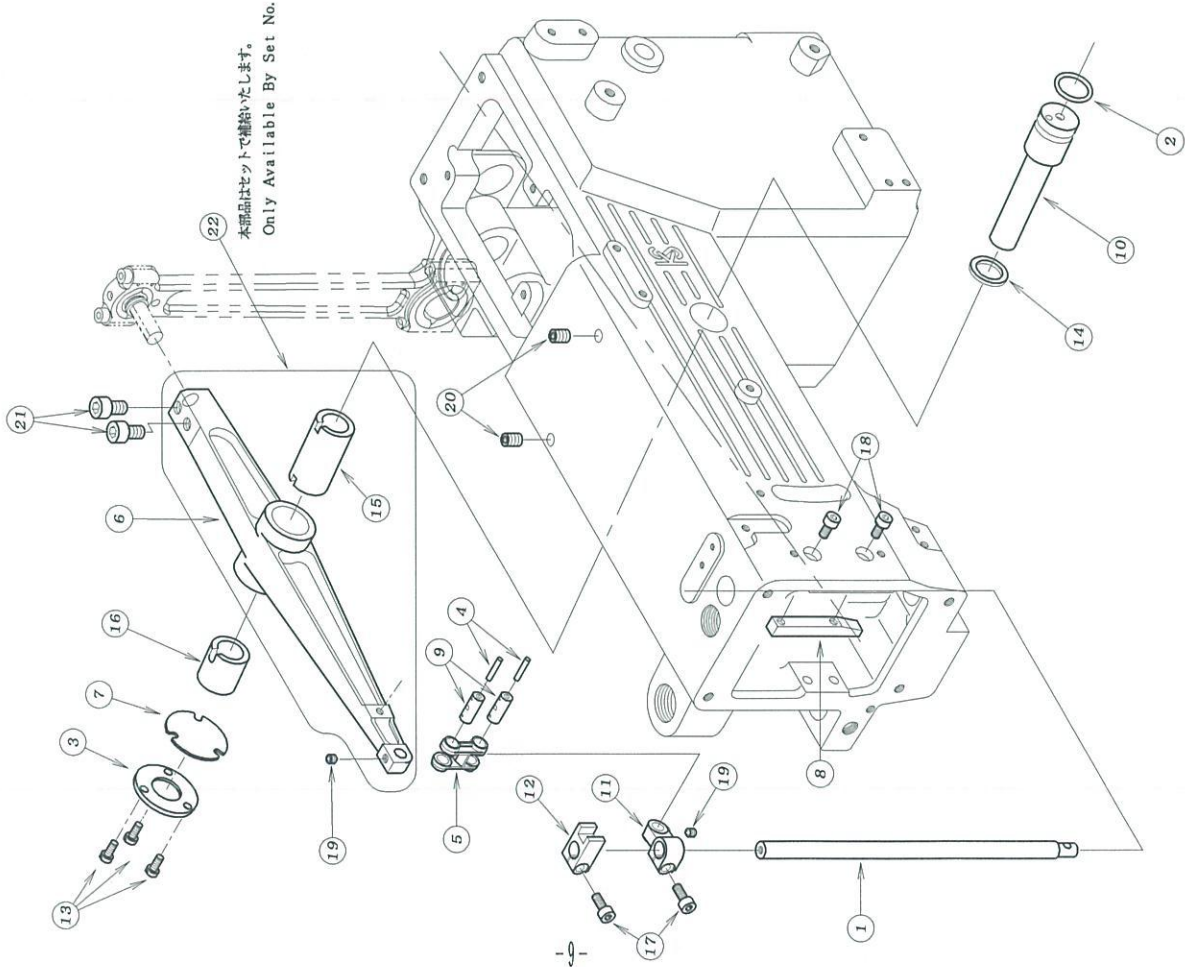
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|--------------|----------|------------------|----------------------|------|
| 07-01105-379 | | 下糸繰めプレート | PLATE | 1 |
| 07-02105-587 | | 下糸繰めシリンダー | AIR CYLINDER | 1 |
| 07-03105-381 | | 下糸繰めシリンダー・ブ・ラケット | BRACKET | 1 |
| 07-04105-391 | | シリンダー・取付土台プレート | PLATE | 1 |
| 07-05105-430 | | ガイドローラー (小) | GUIDE ROLLER (S) | 2 |
| 07-06105-442 | | 糸繰め棒 | BAR | 1 |
| 07-07105-443 | | 糸繰めシリンダー | AIR CYLINDER | 1 |
| 07-08105-555 | | 上糸繰めブ・ラケット | BRACET | 1 |
| 07-09145-107 | | 糸道 | THREAD EYELET | 4 |
| 07-10145-127 | | 糸道 | THREAD EYELET | 1 |
| 07-11145-432 | | 針棒糸道 | THREAD EYELET | 1 |
| 07-12145-433 | | 上糸道 (下) | THREAD EYELET | 1 |
| 07-13145-434 | | 上糸ガイド | THREAD EYELET | 1 |
| 07-14145-435 | | 上糸受け | THREAD TAKE-UP PLATE | 1 |
| 07-15145-436 | | 糸道 | THREAD EYELET | 1 |
| 07-16147-409 | | 糸道 | THREAD EYELET | 1 |
| 07-17147-410 | | 下糸廻き糸案内糸道 | THREAD EYELET | 1 |
| 07-18147-413 | | 下糸廻き糸道 | THREAD EYELET | 1 |
| 07-19151-145 | | スベ・スガラー | COLLAR | 2 |
| 07-20175-410 | | スプ・リンク・ワッシャー | SPRING WASHER | 2 |
| 07-21175-455 | | ワッシャー | WASHER | 9 |
| 07-22175-456 | | ワッシャー | WASHER | 5 |
| 07-23175-467 | | ワッシャー | WASHER | 2 |
| 07-24175-522 | | ワッシャー | WASHER | 1 |
| 07-25187-010 | | ネジ | SCREW | 2 |
| 07-26187-112 | | 六角穴付きボルト | BOLT | 2 |
| 07-27187-113 | | 六角穴付きボルト | BOLT | 8 |
| 07-28187-177 | | 六角穴付きボルト | BOLT | 3 |
| 07-29187-214 | | 六角穴付きボルト | BOLT | 1 |
| 07-30187-269 | | ネジ | SCREW | 2 |
| 07-31187-270 | | ネジ | SCREW | 2 |
| 07-32187-272 | | ネジ | SCREW | 2 |
| 07-33187-288 | | ネジ | SCREW | 1 |
| 07-34187-414 | | ネジ | SCREW | 2 |
| 07-35188-147 | | 六角ナット | NUT | 4 |

8. ブッシュ機構 BUSHING



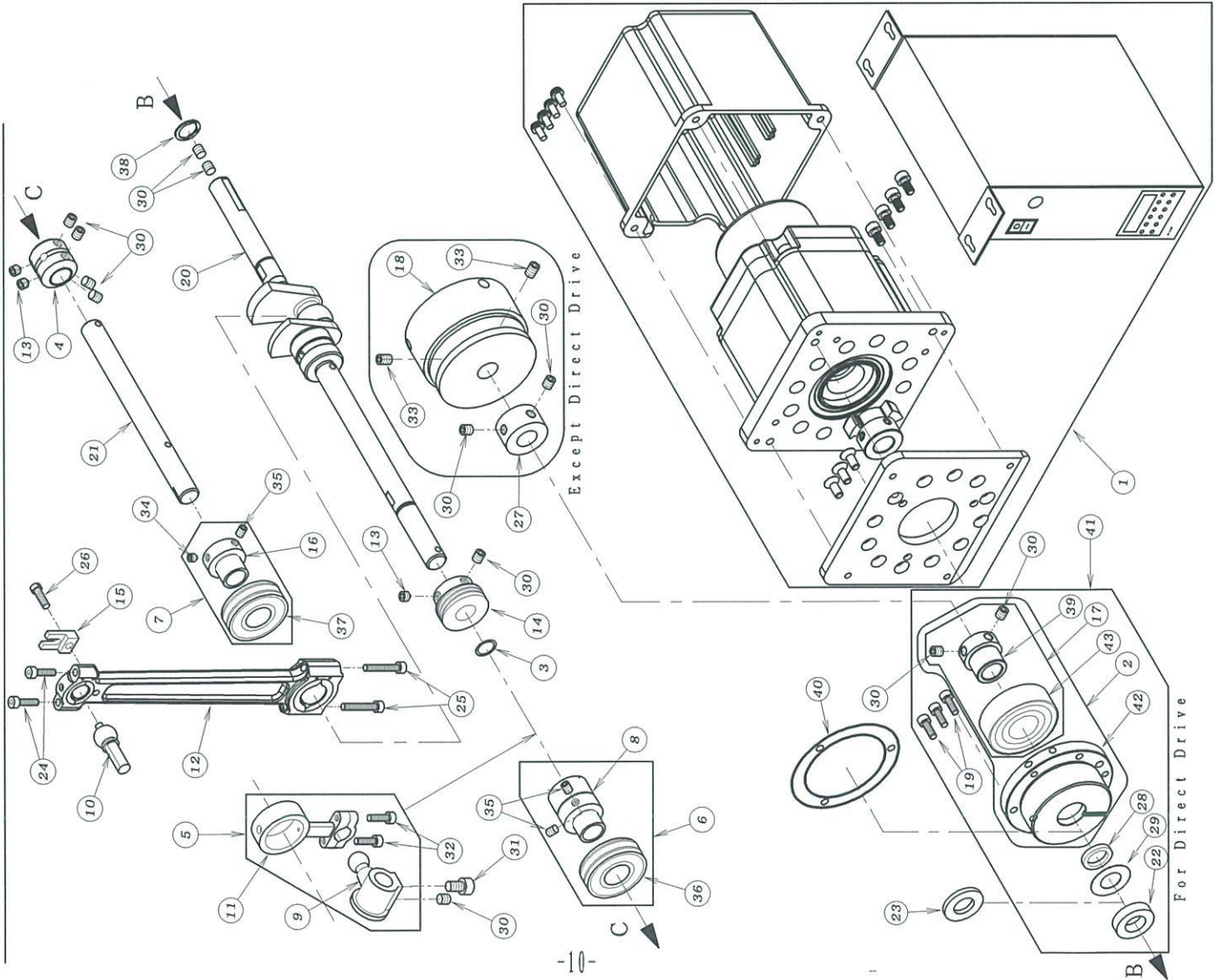
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|--------------|----------|------------|-------------|------|
| 08-01181-407 | | 押え棒ブッシュ | BUSHING | 1 |
| 08-02181-408 | | 後プラー揚げブッシュ | BUSHING | 1 |
| 08-03181-425 | | 針棒ブッシュ上 | BUSHING | 1 |
| 08-04181-426 | | 針棒ブッシュ下 | BUSHING | 1 |
| 08-05181-427 | | クランク軸ブッシュ | BUSHING | 1 |
| 08-06181-428 | | ブッシュ | BUSHING | 2 |
| 08-07181-429 | | ブッシュ | BUSHING | 1 |
| 08-08181-430 | | ブッシュ | BUSHING | 3 |
| 08-09181-432 | | ブッシュ | BUSHING | 3 |
| 08-10181-433 | | ブッシュ | BUSHING | 1 |
| 08-11181-517 | | ブッシュ | BUSHING | 2 |
| 08-12181-559 | | ブッシュ | BUSHING | 2 |
| 08-13194-502 | | オイルシール | OIL SEAL | 1 |
| 08-14139-006 | | オイルガード | OIL GUARD | 1 |
| 08-15153-169 | | 緩衝バンド | BAND | 1 |
| 08-16181-474 | | ブッシュ | BUSHING | 1 |

9. 針棒. 弓機構 NEEDLE BAR MECHANISM



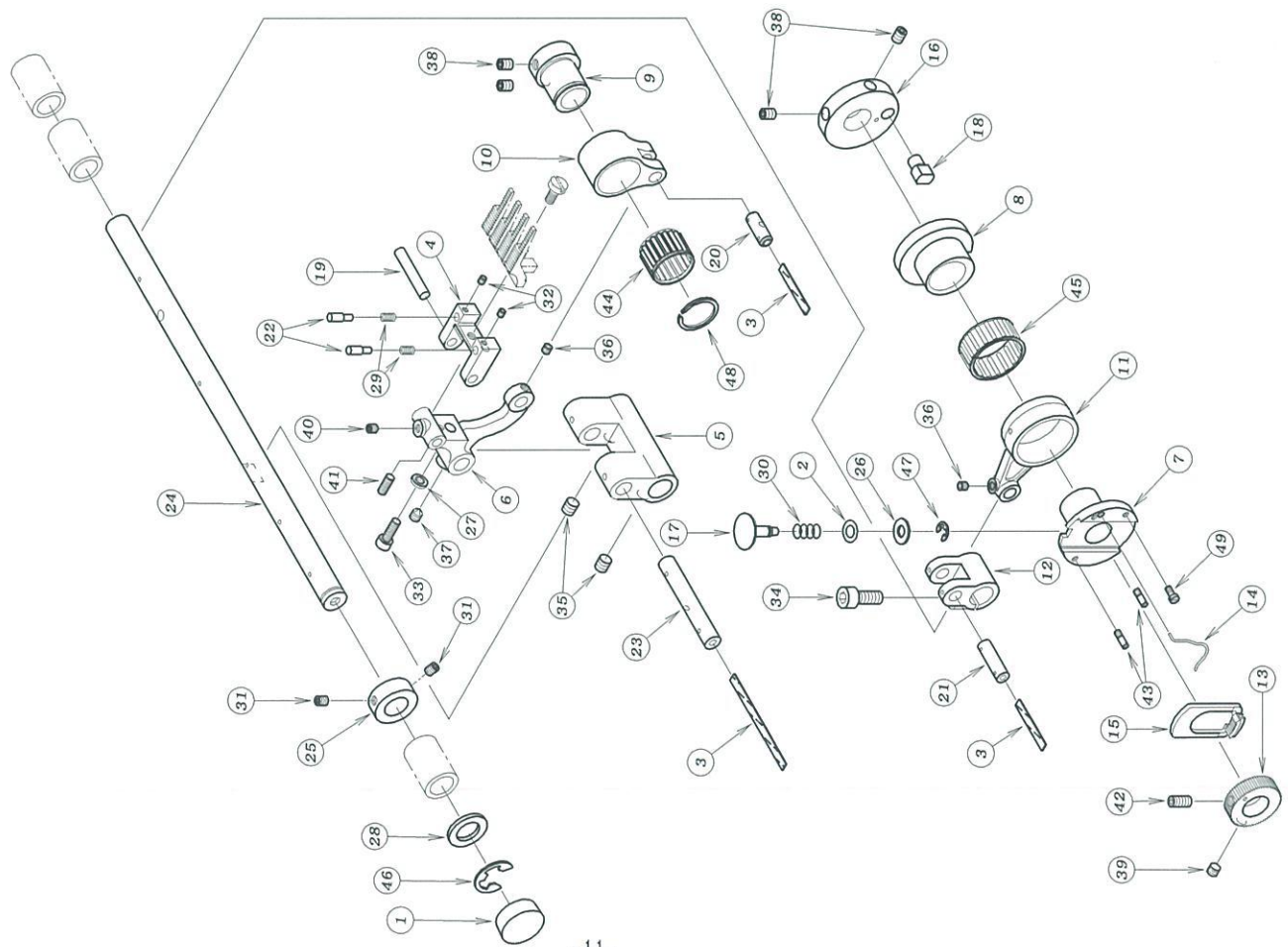
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|-----------|------------|-----------------------------|------|
| 09-01 | 11-407 | 針棒 | NEEDLE BAR | 1 |
| 09-02 | 23-195 | O-リング* | O-RING | 1 |
| 09-03 | 39-003 | 油止め板 | COVER | 1 |
| 09-04 | 23-555 | フェルト | FELT | 2 |
| 09-05 | 66-404 | 針棒リンク | LINK | 1 |
| 09-06 | 69-444 | 弓ピン油止めハッキン | NEEDLE LEVER | 1 |
| 09-07 | 123-049 | 針棒案内板 | GASKET | 1 |
| 09-08 | 69-438 | 針棒コネクタ*イト* | NEEDLE BAR GUIDE | 1 |
| 09-09 | 71-485 | リングヒョン | PIN | 2 |
| 09-10 | 71-495 | 弓ピン | NEEDLE LEVER STUD | 1 |
| 09-11 | 173-402 | 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 | ワッシャー | 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 | 弓ピン(付) | NEEDLE LEVER (WITH BUSHING) | 1 |

10. 下軸機構 CRANKSHAFT MECHANISM



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|-----------------|------------------------------|------|
| 10-01159 | 024 | UTCダイレクトモーターセット | DIRECT MOTOR ASS'Y (FOR UTC) | 1 |
| 10-02160 | 9790 | フレンジセット | FLANGE ASS'Y | 1 |
| 10-03123 | 466 | オリング | O-RING | 1 |
| 10-04175 | 101 | ジョイントカラー | JOINT COLLAR | 1 |
| 10-05160 | 4080 | 糸巻ロッドセット | CONNECTING ROD ASS'Y | 1 |
| 10-06160 | 4100 | ベアリング*セット | BEARING ASS'Y | 1 |
| 10-07160 | 4130 | ベアリング*セット | BEARING ASS'Y | 1 |
| 10-08161 | 415 | 糸巻せエキセン | ECCENTRIC | 1 |
| 10-09161 | 416 | 駆元ロッド玉 | CRANK ROD | 1 |
| 10-10161 | 711 | 立ロッド玉 | CONNECTING ROD BALL | 1 |
| 10-11163 | 422 | 糸巻せ連結ロッド | CONNECTING ROD | 1 |
| 10-12163 | 386 | 針棒クランクロッド | CRANK ROD | 1 |
| 10-13187 | 259 | ネジ | SCREW | 3 |
| 10-14131 | 155 | ポンプ駆動ギア | OIL PUMP DRIVING WARM | 1 |
| 10-15169 | 120 | ロッド*張れ止め | GUIDE | 1 |
| 10-16169 | 440 | ベアリング*スリーブ* | SLEEVE | 1 |
| 10-17160 | 9800 | ベアリング*セット | BEARING ASS'Y | 1 |
| 10-18169 | 446 | プーリー | PULLEY | 1 |
| 10-19187 | 129 | 六角穴付きボルト | BOLT | 3 |
| 10-20171 | 428 | クランクシャフト (34.5) | CRANK SHAFT (34.5) | 1 |
| 10-21171 | 429 | 主軸 | SHAFT | 1 |
| 10-22175 | 352 | スベーク | WASHER | 1 |
| 10-23175 | 329 | ワッシャー | WASHER | 1 |
| 10-24187 | 299 | 六角穴付きボルト | BOLT | 2 |
| 10-25187 | 285 | 六角穴付きボルト | BOLT | 2 |
| 10-26184 | 567 | ネジ* | SCREW | 1 |
| 10-27175 | 353 | スベーク | SPACER | 1 |
| 10-28194 | 214 | オイルシール | OIL SEAL | 1 |
| 10-29175 | 351 | ワッシャー | WASHER | 1 |
| 10-30187 | 172 | ネジ* | SCREW | 12 |
| 10-31187 | 203 | 六角穴付きボルト | BOLT | 1 |
| 10-32187 | 214 | 六角穴付きボルト | BOLT | 2 |
| 10-33187 | 242 | ネジ* | SCREW | 2 |
| 10-34187 | 253 | ネジ* | SCREW | 2 |
| 10-35187 | 254 | ネジ* | SCREW | 3 |
| 10-36191 | 403 | ボールベアリング | BEARING | 1 |
| 10-37191 | 404 | ボールベアリング | BEARING | 1 |
| 10-38193 | 264 | 止め輪 | RING | 1 |
| 10-39169 | 462 | ベアリング*スリーブ* | SLEEVE | 1 |
| 10-40123 | 663 | ハックセン | GASKET | 1 |
| 10-41160 | 9780 | ベアリング*フレンジ*セット | BEARING FLANGE SET | 1 |
| 10-42169 | 461 | ベアリング*フレンジ* | FLANGE | 1 |
| 10-43191 | 995 | ベアリング | BEARING | 1 |

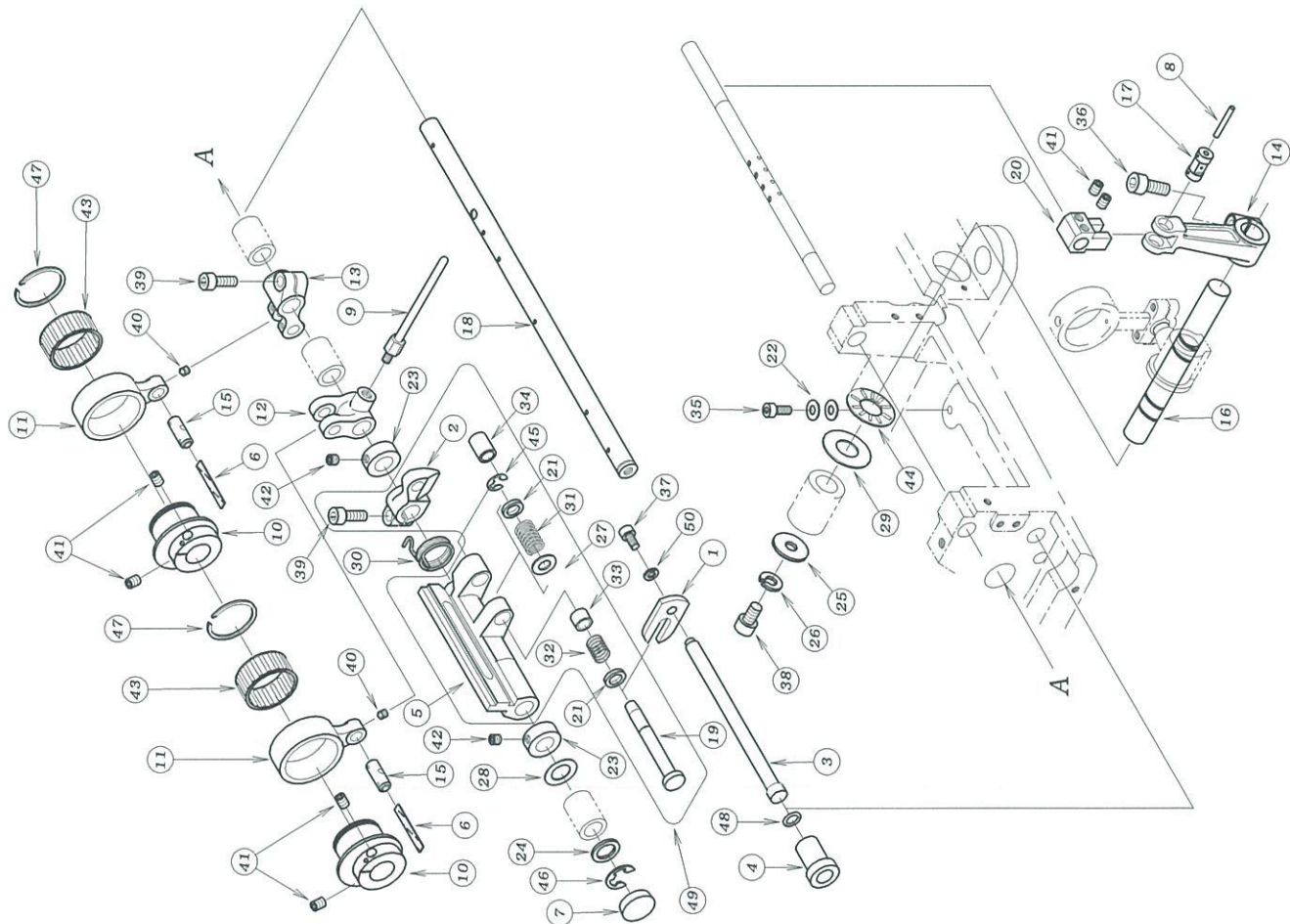
11. 送り機構 FEED MECHANISM



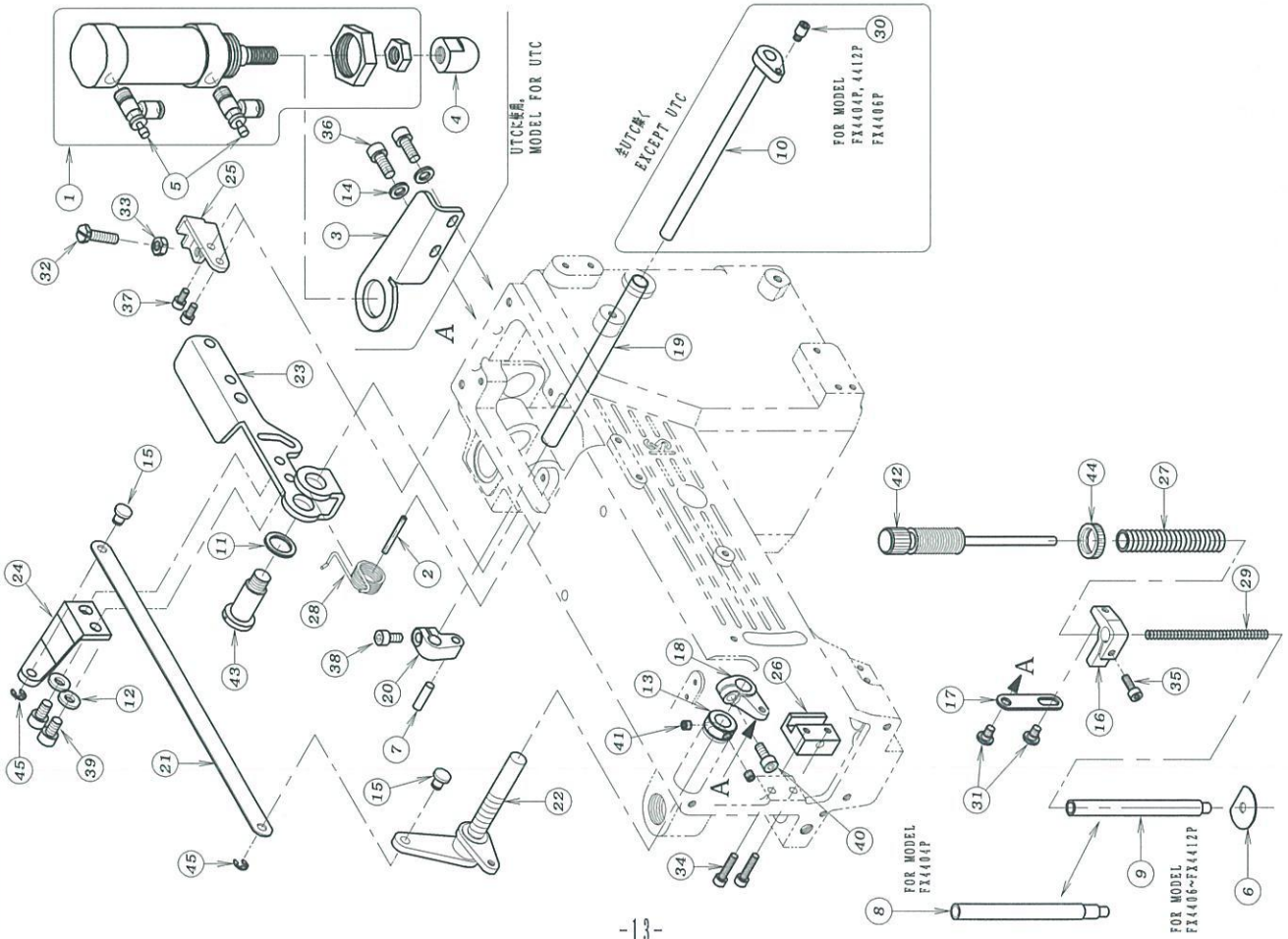
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|--------------|------------------|------|
| 11-01 | 123-166 | フック蓋子A | PLUG | 1 |
| 11-02 | 23-183 | Oリング | O-RING | 1 |
| 11-03 | 23-341 | フェルト | FELT | 3 |
| 11-04 | 155-430 | 送り歯取付台 | FEED DOG HOLDER | 1 |
| 11-05 | 155-431 | 送り元台 | FEED ROCKER | 1 |
| 11-06 | 155-432 | 送り土台 | FEED ROCKER | 1 |
| 11-07 | 161-410 | 送り調節エキセン | FEED ECCENTRIC | 1 |
| 11-08 | 161-411 | 送りエキセン | ECCENTRIC | 1 |
| 11-09 | 161-026 | 送上下エキセン玉 | ECCENTRIC | 1 |
| 11-10 | 163-420 | 送上下エキセンダ'ルマ | LINK | 1 |
| 11-11 | 163-423 | 送り連結ロッド | CONNECTING ROD | 1 |
| 11-12 | 167-423 | 送り前後レバ | LEVER | 1 |
| 11-13 | 169-431 | 送り調節ギア | REGULATING GEAR | 1 |
| 11-14 | 169-432 | 送り調節エキセン'ネ | SPRING | 1 |
| 11-15 | 169-433 | 送り調節ギア'プレート | REGULATING PLATE | 1 |
| 11-16 | 169-434 | 送りエキセン'ン土台 | ECCENTRIC COLLAR | 1 |
| 11-17 | 169-435 | フック蓋子'タン | PUSH BUTTON | 1 |
| 11-18 | 169-442 | エキセンピン | PIN | 1 |
| 11-19 | 171-351 | シャフト | SHAFT | 1 |
| 11-20 | 171-431 | ピン | PIN | 1 |
| 11-21 | 171-434 | シャフト | SHAFT | 1 |
| 11-22 | 171-487 | 送り歯上下ピン | PIN | 2 |
| 11-23 | 171-488 | 送り元台'ン | SHAFT | 1 |
| 11-24 | 171-491 | 送りシャフト | SHAFT | 1 |
| 11-25 | 175-189 | カラー | COLLAR | 1 |
| 11-26 | 175-453 | ワッシャ | WASHER | 1 |
| 11-27 | 175-482 | ワッシャ | WASHER | 1 |
| 11-28 | 175-509 | ワッシャ | WASHER | 1 |
| 11-29 | 179-420 | 送上下ピン'ネ | SPRING | 2 |
| 11-30 | 179-421 | フック蓋子'タン'ネ | SPRING | 2 |
| 11-31 | 184-521 | ネジ | SCREW | 2 |
| 11-32 | 187-104 | ネジ | SCREW | 2 |
| 11-33 | 187-129 | 六角穴付きボルト | BOLT | 1 |
| 11-34 | 187-171 | 六角穴付きボルト | BOLT | 1 |
| 11-35 | 187-172 | ネジ | SCREW | 2 |
| 11-36 | 187-233 | ネジ | SCREW | 2 |
| 11-37 | 187-253 | ネジ | SCREW | 1 |
| 11-38 | 187-254 | ネジ | SCREW | 4 |
| 11-39 | 187-274 | ネジ | SCREW | 1 |
| 11-40 | 187-286 | ネジ | SCREW | 1 |
| 11-41 | 187-401 | ネジ | SCREW | 1 |
| 11-42 | 187-407 | 六角穴付き止メネジ | SCREW | 1 |
| 11-43 | 187-408 | ネジ | SCREW | 2 |
| 11-44 | 191-005 | ベアリング | BEARING | 1 |
| 11-45 | 191-430 | ニードル'ルマ'アリング | NEEDLE BEARING | 1 |
| 11-46 | 193-202 | Eリング | E-RING | 1 |
| 11-47 | 193-205 | Eリング | E-RING | 1 |
| 11-48 | 193-406 | ストップ'リング | C-RING | 1 |
| 11-49 | 187-317 | 平頭付ネジ | SCREW | 1 |

12. ルーパ-機構 LOOPER MECHANISM

| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|-----------------|----------|----------------|-----------------------|------|
| 12-01104-111 | | ルーパ-台引出し板 | PLATE | 1 |
| 12-02104-444 | | ルーパ-台ストップ台 | LOOPER ROCKER STOPPER | 1 |
| 12-03104-445 | | ルーパ-引き出しシャフト | SHAFT | 1 |
| 12-04104-446 | | ルーパ-引き出しピン | STUD | 1 |
| 12-05119-475 | | ルーパ-元台 | LOOPER ROCKER | 1 |
| 12-06123-341 | | フェルト | FELT | 2 |
| 12-07123-519 | | コ-ム粒 | PLUG | 1 |
| 12-08123-534 | | フェルト | FELT | 1 |
| 12-09147-218 | | 下糸割き棒 | TAKE-UP ROD | 1 |
| 12-10161-425 | | エキセン玉 | ECCENTRIC | 2 |
| 12-11163-419 | | 連結ガム | ECCENTRIC LINK | 2 |
| 12-12167-421 | | サバキ棒連結レバ- | TAKE-UP DRIVE LEVER | 1 |
| 12-13167-422 | | ルーパ-前後レバ- | LOOPER DRIVE LEVER | 1 |
| 12-14167-425 | | 糸割きレバ- | LEVER | 1 |
| 12-15171-431 | | ヒ-ン | PIN | 2 |
| 12-16171-478 | | 振元軸 | SHAFT | 1 |
| 12-17171-479 | | 連結ピン | PIN | 1 |
| 12-18171-489 | | ルーパ-駆動シャフト | SHAFT | 1 |
| 12-19171-911 | | シャフト | SHAFT | 1 |
| 12-20173-404 | | 糸割き棒抱き | RETAINER BAR HOLDER | 1 |
| 12-21175-381 | | ワッシャ | WASHER | 2 |
| 12-22175-455 | | ワッシャ | WASHER | 2 |
| 12-23175-483 | | カラー | COLLAR | 2 |
| 12-24175-504 | | ワッシャ | WASHER | 1 |
| 12-25175-515 | | ワッシャ | WASHER | 1 |
| 12-26175-527 | | スプ-リンク* ワッシャ | SPRING WASHER | 1 |
| 12-27175-452 | | ワッシャ | WASHER | 1 |
| 12-28175-675 | | ワッシャ | WASHER | 1 |
| 12-29175-901 | | ワッシャ | WASHER | 1 |
| 12-30179-161 | | ハ-ネ | SPRING | 1 |
| 12-31179-163 | | ハ-ネ | SPRING | 1 |
| 12-32179-164 | | ハ-ネ | SPRING | 1 |
| 12-33181-142 | | ワッシャ | BUSHING | 1 |
| 12-34181-143 | | ワッシャ | BUSHING | 1 |
| 12-35187-113 | | 六角穴付きボルト | BOLT | 1 |
| 12-36187-171 | | 六角穴付きボルト | BOLT | 1 |
| 12-37187-177 | | 六角穴付きボルト | BOLT | 1 |
| 12-38187-203 | | 六角穴付きボルト | BOLT | 1 |
| 12-39187-224 | | 六角穴付きボルト | BOLT | 2 |
| 12-40187-233 | | ネジ | SCREW | 2 |
| 12-41187-254 | | ネジ | SCREW | 6 |
| 12-42187-274 | | ネジ | SCREW | 2 |
| 12-43191-430 | | ニ-ト* ルパ-ア-リンク* | NEEDLE BEARING | 2 |
| 12-44192-233 | | スラストハ-ア-リンク* | BEARING | 1 |
| 12-45193-211 | | E-リンク* | E-RING | 1 |
| 12-46193-222 | | E-リンク* | E-RING | 1 |
| 12-47193-402 | | ストップ* リンク* | C-RING | 2 |
| 12-48198-871 | | O リンク* | O-RING | 1 |
| 12-49119-4750-2 | | FXルーパ-元台セット | LOOPER ROCKER ASS'Y | 1 |
| 12-50175-410 | | スプ-リンク* ワッシャ | SPRING WASHER | 1 |

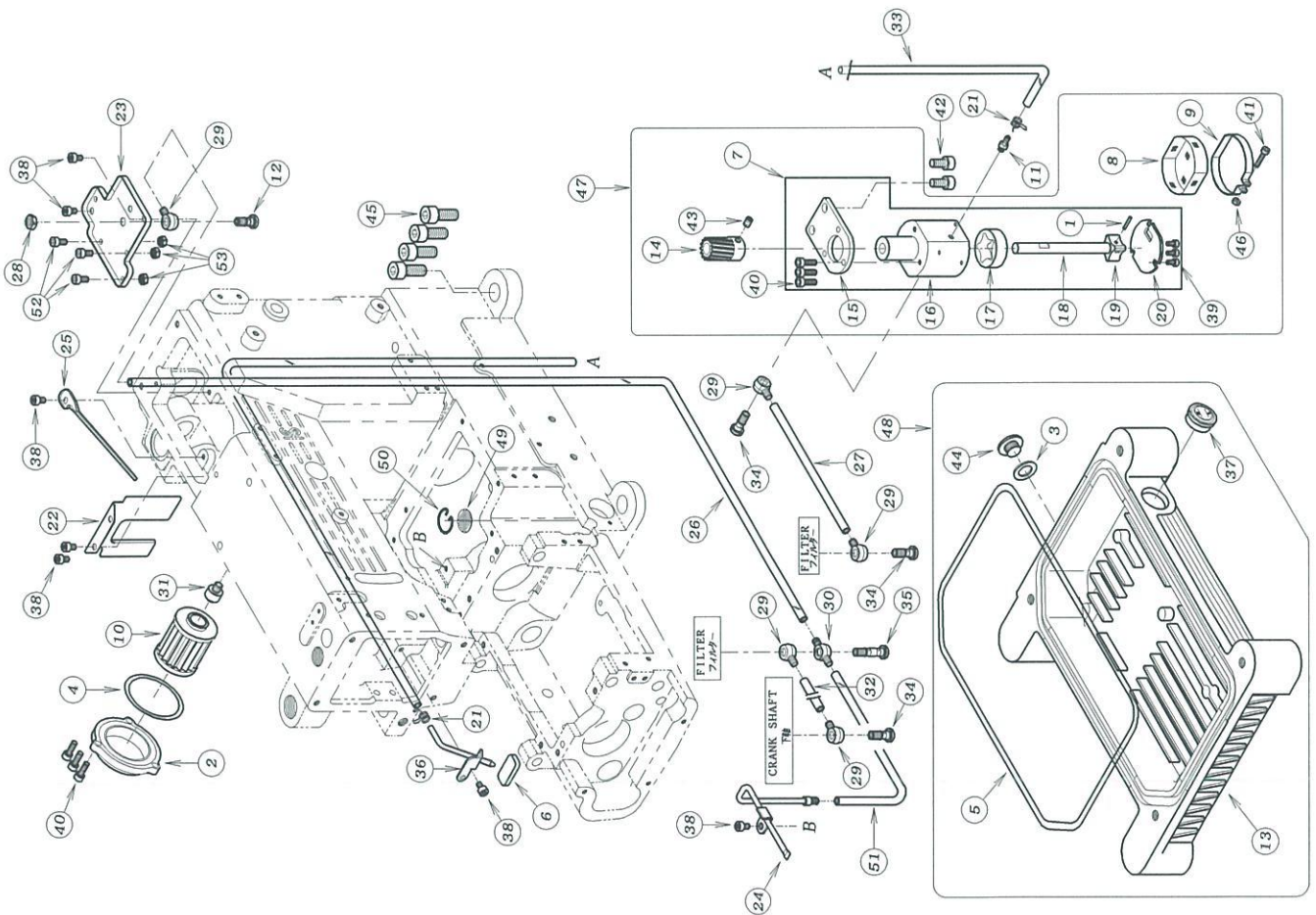


13. 押え揚げ機構 PRESSER FOOT MECHANISM



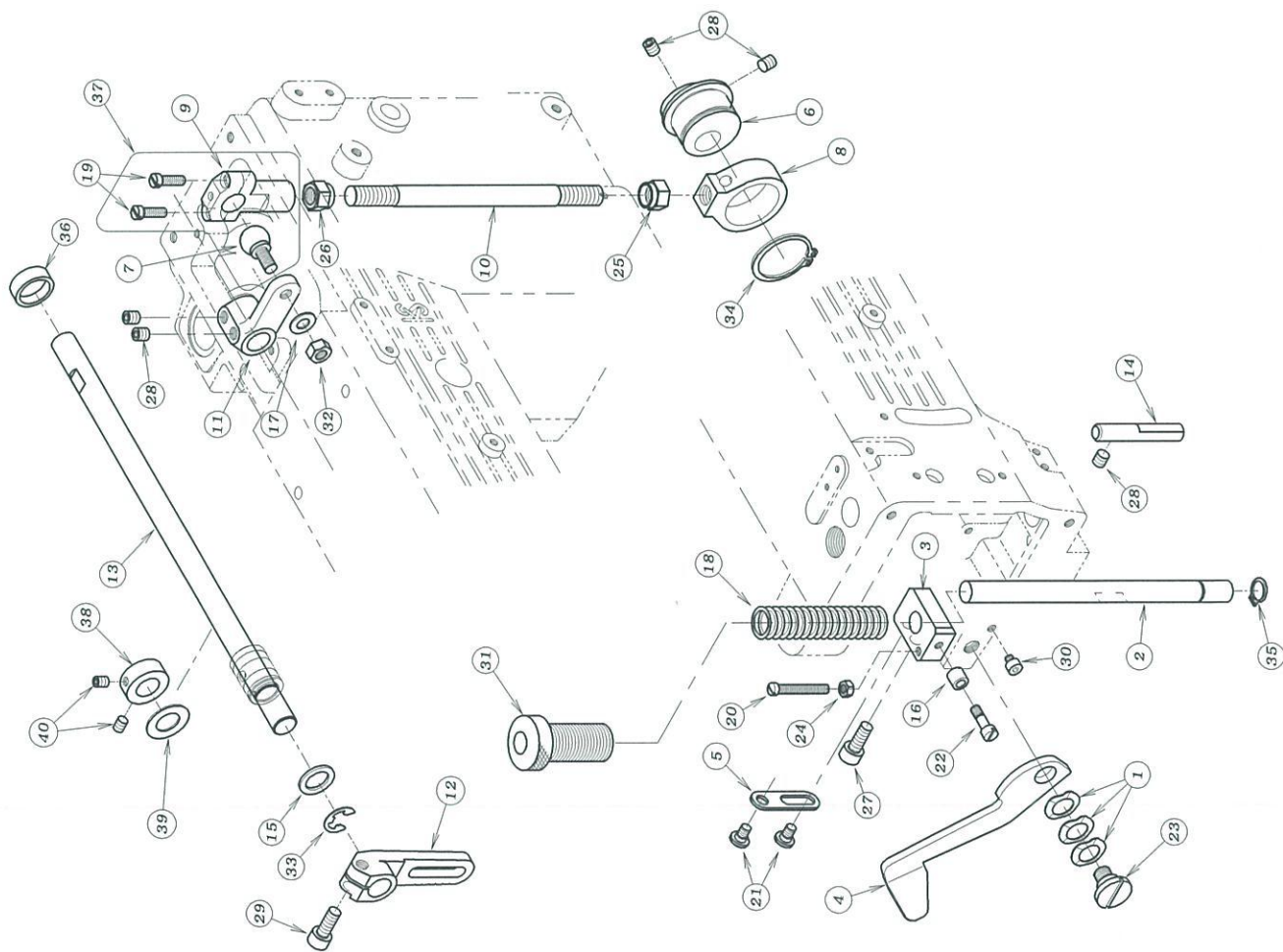
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|---------------|--------------|--------------|--------------------|------|
| 13-01100-6082 | 押え揚げシリンダ | シリンダ | AIR CYLINDER ASS'Y | 1 |
| 13-02105-404 | スプリングピン | スプリングピン | SPRING PIN | 1 |
| 13-03105-586 | 押えシリンダ-ブラケット | 押えシリンダ-ブラケット | BRACKET | 1 |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

14. 給油機構 LUBRICATION MECHANISM



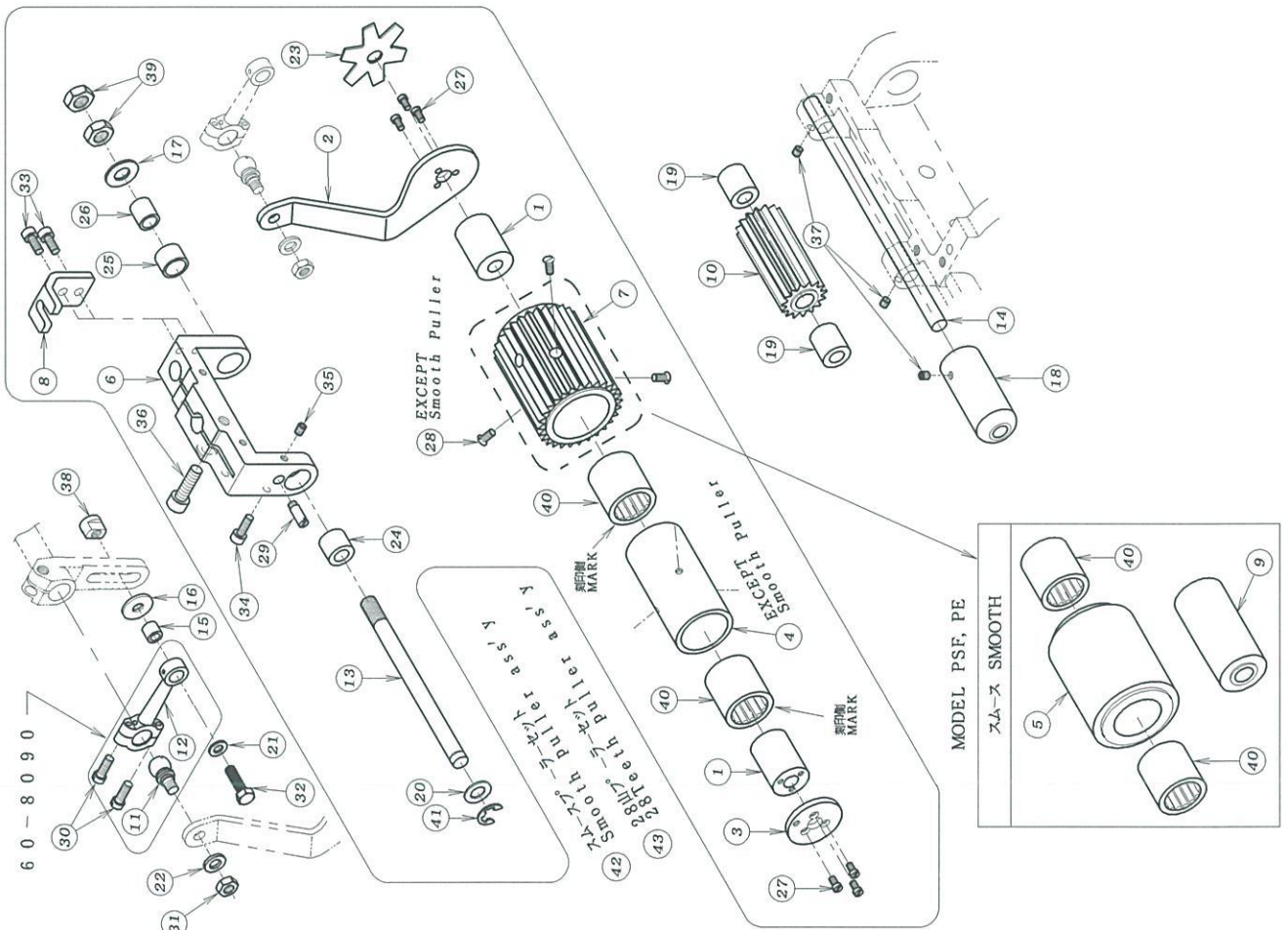
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|-----------|---------------|-------------------|------|
| 14-011 | 17-8010-G | ヒン | PIN | 1 |
| 14-021 | 1-632 | オイルフィルターキャップ | OIL FILTER CAP | 1 |
| 14-031 | 23-304 | シール | SEAL | 1 |
| 14-041 | 23-506 | O-リング | O-RING | 1 |
| 14-051 | 23-508 | O-リング | O-RING | 1 |
| 14-061 | 23-067 | フェルト | FELT | 1 |
| 14-071 | 30-0130 | ポンプセット | PUMP ASS'Y | 1 |
| 14-081 | 31-156 | ポンプメッシュ | PUMP MESH | 1 |
| 14-091 | 31-157 | ポンプメッシュ止メ器具 | CLAMP | 1 |
| 14-101 | 31-222 | フィルター | OIL FILTER | 1 |
| 14-111 | 31-314 | 継手 | JOINT | 1 |
| 14-121 | 35-539 | 管継手ボルト | JOINT SCREW | 1 |
| 14-131 | 31-507 | オイルタンク | OIL RESERVOIR | 1 |
| 14-141 | 31-702 | ポンプキア | PUMP GEAR | 1 |
| 14-151 | 31-703 | ポンプ取付板 | PLATE | 1 |
| 14-161 | 31-704 | トロコイドポンプハウジング | PUMP HOUSING | 1 |
| 14-171 | 31-705 | アウトローター | OUTER ROTER | 1 |
| 14-181 | 31-706 | ポンプ軸 | PUMP SHAFT | 1 |
| 14-191 | 31-707 | インナーローター | INNER ROTER | 1 |
| 14-201 | 31-708 | ポンプ裏板 | PLATE | 1 |
| 14-211 | 35-413 | 止め金具 | CLAMP | 2 |
| 14-221 | 35-414 | オイルポンプ | OIL PUMP | 1 |
| 14-231 | 35-415 | 油受 | OIL FENCE | 1 |
| 14-241 | 35-417 | 下解給油配管 | OIL DISTRIBUTOR | 1 |
| 14-251 | 35-418 | 回せん配管 | OILER | 1 |
| 14-261 | 35-421 | ヒニールチューブ | TUBE | 1 |
| 14-271 | 35-420 | ヒニールチューブ | TUBE | 1 |
| 14-281 | 88-165 | 六角ナット | NUT | 1 |
| 14-291 | 35-505 | 片口継手 | JOINT | 1 |
| 14-301 | 35-506 | 両口管継手 | JOINT | 1 |
| 14-311 | 35-509 | 継手 | JOINT | 1 |
| 14-321 | 35-519 | ヒニールチューブ | TUBE | 1 |
| 14-331 | 35-521 | ヒニールチューブ | TUBE | 1 |
| 14-341 | 35-528 | 管継手ボルト | JOINT SCREW | 3 |
| 14-351 | 35-529 | 管継手ボルト | JOINT SCREW | 1 |
| 14-361 | 39-404 | リターン配管 | OIL RETURN PIPE | 1 |
| 14-371 | 39-504 | オイルゲージ | OIL SIGHT GAUGE | 1 |
| 14-381 | 87-092 | 六角穴付きボルト | BOLT | 7 |
| 14-391 | 87-123 | 六角穴付きボルト | BOLT | 3 |
| 14-401 | 87-129 | 六角穴付きボルト | BOLT | 6 |
| 14-411 | 87-140 | 六角穴付きボルト | BOLT | 1 |
| 14-421 | 87-225 | 六角穴付きボルト | BOLT | 2 |
| 14-431 | 87-254 | ネジ | SCREW | 1 |
| 14-441 | 87-311 | フタネジ | SCREW | 1 |
| 14-451 | 87-663 | 六角穴付きボルト | BOLT | 4 |
| 14-461 | 88-137 | ナット | NUT | 1 |
| 14-471 | 30-0131 | ポンプセット | PUMP ASS'Y | 1 |
| 14-481 | 30-5070 | RXオイルタンクセット | OIL TANK ASS'Y | 1 |
| 14-491 | 31-503 | 濾過網 | OIL FILTER SCREEN | 1 |
| 14-501 | 39-503 | 濾過網押え | CLAMP | 1 |
| 14-511 | 35-518 | ヒニールチューブ | TUBE | 1 |
| 14-521 | 87-177 | 六角穴付きボルト | BOLT | 3 |
| 14-531 | 88-146 | ナット | NUT | 3 |

15. 後プーラー機構 REAR PULLER MECHANISM



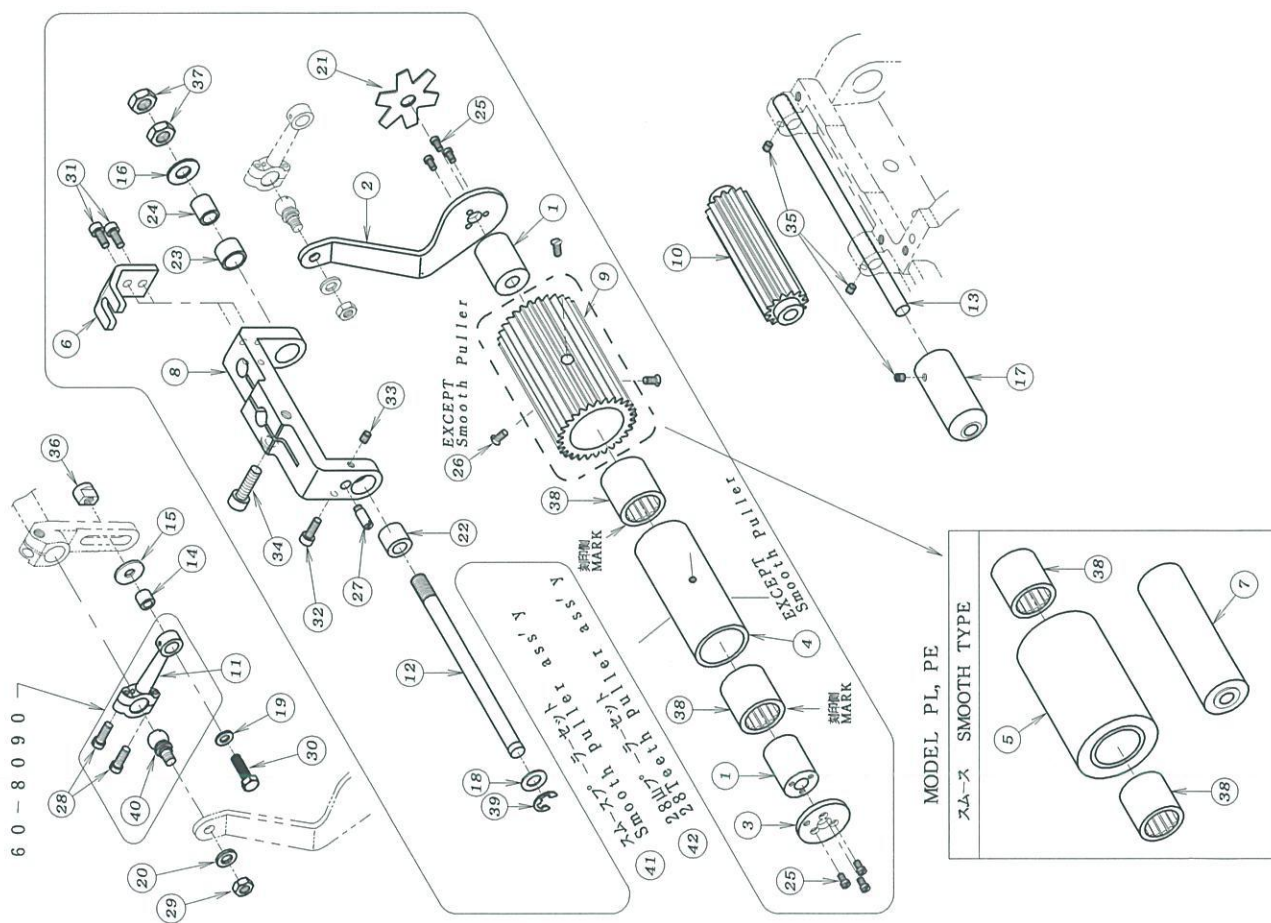
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|---------------|-------------------|--------------------------|-------------|------|
| 15-01102-030 | 後ワッシャー | WASHER | | 3 |
| 15-0271-462 | 後プーラー立シャフト | SHAFT | | 1 |
| 15-03102-407 | 後プーラー立シャフト廻き | BRACKET | | 1 |
| 15-04102-029 | 手摺げ用金具 | LEVER | | 1 |
| 15-05102-409 | 連結プレート | PLATE | | 1 |
| 15-06161-209 | 上シャフト連結エキセン玉 | PULLER DRIVING ECCENTRIC | | 1 |
| 15-07161-418 | ロット玉 | BALL JOINT | | 1 |
| 15-08163-208 | 上シャフト連結タ'ルマ | CONNECTING LINK | | 1 |
| 15-09163-711 | 立ロット(小) | BALL JOINT | | 1 |
| 15-10165-306 | 上シャフト連結棒 | CONNECTING BAR | | 1 |
| 15-11167-426 | 上プーラー-振りレバ- | LEVER | | 1 |
| 15-12167-529 | 上プーラー-駆動レバ- | LEVER | | 1 |
| 15-13171-291 | 上プーラー-駆動軸 | SHAFT | | 1 |
| 15-14171-729 | プーラー-回り止ピン | GUIDE PIN | | 1 |
| 15-15175-187 | ワッシャ | WASHER | | 1 |
| 15-16175-211 | カラー | COLLAR | | 1 |
| 15-17175-452 | ワッシャ | WASHER | | 1 |
| 15-18179-425 | プーラー-圧縮バネ | SPRING | | 1 |
| 15-19184-567 | ネジ' | SCREW | | 2 |
| 15-20184-569 | ネジ' | SCREW | | 1 |
| 15-21184-581 | 段ネジ' | SCREW | | 2 |
| 15-22184-582 | 段ネジ' | SCREW | | 1 |
| 15-23185-002 | 段ネジ' | SCREW | | 1 |
| 15-24186-311 | ナット | NUT | | 1 |
| 15-25186-741 | ナット | NUT | | 1 |
| 15-26186-742 | ナット | NUT | | 1 |
| 15-27187-171 | 六角穴付きボルト | BOLT | | 1 |
| 15-28187-172 | ネジ' | SCREW | | 5 |
| 15-29187-171 | 六角穴付きボルト | BOLT | | 1 |
| 15-30187-287 | 六角穴付きボルト | BOLT | | 1 |
| 15-31187-754 | プーラー-筒ネジ' | SCREW | | 1 |
| 15-32188-166 | ナット | NUT | | 1 |
| 15-33193-223 | E型止め輪 | E-RING | | 1 |
| 15-34193-258 | 軸用止め輪 | SNAP RING | | 1 |
| 15-35193-261 | クリンツ | C-RING | | 1 |
| 15-36194-506 | オイルシール | OIL SEAL | | 1 |
| 15-37160-3780 | 上シャフト連結レバ'-ロットセット | BALL JOINT ASS'Y | | 1 |
| 15-38175-018 | カラー | COLLAR | | 1 |
| 15-39175-021 | ワッシャ | WASHER | | 1 |
| 15-40187-254 | ネジ | SCREW | | 2 |

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



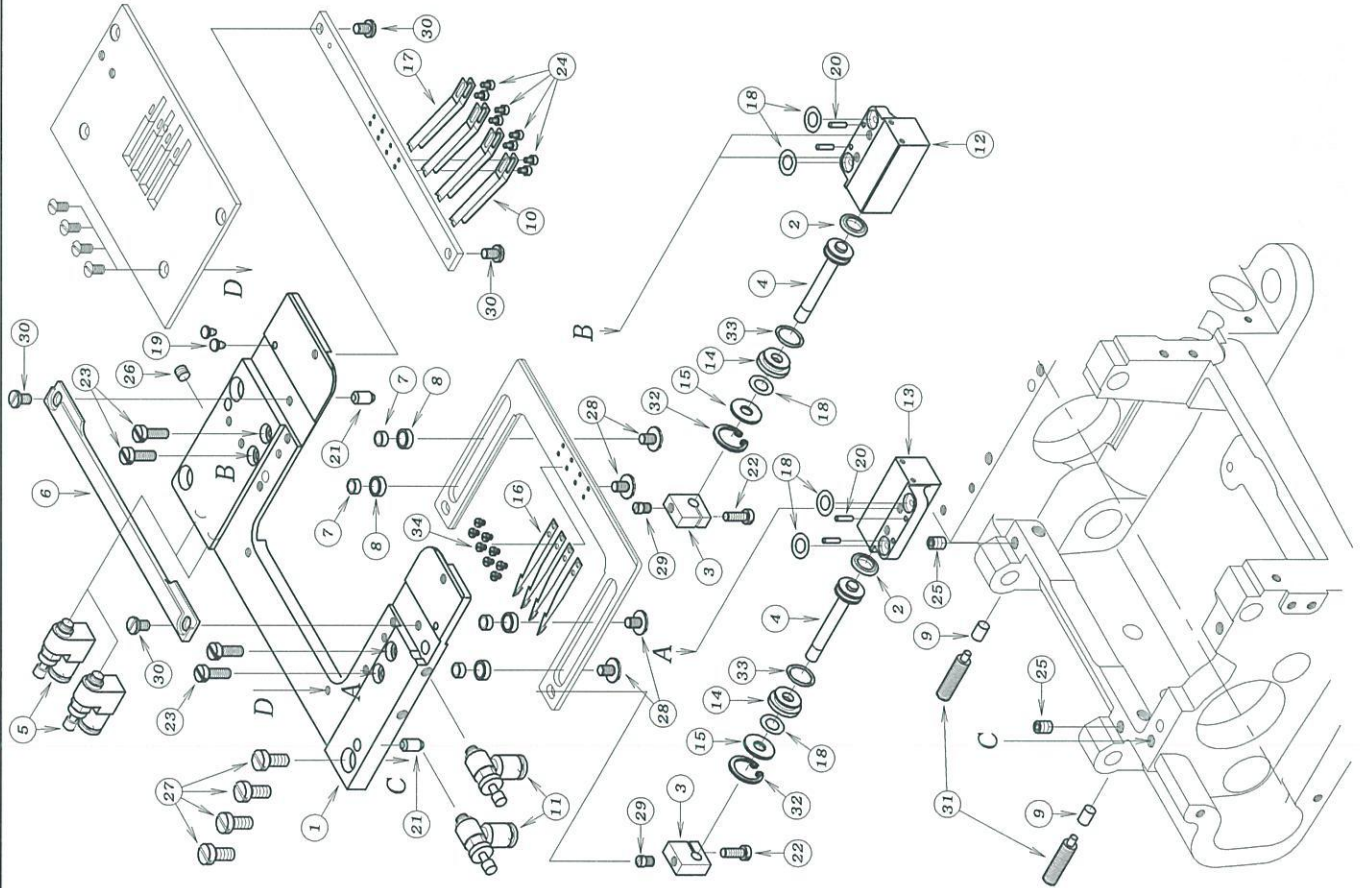
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|---------------|--------------------|--------------------|----------------------------|------|
| 16-01101-1115 | スリプ | スリプ | SLEEVE | 2 |
| 16-02102-017 | 後プーラー連結板 | 後プーラー連結板 | CONNECTING PLATE | 1 |
| 16-03102-117 | 後プーラーハブイプフタ | 後プーラーハブイプフタ | PLATE | 1 |
| 16-04102-123 | ワンウェイクラッチ用ハウジング(甲) | ワンウェイクラッチ用ハウジング(甲) | CLUTCH HOUSING | 1 |
| 16-05102-136 | スミス(中) | スミス(中) | REAR PULLER (SMOOTH) | 1 |
| 16-06102-158 | 後プーラー台 | 後プーラー台 | REAR PULLER HOLDER | 1 |
| 16-07102-178 | 後プーラー上ギヤ-28山 | 後プーラー上ギヤ-28山 | UPPER REAR PULLER28 | 1 |
| 16-08102-250 | 回り止ラケット | 回り止ラケット | BRACKET | 1 |
| 16-09102-415 | 下ローラー4本針スミス | 下ローラー4本針スミス | REAR PULLER (SMOOTH) | 1 |
| 16-10102-417 | 下ローラー4本針15山 | 下ローラー4本針15山 | REAR PULLER GEAR (15TEETH) | 1 |
| 16-11161-810 | フーラー連結ロッド | フーラー連結ロッド | CONNECTING ROD BALL | 1 |
| 16-12163-809 | プーラー連結ロッド | プーラー連結ロッド | BALL JOINT | 1 |
| 16-13171-444 | 後プーラー台シャフト(中) | 後プーラー台シャフト(中) | SHAFT | 1 |
| 16-14171-490 | 下ローラーシャフト | 下ローラーシャフト | SHAFT | 1 |
| 16-15175-247 | 連結メガネローラー | 連結メガネローラー | ROLLER | 1 |
| 16-16175-407 | ワッシャー | ワッシャー | WASHER | 1 |
| 16-17175-451 | ワッシャー | ワッシャー | WASHER | 1 |
| 16-18175-484 | ガイドカラー | ガイドカラー | GUIDE COLLAR | 1 |
| 16-19175-485 | スベサ | スベサ | COLLAR | 2 |
| 16-20175-519 | ワッシャー | ワッシャー | WASHER | 1 |
| 16-21175-520 | ワッシャー | ワッシャー | WASHER | 1 |
| 16-22175-552 | ワッシャー | ワッシャー | WASHER | 1 |
| 16-23179-551 | フーラー板ハネ | フーラー板ハネ | PULLER PLATE SPRING | 1 |
| 16-24181-321 | ブッシュ | ブッシュ | BUSHING | 1 |
| 16-25181-322 | ブッシュ | ブッシュ | BUSHING | 1 |
| 16-26181-323 | ブッシュ | ブッシュ | BUSHING | 1 |
| 16-27184-162 | ネジ | ネジ | SCREW | 6 |
| 16-28184-462 | ネジ | ネジ | SCREW | 3 |
| 16-29184-573 | 既ネジ | 既ネジ | SCREW | 1 |
| 16-30184-635 | ネジ | ネジ | SCREW | 2 |
| 16-31186-411 | ナット | ナット | NUT | 1 |
| 16-32187-015 | ネジ | ネジ | SCREW | 1 |
| 16-33187-113 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 2 |
| 16-34187-129 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 1 |
| 16-35187-181 | ネジ | ネジ | SCREW | 1 |
| 16-36187-173 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 1 |
| 16-37187-286 | ネジ | ネジ | SCREW | 3 |
| 16-38188-005 | ナット | ナット | NUT | 1 |
| 16-39188-179 | ナット | ナット | NUT | 2 |
| 16-40191-407 | ワンウェイクラッチ | ワンウェイクラッチ | BEARING | 4 |
| 16-41193-221 | ストップリング | ストップリング | E-RING | 1 |
| 16-42100-2008 | スミスプーラーセット | スミスプーラーセット | SMOOTH PULLER ASS'Y | 1 |
| 16-43100-3282 | 28山プーラーセット | 28山プーラーセット | 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 |
|----------|-----------|--------------------|---------------------------|------|
| 17-0101 | 1-115 | スリープ | SLEEVE | 2 |
| 17-0202 | 2-018 | 後プーラー連結板 | CONNECTING PLATE | 1 |
| 17-0302 | 2-117 | 後プーラーハブイプフタ | PLATE | 1 |
| 17-0402 | 2-124 | ワンウェイクラッチ用ハウジング(大) | HOUSING | 1 |
| 17-0502 | 2-138 | 後プーラー(コア) | REAR PULLER | 1 |
| 17-0602 | 2-246 | 回り止ブッシュ | BRACKET | 1 |
| 17-0702 | 2-420 | トロロー(12本針スラス) | REAR PULLER GEAR (SMOOTH) | 1 |
| 17-0802 | 2-159 | 後プーラー台 | BRACKET | 1 |
| 17-0902 | 2-494 | 後プーラー上キヤ-28山 | REAR PULLER | 1 |
| 17-1002 | 2-496 | 後プーラー下キヤ-14山 | REAR PULLER | 1 |
| 17-1102 | 163-809 | プーラー連結ロッド | BALL JOINT | 1 |
| 17-1202 | 1-445 | 後プーラー台シャフト(大) | SHAFT | 1 |
| 17-1302 | 1-490 | トロローシャフト | SHAFT | 1 |
| 17-1402 | 1-475-247 | 連結マガネローラ | ROLLER | 1 |
| 17-1502 | 1-407 | ワッシャ | WASHER | 1 |
| 17-1602 | 1-451 | ワッシャ | WASHER | 1 |
| 17-1702 | 1-484 | ガイドカラー | GUIDE COLLAR | 1 |
| 17-1802 | 1-519 | ワッシャ | WASHER | 1 |
| 17-1902 | 1-520 | ワッシャ | WASHER | 1 |
| 17-2002 | 1-552 | ワッシャ | WASHER | 1 |
| 17-2102 | 1-551 | プーラー板ハネ | PULLER PLATE SPRING | 1 |
| 17-2202 | 1-321 | ブッシュ | BUSHING | 1 |
| 17-2302 | 1-322 | ブッシュ | BUSHING | 1 |
| 17-2402 | 1-323 | ブッシュ | BUSHING | 1 |
| 17-2502 | 1-162 | ネジ | SCREW | 6 |
| 17-2602 | 1-462 | ネジ | SCREW | 3 |
| 17-2702 | 1-573 | 段ネジ | SCREW | 1 |
| 17-2802 | 1-635 | ネジ | SCREW | 2 |
| 17-2902 | 1-411 | ナット | NUT | 1 |
| 17-3002 | 1-015 | ネジ | SCREW | 1 |
| 17-3102 | 1-113 | 六角穴付きボルト | BOLT | 2 |
| 17-3202 | 1-129 | 六角穴付きボルト | BOLT | 1 |
| 17-3302 | 1-181 | ネジ | SCREW | 1 |
| 17-3402 | 1-173 | 六角穴付きボルト | BOLT | 1 |
| 17-3502 | 1-286 | ネジ | SCREW | 3 |
| 17-3602 | 1-005 | ナット | NUT | 1 |
| 17-3702 | 1-179 | ナット | NUT | 2 |
| 17-3802 | 1-407 | ワンウェイクラッチ | BEARING | 4 |
| 17-3902 | 1-221 | ストップリンク | E-RING | 1 |
| 17-4002 | 1-810 | プーラー連結ロッド玉 | CONNECTING ROD BALL | 1 |
| 17-4102 | 1-4283 | スラスプーラーセット | SMOOTH PULLER ASS'Y | 1 |
| 17-4202 | 1-3223 | 28山プーラーセット | 28 TEETH PULLER ASS'Y | 1 |

18. UTC糸切り装置 UTC KNIFE MECHANISM

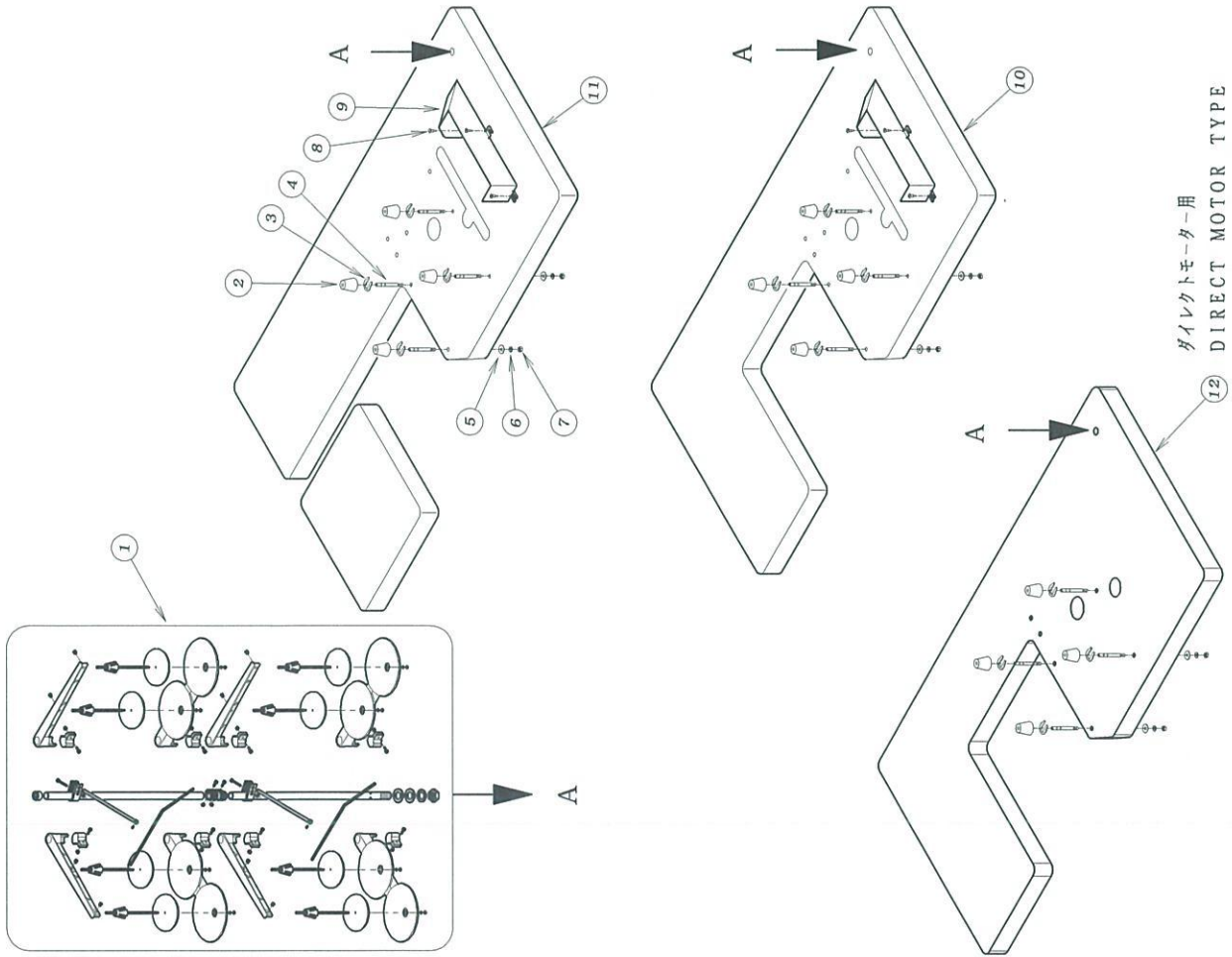


| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|-------------|----------|------------|-----------------------------|------|
| 18-0105-395 | | 針板土台 | NEEDL PLATE SUPPORT BRACKET | 1 |
| 18-0205-420 | | ハッネシ | SEAL | 2 |
| 18-0305-421 | | 案内フプレート | GUIDE BRACKET | 2 |
| 18-0405-426 | | ヒーストンロッド | ROD | 2 |
| 18-0505-428 | | スピードコントロール | SPEED CONTROLER | 2 |
| 18-0605-429 | | 固定メス | UPPER KNIFE | 1 |
| 18-0705-430 | | ガイドローラー(小) | GUIDE ROLLER (S) | 4 |
| 18-0805-431 | | ガイドローラー(大) | GUIDE ROLLER (L) | 4 |
| 18-0905-433 | | ストッパー | STOPPER | 2 |
| 18-1005-447 | | 裏ハネ(下) | LEAF SPRING | 4 |
| 18-1105-997 | | スピードコントロール | SPEED CONTROLER | 2 |
| 18-1205-544 | | シリンダ-本体(右) | AIR CYLINDER | 1 |
| 18-1305-545 | | シリンダ-本体(左) | AIR CYLINDER | 1 |
| 18-1405-546 | | ロッドカバー | COVER | 2 |
| 18-1505-547 | | ロッドプレート | PLATE | 2 |
| 18-1605-548 | | 可動メス | LOWER KNIFE | 4 |
| 18-1705-549 | | 裏ハネ(上) | LEAF SPRING (UPPER) | 4 |
| 18-1823-183 | | Oリング | O-RING | 6 |
| 18-1923-512 | | クッションゴム | CUSHION RUBBER | 2 |
| 18-2071-201 | | ピン | PIN | 4 |
| 18-2171-579 | | ピン | PIN | 2 |
| 18-2287-011 | | ネジ | SCREW | 2 |
| 18-2387-097 | | ネジ | SCREW | 4 |
| 18-2487-100 | | 六角穴付きボルト | BOLT | 8 |
| 18-2587-254 | | ネジ | SCREW | 2 |
| 18-2687-274 | | ネジ | SCREW | 1 |
| 18-2787-278 | | ネジ | SCREW | 4 |
| 18-2887-412 | | ネジ | SCREW | 4 |
| 18-2987-413 | | ネジ | SCREW | 2 |
| 18-3087-415 | | ネジ | SCREW | 4 |
| 18-3187-416 | | ストップネジ | SCREW | 2 |
| 18-3293-236 | | 穴用止め輪 | C-RING | 2 |
| 18-3398-857 | | Oリング | O-RING | 2 |
| 18-3487-091 | | ネジ | SCREW | 8 |

* UTAは、41ページを参照して下さい。
 * UTA series : Please refer to Page 41

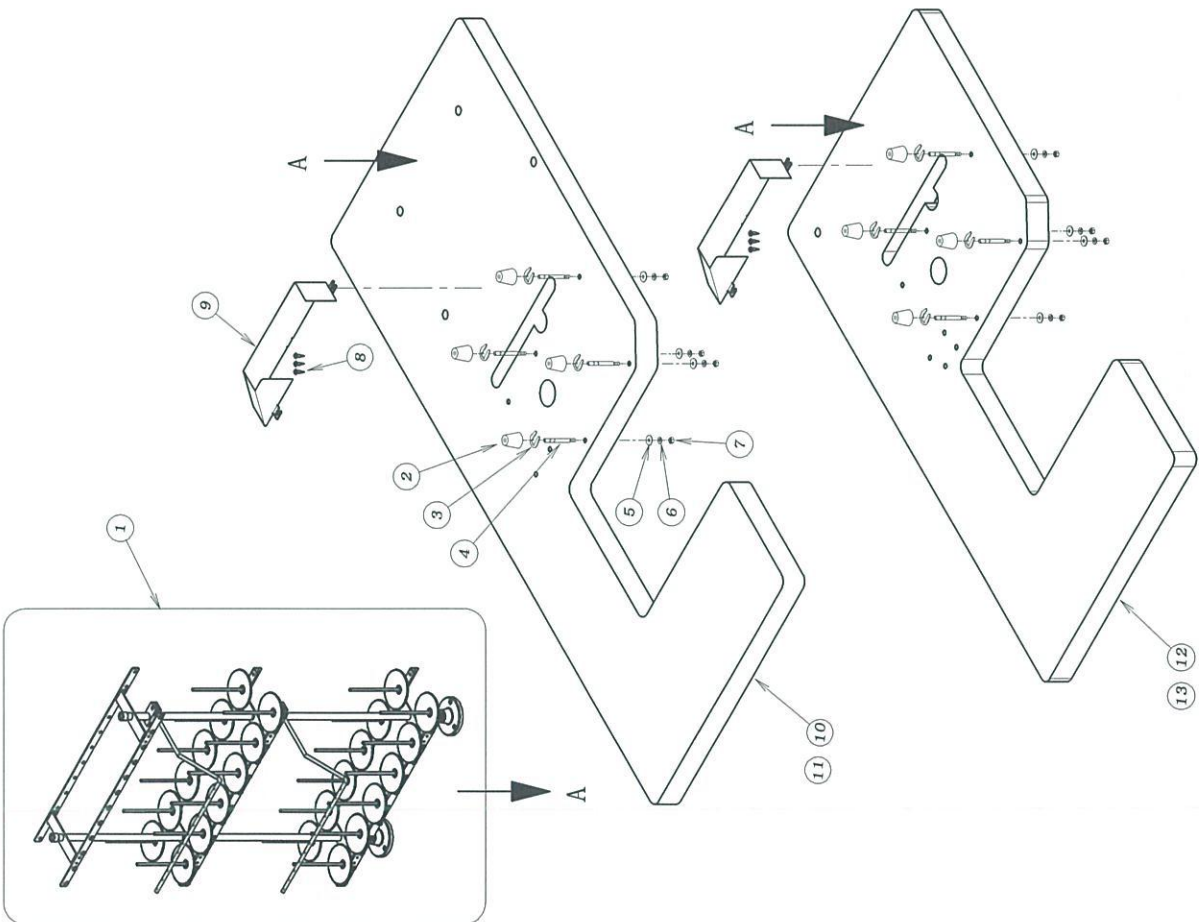
19. 糸立て及びテーブル (FX4404) THREAD STAND AND TABLE

| REF. NO. | PART NO. | 品名 | DESCRIPTION | Qty |
|----------|----------|----------------------|---------------------------|-----|
| 19-01 | 42-718 | 8本糸立て | 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用平ワッシャー | 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 | シリンダーフラットテーブル | FLAT TABLE | 1 |
| 19-11 | 21-025 | 補助フラットテーブル | WITH ASSISTANCE TABLE | 1 |
| 19-12 | 27-345 | フラットテーブル(ダイレクトモーター用) | FLAT TABLE (DIRECT MOTOR) | 1 |



20. 糸立て及びテーブール (FX4406, 4412, 4413) THREAD STAND AND TABLE

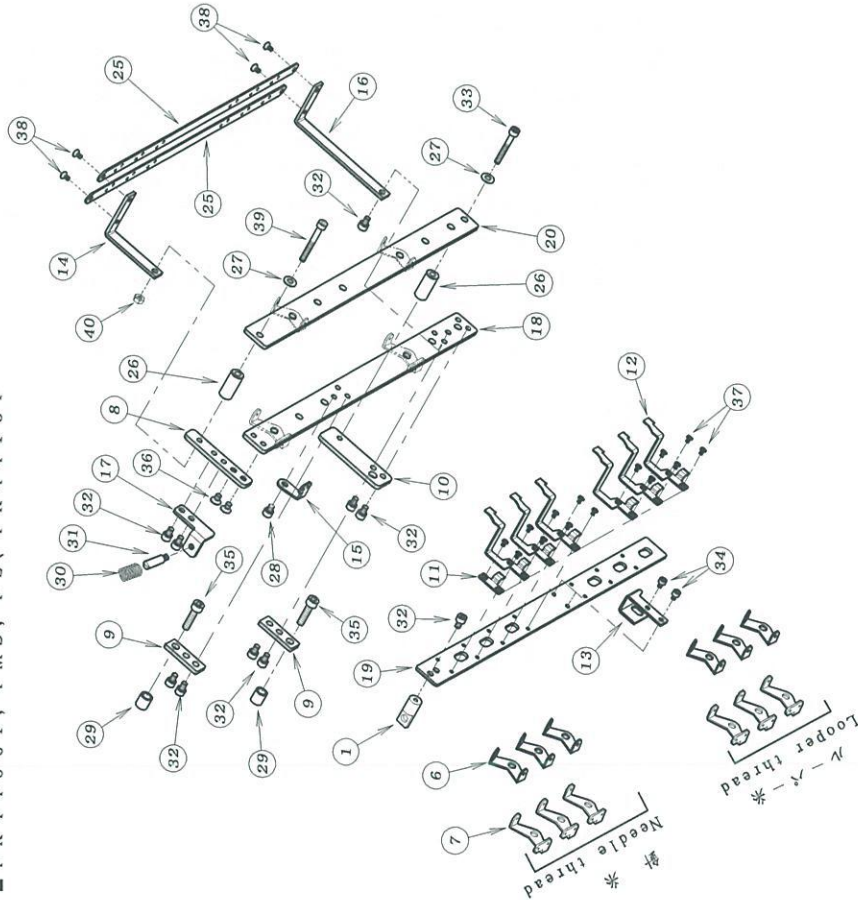
FX4406P, PMD, PL
FX4412



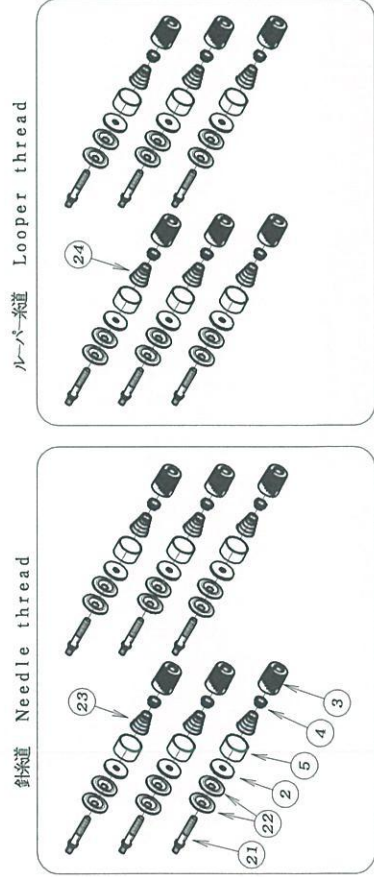
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Qty |
|----------|----------|----------------|---------------------------|-----|
| 20-01 | 42-024 | 2.4本糸立て(垂直タイプ) | THREAD STAND ASSEMBLY 2.4 | 1 |
| 20-02 | 23-509 | クッションゴム | CUSHION RUBBER | 4 |
| 20-03 | 93-501 | U型止め輪 | U-RING | 4 |
| 20-04 | 42-501 | 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用平ワッシャー | 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 | 補助取付テーブル | 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 | 補助取付テーブル | WITH ASSISTANCE TABLE | 1 |

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

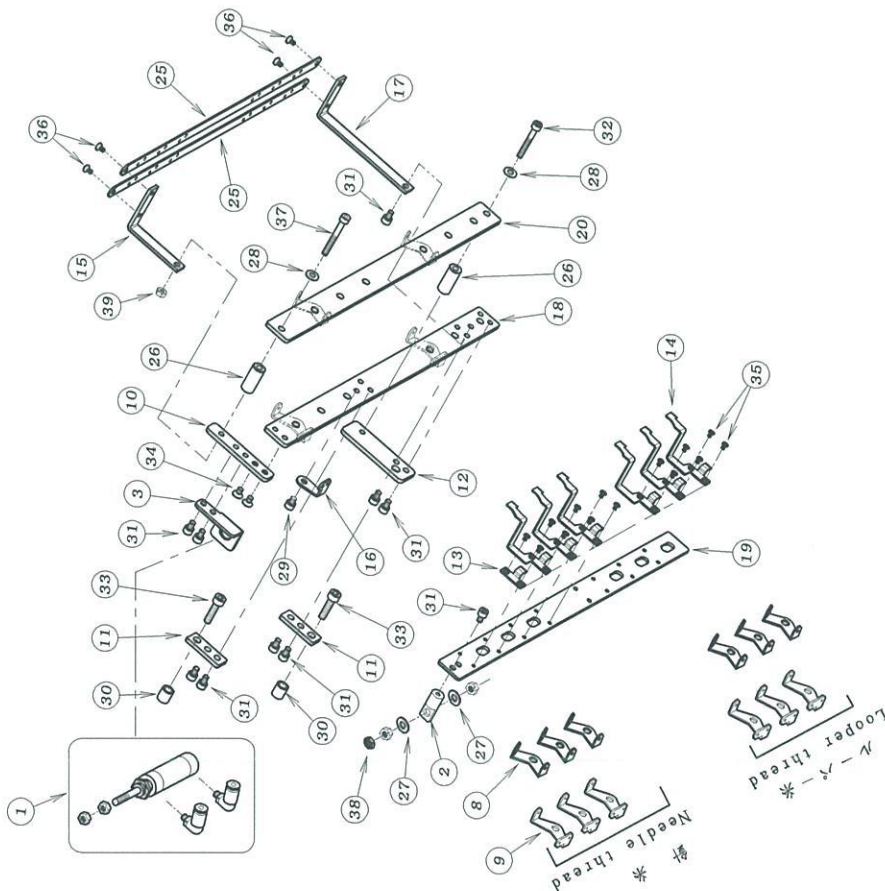
■ FX4406P, PMD, PL, FX4413P



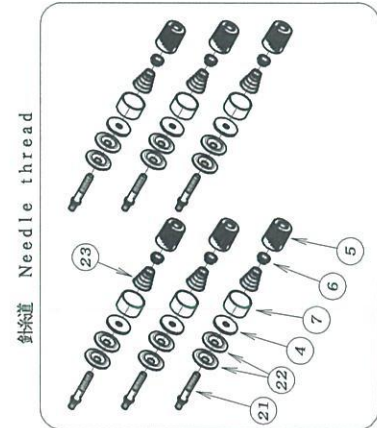
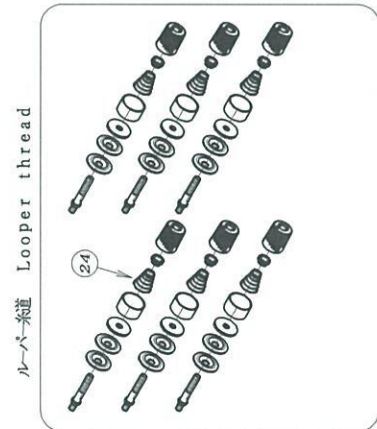
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|--------------|--------------|----------------------|----------------------|-----|
| 21-01105-531 | エア-リソリダ-連結金具 | BRACKET | BRACKET | 1 |
| 21-0223-324 | フェルト | FELT | FELT | 12 |
| 21-0341-104 | チャンボン皿小ネズ | THREAD TENSION NUT | THREAD TENSION NUT | 12 |
| 21-0441-105 | チャンボン皿ワレット | SPRING POST | SPRING POST | 12 |
| 21-0541-106 | 大ネズ | SPRING CUP | SPRING CUP | 12 |
| 21-0641-115 | 糸道(上) | THREAD GUIDE | THREAD GUIDE | 6 |
| 21-0741-466 | チャンボン皿糸道 | THREAD EYELET | THREAD EYELET | 6 |
| 21-0841-472 | 取付金具A | BRACKET A | BRACKET A | 1 |
| 21-0941-473 | 取付金具B | BRACKET B | BRACKET B | 2 |
| 21-1041-474 | 取付金具C | BRACKET C | BRACKET C | 1 |
| 21-1141-476 | 糸巻め爪(小) | NAIL (S) | NAIL (S) | 1 |
| 21-1241-477 | 糸巻め爪(大) | NAIL (L) | NAIL (L) | 6 |
| 21-1341-478 | 糸巻め金具 | PLATE | PLATE | 1 |
| 21-1441-480 | 糸ガイド取付金具 | BRACKET | BRACKET | 1 |
| 21-1541-487 | 糸道 | THREAD EYELET | THREAD EYELET | 1 |
| 21-1641-482 | 糸ガイド取付金具 | BRACKET | BRACKET | 1 |
| 21-1741-483 | 防振用取付金具 | BRACKET | BRACKET | 1 |
| 21-1841-484 | チャンボン台(F) | BRACKET | BRACKET | 1 |
| 21-1941-485 | 糸巻めプレート | THREAD RELEASE PLATE | THREAD RELEASE PLATE | 1 |
| 21-2041-486 | チャンボン台(上) | BRACKET | BRACKET | 1 |
| 21-2141-508 | 調子棒(中) | SCREW STUD | SCREW STUD | 12 |
| 21-2241-509 | チャンボン皿 | TENSION DISC | TENSION DISC | 24 |
| 21-2341-701 | チャンボン調子バネ(強) | SPRING (HEAVY) | SPRING (HEAVY) | 6 |
| 21-2441-702 | チャンボン調子バネ(弱) | SPRING (LIGHT) | SPRING (LIGHT) | 6 |
| 21-2545-472 | 糸ガイド | THREAD EYELET | THREAD EYELET | 2 |
| 21-2675-427 | スベ-スカラー | COLLAR | COLLAR | 2 |
| 21-2775-455 | ワッシャ | WASHER | WASHER | 2 |
| 21-2887-067 | 六角穴付きボルト | BOLT | BOLT | 1 |
| 21-2975-943 | カラー | COLLAR | COLLAR | 2 |
| 21-3079-163 | ハネ | SPRING | SPRING | 1 |
| 21-3184-537 | 取ネジ | SCREW | SCREW | 1 |
| 21-3287-092 | 六角穴付きボルト | BOLT | BOLT | 10 |
| 21-3387-120 | 六角穴付きボルト | BOLT | BOLT | 1 |
| 21-3487-142 | ネジ | SCREW | SCREW | 2 |
| 21-3587-246 | 六角穴付きボルト | BOLT | BOLT | 2 |
| 21-3687-293 | ネジ | SCREW | SCREW | 2 |
| 21-3787-338 | 十字穴付皿小ネジM2.5 | SCREW | SCREW | 14 |
| 21-3887-339 | 十字穴付皿小ネジM3 | SCREW | SCREW | 4 |
| 21-3987-903 | 六角穴付きボルト | BOLT | BOLT | 1 |
| 21-4088-146 | ナット | NUT | NUT | 1 |



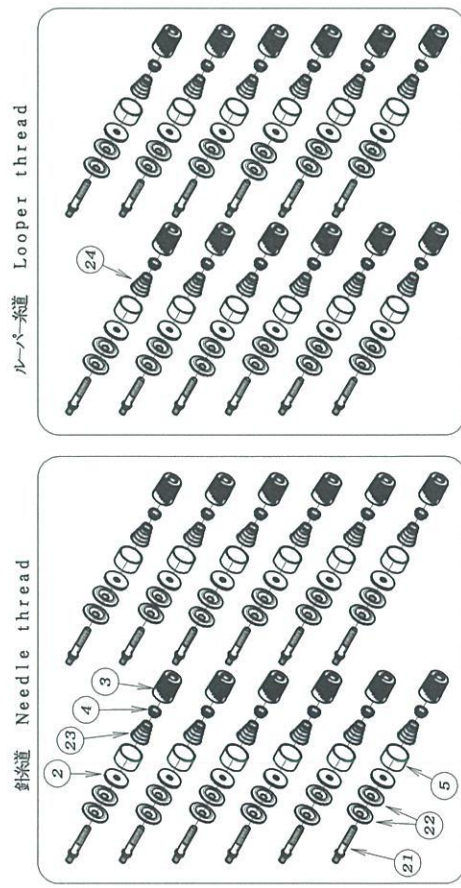
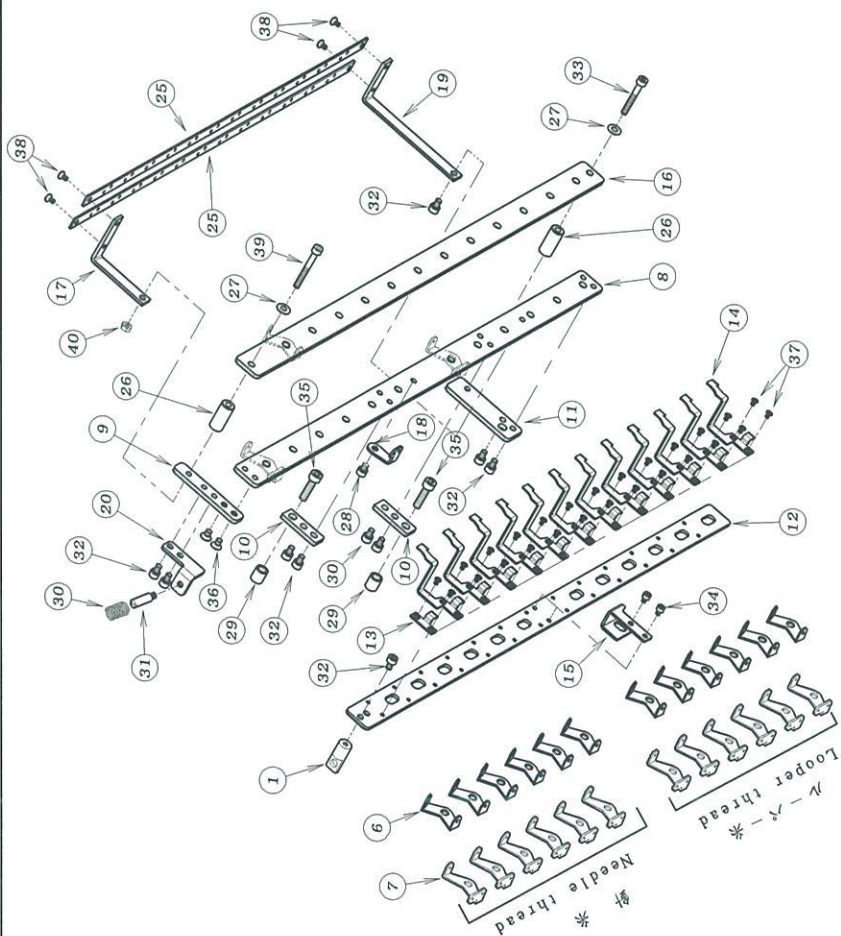
22. 糸調子機構 (FX4406UTC, FX4413UTC) THREAD TENSION MECHANISM



| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|---------------|----------------------|-----|
| 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 | 41-104 | チャンポン皿小ケース | THREAD TENSION NUT | 12 |
| 22-06 | 41-105 | チャンポン皿ワチエット | SPRING POST | 12 |
| 22-07 | 41-106 | 大ケース | SPRING CUP | 12 |
| 22-08 | 41-115 | 糸道 (上) | THREAD GUIDE | 6 |
| 22-09 | 41-466 | チャンポン皿糸道 | 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 | 糸繰め爪 (小) | NAIL (S) | 1 |
| 22-14 | 41-477 | 糸繰め爪 (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 | 糸繰めプレート | 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 | チャンポン調子パネ (軸) | SPRING (HEAVY) | 6 |
| 22-24 | 41-702 | チャンポン調子パネ (弱) | SPRING (LIGHT) | 6 |
| 22-25 | 45-472 | 糸ガイド | THREAD EYELET | 2 |
| 22-26 | 75-427 | スベ-スカラ- | 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 |

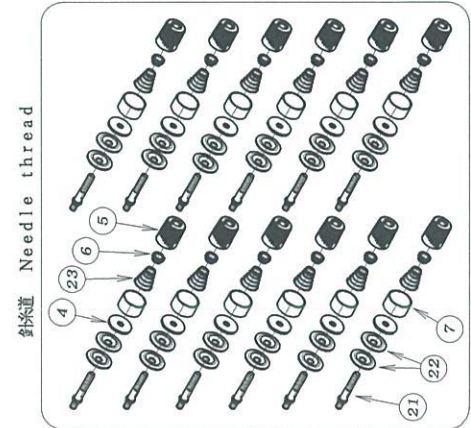
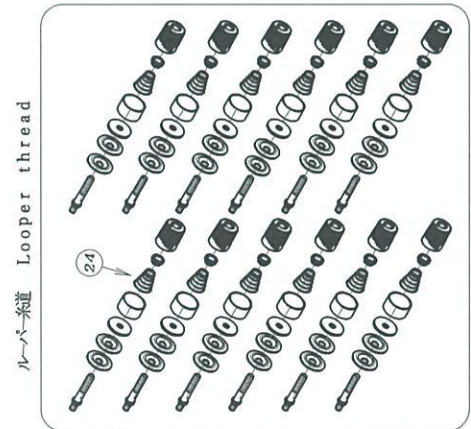
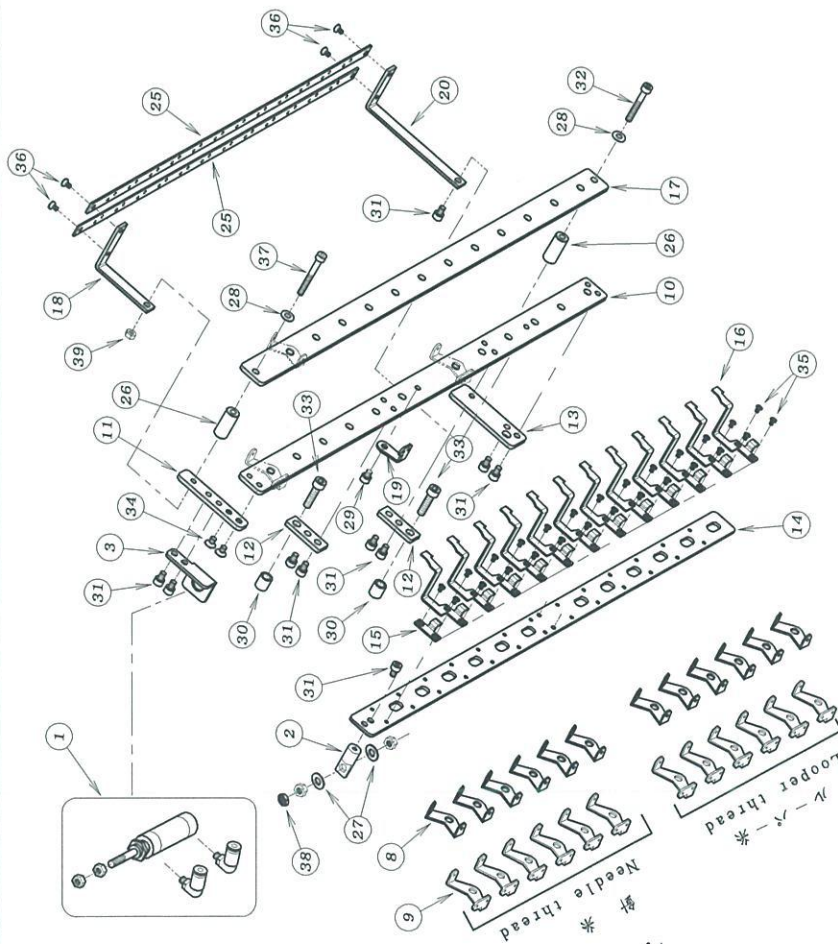


23. 糸調子機構 (FX4412) THREAD TENSION MECHANISM



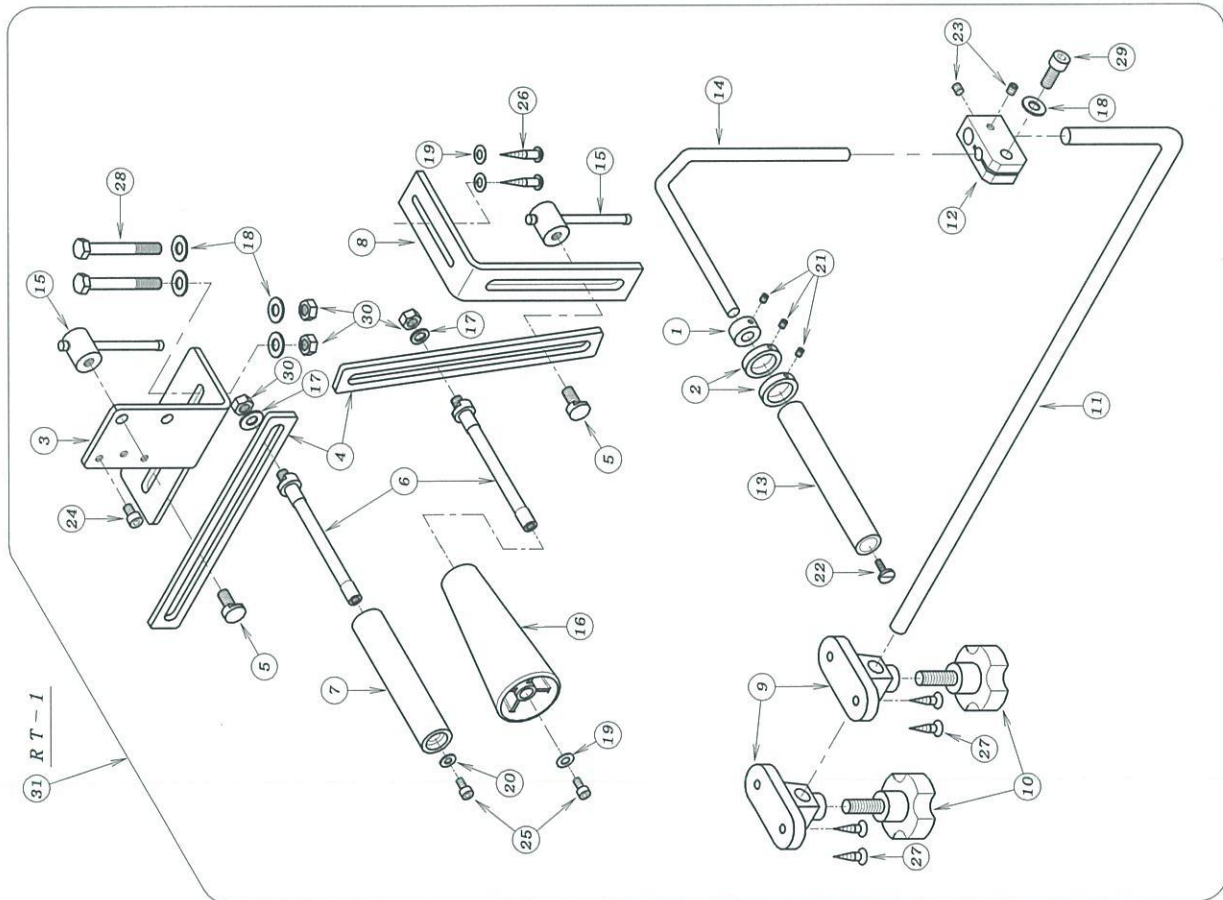
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|---------------|----------------------|-----|
| 23-01 | 105-531 | エア-シリンドラ-連結金具 | BRACKET | 1 |
| 23-02 | 23-324 | フェルト | FELT | 24 |
| 23-03 | 41-104 | チャンポン皿小ケース | THREAD TENSION NUT | 24 |
| 23-04 | 41-105 | チャンポン皿ワチェット | SPRING POST | 24 |
| 23-05 | 41-106 | 大ケース | SPRING CUP | 24 |
| 23-06 | 41-115 | 糸道 (上) | THREAD GUIDE | 12 |
| 23-07 | 41-466 | チャンポン皿糸道 | 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 | 糸繰めプレート | THREAD RELEASE PLATE | 1 |
| 23-13 | 41-476 | 糸繰め爪 (小) | NAIL (S) | 1 |
| 23-14 | 41-477 | 糸繰め爪 (大) | NAIL (L) | 12 |
| 23-15 | 41-478 | 糸繰め金具 | 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 | 24 |
| 23-22 | 41-509 | チャンポン皿 | TENSION DISC | 48 |
| 23-23 | 41-701 | チャンポン調子パネ (軸) | SPRING (HEAVY) | 12 |
| 23-24 | 41-702 | チャンポン調子パネ (朝) | SPRING (LIGHT) | 12 |
| 23-25 | 45-471 | 糸ガイド | THREAD EYELET | 2 |
| 23-26 | 75-427 | スベ-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



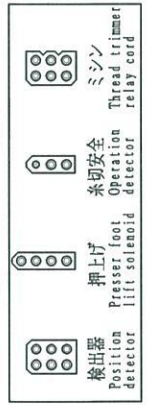
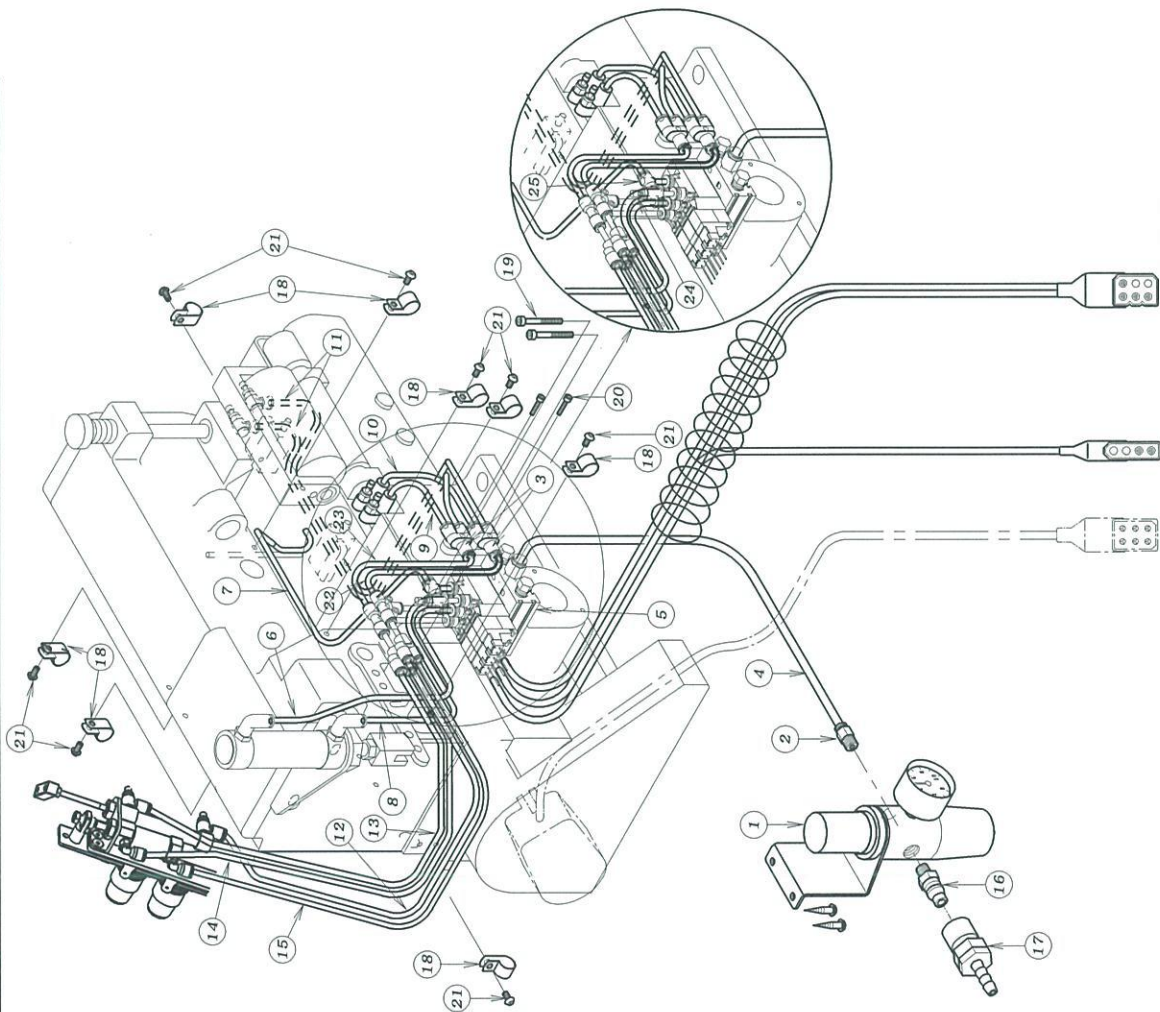
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|--------------|----------------------|-----|
| 24-01 | 105-450 | エア-シリンダ | AIR CYLINDER | 1 |
| 24-02 | 05-531 | エア-シリンダ-連結金具 | BRACKET | 1 |
| 24-03 | 05-585 | エア-シリンダ-取付金具 | BRACKET | 1 |
| 24-04 | 23-324 | フェルト | FELT | 24 |
| 24-05 | 41-104 | チャンポン皿小ケース | THREAD TENSION NUT | 24 |
| 24-06 | 41-105 | チャンポン皿ワチェット | SPRING POST | 24 |
| 24-07 | 41-106 | 大ケース | SPRING CUP | 24 |
| 24-08 | 41-115 | 糸道(上) | THREAD GUIDE | 12 |
| 24-09 | 41-466 | チャンポン皿糸道 | THREAD EYELET | 12 |
| 24-10 | 41-471 | チャンポン台(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 | 糸締めプレート | THREAD RELEASE PLATE | 1 |
| 24-15 | 41-476 | 糸締め爪(小) | NAIL (S) | 1 |
| 24-16 | 41-477 | 糸締め爪(大) | NAIL (L) | 12 |
| 24-17 | 41-479 | チャンポン台(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 | チャンポン皿 | TENSION DISC | 48 |
| 24-23 | 41-701 | チャンポン調子バネ(強) | SPRING (HEAVY) | 12 |
| 24-24 | 41-702 | チャンポン調子バネ(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



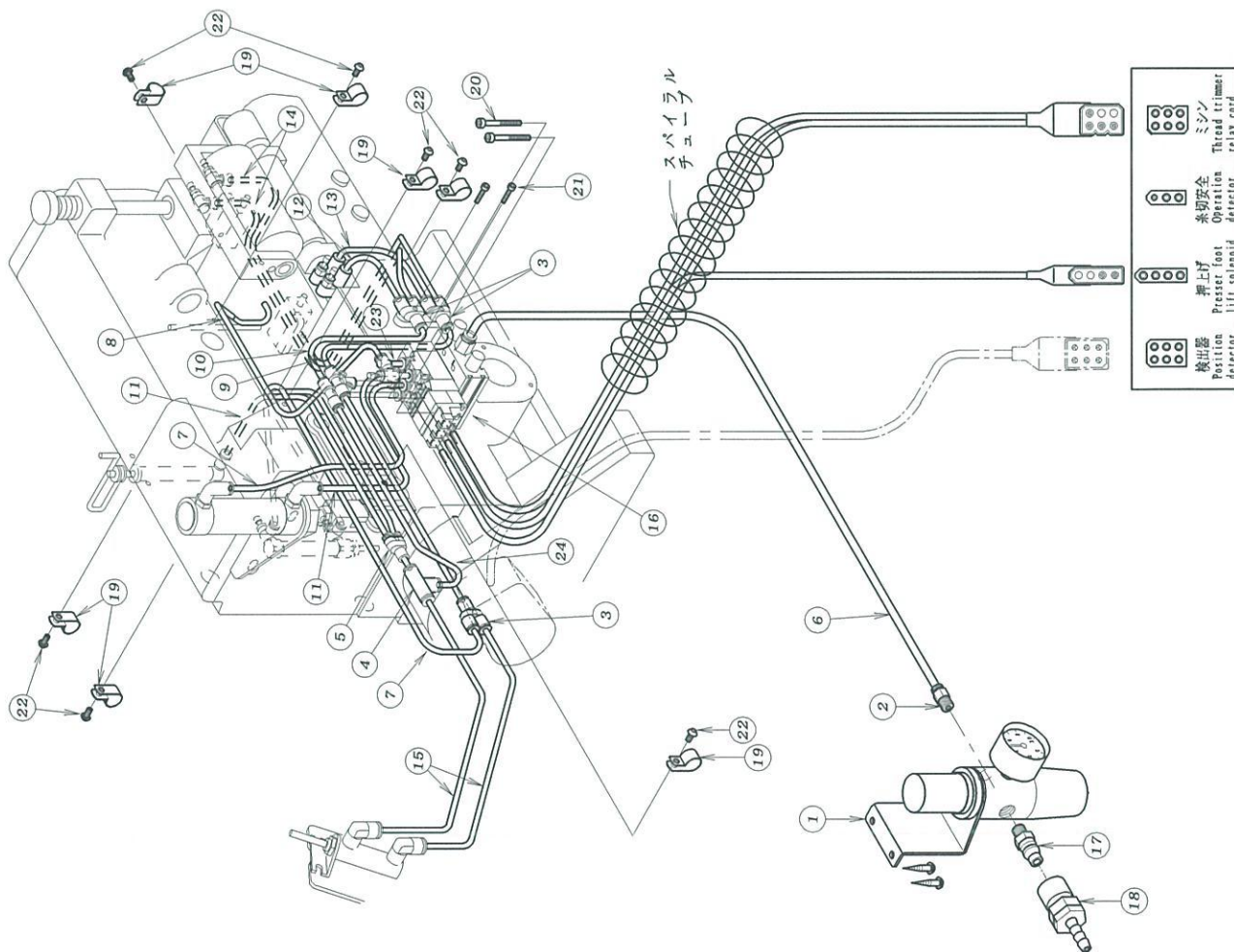
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|--------------|--------------|--------------|---------------------|------|
| 25-0109-145 | カラ- | カラ- | COLLAR | 1 |
| 25-0209-147 | カラ- | カラ- | COLLAR | 2 |
| 25-0309-519 | リアローラーブ'ラケット | リアローラーブ'ラケット | REAR ROLLER BRACKET | 1 |
| 25-0409-521 | リアローラーズライト' | リアローラーズライト' | SLIDE PLATE | 2 |
| 25-0509-522 | リアローラー止めネジ' | リアローラー止めネジ' | SCREW | 2 |
| 25-0609-523 | リアローラー調整軸 | リアローラー調整軸 | SHAFT | 2 |
| 25-0709-524 | リアローラー | リアローラー | REAR ROLLER | 1 |
| 25-0809-525 | ブ'ラケット | ブ'ラケット | BRACKET | 1 |
| 25-0909-526 | ブ'ラケット | ブ'ラケット | BRACKET | 2 |
| 25-1009-527 | ノブ' | ノブ' | KNOB | 2 |
| 25-1109-528 | ローラーブ'ラケットハ' | ローラーブ'ラケットハ' | BAR | 1 |
| 25-1209-529 | ローラー軸継手 | ローラー軸継手 | JOINT BLOCK | 1 |
| 25-1309-530 | 前ローラー | 前ローラー | ROLLER | 1 |
| 25-1409-531 | ローラーブ'ラケットハ' | ローラーブ'ラケットハ' | BAR | 1 |
| 25-1509-553 | ハンドル | ハンドル | HANDLE | 2 |
| 25-1609-727 | テーパーローラー | テーパーローラー | TAPER ROLLER | 1 |
| 25-1775-501 | ワッシャ | ワッシャ | WASHER | 2 |
| 25-1875-451 | ワッシャ | ワッシャ | WASHER | 5 |
| 25-1975-452 | ワッシャ | ワッシャ | WASHER | 3 |
| 25-2075-453 | ワッシャ | ワッシャ | WASHER | 1 |
| 25-2184-521 | ネジ' | ネジ' | SCREW | 3 |
| 25-2284-570 | ネジ' | ネジ' | SCREW | 1 |
| 25-2387-172 | ネジ' | ネジ' | SCREW | 2 |
| 25-2487-203 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 1 |
| 25-2587-213 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 2 |
| 25-2687-501 | 丸ネジ' | 丸ネジ' | SCREW | 2 |
| 25-2787-502 | 皿ネジ' | 皿ネジ' | SCREW | 4 |
| 25-2887-503 | 六角ボルト | 六角ボルト | BOLT | 2 |
| 25-2987-663 | 六角穴付きボルト | 六角穴付きボルト | BOLT | 1 |
| 25-3088-176 | ナット | ナット | NUT | 4 |
| 25-3115019XX | ゴム張りセット | ゴム張りセット | GUIDE ROLLER ASS'Y | 1 |

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



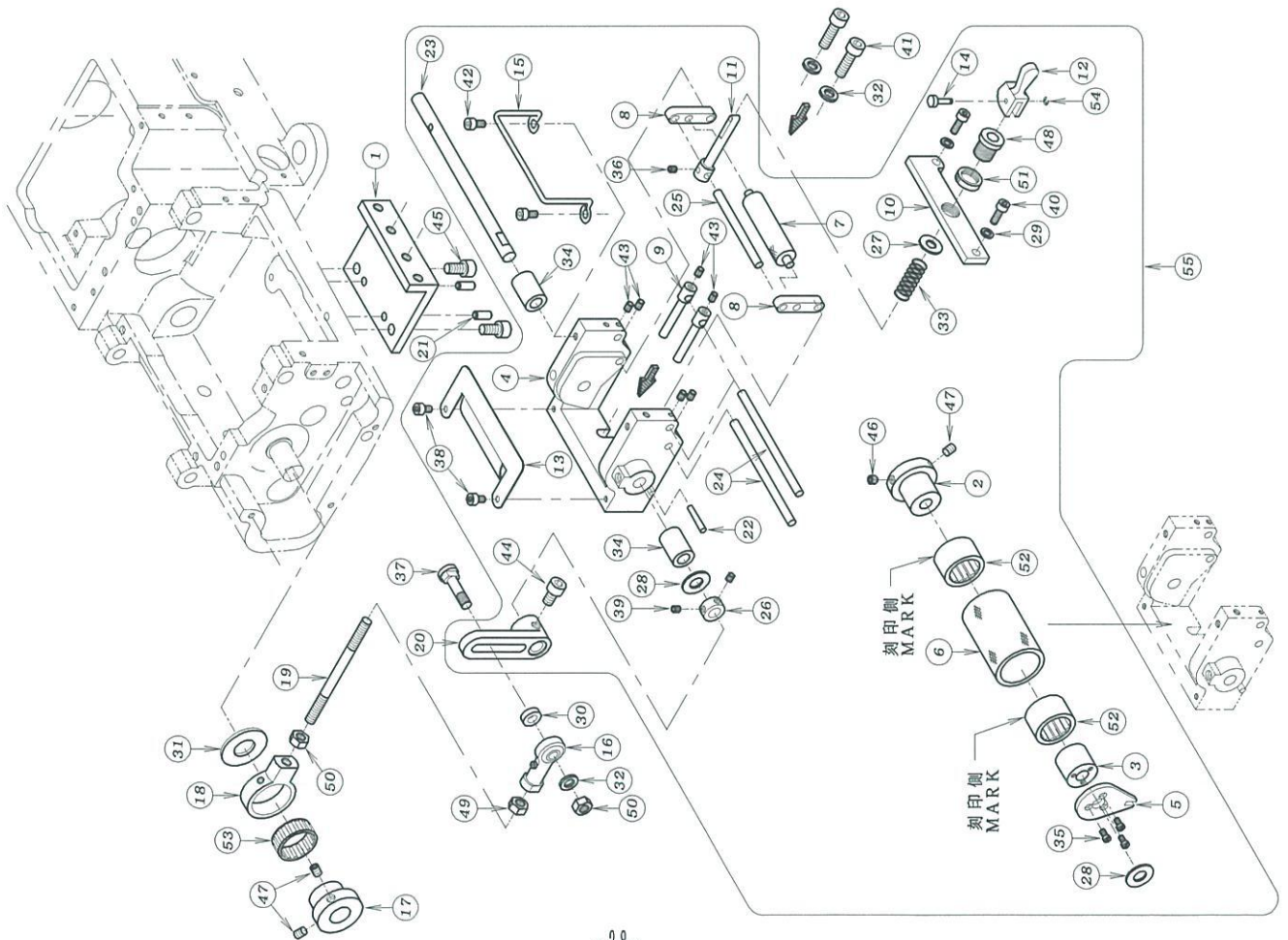
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|------------|----------------------|------|
| 26-01 | 05-212 | フィルタレギュレータ | REGULATOR | 1 |
| 26-02 | 05-218 | レギュレータ用継手 | JOINT | 1 |
| 26-03 | 05-482 | ユニオンワイ | JOINT | 2 |
| 26-04 | 05-486 | チューブ | TUBE | 1 |
| 26-05 | 05-996 | 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 | カプラー | CONNECTOR | 1 |
| 26-17 | 06-517 | カプラー | CONNECTOR | 1 |
| 26-18 | 06-928 | ナイロクリップ | 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 | SPEED CONTROLLER | 1 |
| 26-25 | 06-597 | プラグ | PLUG | 1 |

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



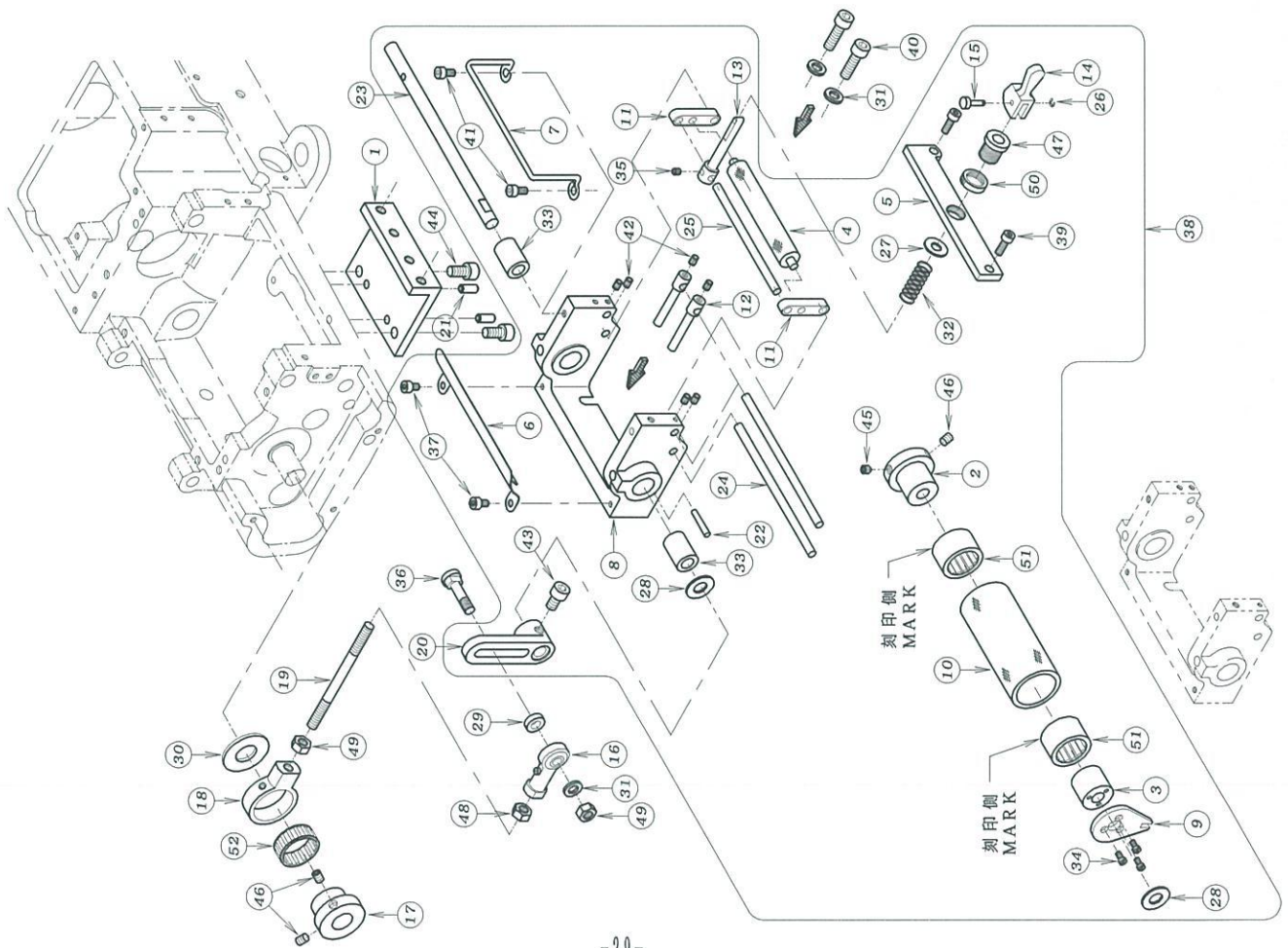
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|-------------|----------------------|-----|
| 27-01 | 05-212 | フィルムレギュレーター | REGULATOR | 1 |
| 27-02 | 05-218 | レギュレーター用継手 | JOINT | 1 |
| 27-03 | 05-482 | ユニオンワイ | JOINT | 3 |
| 27-04 | 05-483 | ユニオンテーパー | JOINT | 1 |
| 27-05 | 05-484 | フランジユニオンワイ | 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 | カプラー | CONNECTOR | 1 |
| 27-18 | 06-517 | カプラー | CONNECTOR | 1 |
| 27-19 | 06-928 | パイロソケット | 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 |

28. PMD機構 (FX4404) METERING DEVICE MECHANISM



| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|---------------------|-----------------------|-----|
| 28-01 | 01-101 | 前ア-ラー取付土台 | BRACKET | 1 |
| 28-02 | 01-102 | フタ側スリーブ | SLEEVE | 1 |
| 28-03 | 01-103 | 連結被覆スリーブ | SLEEVE | 1 |
| 28-04 | 01-111 | 前ア-ラー土台 | BRACKET | 1 |
| 28-05 | 01-116 | 前ア-ラー回り止め蓋 | PLATE | 1 |
| 28-06 | 01-132 | 前ア-ラーローレット | PULLER | 1 |
| 28-07 | 01-134 | 前ア-ラー-ロー-ラー | LOWER ROLLER | 1 |
| 28-08 | 01-136 | 前ア-ラー-ロー-ラー取付付金具 | ROLLER HOLDER | 2 |
| 28-09 | 01-138 | 前ア-ラー-ロー-ラー-コ-ム案内金具 | PIVOT SHAFT HOLDER | 2 |
| 28-10 | 01-141 | 前ア-ラー-締め金具 | RUBBER TIGHTENER | 1 |
| 28-11 | 01-143 | 小ロー-ラー締め金具 | ROLLER CONTROLLER | 1 |
| 28-12 | 01-145 | ワシワシ レバ- | LEVER | 1 |
| 28-13 | 01-146 | 前ア-ラー-カハ- | COVER | 1 |
| 28-14 | 01-147 | レバ-連結ピン | PIN | 1 |
| 28-15 | 01-152 | ガイド | GUIDE | 1 |
| 28-16 | 05-954 | ロッド エント | ROD | 1 |
| 28-17 | 61-409 | 前ア-ラー-エキセン | ECCENTRIC | 1 |
| 28-18 | 63-425 | 前ア-ラー-ロッド | CONNECTING ROD | 1 |
| 28-19 | 65-335 | 前ア-ラー-連結棒 | CONNECTING BAR | 1 |
| 28-20 | 67-419 | 前ア-ラー-連結レバ- | LEVER | 1 |
| 28-21 | 71-208 | ワシワシ | PIN | 2 |
| 28-22 | 71-227 | ワシワシ | PIN | 1 |
| 28-23 | 71-353 | 前ア-ラー-土台シャフト | SHAFT | 1 |
| 28-24 | 71-361 | 案内棒大 | PIVOT SHAFT (LARGE) | 2 |
| 28-25 | 71-362 | 案内棒小 | PIVOT SHAFT (SMALL) | 1 |
| 28-26 | 75-152 | カラー | COLLAR | 1 |
| 28-27 | 75-446 | ワシワシ | WASHER | 1 |
| 28-28 | 75-451 | ワシワシ | WASHER | 2 |
| 28-29 | 75-468 | ワシワシ | WASHER | 2 |
| 28-30 | 75-480 | ワシワシ | WASHER | 1 |
| 28-31 | 75-490 | 前ア-ラー-ベアリングワシワシ | WASHER | 3 |
| 28-32 | 75-552 | ワシワシ | WASHER | 1 |
| 28-33 | 79-171 | 圧縮バネ | SPRING | 1 |
| 28-34 | 81-125 | ブッシュ | BUSHING | 2 |
| 28-35 | 84-162 | ネジ | SCREW | 3 |
| 28-36 | 84-314 | ネジ | SCREW | 1 |
| 28-37 | 87-006 | ロッド エント 止ネジ | SCREW | 1 |
| 28-38 | 87-092 | 六角穴付きボルト | BOLT | 1 |
| 28-39 | 87-106 | ネジ | SCREW | 2 |
| 28-40 | 87-129 | 六角穴付きボルト | BOLT | 2 |
| 28-41 | 87-173 | 六角穴付きボルト | BOLT | 2 |
| 28-42 | 87-177 | 六角穴付きボルト | BOLT | 2 |
| 28-43 | 87-181 | ネジ | SCREW | 6 |
| 28-44 | 87-203 | 六角穴付きボルト | BOLT | 1 |
| 28-45 | 87-225 | 六角穴付きボルト | BOLT | 2 |
| 28-46 | 87-253 | ネジ | SCREW | 1 |
| 28-47 | 87-254 | ネジ | SCREW | 3 |
| 28-48 | 87-456 | 調整ネジ | SCREW | 1 |
| 28-49 | 88-161 | ナット | NUT | 1 |
| 28-50 | 88-166 | ナット | NUT | 2 |
| 28-51 | 88-456 | ナット | NUT | 1 |
| 28-52 | 91-405 | ワシワシ | BEARING | 2 |
| 28-53 | 91-411 | 前ア-ラー リング | BEARING | 1 |
| 28-54 | 93-200 | ストップ リング | E-RING | 1 |
| 28-55 | 00-1402 | PMD装置(組) | METERING DEVICE ASS'Y | 1 |

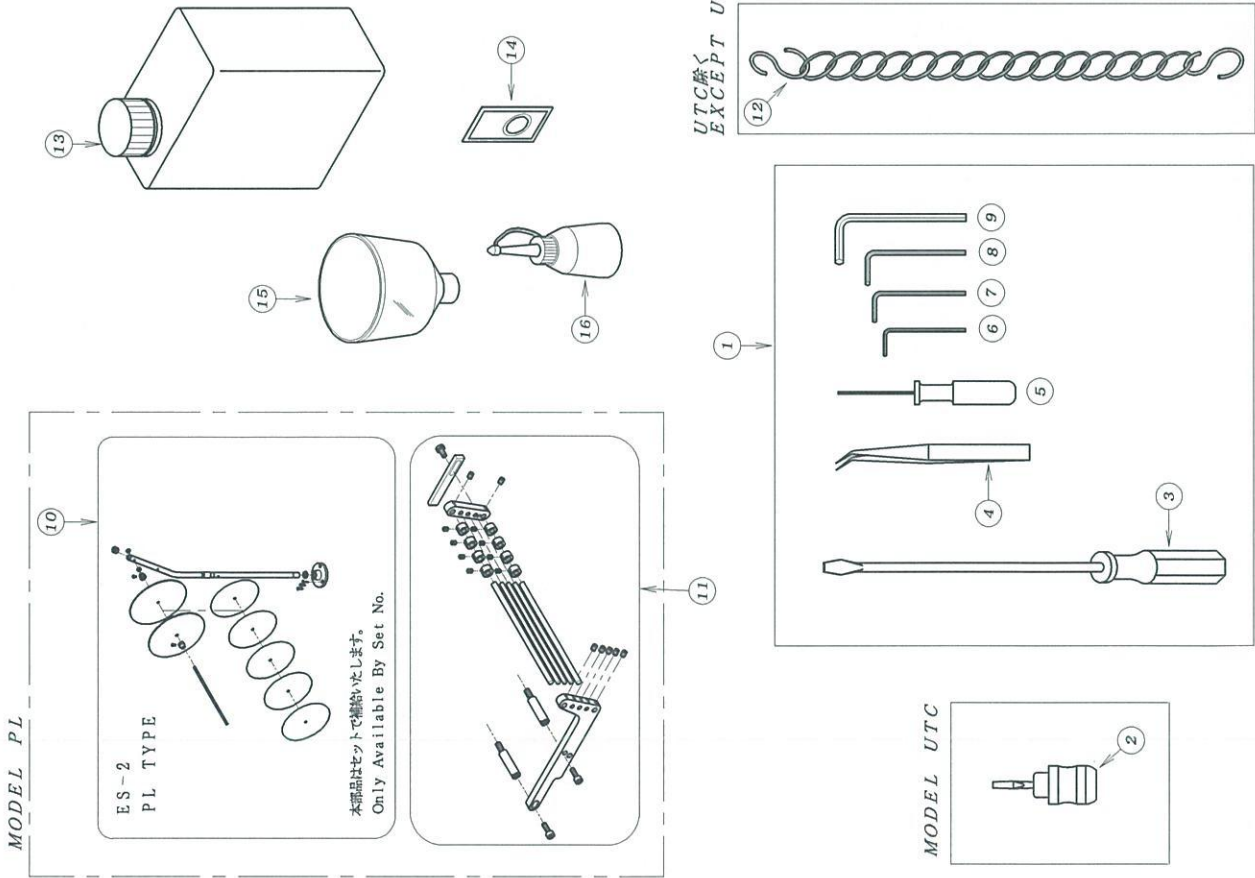
29. PMD機構 (FX4406-12) METERING DEVICE MECHANISM



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|-----------------|-----------------------|------|
| 29-01 | 101-101 | 前フーラー取付土台 | BRACKET | 1 |
| 29-02 | 101-102 | フタ側スリーブ | SLEEVE | 1 |
| 29-03 | 101-103 | 連結板側スリーブ | SLEEVE | 1 |
| 29-04 | 101-104 | 前フーラー小ローラー (幅広) | LOWER ROLLER | 1 |
| 29-05 | 101-105 | 前フーラー締め金具 (幅広) | RUBBER TENSIONER | 1 |
| 29-06 | 101-106 | 前フーラーカバー (幅広) | PULLER COVER | 1 |
| 29-07 | 101-107 | 前フーラー取付ガイド (幅広) | GUIDE WIRE | 1 |
| 29-08 | 101-112 | 前フーラー土台 (幅広) | PULLER ROCKER | 1 |
| 29-09 | 101-116 | 前フーラー回り止め蓋 | PLATE | 1 |
| 29-10 | 101-133 | 前フーラーローレット | PULLER | 1 |
| 29-11 | 101-136 | 前フーラー小ローラー取付金具 | ROLLER HOLDER | 1 |
| 29-12 | 101-138 | 前フーラーローラーコム案内金具 | PIVOT SHAFT HOLDER | 2 |
| 29-13 | 101-143 | 小ローラー締め金具 | ROLLER CONTROLLER | 1 |
| 29-14 | 101-145 | ワントップ レバー | LEVER | 1 |
| 29-15 | 101-147 | レバー 連結ピン | PIN | 1 |
| 29-16 | 105-954 | ロット エント | ROD | 1 |
| 29-17 | 161-409 | 前フーラーエキセン | ECCENTRIC | 1 |
| 29-18 | 163-425 | 前フーラーロッド | CONNECTING ROD | 1 |
| 29-19 | 165-335 | 前フーラー連結棒 | CONNECTING BAR | 1 |
| 29-20 | 167-419 | 前フーラー連結レバー | LEVER | 1 |
| 29-21 | 171-208 | ワントップ レバー | PIN | 2 |
| 29-22 | 171-227 | ワントップ レバー | PIN | 1 |
| 29-23 | 171-354 | 前フーラー土台シャフト | SHAFT | 1 |
| 29-24 | 171-355 | 案内棒大 (幅広) | SHAFT | 2 |
| 29-25 | 171-356 | 案内棒小 (幅広) | SHAFT | 1 |
| 29-26 | 193-200 | ワントップ リンク | E-RING | 1 |
| 29-27 | 175-446 | ワッシャー | WASHER | 1 |
| 29-28 | 175-451 | ワッシャー | WASHER | 2 |
| 29-29 | 175-480 | ワッシャー | WASHER | 1 |
| 29-30 | 175-490 | 前フーラーベアリングワッシャー | WASHER | 1 |
| 29-31 | 175-552 | ワッシャー | WASHER | 3 |
| 29-32 | 179-171 | 圧縮バネ | SPRING | 1 |
| 29-33 | 181-125 | ブッシュ | BUSHING | 2 |
| 29-34 | 184-162 | ネジ | SCREW | 3 |
| 29-35 | 184-314 | ネジ | SCREW | 1 |
| 29-36 | 187-006 | ロット エント 止ネジ | SCREW | 1 |
| 29-37 | 187-092 | 六角穴付きボルト | BOLT | 2 |
| 29-38 | 100-1403 | PMD装置 (組) | METERING DEVICE ASS'Y | 1 |
| 29-39 | 187-129 | 六角穴付きボルト | BOLT | 2 |
| 29-40 | 187-173 | 六角穴付きボルト | BOLT | 2 |
| 29-41 | 187-177 | 六角穴付きボルト | BOLT | 2 |
| 29-42 | 187-181 | ネジ | SCREW | 6 |
| 29-43 | 187-203 | 六角穴付きボルト | BOLT | 1 |
| 29-44 | 187-225 | 六角穴付きボルト | BOLT | 2 |
| 29-45 | 187-253 | ネジ | SCREW | 1 |
| 29-46 | 187-254 | ネジ | SCREW | 3 |
| 29-47 | 187-456 | 調整ネジ | SCREW | 1 |
| 29-48 | 188-161 | ナット | NUT | 1 |
| 29-49 | 188-166 | ナット | NUT | 2 |
| 29-50 | 188-456 | ナット | NUT | 1 |
| 29-51 | 191-405 | ワントップ クラッチ | BEARING | 2 |
| 29-52 | 191-411 | 前マスのベアリング | BEARING | 1 |

30. アクセサリー - ACCESSORIES

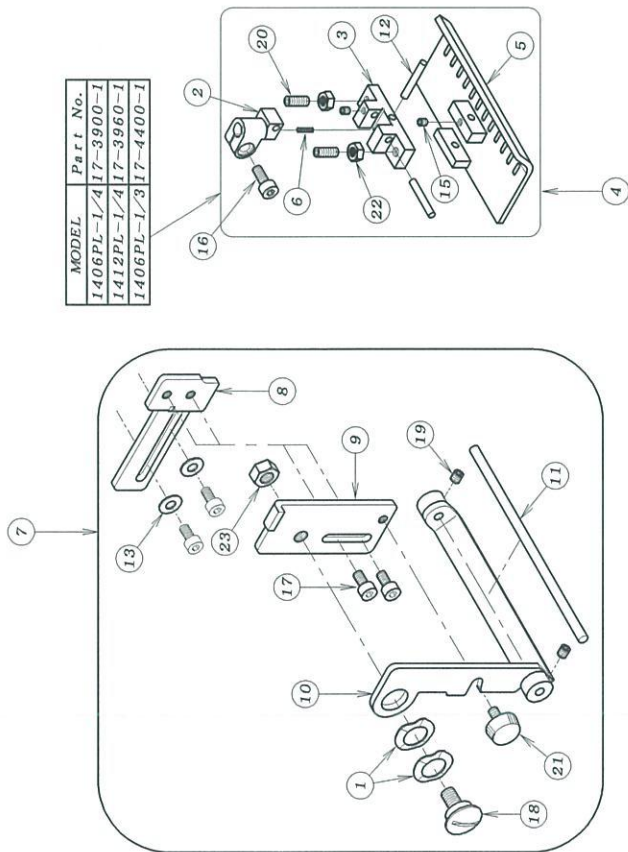
| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|-----------|------------------|-------------------|-----|
| 30-01 | 20-0010 | 附属品ケース | ACCESSORIES | 1 |
| 30-02 | 28-454 | ドライバ - (H) | DRIVER (S) | 1 |
| 30-03 | 28-452 | ドライバ - (A) | DRIVER (L) | 1 |
| 30-04 | 28-011 | ピンセット | TWEZERS | 1 |
| 30-05 | 28-317 | グ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 | 運動カサ | CHAIN | 1 |
| 30-13 | 28-618 | シンナー油 | OIL | 1 |
| 30-14 | 13-0540-5 | 針 DYX57 #14 | NEEDLE | 10 |
| 30-15 | 28-615 | シヨウゴ | OIL FUNNEL | 1 |
| 30-16 | 28-614 | 油差し | OILER | 1 |



31. PL専用部品 MODEL PL EXCLUSIVE PARTS

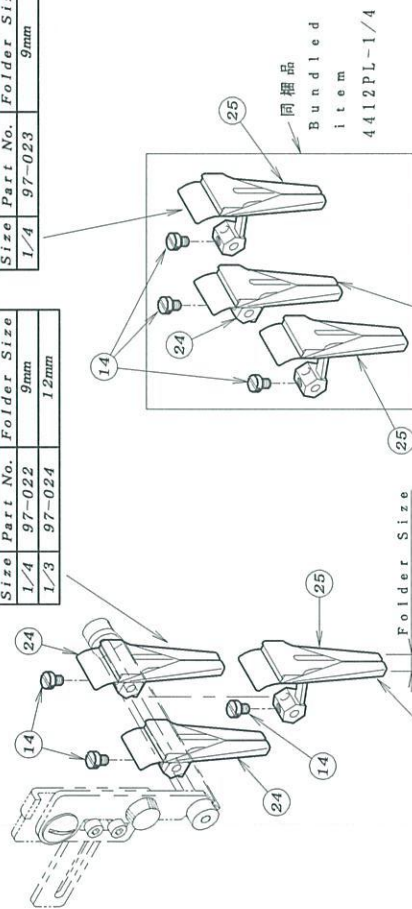
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|-----------|--------------|--------------------------------|------|
| 31-01 | 102-112 | 波ワッシャー | WASHER | 2 |
| 31-02 | * | 押エボス | SHANK | 1 |
| 31-03 | 17-3710-C | 押エボス取り付台 | BRACKET | 1 |
| 31-04 | * | 押えセット | PRESSER FOOT ASS'Y | 1 |
| 31-05 | * | 押エ足 | BOTTOM | 1 |
| 31-06 | 17-8190-F | ハネ | SPRING | 1 |
| 31-07 | 120-6510 | 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 | 126-755 | 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 | 126-757 | ホルダー取付軸 | HOLDER SHAFT | 1 |
| 31-12 | 71-215 | ピン | PIN | 2 |
| 31-13 | 175-455 | ワッシャー | 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、39, 40ページのゲージパーツ表を参照して下さい。
* Please refer to Page 39, 40 GAUGE PARTS LIST



| Size | Part No. | Folder Size |
|------|----------|-------------|
| 1/4 | 97-023 | 9mm |

| Size | Part No. | Folder Size |
|------|----------|-------------|
| 1/4 | 97-022 | 9mm |
| 1/3 | 97-024 | 12mm |



| Size | Part No. | Folder Size |
|------|----------|-------------|
| 1/4 | 97-022 | 9mm |

| Size | Part No. | Folder Size |
|------|----------|-------------|
| 1/4 | 97-023 | 9mm |
| 1/3 | 97-025 | 12mm |

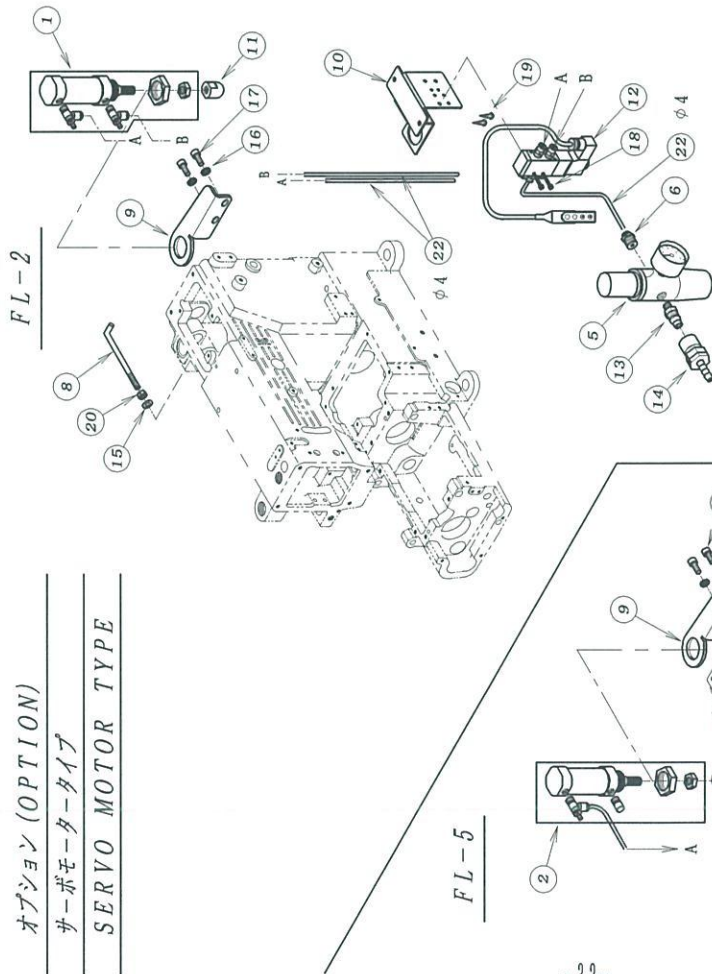
32. 押え揚げ装置 (エア式) FL-2, FL-5

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

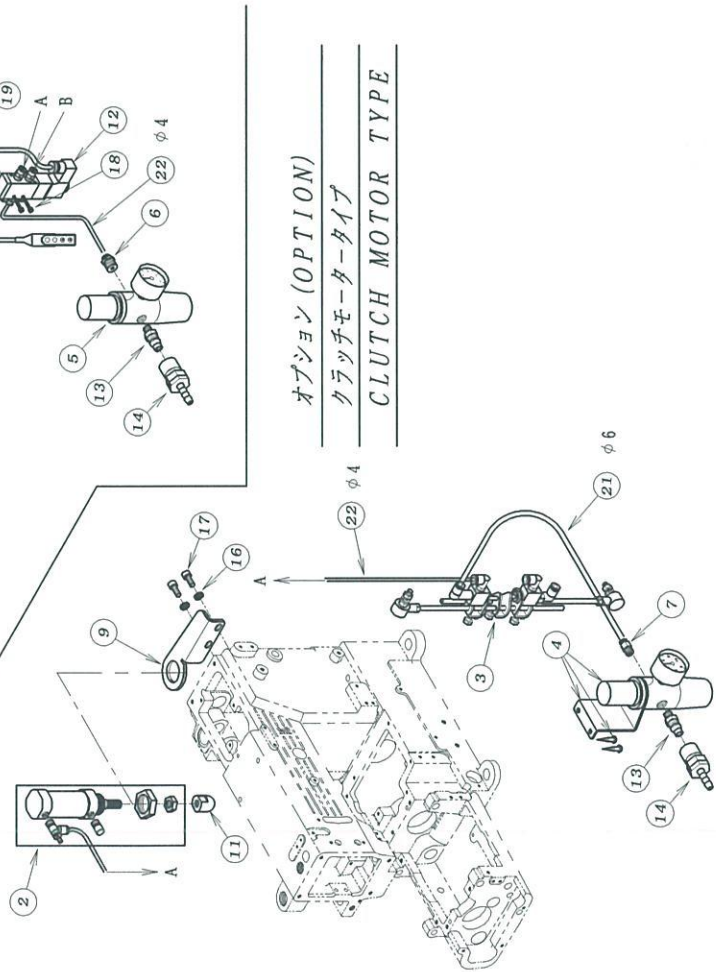
オプション (OPTION)

サーボモータータイプ

SERVO MOTOR TYPE



FL-5



オプション (OPTION)

クラッチモータータイプ

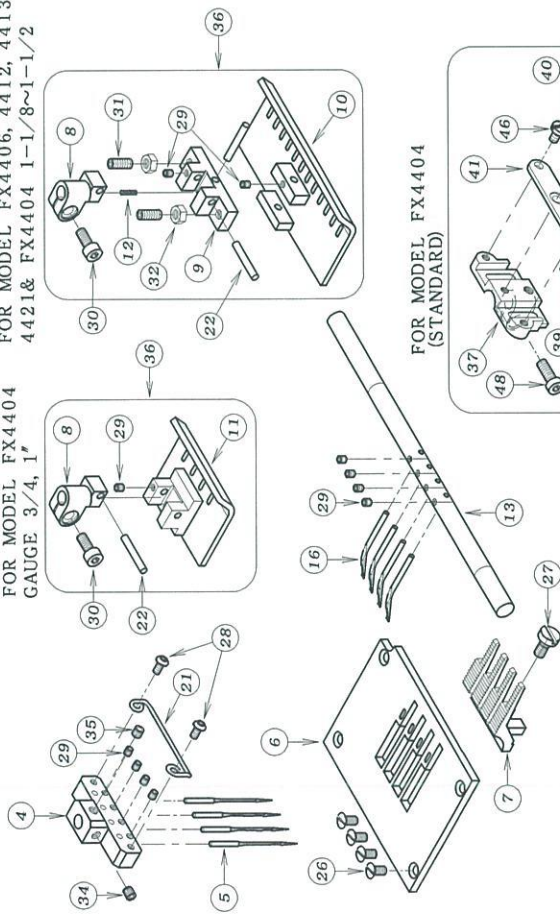
CLUTCH MOTOR TYPE

| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|------------|--------------------|----------------------|------|
| 32-01 | 100-6082 | 押えプーリー駆けシリンダ' -セット | AIR CYLINDER ASS'Y | 1 |
| 32-02 | 100-6130 | 押え揚げシリンダ' -セット | AIR CYLINDER ASS'Y | 1 |
| 32-03 | 100-8040 | 吸込押え上げバルブセット | AIR SWITCH ASSEMBLY | 1 |
| 32-04 | 105-212 | フィルタレキ' ユレータ | REGULATOR | 1 |
| 32-05 | 105-2120-A | フィルタレキ' ユレータ | REGULATOR | 1 |
| 32-06 | 105-217 | ハーフユニオン | JOINT | 1 |
| 32-07 | 105-218 | レキ' ユレータ-用継手 | JOINT | 1 |
| 32-08 | 105-558 | ホ' シ' ショナ' ハ' - | BAR | 1 |
| 32-09 | 105-586 | 弁器シリンダ' -ブラケット | BRACKET | 2 |
| 32-10 | 105-644 | 電磁弁ブラケット | BRACKET | 1 |
| 32-11 | 105-897 | シリンダ' -作動チップ | CHIP | 2 |
| 32-12 | 105-982 | 押え揚げ電磁弁セット | SOLENOID VALVE ASS'Y | 1 |
| 32-13 | 106-516 | カブ' ラマス | CONNECTOR | 2 |
| 32-14 | 106-517 | カブ' ラマス | CONNECTOR | 2 |
| 32-15 | 175-452 | ワッシャ | WASHER | 1 |
| 32-16 | 175-552 | ワッシャ | WASHER | 4 |
| 32-17 | 187-171 | 六角穴付きボルト | BOLT | 4 |
| 32-18 | 187-438 | 六角穴付きボルト | BOLT | 2 |
| 32-19 | 187-902 | 木ねじ | SCREW | 2 |
| 32-20 | 88-166 | ナット | NUT | 1 |
| 32-21 | 105-486 | チューブφ6x1000mm | TUBE (φ6x1000L) | 1~2 |
| 32-22 | 105-979 | チューブφ4x700mm | TUBE (φ4x700L) | 1 |

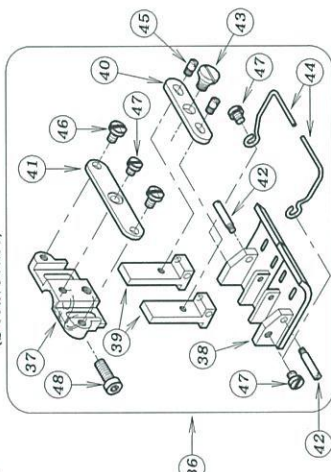
33. ゲージパーツ GAUGE PARTS

FOR MODEL FX4404
GAUGE 3/4, 1"

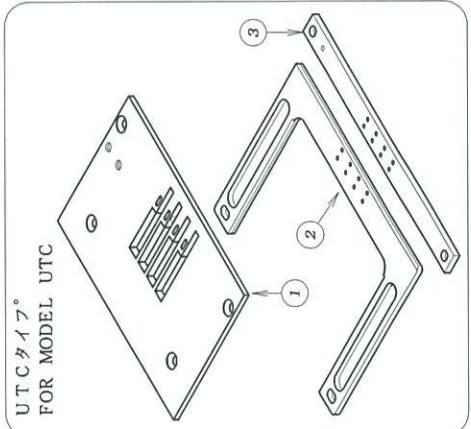
FOR MODEL FX4406, 4412, 4413,
4421& FX4404 1-1/8~1-1/2



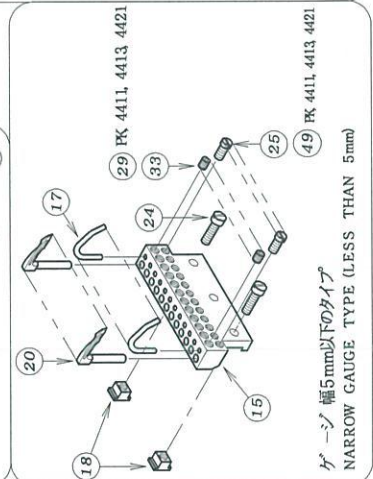
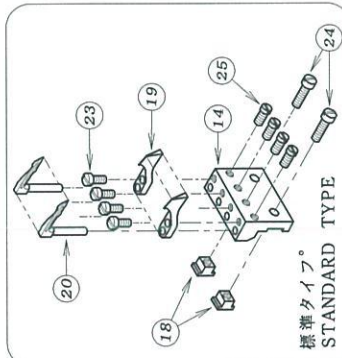
FOR MODEL FX4404
(STANDARD)



UTCタイプ
FOR MODEL UTC



標準タイプ
STANDARD TYPE



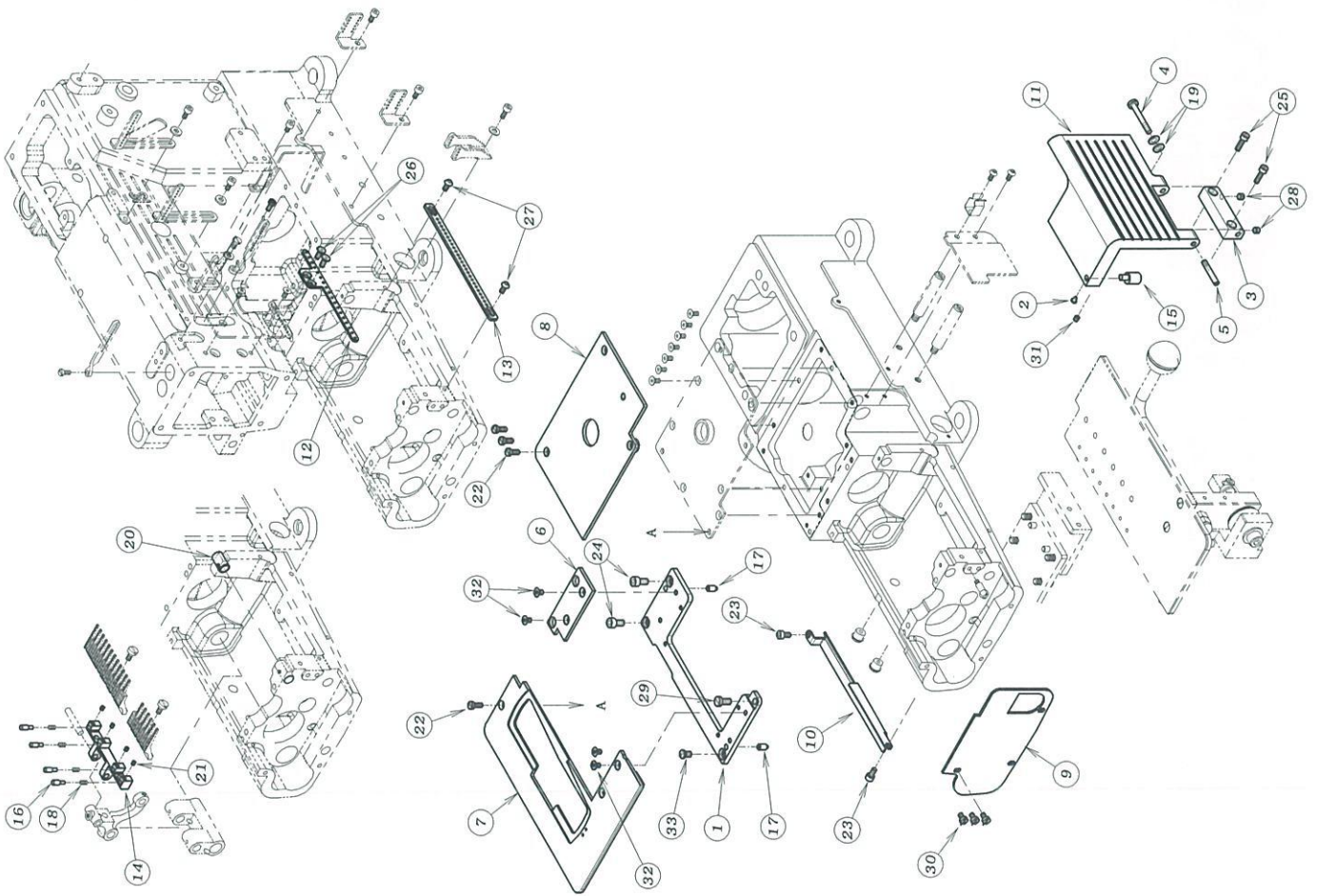
ゲージ幅5mm以下のタイプ
NARROW GAUGE TYPE (LESS THAN 5mm)

| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|-----------|---------------|--------------------|-------|
| 33-01 | * | 針板 | NEEDLE PLATE | 1 |
| 33-02 | * | 可動スベース | LOWER KNIFE BASE | 1 |
| 33-03 | * | ハスベース | 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 | * | 送册 | FEED DOG | 1 |
| 33-08 | 17-3710-A | 押エボス | SHANK | 2 |
| 33-09 | 17-3710-C | 押エボス取付台 | 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 | * | ループ台 | LOOPER HOLDER | 1 |
| 33-15 | * | ループ台 | LOOPER HOLDER | 1 |
| 33-16 | 19-404 | 糸寄せループ | RETAINER LOOPER | * |
| 33-17 | 19-405 | 針受け | NEEDLE GUIDE | * |
| 33-18 | 19-406 | ループ台止め金具 | BRACKET | 2 |
| 33-19 | 19-416 | 針受 | NEEDLE GUARD | * |
| 33-20 | * | ループ | LOOPER | * |
| 33-21 | * | 針板糸ガイド | THREAD GUIDE | 1 |
| 33-22 | 71-215 | ピン | PIN | 1 |
| 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 | ネジ | SCREW | 2 |
| 33-32 | 88-146 | ナット | NUT | 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 | * | 押エ足 | BOTTOM | 1 |
| 33-39 | 17-4210-C | 取付金具 | BRACKET | 2 |
| 33-40 | 17-4210-E | 段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 | フィンガークラット | 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 |

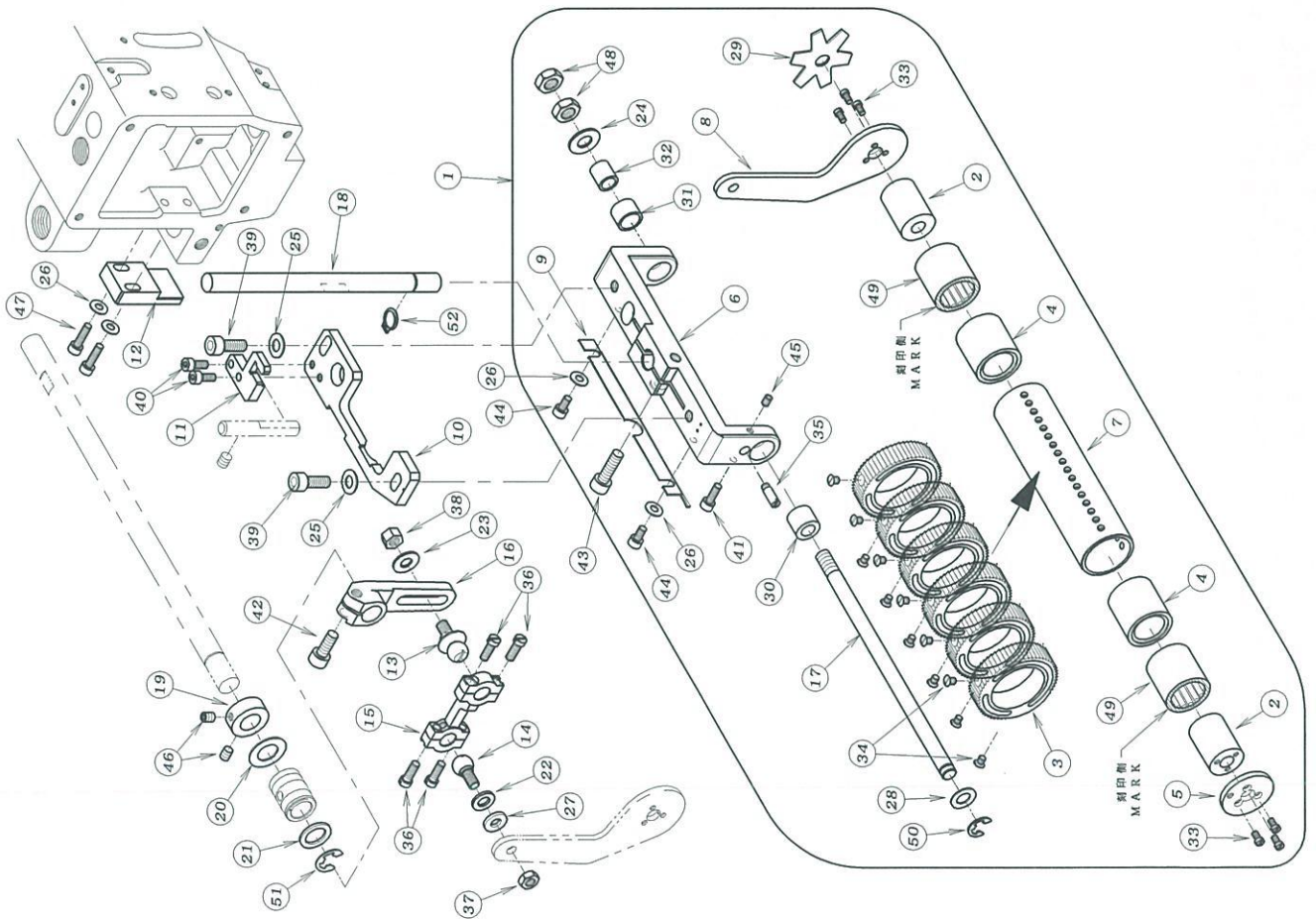
* 各ゲージ部品の品番は、39, 40ページのゲージパーツ表を参照して下さい。
* Please refer to Page 39, 40 GAUGE PARTS LIST

34. 4418SPF 専用部品 MODEL 4418SPF EXCLUSIVE PARTS

| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|----------|----------|------------------------------|-----|
| 34-01 | 14-433 | 針板土台 | NEEDLE PLATE SUPPORT BRACKET | 1 |
| 34-02 | 23-512 | クッションゴム | CUSHION RUBBER | 1 |
| 34-03 | 25-516 | 定規台ヒンジ | HINGE | 1 |
| 34-04 | 25-517 | ヒンジネジ | SCREW | 1 |
| 34-05 | 25-527 | カバーネジ | SCREW | 1 |
| 34-06 | 27-376 | 針板上台化粧板 | COVER | 1 |
| 34-07 | 27-377 | 下フレームネジ | COVER | 1 |
| 34-08 | 27-378 | 上フレームネジ | UPPER COVER | 1 |
| 34-09 | 27-379 | 側カバーネジ | SIDE COVER | 1 |
| 34-10 | 27-380 | シリンダネジ | COVER | 1 |
| 34-11 | 27-447 | 前カバー | FRONT COVER | 1 |
| 34-12 | 45-405 | 上糸道(下) | NEEDLE THREAD EYELET | 1 |
| 34-13 | 47-421 | 下糸道ネジ | LOOPER THREAD EYELET | 1 |
| 34-14 | 55-433 | 送直取付台 | FEED DOG HOLDER | 1 |
| 34-15 | 71-116 | ピン | PIN | 1 |
| 34-16 | 71-487 | 送り直上ピン | PIN | 4 |
| 34-17 | 71-579 | ロックピン | PIN | 2 |
| 34-18 | 79-420 | 送り上下ピン | スプライン | 2 |
| 34-19 | 79-922 | 皿ネジ | SPRING | 2 |
| 34-20 | 81-439 | ブッシュ | BUSHING | 1 |
| 34-21 | 87-104 | ネジ | SCREW | 4 |
| 34-22 | 87-145 | ネジ | SCREW | 4 |
| 34-23 | 87-177 | 六角穴付きボルト | BOLT | 2 |
| 34-24 | 87-213 | 六角穴付きボルト | BOLT | 2 |
| 34-25 | 87-214 | 六角穴付きボルト | BOLT | 2 |
| 34-26 | 87-270 | ネジ | SCREW | 2 |
| 34-27 | 87-272 | ネジ | SCREW | 2 |
| 34-28 | 87-274 | ネジ | SCREW | 2 |
| 34-29 | 87-278 | ネジ | SCREW | 1 |
| 34-30 | 87-284 | ネジ | SCREW | 3 |
| 34-31 | 87-286 | ネジ | SCREW | 1 |
| 34-32 | 87-293 | ネジ | SCREW | 4 |
| 34-33 | 87-426 | 平小ネジ | SCREW | 1 |

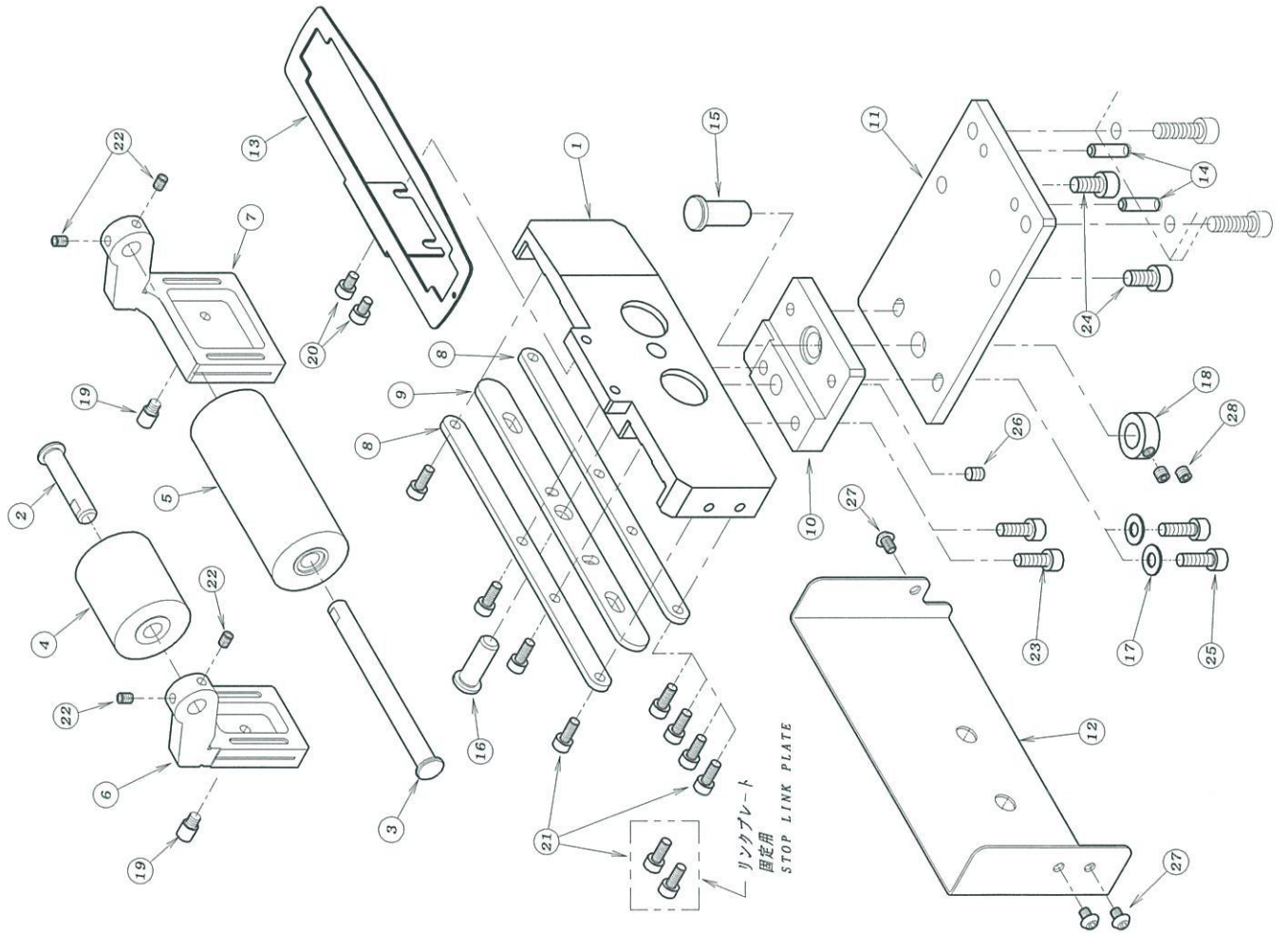


35. 4418SPFF後プーラー機構 MODEL 4418SPFF REAR PULLER MECHANISM



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|------------------|------------------------|------|
| 35-01 | 00-4290 | 4418SPFF後プーラーセット | 4418SPFF PULLER ASS'Y | 1 |
| 35-02 | 01-115 | スリーブ | SLEEVE | 2 |
| 35-03 | 02-014 | ギアプーラー小59山 | REAR PULLER GEAR SMALL | 6 |
| 35-04 | 02-015 | スペーサー | SPACER | 2 |
| 35-05 | 02-117 | 後プーラーハブイアプタ | PLATE | 1 |
| 35-06 | 02-637 | 上プーラー土台 | PULLER BRACKET | 1 |
| 35-07 | 02-638 | リンクエイラッチ用ハブシヤク | HOUSING | 1 |
| 35-08 | 02-639 | 後プーラー連結板 | CONNECTING PLATE | 1 |
| 35-09 | 02-640 | 巻き込み防止板 | SAFETY PLATE | 1 |
| 35-10 | 02-641 | 上プーラー台ロックプレート | PULLER LOCK PLATE | 1 |
| 35-11 | 02-642 | 回り止めプレート | BRACKET | 1 |
| 35-12 | 02-643 | 回り止めプレート | PLATE | 1 |
| 35-13 | 161-821 | ロッド玉 | CONNECTING ROD BALL | 1 |
| 35-14 | 161-823 | ルーハ-連結ロッド玉 | CONNECTING BALL | 1 |
| 35-15 | 163-814 | ルーハ-連結ロッド | BALL JOINT | 1 |
| 35-16 | 67-529 | 上プーラー駆動レバ | LEVER | 1 |
| 35-17 | 171-294 | 後プーラー台シヤフト | SHAFT | 1 |
| 35-18 | 71-462 | 後プーラー立てシヤフト | SHAFT | 1 |
| 35-19 | 75-018 | カラー | COLLAR | 1 |
| 35-20 | 75-021 | ワッシャ | WASHER | 1 |
| 35-21 | 75-187 | ワッシャ | WASHER | 1 |
| 35-22 | 75-401 | 板止めワッシャ | WASHER | 1 |
| 35-23 | 75-446 | ワッシャ | WASHER | 1 |
| 35-24 | 75-451 | ワッシャ | WASHER | 1 |
| 35-25 | 75-452 | ワッシャ | WASHER | 2 |
| 35-26 | 75-455 | ワッシャ | WASHER | 4 |
| 35-27 | 75-458 | ワッシャ | WASHER | 1 |
| 35-28 | 75-519 | ワッシャ | WASHER | 1 |
| 35-29 | 79-551 | プーラー板ハネ | PULLER PLATE SPRING | 1 |
| 35-30 | 81-321 | ブッシュ | BUSHING | 1 |
| 35-31 | 81-322 | ブッシュ | BUSHING | 1 |
| 35-32 | 81-323 | ブッシュ | BUSHING | 1 |
| 35-33 | 84-162 | ネジ | SCREW | 6 |
| 35-34 | 84-465 | ネジ | SCREW | 12 |
| 35-35 | 84-573 | 段ネジ | SCREW | 1 |
| 35-36 | 84-635 | ネジ | SCREW | 4 |
| 35-37 | 86-411 | ナット | NUT | 1 |
| 35-38 | 86-501 | ナット | NUT | 1 |
| 35-39 | 87-039 | ネジ | SCREW | 2 |
| 35-40 | 87-113 | 六角穴付きボルト | BOLT | 2 |
| 35-41 | 87-129 | 六角穴付きボルト | BOLT | 1 |
| 35-42 | 87-171 | 六角穴付きボルト | BOLT | 1 |
| 35-43 | 87-173 | 六角穴付きボルト | BOLT | 1 |
| 35-44 | 87-177 | 六角穴付きボルト | BOLT | 2 |
| 35-45 | 87-181 | ネジ | SCREW | 1 |
| 35-46 | 87-254 | 六角穴付きボルト | BOLT | 2 |
| 35-47 | 87-299 | 六角穴付きボルト | BOLT | 2 |
| 35-48 | 88-179 | ナット | NUT | 2 |
| 35-49 | 91-407 | リンクエイラッチ | BEARING | 2 |
| 35-50 | 93-221 | ストップリンク | E-RING | 1 |
| 35-51 | 93-223 | E環止輪 | E-RING | 1 |
| 35-52 | 93-261 | Cリング | C-RING | 1 |

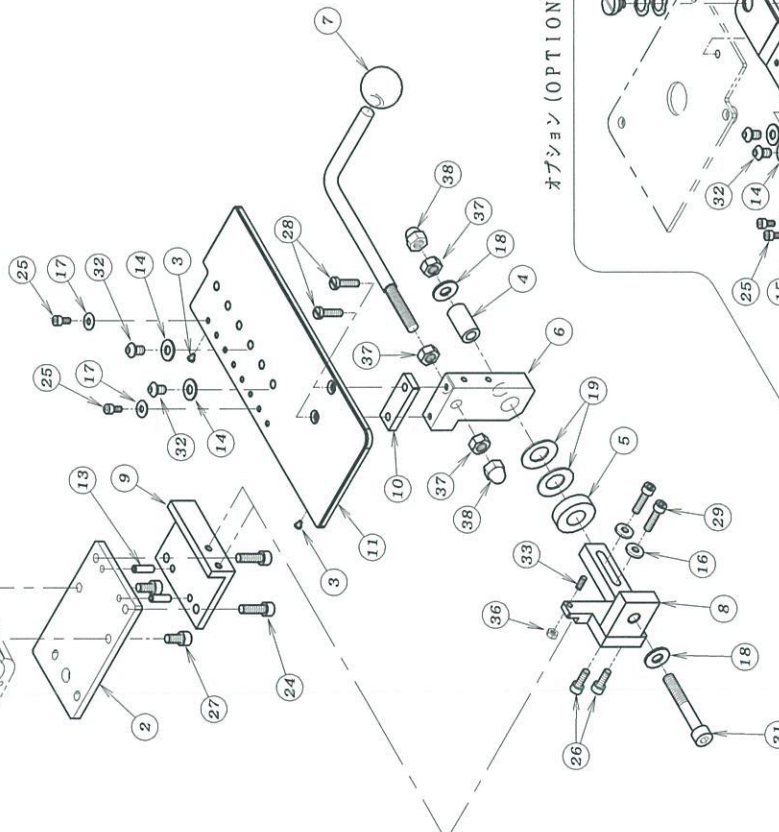
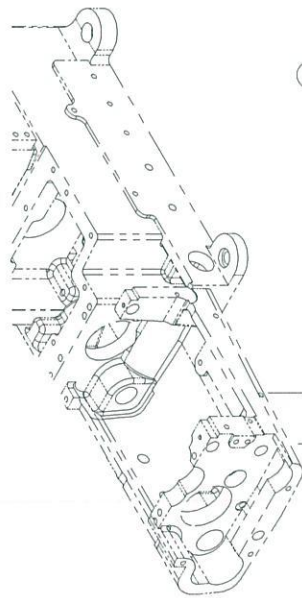
36. 4418SPFTプーラー機構 MODEL 4418SPF LOWER PULLER MECHANISM



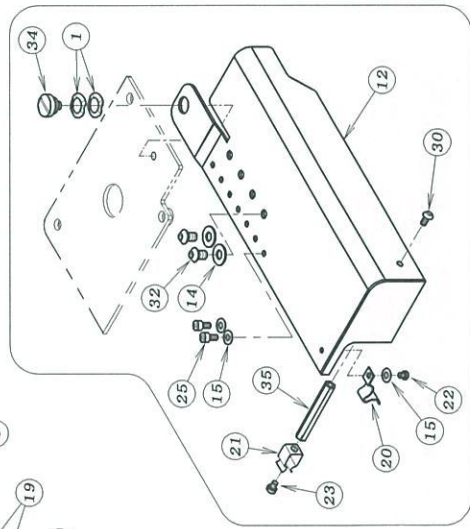
| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|----------------|----------------|------|
| 36-01 | 02-626 | プーラー土台 | PULLER BRACKET | 1 |
| 36-02 | 02-627 | ピン (左) | PIN (L) | 1 |
| 36-03 | 02-628 | ピン (右) | PIN (R) | 1 |
| 36-04 | 02-629 | ローラー (左) | ROLLER (L) | 1 |
| 36-05 | 02-630 | ローラー (右) | ROLLER (R) | 1 |
| 36-06 | 02-631 | ブラケット (左) | BRACKET (L) | 1 |
| 36-07 | 02-632 | ブラケット (右) | BRACKET (R) | 1 |
| 36-08 | 02-633 | 押え板 | PLATE | 2 |
| 36-09 | 02-634 | リンクプレート | LINK PLATE | 1 |
| 36-10 | 02-635 | プーラー台'ラケット | BRACKET | 1 |
| 36-11 | 02-636 | プーラー台取付'プレート | PLATE | 1 |
| 36-12 | 27-382 | 下'プーラー台カバー | COVER | 1 |
| 36-13 | 27-383 | フロ'ラー'ガイド'プレート | GUIDE PLATE | 1 |
| 36-14 | 71-223 | ノックピン | PIN | 2 |
| 36-15 | 71-292 | プーラー'台支点'ピン | ROCKING PIN | 1 |
| 36-16 | 71-293 | リンク支点ピン | LINK PIN | 1 |
| 36-17 | 75-453 | ワッシャー | WASHER | 2 |
| 36-18 | 75-537 | カラー | COLLAR | 1 |
| 36-19 | 84-561 | ネジ' | SCREW | 2 |
| 36-20 | 87-092 | 六角穴付きボルト | BOLT | 2 |
| 36-21 | 87-113 | 六角穴付きボルト | BOLT | 10 |
| 36-22 | 87-181 | ネジ' | SCREW | 4 |
| 36-23 | 87-224 | 六角穴付きボルト | BOLT | 2 |
| 36-24 | 87-225 | 六角穴付きボルト | BOLT | 2 |
| 36-25 | 87-245 | 六角穴付きボルト | BOLT | 2 |
| 36-26 | 87-254 | ネジ' | SCREW | 1 |
| 36-27 | 87-271 | ネジ' | SCREW | 3 |
| 36-28 | 87-274 | ネジ' | SCREW | 2 |

37. 4418SPFホルダー機構 MODEL 4418SPF HOLDER MECHANISM

TURN DOWN HOLDER MACHANISM

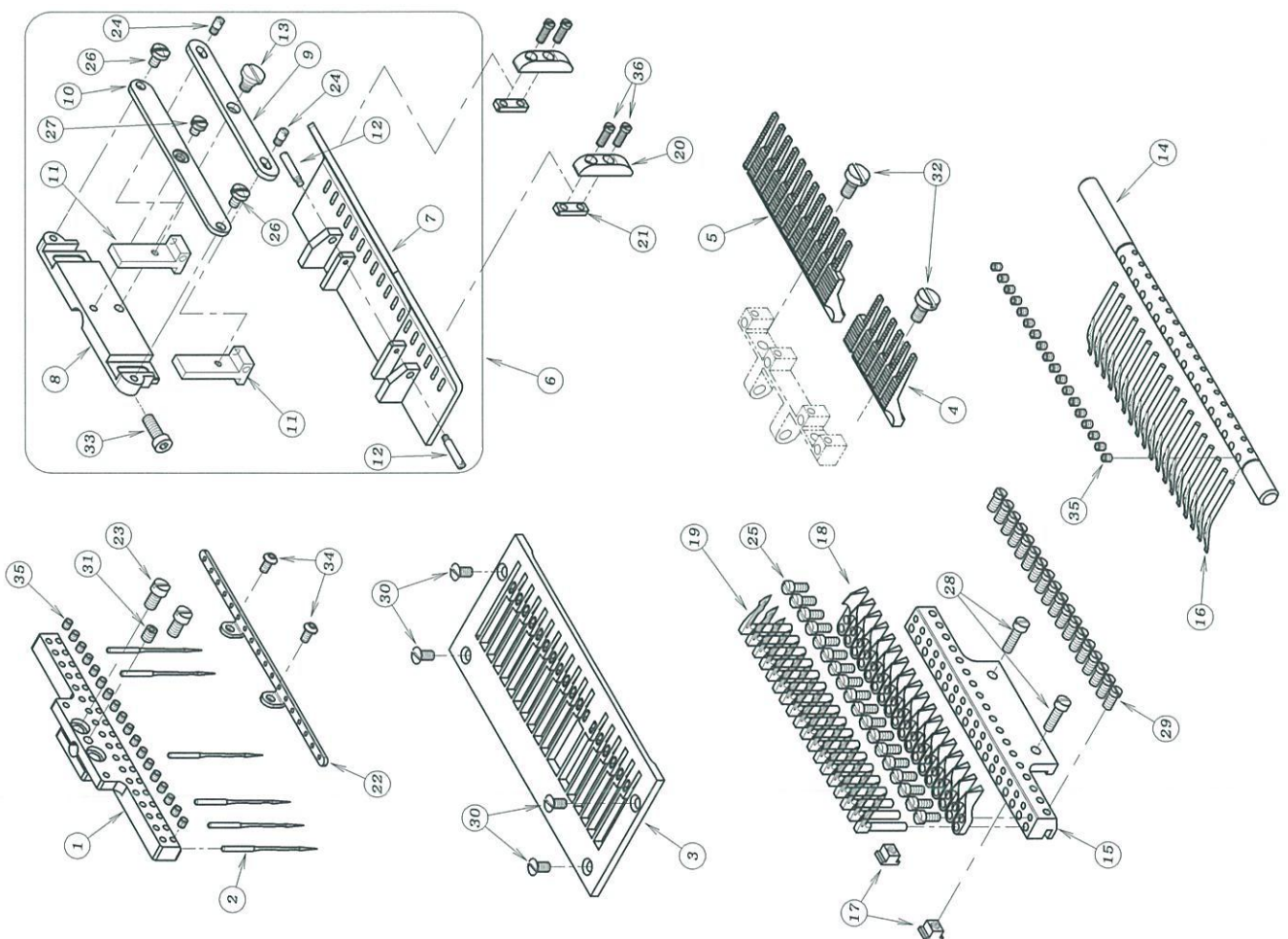


オプション (OPTION)



| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|--------------|--------------|-------------|------------------|------|
| 37-01102-112 | 37-01102-112 | 蓋ワッシャー | WASHER | 2 |
| 37-02102-636 | 37-02102-636 | フーラー取付プレート | PLATE | 1 |
| 37-03123-512 | 37-03123-512 | クッションゴム | CUSHION RUBBER | 2 |
| 37-04126-461 | 37-04126-461 | シャフト | SHAFT | 1 |
| 37-05126-462 | 37-05126-462 | スペーサー | SPACE BUSHING | 1 |
| 37-06126-487 | 37-06126-487 | ホルダー取付台 | BRACKET | 1 |
| 37-07126-492 | 37-07126-492 | グリップ | GRIP | 1 |
| 37-08126-496 | 37-08126-496 | ホルダー取付ブラケット | BRACKET | 1 |
| 37-09126-498 | 37-09126-498 | ホルダー取付付土台 | BRACKET | 1 |
| 37-10126-499 | 37-10126-499 | スペーサー | SPACER | 1 |
| 37-11126-500 | 37-11126-500 | ホルダー取付ベース | PLATE | 1 |
| 37-12127-381 | 37-12127-381 | 前面スキャバー | FRONT COVER | 1 |
| 37-13171-223 | 37-13171-223 | ノックピン | PIN | 2 |
| 37-14175-446 | 37-14175-446 | ワッシャー | WASHER | 4 |
| 37-15175-455 | 37-15175-455 | ワッシャー | WASHER | 3 |
| 37-16175-456 | 37-16175-456 | ワッシャー | WASHER | 2 |
| 37-17175-467 | 37-17175-467 | ワッシャー | WASHER | 2 |
| 37-18175-501 | 37-18175-501 | ワッシャー | WASHER | 2 |
| 37-19179-427 | 37-19179-427 | 皿バネ | SPRING | 2 |
| 37-20179-521 | 37-20179-521 | 板バネ (A) | PLATE SPRING (A) | 1 |
| 37-21179-912 | 37-21179-912 | バネ | SPRING | 1 |
| 37-22184-364 | 37-22184-364 | ネジ | SCREW | 1 |
| 37-23187-098 | 37-23187-098 | ネジ | SCREW | 1 |
| 37-24187-173 | 37-24187-173 | 六角穴付きボルト | BOLT | 2 |
| 37-25187-177 | 37-25187-177 | 六角穴付きボルト | BOLT | 4 |
| 37-26187-224 | 37-26187-224 | 六角穴付きボルト | BOLT | 2 |
| 37-27187-225 | 37-27187-225 | 六角穴付きボルト | BOLT | 2 |
| 37-28187-235 | 37-28187-235 | ネジ | SCREW | 2 |
| 37-29187-246 | 37-29187-246 | 六角穴付きボルト | BOLT | 2 |
| 37-30187-272 | 37-30187-272 | ネジ | SCREW | 1 |
| 37-31187-281 | 37-31187-281 | 六角穴付きボルト | BOLT | 1 |
| 37-32187-400 | 37-32187-400 | 六角穴付きボルト | BOLT | 4 |
| 37-33187-401 | 37-33187-401 | ネジ | SCREW | 1 |
| 37-34187-418 | 37-34187-418 | 段ネジ | SCREW | 1 |
| 37-35187-444 | 37-35187-444 | 支柱ネジ | BAR | 1 |
| 37-36188-146 | 37-36188-146 | ナット | NUT | 1 |
| 37-37188-176 | 37-37188-176 | ナット | NUT | 3 |
| 37-38188-183 | 37-38188-183 | 袋ナット | NUT | 2 |

38. 4418SPFゲージパーツ MODEL 4418SPF GAUGE PARTS



| REF. NO. | PART NO. | 品名 | DESCRIPTION | QTY |
|----------|-----------|------------------|----------------------|-----|
| 38-01 | 12-388 | 針座18本針1/4 | NEEDLE HOLDER | 1 |
| 38-02 | 13-0610-5 | 針 (DVX57 #21) | NEEDLE | 6 |
| 38-03 | 14-388 | 針板 | NEEDLE PLATE | 1 |
| 38-04 | 15-388 | 送前 (左) | FEED DOG (L) | 1 |
| 38-05 | 15-388 | 送前 (右) | FEED DOG (R) | 1 |
| 38-06 | 17-3880-1 | 段押えセット18本針1/4 | PRESSER FOOT ASS'Y | 1 |
| 38-07 | 17-3880-A | 押え足 | BOTTOM | 1 |
| 38-08 | 17-3880-B | 押えボス | BRACKET | 1 |
| 38-09 | 17-3880-E | 段押えリンクア°プレート | LINK PLATE | 1 |
| 38-10 | 17-3880-G | 段押えスライト°押えフ°プレート | SLIDE PLATE | 1 |
| 38-11 | 17-4210-C | 取付金具 | BRACKET | 2 |
| 38-12 | 17-5810-D | 押え足取付ピン | PIN | 2 |
| 38-13 | 17-5810-F | リンクネジ | SCREW | 1 |
| 38-14 | 18-388 | 糸巻せ棒 | RETAINER BAR | 1 |
| 38-15 | 19-388 | ループア° | LOOPER HOLDER | 1 |
| 38-16 | 19-404 | 糸巻せループア° | RETAINER LOOPER | 18 |
| 38-17 | 19-406 | ループア°止め金具 | BRACKET | 2 |
| 38-18 | 19-416 | 針受 | NEEDLE GUARD | 18 |
| 38-19 | 19-431 | ループア° | LOOPER | 18 |
| 38-20 | 26-404 | 生地ガイド | TAPE GUIDE | 2 |
| 38-21 | 26-405 | プレートナット | PLATE NUT | 2 |
| 38-22 | 45-400 | 針株糸道 | NEEDLE HOLDER EYELET | 1 |
| 38-23 | 84-001 | ネジ | SCREW | 2 |
| 38-24 | 84-114 | ネジ | SCREW | 2 |
| 38-25 | 84-164 | ネジ° | SCREW | 18 |
| 38-26 | 84-361 | ネジ° | SCREW | 2 |
| 38-27 | 84-364 | ネジ° | SCREW | 1 |
| 38-28 | 84-367 | ネジ° | SCREW | 2 |
| 38-29 | 84-380 | ネジ° | SCREW | 18 |
| 38-30 | 84-464 | ネジ° | SCREW | 4 |
| 38-31 | 84-521 | ネジ° | SCREW | 1 |
| 38-32 | 84-588 | ネジ° | SCREW | 2 |
| 38-33 | 84-591 | 六角穴付きボルト | BOLT | 1 |
| 38-34 | 87-099 | ネジ° | SCREW | 2 |
| 38-35 | 87-104 | ネジ° | SCREW | 36 |
| 38-36 | 87-669 | ネジ° | SCREW | 4 |

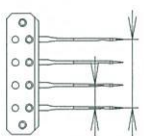
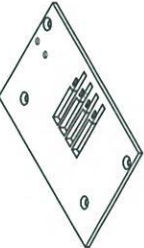


39. ゲージ部品一覧表 GAUGE PARTS TABLE

| モデル MODEL | ゲージサイズ (インチ) GAUGE SIZE (INCH) | 針株 NEEDLE HOLDER | 針株系ガイド 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 | | 17-4800-1 17-4180-1 | 14-418 | 15-418 | 19-418 | 18-375 | | | |
| | 1 | 12-3520-1 | 45-371 | 17-4810-1 17-4210-1 | 14-421 | 15-421 | 19-421 | 18-371 | | | |
| | 1-1/8 | 12-3530-1 | | 17-3720-1 17-4220-1 | 14-422 | 15-422 | 19-422 | 18-372 | 19-416 | | |
| | 1-1/4 | 12-3540-1 | 45-381 | 17-3730-1 17-4230-1 | 14-423 | 15-423 | 19-423 | 18-373 | | | |
| 4404PE | 1-1/2 | 12-3550-1 | | 17-3740-1 17-4240-1 | 14-424 | 15-424 | 19-424 | 18-374 | | | |
| | 1 | 12-3520-1 | 45-371 | 17-4810-1 17-4210-1 | 14-421 | 15-421 | 19-421 | 18-371 | | | |
| 4404PSF | 1/4-3/4-1/4 | 12-3620-1 | 45-381 | 17-3770-1 | 14-427 | 15-427 | 19-427 | 18-377 | | | |
| | 1/4-1-1/4 | 12-3630-1 | | 17-3810-1 | 14-431 | 15-431 | 19-429 | 18-381 | | 19-404 | 19-431 |
| 4412P | 3/16 | 12-3580-1 | 45-397 | 17-3970-1 | 14-497 | 15-497 | 19-397 | 18-397 | 19-405 | | |
| | 1/4 | 12-3590-1 | 45-396 | 17-3960-1 | 14-496 | 15-496 | 19-496 | 18-396 | 19-416 | | |
| 4412PE | 5mm | 12-3600-1 | 45-397 | 17-3980-1 | 14-045 | 15-045 | 19-045 | 18-398 | 19-405 | | |
| | 1/4 | 12-3590-1 | 45-396 | 17-3960-1 | 14-496 | 15-496 | 19-496 | 18-396 | 19-416 | | |
| 4406P (E) | 1/4 | 12-3560-1 | 45-381 | 17-3900-1 | 14-443 | 15-443 | 19-443 | 18-390 | | | |
| | 1/4 | 12-3560-1 | 45-381 | 17-3900-1 | 14-443 | 15-443 | 19-443 | 18-390 | | | |
| 4408P | 1/4 | 12-3610-1 | 45-397 | 17-3930-1 | 14-465 | 15-465 | 19-496 | 18-396 | | | |
| | 1/4 | 12-3570-1 | 45-397 | 17-3940-1 | 14-470 | 15-470 | 19-470 | 18-394 | 19-416 | | |
| 4406PL | 1/4 | 12-3560-1 | 45-381 | 17-3900-1 | 14-443 | 15-443 | 19-443 | 18-390 | | | |
| | 1/3 | 12-3640-1 | 45-397 | 17-4400-1 | 14-440 | 15-440 | 19-440 | 18-391 | | | |
| 4412PL | 1/4 | 12-3590-1 | 45-396 | 17-3960-1 | 14-496 | 15-496 | 19-496 | 18-396 | | | |
| | * | 12-3670-1 | 45-396 | 17-3670-1 | 14-367 | 15-367 | 19-367 | 18-367 | | | |
| 4418P | * | 12-3680-1 | 45-396 | 17-3680-1 | 14-395 | 15-395 | 19-368 | 18-368 | | | |
| 4421P, PE | 1/8 | 12-3680-1 | 45-396 | 17-3680-1 | 14-368 | 15-368 | 19-368 | 18-368 | 19-405 | | 19-433 |
| | 1/8 | 12-3690-1 | 45-396 | 17-3690-1 | 14-369 | 15-369 | 19-369 | 18-369 | | | |
| 4423P 4423PMD | 1/8 | 12-3690-1 | 45-396 | 17-3690-1 | 14-369 | 15-369 | 19-369 | 18-369 | | | |
| | 1/4 | 12-3880-1 | 45-400 | 17-3880-1 | 14-388 | 15-388 15-389 | 19-388 | 18-388 | 19-416 | | 19-431 |

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

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

40. UTC ケーシング専用部品一覧表 UTC GAUGE PARTS TABLE (UTC series)

| 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

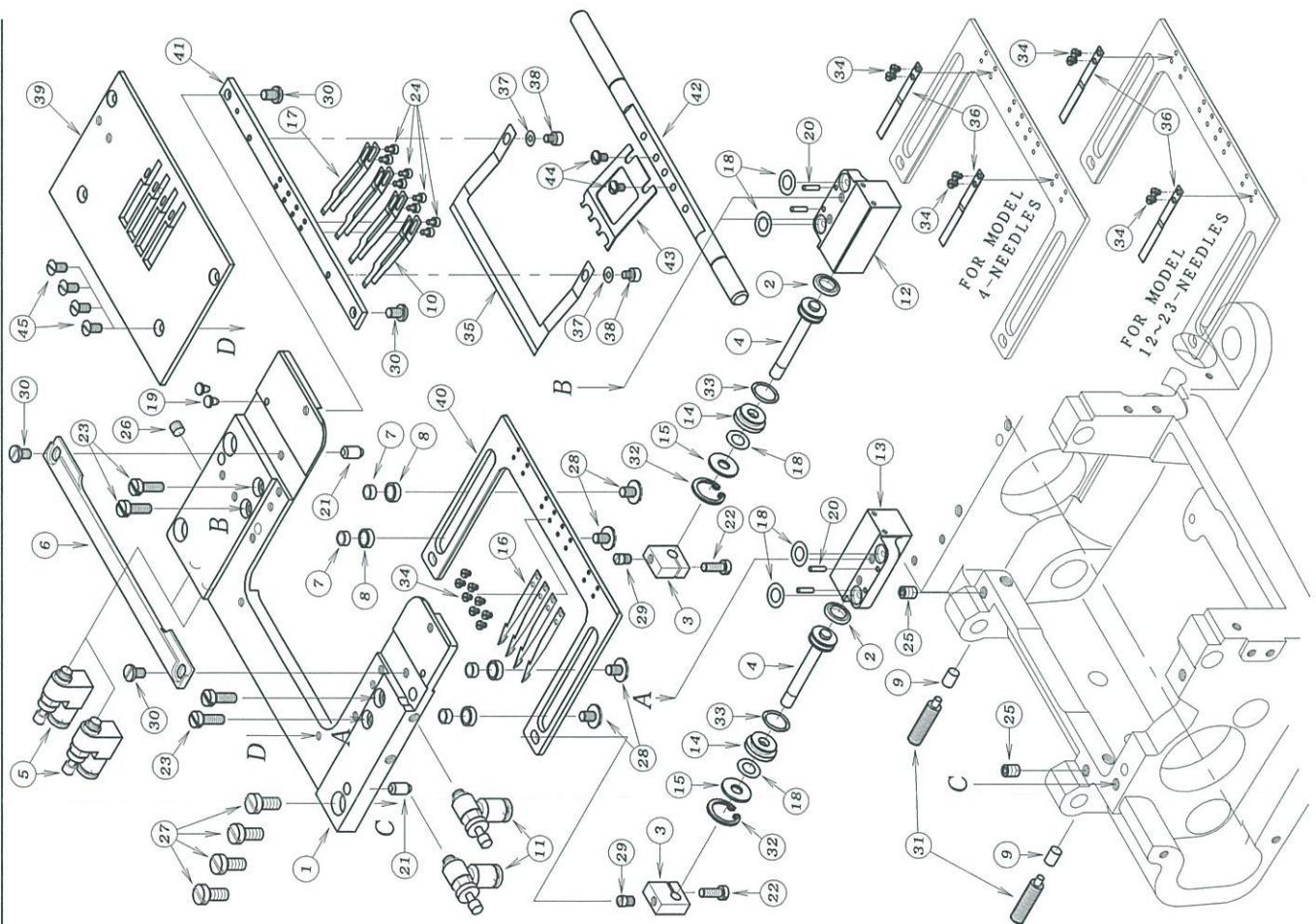
◆ UTAは、41ページを参照して下さい。

◆ UTA series : Please refer to Page 42

41. UTA糸切り装置 UTA KNIFE MECHANISM

| REF. NO. | PART NO. | 品名 | DESCRIPTION | Q'TY |
|----------|----------|------------|------------------------------|------|
| 41-01 | 05-395 | 針板土台 | NEEDLE PLATE SUPPORT BRACKET | 1 |
| 41-02 | 05-420 | ハッネン | SEAL | 2 |
| 41-03 | 05-421 | 案内プレート | GUIDE BRACKET | 2 |
| 41-04 | 05-426 | ヒーストノット | ROD | 2 |
| 41-05 | 05-428 | スピードコントローラ | SPEED CONTROLLER | 2 |
| 41-06 | 05-429 | 固定メス | UPPER KNIFE | 1 |
| 41-07 | 05-430 | ガイドローラ(小) | GUIDE ROLLER (S) | 4 |
| 41-08 | 05-431 | ガイドローラ(大) | GUIDE ROLLER (L) | 4 |
| 41-09 | 05-433 | ストップ | STOPPER | 2 |
| 41-10 | 05-377 | 裏ハネ(下) | LEAF SPRING (LOWER) | 4 |
| 41-11 | 05-997 | スピードコントローラ | SPEED CONTROLLER | 2 |
| 41-12 | 05-544 | シリンダ-本体(右) | AIR CYLINDER | 1 |
| 41-13 | 05-545 | シリンダ-本体(左) | AIR CYLINDER | 1 |
| 41-14 | 05-546 | ロッドカバー | COVER | 2 |
| 41-15 | 05-547 | ロッドプレート | PLATE | 2 |
| 41-16 | 05-548 | 可動メス | LOWER KNIFE | 4 |
| 41-17 | 05-376 | 裏ハネ(上) | LEAF SPRING (UPPER) | 4 |
| 41-18 | 23-183 | Oリング | O-RING | 6 |
| 41-19 | 23-512 | クッションゴム | CUSHION RUBBER | 2 |
| 41-20 | 71-201 | ピン | PIN | 4 |
| 41-21 | 71-579 | ピン | PIN | 2 |
| 41-22 | 87-011 | ネジ | SCREW | 2 |
| 41-23 | 87-097 | ネジ | SCREW | 4 |
| 41-24 | 87-100 | 六角穴付きボルト | BOLT | 8 |
| 41-25 | 87-254 | ネジ | SCREW | 2 |
| 41-26 | 87-274 | ネジ | SCREW | 1 |
| 41-27 | 87-278 | ネジ | SCREW | 4 |
| 41-28 | 87-412 | ネジ | SCREW | 4 |
| 41-29 | 87-413 | ネジ | SCREW | 4 |
| 41-30 | 87-415 | ネジ | SCREW | 2 |
| 41-31 | 87-416 | ストップネジ | SCREW | 4 |
| 41-32 | 93-236 | 穴用止め輪 | C-RING | 2 |
| 41-33 | 98-857 | Oリング | O-RING | 2 |
| 41-34 | 87-091 | ネジ | SCREW | 12 |
| 41-35 | 05-368 | スレッドキーパー | THREAD KEEPER | 1 |
| 41-36 | 05-378 | オープナー | OPENER | 2 |
| 41-37 | 75-441 | ワッシャー | WASHER | 2 |
| 41-38 | 87-142 | ネジ | SCREW | 2 |
| 41-39 | * | 針板 | NEEDLE PLATE | 1 |
| 41-40 | * | 可動メスベース | LOWER KNIFE BASE | 1 |
| 41-41 | * | バネベース | SPRING BASE | 1 |
| 41-42 | 18-389 | 糸寄せ棒 | RETAINER BAR | 1 |
| 41-43 | * | 糸寄せ棒 | RETAINER BAR | 1 |
| 41-44 | 87-166 | ネジ | SCREW | 2~3 |
| 41-45 | 84-464 | ネジ | SCREW | 4 |

* UTCは、18ページを参照して下さい。
 * UTC series : Please refer to Page 18



42. ゲージ部品一覧表 (GAUGE PARTS TABLE (UTA series))

| 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 | 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 |
|--------------|-----------------------------------------|------------------------|----------------------------|------------------------------------|-------------------|---------------------------|-------------------------|-----------------------|-----------------------------------|----------------|
| FX4404P | 1 | 12-3520-1 | 45-371 | 17-4210-1 | 15-421 | 19-421 | 18-389 | 19-416 | 19-480 | 19-441 |
| FX4412P | 1/4 | 12-3590-1 | 45-396 | 17-3960-1 | 15-496 | 19-496 | | 19-482 | 19-405 | 19-444 |
| FX4418P | 1/4x1/8 | 12-3690-1 | | 17-3690-1 | 15-395 15-369 | 19-369 | | | | |
| FX4423P | 1/8 | | | | | | | | | |

| モデル MODEL | ゲージサイズ (インチ) GAUGE SIZE (INCH) | 針板 NEEDLE PLATE | 可動メスベース LOWER KNIFE BASE | バネベース SPRING BASE |
|--------------|-----------------------------------------|-----------------------|-----------------------------------|-------------------------|
| FX4404P | 1 | 05-352 | 05-363 | 05-364 |
| FX4412P | 1/4 | 05-357 | 05-388 | 05-389 |
| FX4418P | 1/4x1/8 | 05-362 | | |
| FX4423P | 1/8 | 05-365 | | |

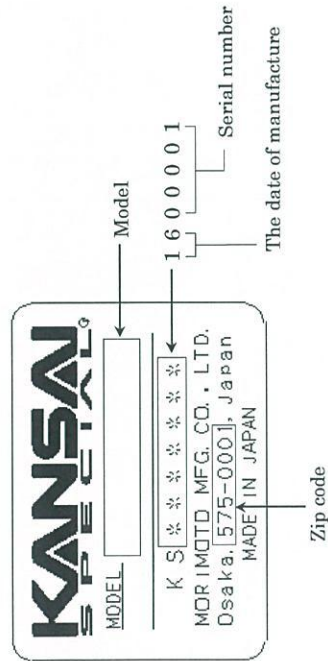
***FX** Series Instruction Manual*

INTRODUCTION

Thank you for your purchasing Kansai Special's FX, FXUTC 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



FXseries

FX/FXUTC CONTENTS

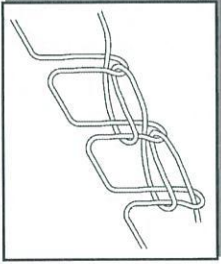
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| | 1-2 Models | 1 |
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| | 2-3 To thread the machine | 2 |
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| | 7-2 Timing of the retainer looper to the needle | 12 |
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| | 10-2 Position of the presser foot and foot lift | 14 |
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FXseries

[1] SPECIFICATIONS

1-1 Stitch type

JIS401 double chainsitch machines

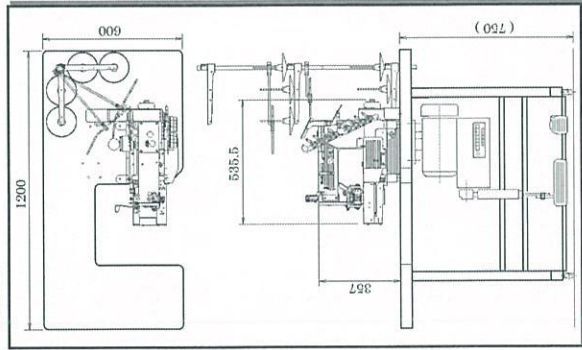


1-2 Models

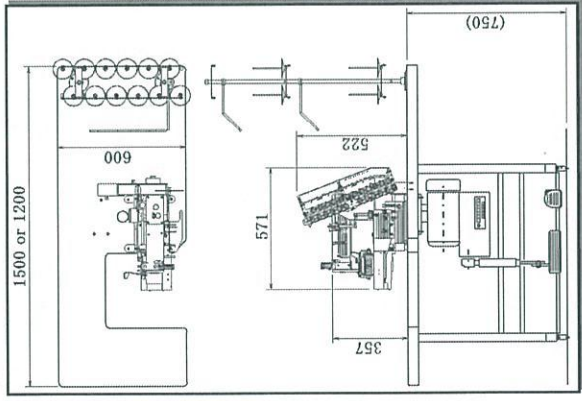
| Model | FX4404P FX4404P/UTC | FX4406P FX4406P/UTC | FX4412P FX4412P/UTC | FX4418SPF-SA |
|---------------------|--------------------------------------|--------------------------------------|----------------------------------------|--------------------------------------|
| No. of needles | 2~4 | 5~6 | 7~12 | 6 (18 Selection) |
| No. of threads | 4 needle threads 4 looper threads | 6 needle threads 6 looper threads | 12 needle threads 12 looper threads | 6 needle threads 6 looper threads |
| Type of tension set | Mounted type | | | |
| Puller width | 55mm | 78mm | 78mm | 114mm |
| Minimum gauge width | 3.2mm (1/8 inch) | | | |
| Maximum gauge width | 50mm | 70mm | 70mm | 107.95mm |

1-3 Diagrammatic sketch of the Series

< FX4404 >



< FX4412 >



[2] NEEDLES & THREADING THE MACHINE

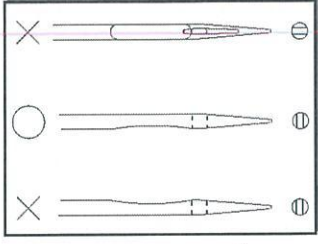
2-1 Needles

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 | Nm130 |
|---------|------|------|------|-------|-------|
| Organ | #11 | #12 | #14 | #16 | #21 |



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 >

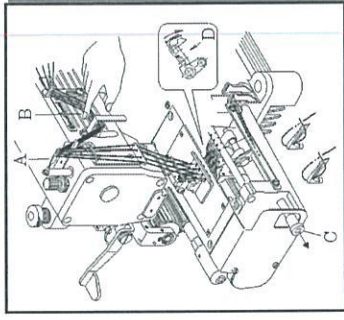
Be sure to turn off the machine before replacing the needle. A clutch motor continues running for a while after the machine is turned off. Therefore keep on pressing the pedal until the machine stops.

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

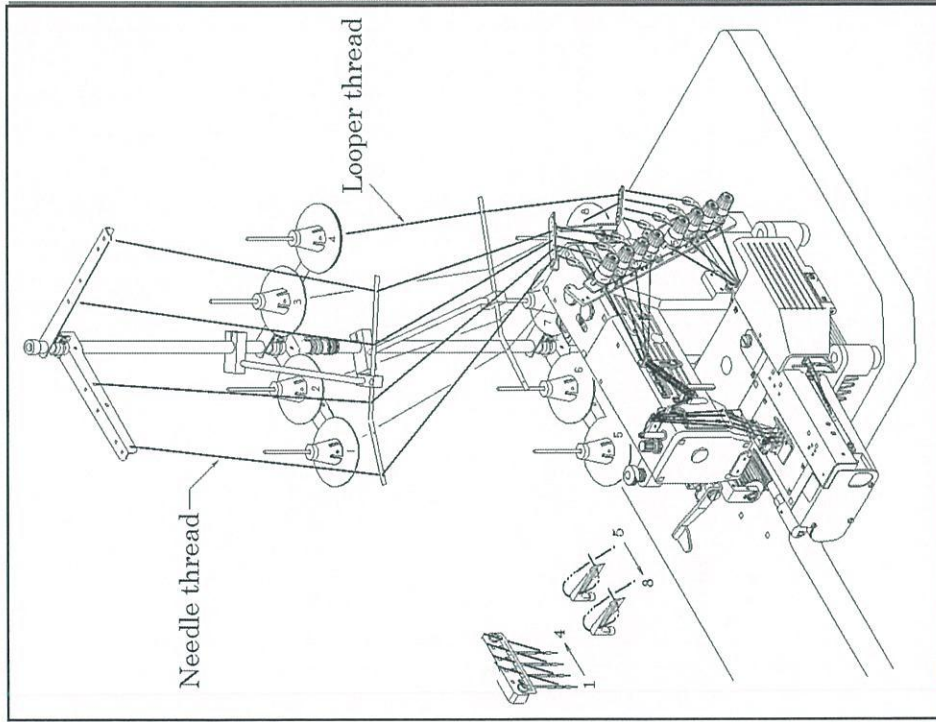
1. Bring needle bar A to the top of its stroke.
2. Pay out the needle thread from the spool by pressing a finger down on needle threads B.
3. Pull looper drawing bar knob C out to the left so that the looper holder is tilted toward the front of the machine.
4. After the machine is threaded, replace the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



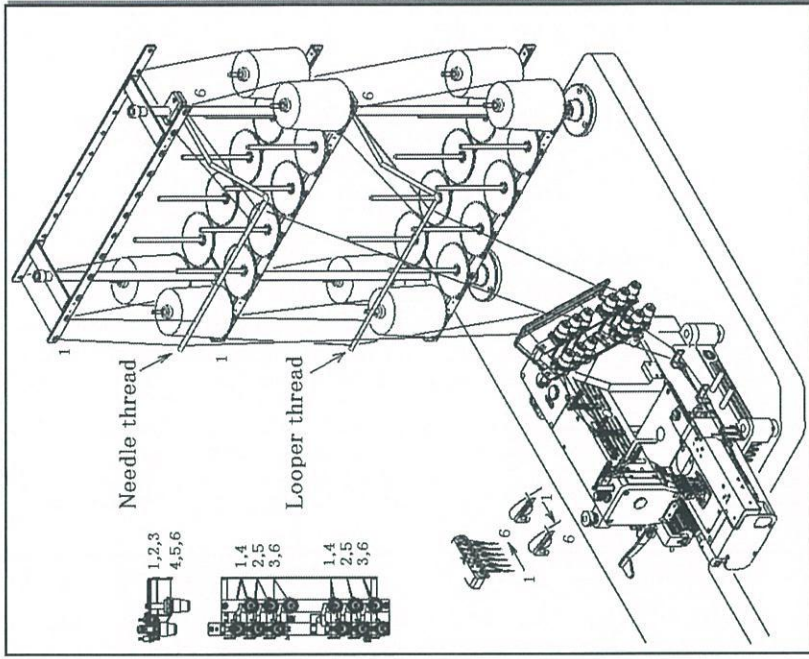
< Note >

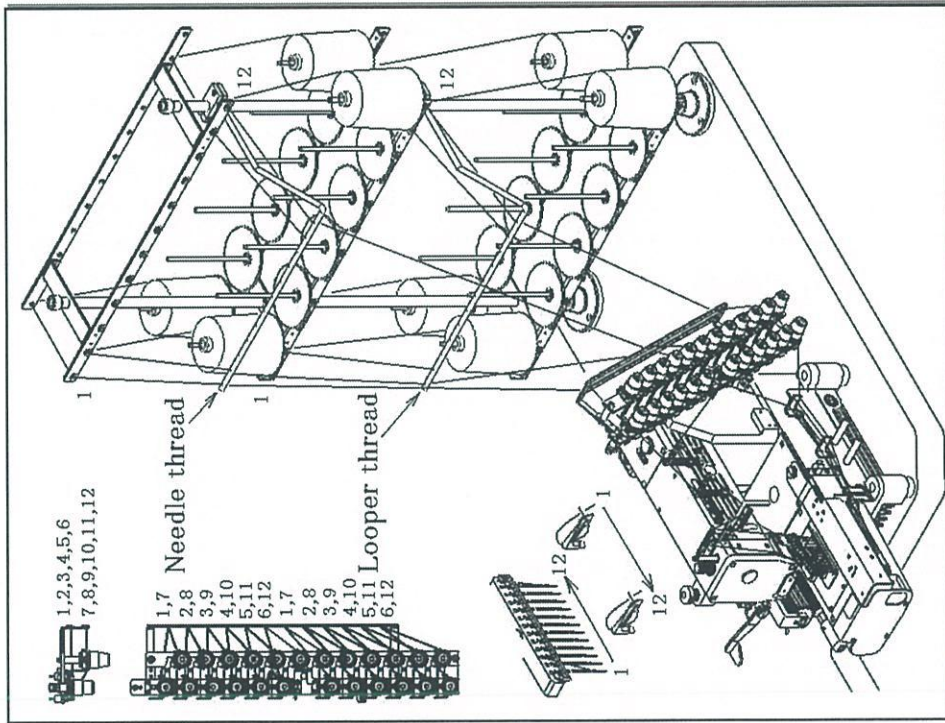
The looper pops out of the machine as soon as knob C is pulled, so do not bring your fingers close to the looper.

■ Threading diagram for FX4404



■ Threading diagram for FX4406

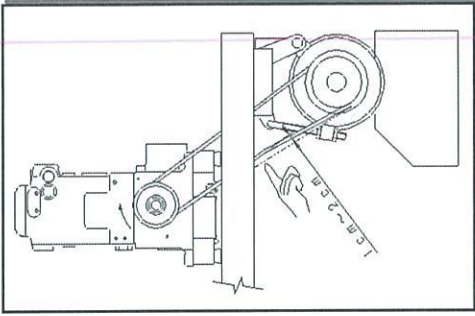




[3] MACHINE SPEED

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 |
| FX4418SPF | 2500 | 2000 |

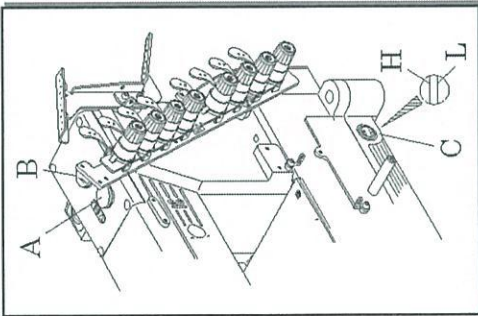
< Motor pulley selection table >

| 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.

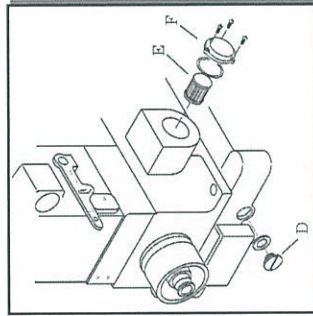
1. Remove the V belt from the motor pulley and then remove the machine from the table.
2. Remove screw D and then drain the oil.
Be careful not to stain V belt with the oil.
3. After draining the oil, be sure to tighten screw D.
4. Fill the machine with oil by referring to 4-2 shown above.

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.

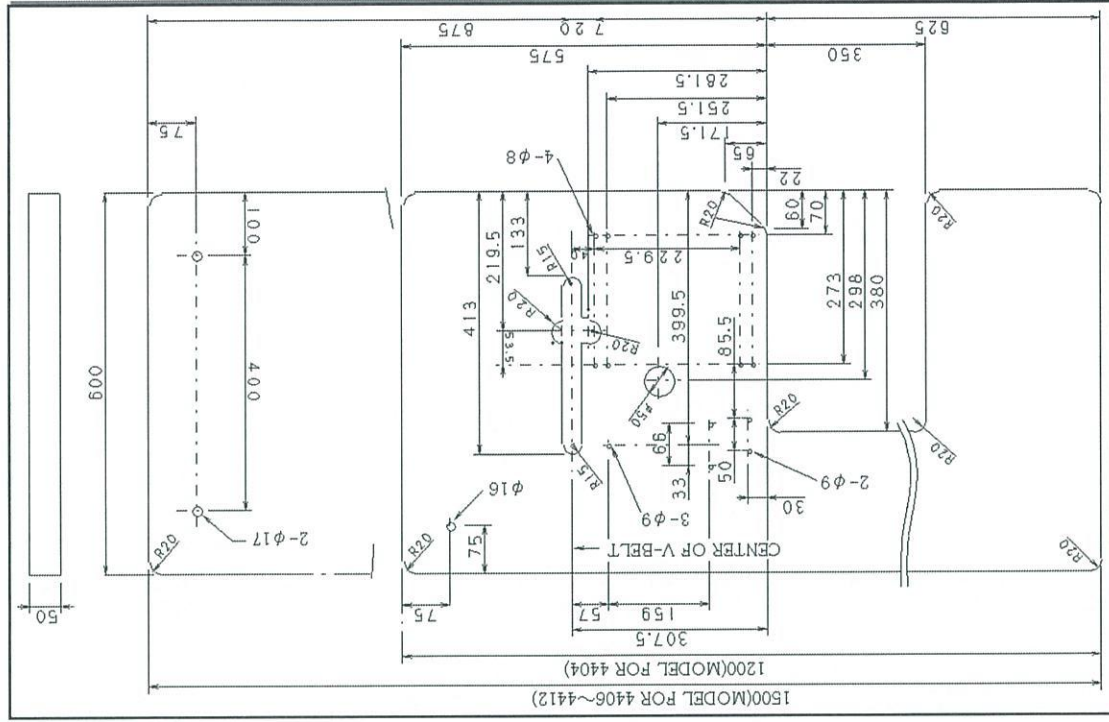
< Note >

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

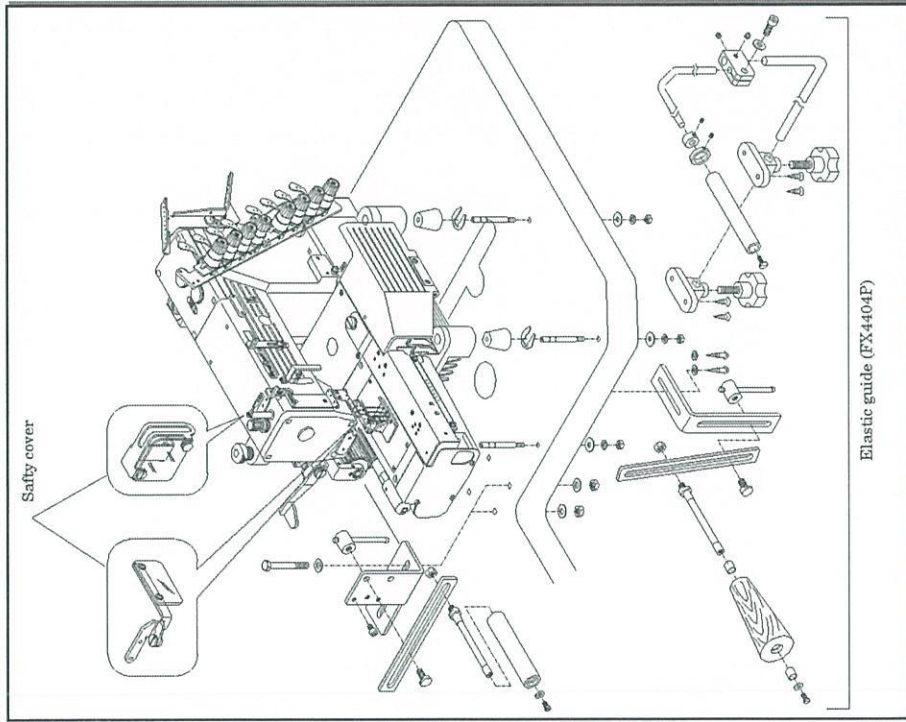


[5] SEWING MACHINE INSTALLATION

5-1 Cutting the machine table



5-2 How to install the machine

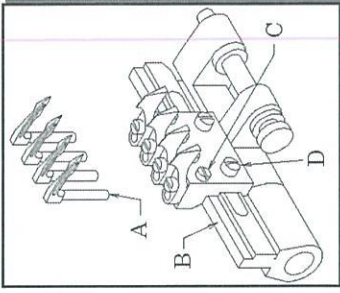


Elastic guide (FX4404P)

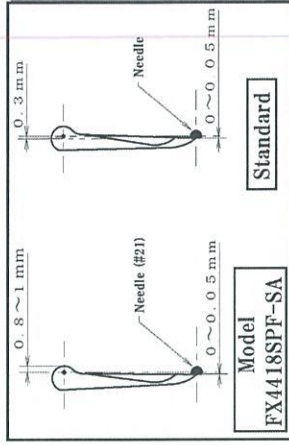
[6] TIMING OF THE LOOPER TO THE NEEDLE

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.

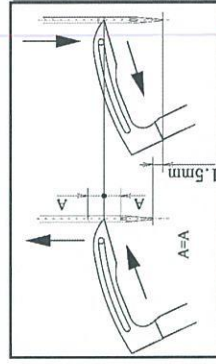


Location of looper holder have to be located in the point of needle have to be positioned with 0.3mm from center of back side of looper should be adjusted by screw D on looper holder. Then when the point of looper reach at needle scarf, the clearance should be 0~0.05mm is adjusted by screw C for fixing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

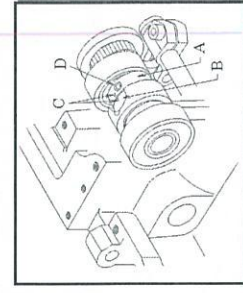


6-2 Looper left-to-right movement

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.

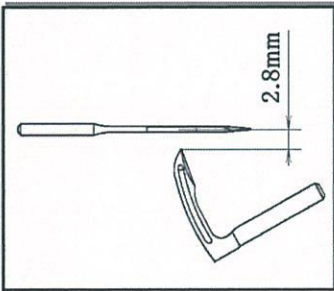


To make this adjustment, remove the top cover first. Loosen screw D. Then move eccentric A. For standards, marks C is turned upward when the needle is at the top of its stroke (at the same position as eccentric B).

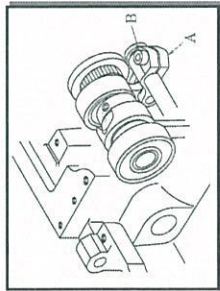


6-3 Looper setting distance

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

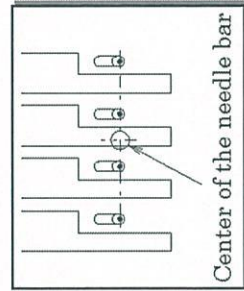
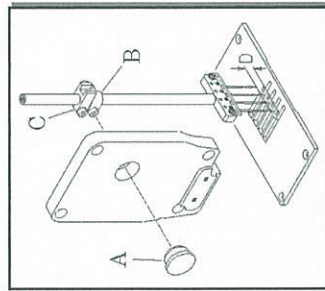
When the needle bar is at the top of its stroke, remove plug A on the head plate, loosen needle bar clamp B with a hex wrench and then move the needle bar up or down.

<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.

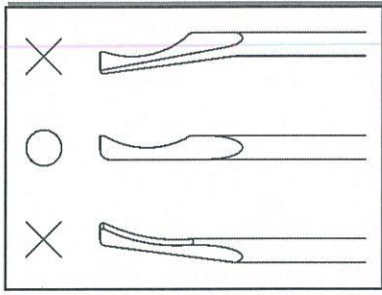
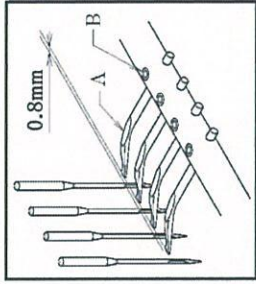


Center of the needle bar

[17] 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.

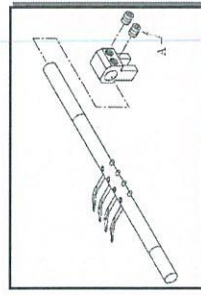
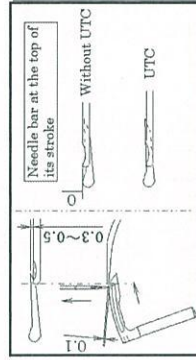


7-2 Timing of the retainer looper to the needle

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 midst body and the rightmost end of the spreader must be co-lined.



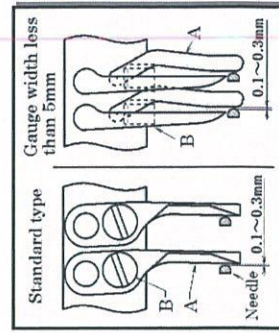
[18] ADJUSTING THE NEEDLE GUARD

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

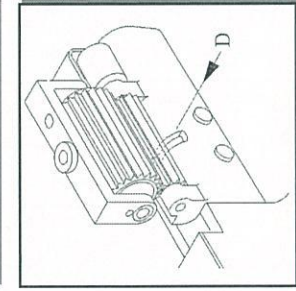
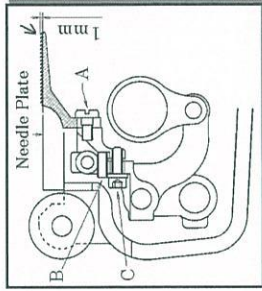
9-1 Feed dog height & tilt

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

< 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 |

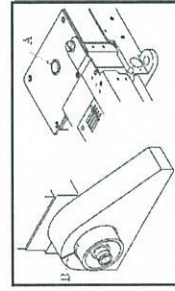
■ To change the stitch length

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.
4. Then turn the machine pulley to select the stitch length as required.

1. Align the desired stitch length with alignment mark B.
2. Then release the left hand.

< Note >

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

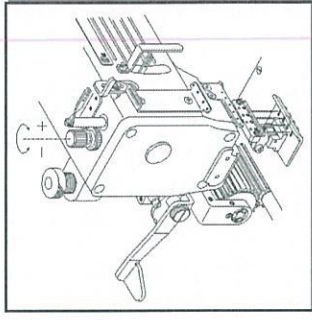


[10] ADJUSTING THE PRESSER FOOT

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).

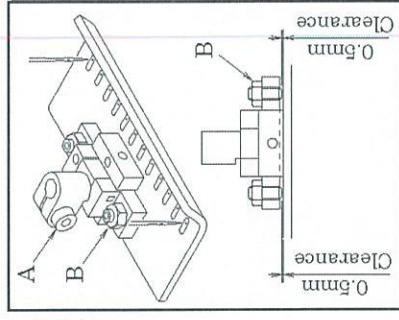


10-2 Position of the presser foot and foot lift

Fit the presser foot properly onto the presser bar.

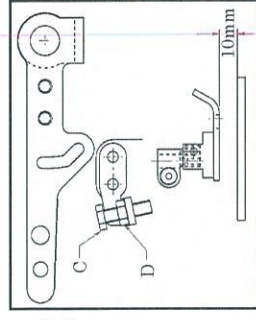
Make sure the needle is centered left to right in the needle drop hole on the presser foot when the needle is descending. Adjustment is made by loosening screw A. There should be a clearance of 0.5mm on both sides as shown in the illustration.

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



■ Foot lift

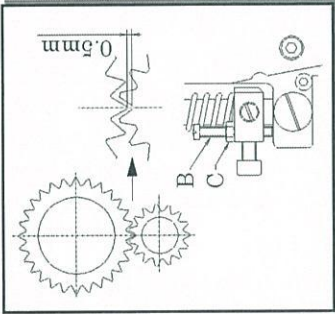
Position stopper C with the presser foot approximately 10mm above the top surface of the needle plate and then tighten nut D.



[11] ADJUSTING THE REAR PULLER DEVICE

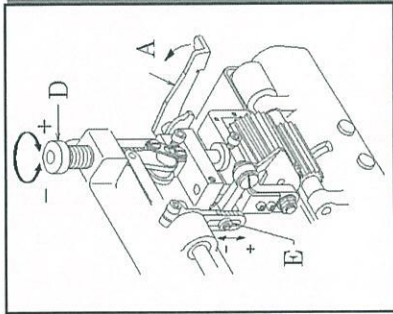
11-1 Manual lever and position of the stopper

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.

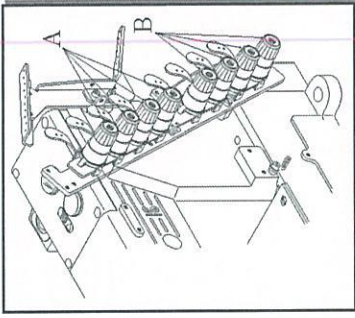
[12] ADJUSTING THE STITCH FORMATION

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.

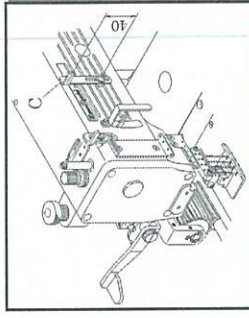


12-2 Position of the needle thread eyelet

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.

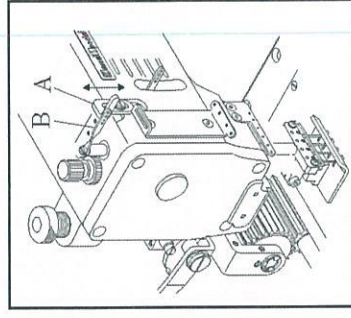


12-3 To adjust the needle thread guard

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.

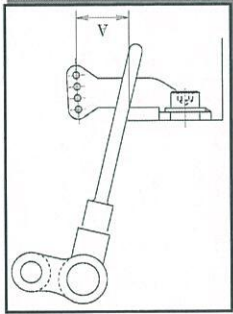
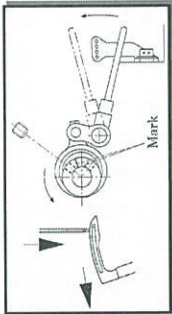


12-4 Position and timing of the looper thread take-up eyelet

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 |

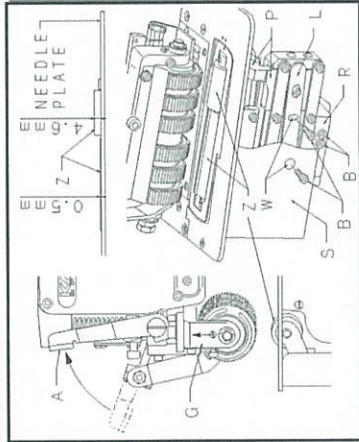


[13] REAR PULLER ADJUSTMENT FOR FX4418SPF

13-1 ADDITIONAL FEATURES FOR LOWER PULLER

Kansai Special original compensating lower puller can be moved freely, but it can also be locked in by using screw B on Bracket R.

Lift up upper puller by lever A and take out the screw B on bracket R and fix on the plate L. The bottom of position of the lower puller is 0.5mm from the top of the surface of needle plate. The maximum of the step of those lower puller is 4.6mm.



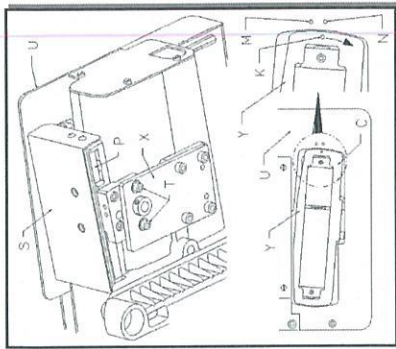
< Note >

At the factory setting, The lower puller has been set to move freely, and the screw B is attached on the bracket R

13-2 Adjustment of lower puller angle

Loosen screw T on the lower puller bracket X and make the adjustment of lower puller angle.

The maximum degree of the lower puller angle is 5°. When the mark K and mark M is aligned, the puller angle will be 0°.

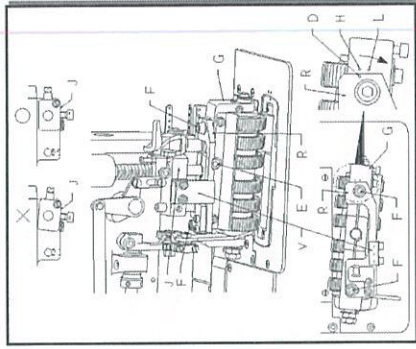


13-3 Adjustment of upper puller angle

Loosen screw E and F on the upper puller bracket G and make the adjustment of upper puller angle.

The maximum degree of the upper puller angle is 5°. When the mark D and mark L is aligned, the puller angle will be 0°.

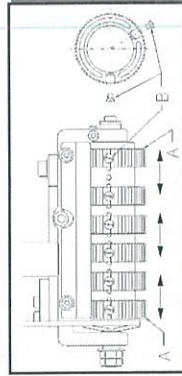
When you tighten screw F, make sure that plate R moves smoothly on guide plate V. Make sure that bracket J is set correctly as picture.



< Note >
The original setting of upper and lower puller angle is 5 degree (maximum angle).

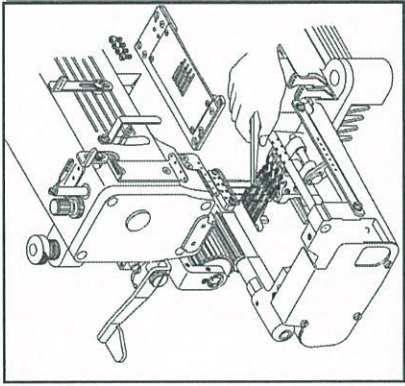
13-4 Upper puller position

Location of upper puller A can be changed by loosening screw B.



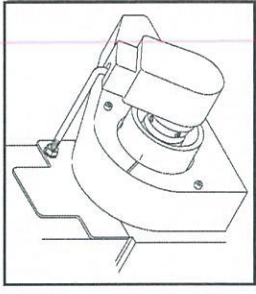
[14] CLEANING THE MACHINE

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
[15] INSTALLING THE POSITION DETECTOR

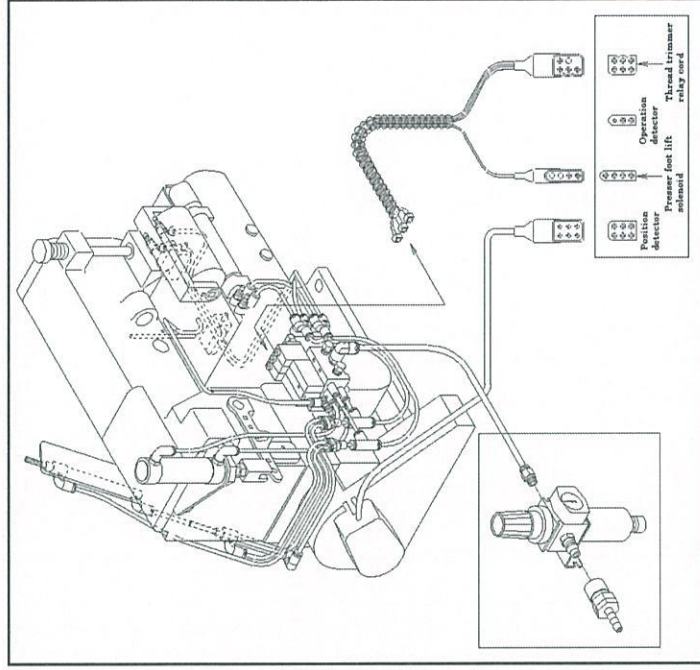
■ Install the position detector by referring to the illustration on the right.

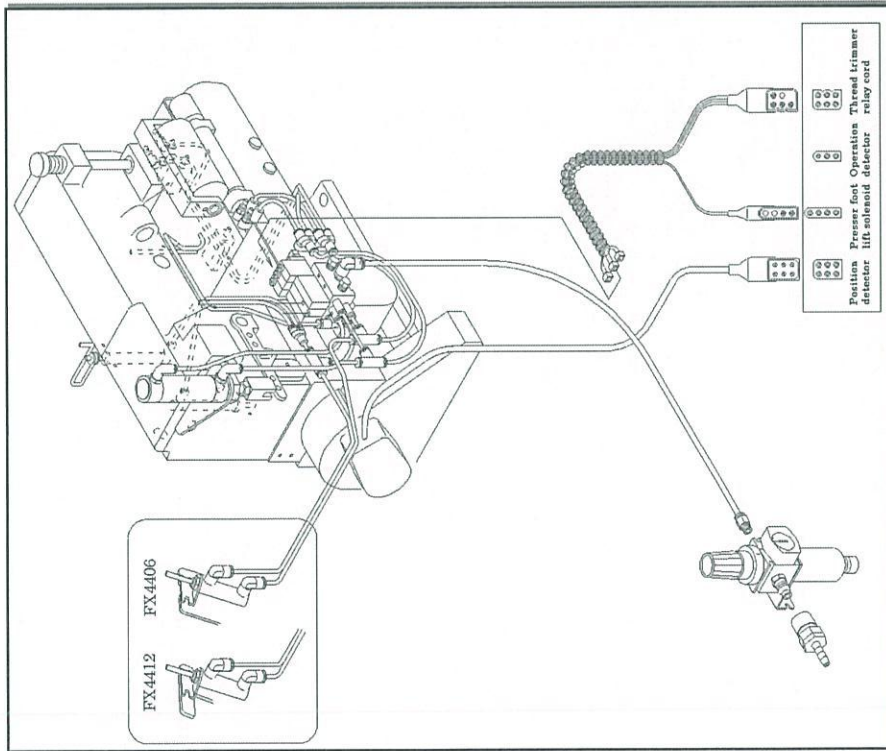


[16] CONNECTING RELAY CORDS AND AIR LINES

15-1 FX4404

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

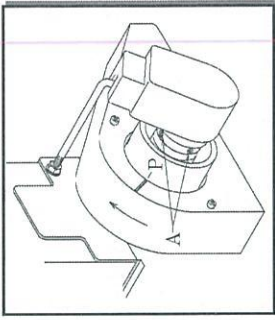




[17] ADJUSTING THE NEEDLE STOP POSITION

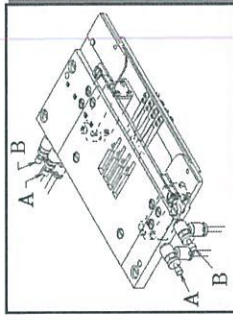
Adjust the motor so that the needle bar stops at the top of its stroke. Then start the machine and check to see if the needle bar stops at the top of its stroke. Loosen screws A on the position detector. Align mark P on the pulley with the alignment mark on the cover. Then tighten screws A. Check to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

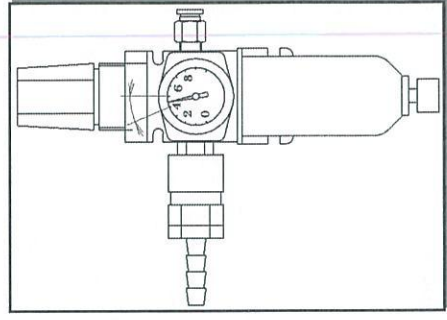


[18] ADJUSTING THE SPEED CONTROLLER AND AIR PRESSURE

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.

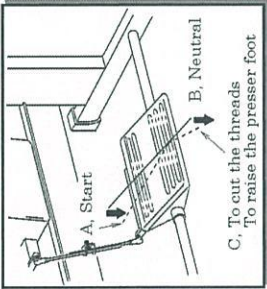


[19] HOW TO USE THE PEDAL

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).

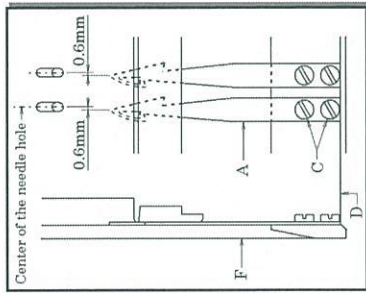


C, To raise the threads
B, Neutral

[20] ADJUSTING THE THREAD TRIMMER

20-1 Position of the movable knife

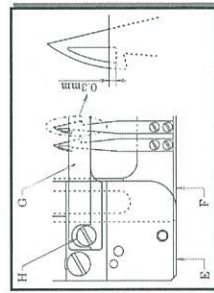
Adjust movable knife A so that the bottom of movable knife base D is flush with that of movable knife A. Adjustment is made by loosening two screws C. The point of the movable knife should be 0.6mm to the left of the center of the needle hole. With the movable knife retracted, front E of the needle plate support bracket should be almost aligned with front F of the movable knife base.



Center of the needle hole

20-2 Position of the stationary knife

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



< Note >

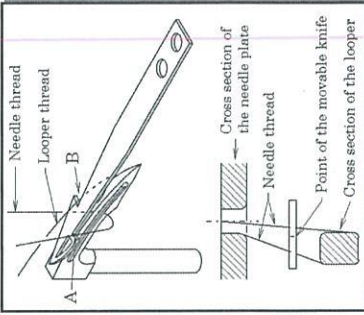
If the gauge width is large, the overlap of the stationary knife and the right movable knife should be equal to that of the stationary knife and the left movable knife. To achieve this adjustment, check to see if the stationary knife is placed in a horizontal position.

20-3 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).

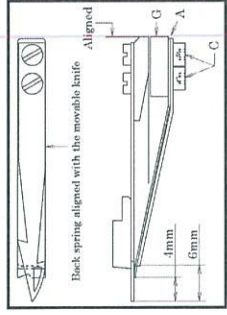
Then the looper thread is held by the stationary knife and the back spring.

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.



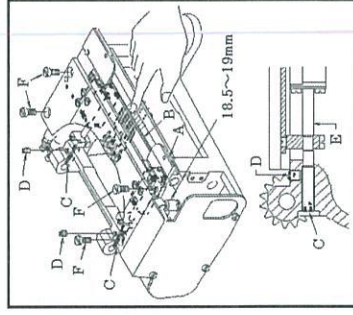
Back spring aligned with the movable knife

20-4 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.

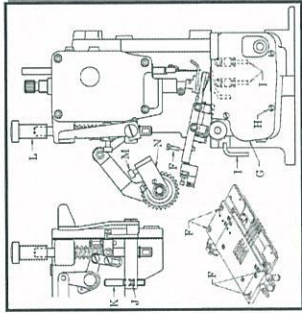
20-5 Disassembling and reassembling the knife assembly

The knife assembly is secured with four screws F.

Do not loosen other screws.

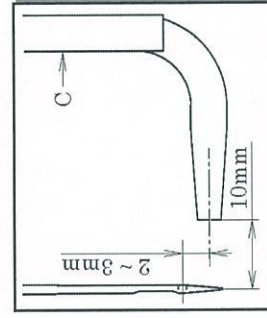
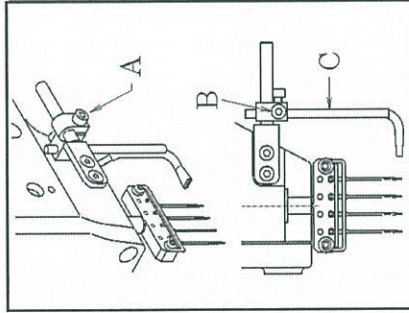
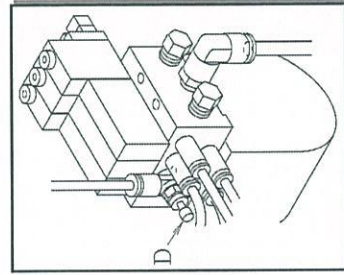
Perform preventive maintenance such as replacing the knife by following the procedures below.

1. Loosen screw H for front cover G.
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.



[21] ADJUSTING THE AIR WIPER

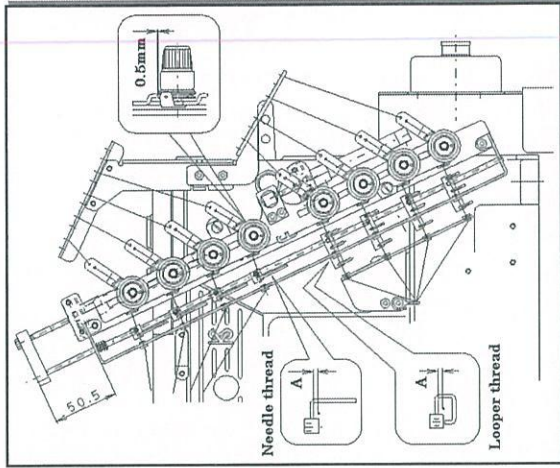
The outlet of air wiper C should be positioned approximately 10mm to the right of the right needle. Adjustment is made by loosening screw A. The outlet should be 2~3mm below the eye of the needle. Adjustment is made by loosening screw B. The time when the air wiper is blowing is factory-set at 2 sec. 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 FX4112P/UTC is fixed).



[22] THREADING & ADJUSTING THE THREAD RELEASER

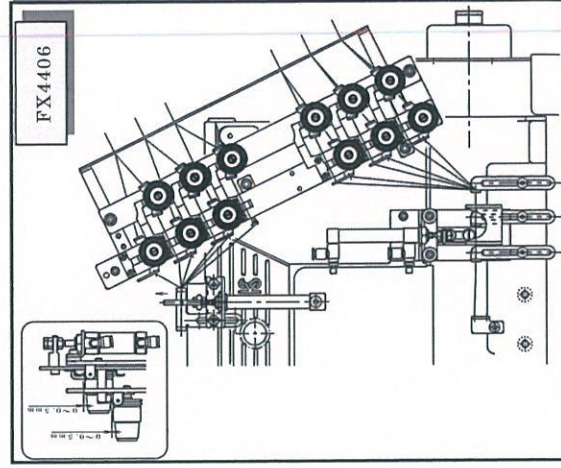
22-1 For 4-needle machines

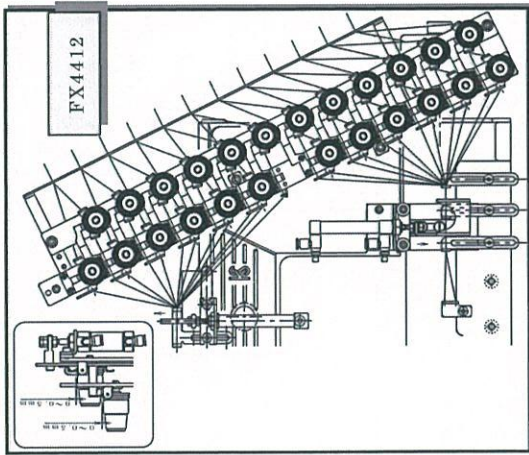
Thread the machine correctly by referring to the illustration on the right. Adjust the standby position of the releaser block for the needle and looper threads according to the distance in the illustration below. To increase the amount of the thread to be released, decrease distance A. To decrease the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



22-2 For 6- to 12-needle machines

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

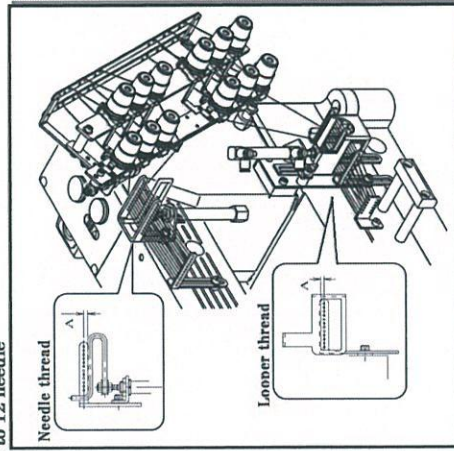




22-3 Adjustment for tension releaser of 6 to 12 needle

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.



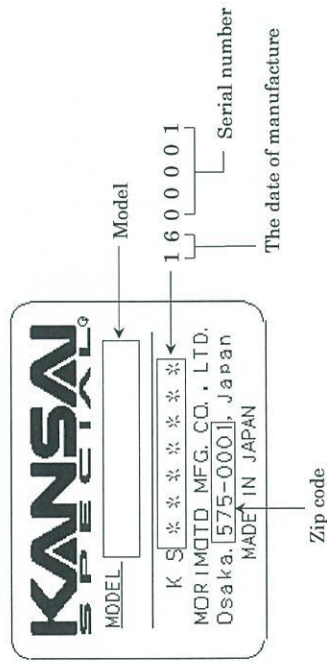
FX/UTA Series Instruction Manual

INTRODUCTION

Thank you for your purchasing Kansai Special's FX/UTA 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 FX series 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



FXseries

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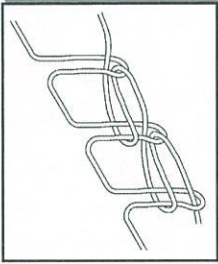
| | | |
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FXseries

[1] SPECIFICATIONS

1-1 Stitch type

JIS401 double chainstitch machines

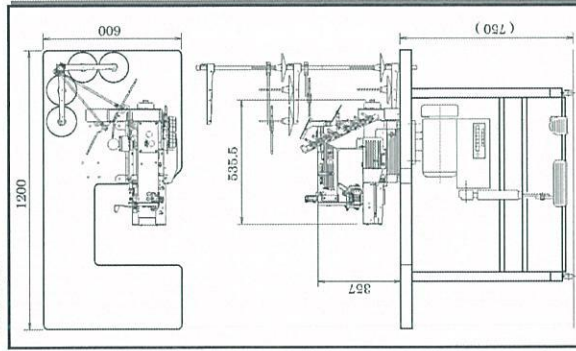


1-2 Models

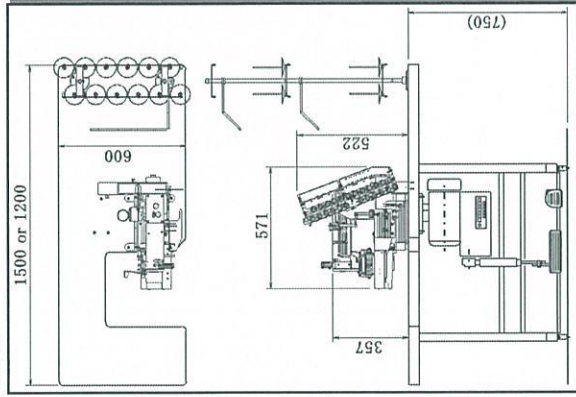
| | | | |
|---------------------|--------------------|--------------------|-------------------|
| Model | FX4404P, 4404P/UTA | FX4406P, 4406P/UTA | FX4412P~4423P/UTA |
| No. of needles | 2~4 | 5~6 | 7~12 |
| No. of threads | 4 needle threads | 6 needle threads | 12 needle threads |
| | 4 looper threads | 6 looper 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 | 70mm | | |

1-3 Diagrammatic sketch of the Series

< FX4404 >



< FX4412 >



[2] NEEDLES & THREADING THE MACHINE

2-1 Needles

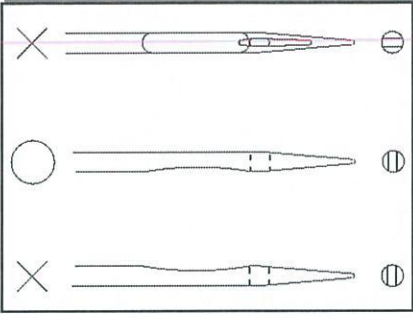
DV×57 of Schmetz or Organ.
Select the proper needle for the fabric and thread to be used.

< 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 >

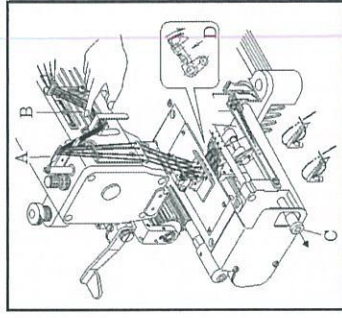
Be sure to turn off the machine before replacing the needle. A clutch motor continues running for a while after the machine is turned off. Therefore keep on pressing the pedal until the machine stops.

2-3 Threading 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

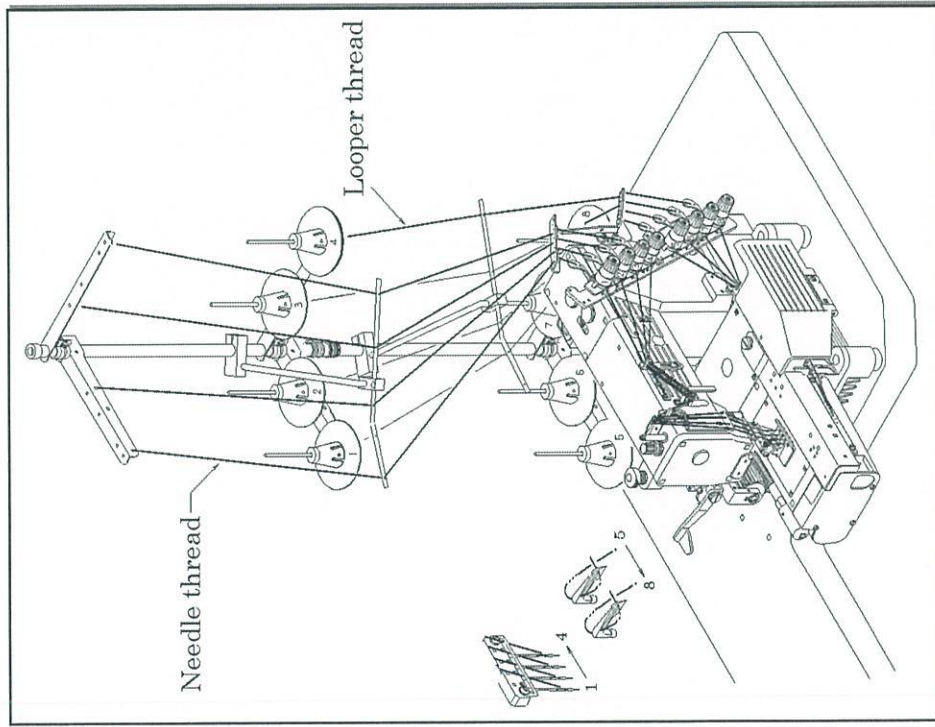
1. Bring needle bar A to the top of its stroke.
2. Pay out the needle thread from the spool by pressing a finger down on needle threads B.
3. Pull looper drawing bar knob C out to the left, so that the looper holder is tilted toward the front of the machine.
4. After the machine is threaded, replace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



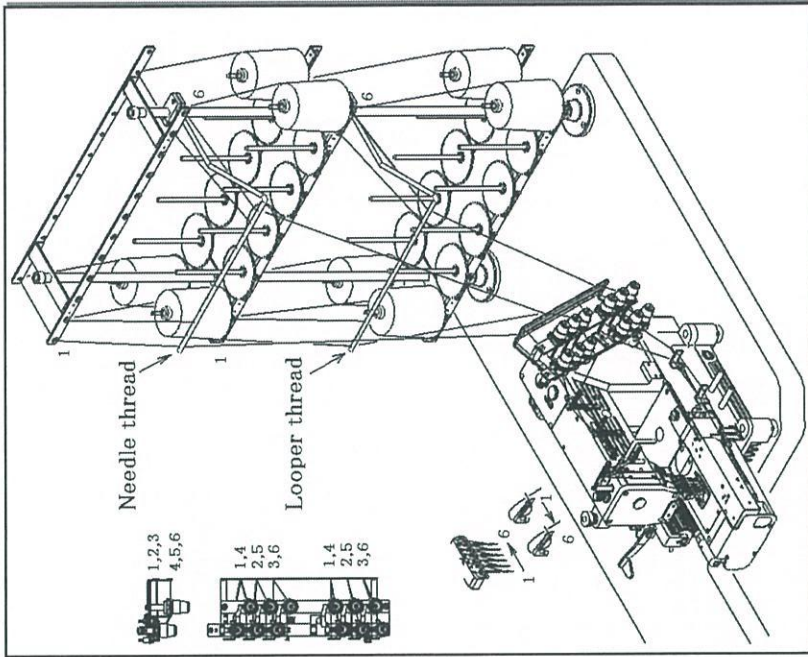
< Note >

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

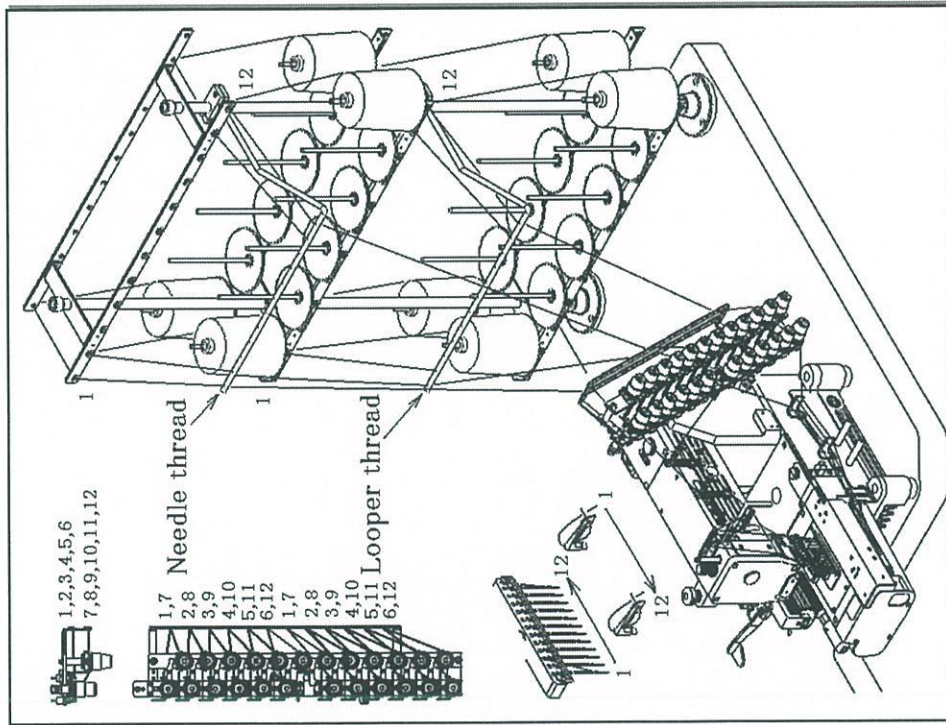
■ Threading diagram for FX4404



■ Threading diagram for FX4406



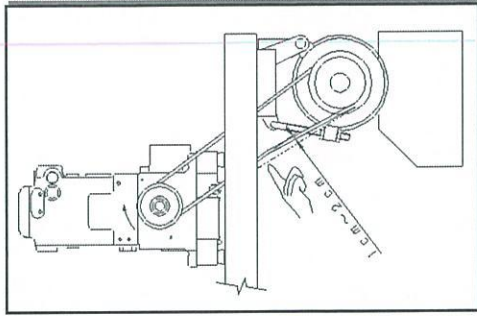
■ Threading diagram for FX4412



[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).

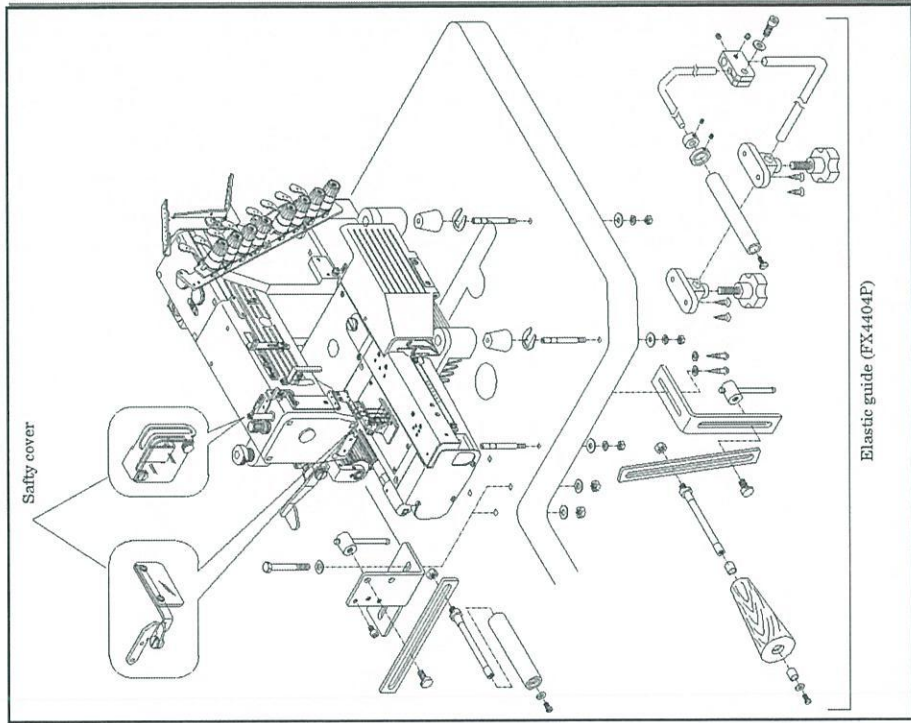
< Machine speed >

| 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) |

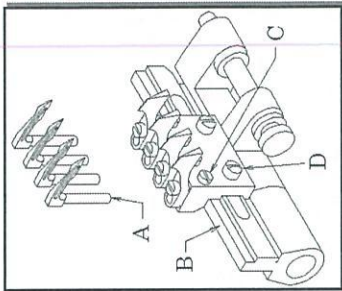
5-2 How to install the machine



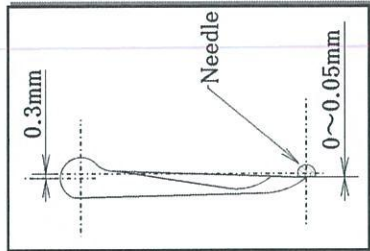
[6] TIMING OF THE LOOPER TO THE NEEDLE

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.

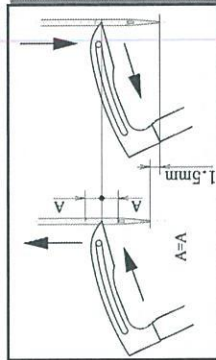


Location of looper holder have to be located in the point of needle have to be positioned with 0.3mm from center of back side of looper should be adjusted by screw D on looper holder. Then when the point of looper reach at needle scarf, the clearance should be 0~0.05mm is adjusted by screw C for fixing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



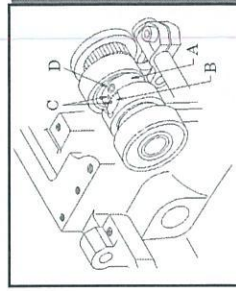
6-2 Looper left-to-right movement

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.



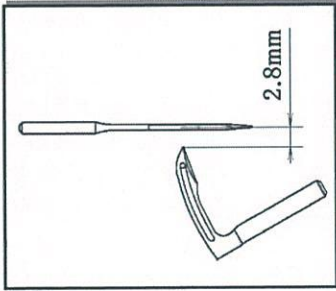
To make this adjustment, remove the top cover first. Loosen screw D. Then move eccentric A.

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

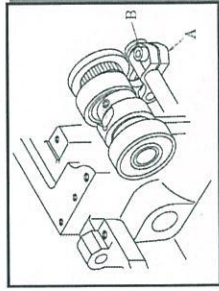


6-3 Looper setting distance

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

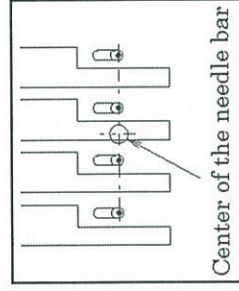
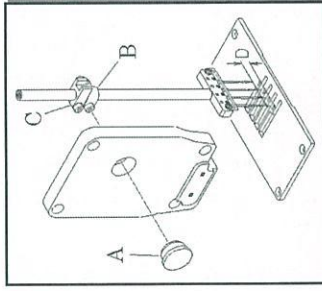
When the needle bar is at the top of its stroke, remove plug A on the head plate, loosen needle bar clamp B with a hex wrench and then move the needle bar up or down.

< 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.

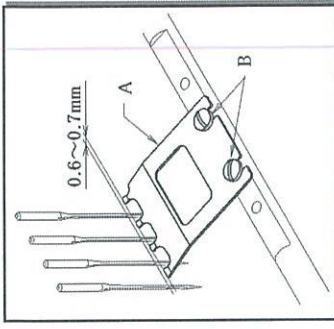


Center of the needle bar

[7] TIMING OF THE RETAINER LOOPER

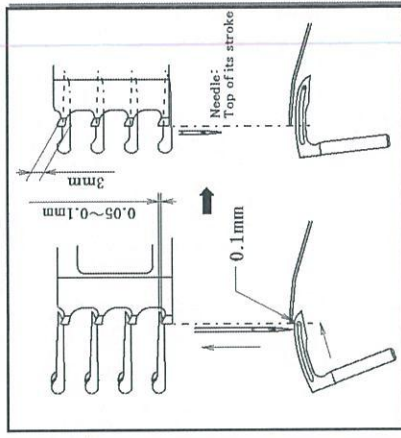
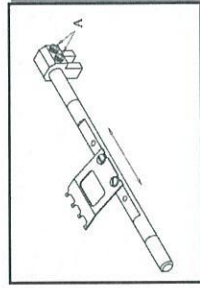
7-1 Installing the retainer looper

Install retainer looper A should be a clearance of 0.6~0.7mm 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 0.05~0.1mm between the right side of the retainer looper and that of the looper. Then set the clearance between the retainer looper and the top surface of the looper blade at 0.1mm. After this adjustment is made, tighten screws A. When the needle bar is at the top of its stroke, there should be a clearance of 3mm between the right side of the retainer looper and the left side of the looper.



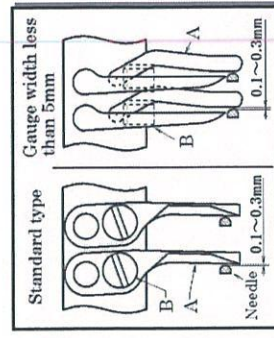
[8] ADJUSTING THE NEEDLE GUARD

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.

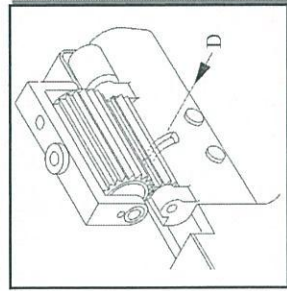
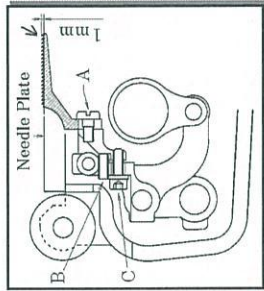
< Note >

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.

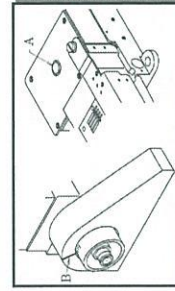
| Position of pulley | Stitch length (mm) | No. of stitches within 30mm | |
|--------------------|--------------------|-----------------------------|-------------|
| | | within 1" | within 30mm |
| S | 2 | 13 | 15 |
| M | 3 | 8.5 | 10 |
| L | 5 | 5 | 6 |

■ 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.
 4. Then turn the machine pulley to select the stitch length as required.
- 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.

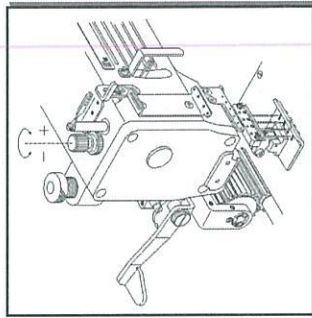


[10] ADJUSTING THE PRESSER FOOT

10-1 Presser foot pressure

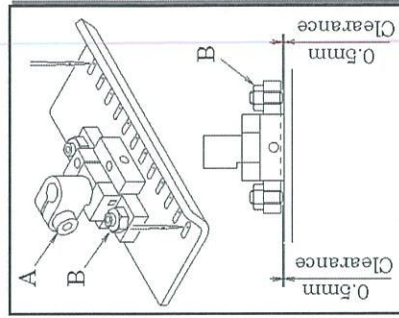
The presser foot pressure should be as light as possible, yet be sufficient to feed the fabric and produce uniform stitches.

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



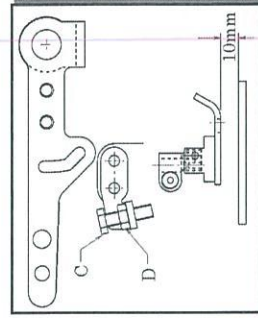
10-2 Position of the presser foot and foot lift

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

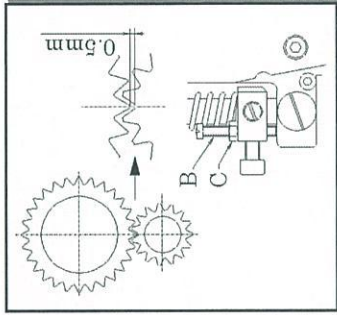
Position stopper C with the presser foot approximately 10mm above the top surface of the needle plate and then tighten nut D.



[11] ADJUSTING THE REAR PULLER DEVICE

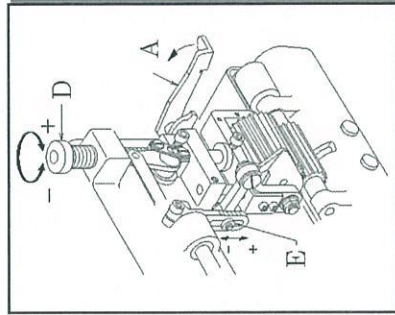
11-1 Manual lever and position of the stopper

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.



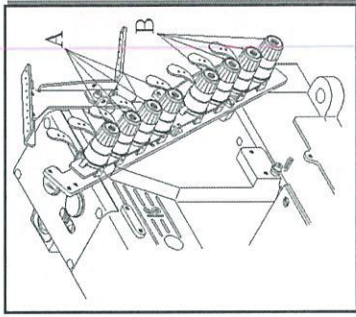
11-3 To adjust the feeding amount of the rear puller

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.

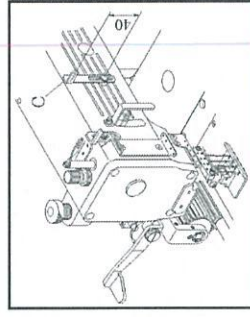


< Note >

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.

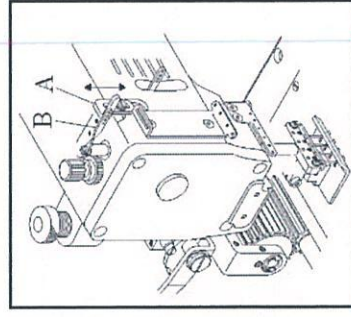


< Note >

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 >

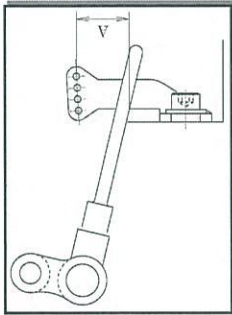
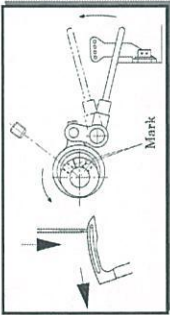
Raising needle thread guard A increases the size of the needle thread loop. Lowering needle thread guard A decreases the size of the needle thread loop.

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.

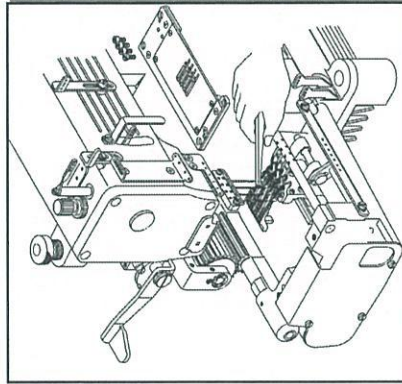
Adjustment is made by loosening the screw and aligning the mark on the eccentric with that on the main shaft. When the looper thread take-up bar is at the bottom of its stroke, adjust distance A from the eyes on the thread eyelet to the looper thread take-up bar by referring to the table below.

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



[13] CLEANING THE MACHINE

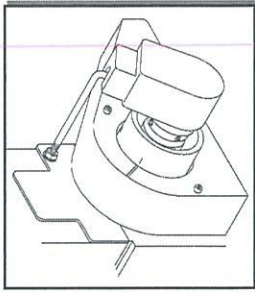
At the end of each day, remove the presser foot and the needle plate and then clean the slots of the needle plate and the area around the feed dogs.



◆ THE THREAD TRIMMER FOR UTA MODEL

[14] INSTALLING THE POSITION DETECTOR

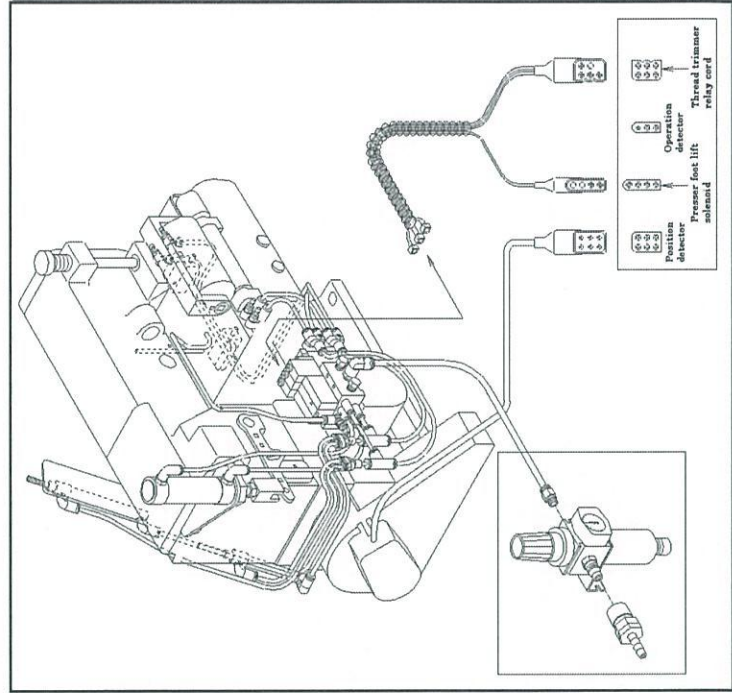
■ Install the position detector by referring to the illustration on the right.

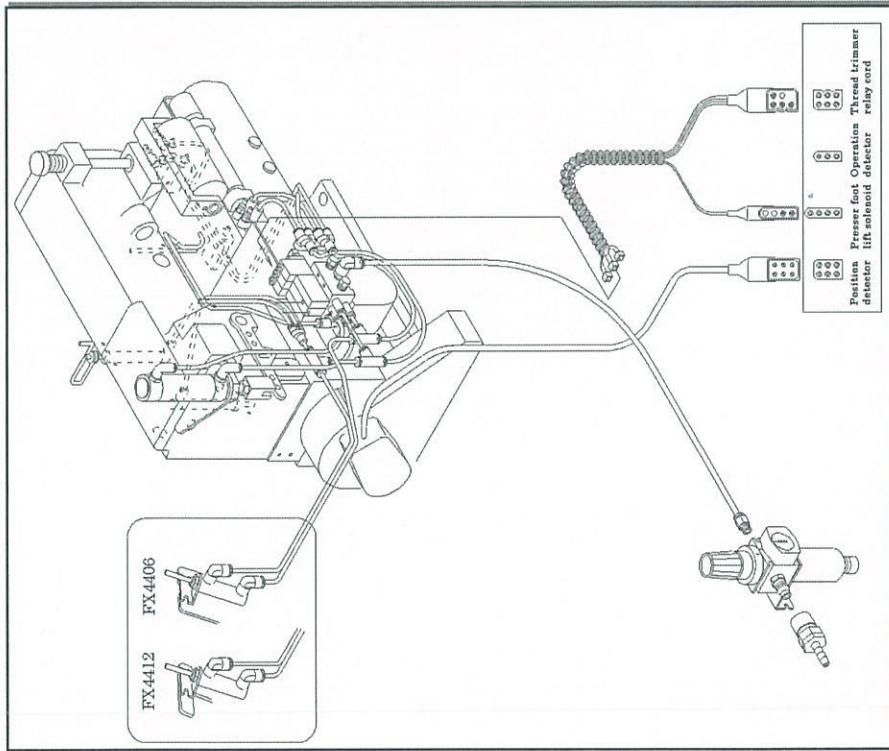


[15] CONNECTING RELAY CORDS AND AIR LINES

15-1 FX4404

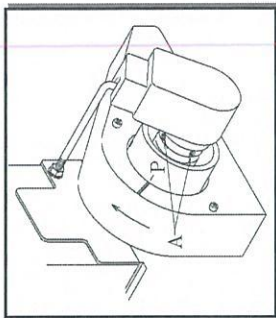
■ Connect relay cords and air lines correctly by referring to the illustration and parts list.





[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.

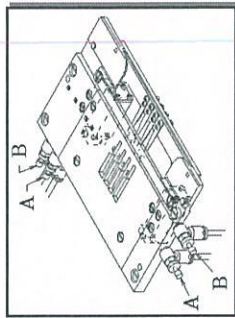


<Note >

*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.*

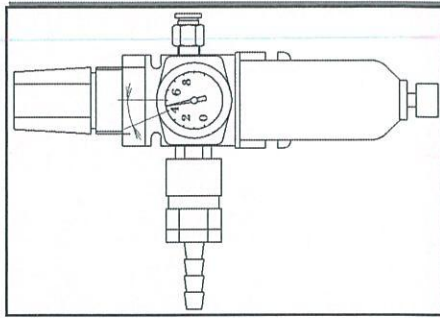
[17] ADJUSTING THE SPEED CONTROLLER AND AIR PRESSURE

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 5-5.5kg/cm².
To increase the pressure, turn the adjusting knob clockwise. Excessive pressure will give a shock to movable parts and cause damage and trouble.*

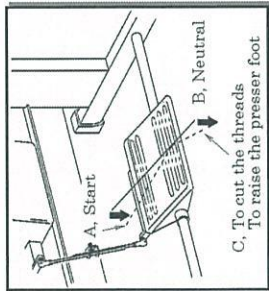


[18] HOW TO USE THE PEDAL

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).



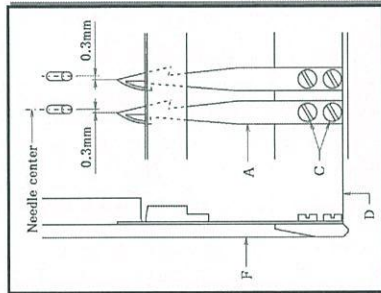
[19] ADJUSTING THE THREAD TRIMMER

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 0.3mm to the left of the center of the needle hole.

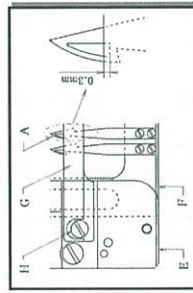
With the movable knife retracted, front E of the needle plate support bracket should be almost aligned with front F of the movable knife base.



19-2 Position of the stationary knife

With the movable knife fully retracted, there should be an 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.



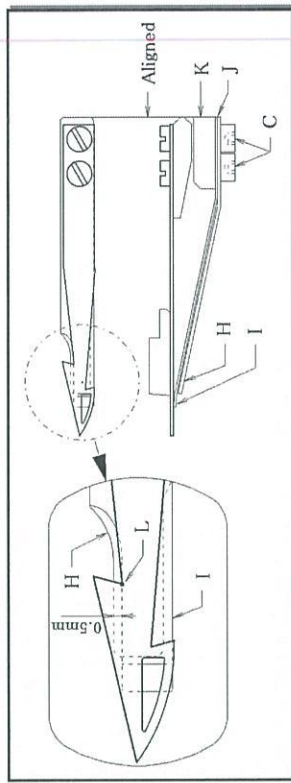
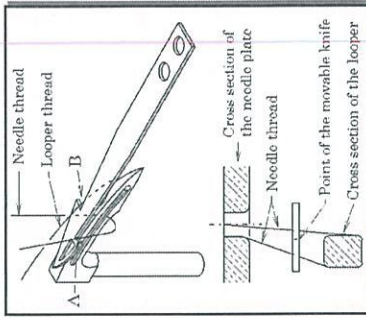
19-3 Adjusting the back spring

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 and the needle threads are not held by the movable knife and the upper spring I.

Position the two back springs by referring to the illustration and secure it with screws C. The face of upper spring I should be same line the point L of movable knife. Adjust it will protrude approximately 0.5mm from the face of upper spring I to the face of lower spring H.

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

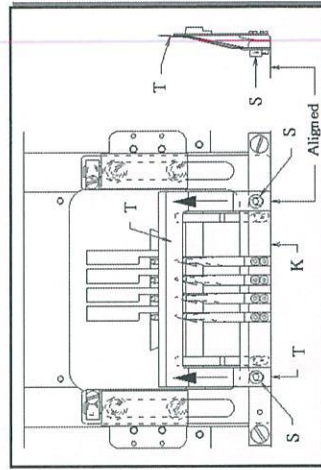


19-4 Adjusting the thread keeper

Adjust thread keeper T so that the bottom of spring base K is flush with that of the thread keeper T. Adjustment is made by loosening two screws S. (see the illustration)
The amount of the looper thread after cut can be changed by adjusting thread keeper position.

< Note >
Make sure that these parts do not interfere between retainer looper and thread keeper during sewing.

< Note >
When the 1-2 rotation of the start of sewing, should be made slow start by adjusting motor in order to give the efficacy of the thread keeper.



19-5 Adjusting the stopper

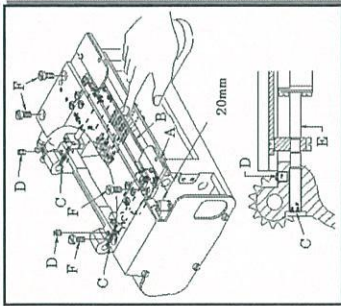
Stopper C adjust the position to which the movable knives protrude. With the needle bar at the top of its stroke, press the center of movable knife base B until the movable knives touch the stopper.

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 20mm.

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.



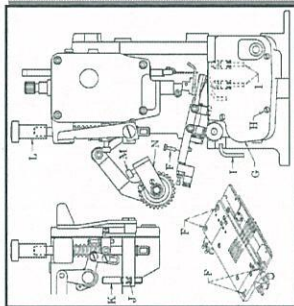
19-6 Disassembling and reassembling the knife assembly

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



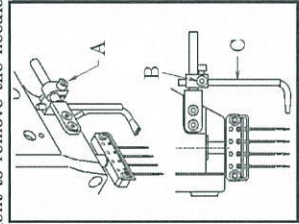
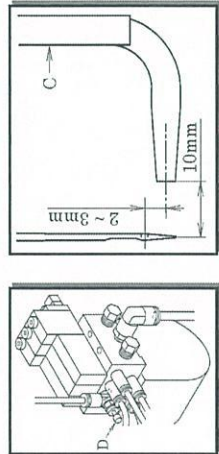
[20] ADJUSTING THE AIR WIPER

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 air on FX4412P/UTC is fixed).

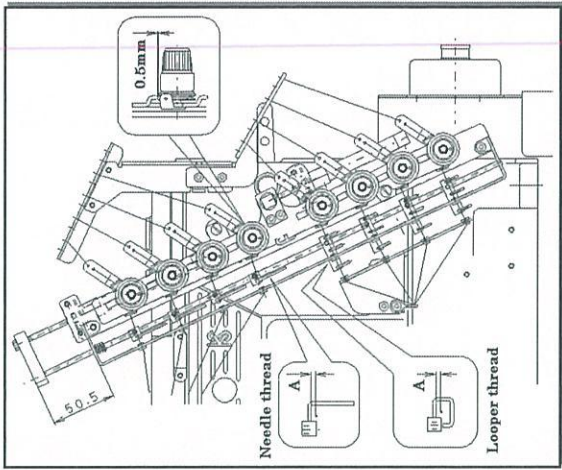


[21] THREADING & ADJUSTING THE THREAD RELEASER

21-1 For 4-needle machines

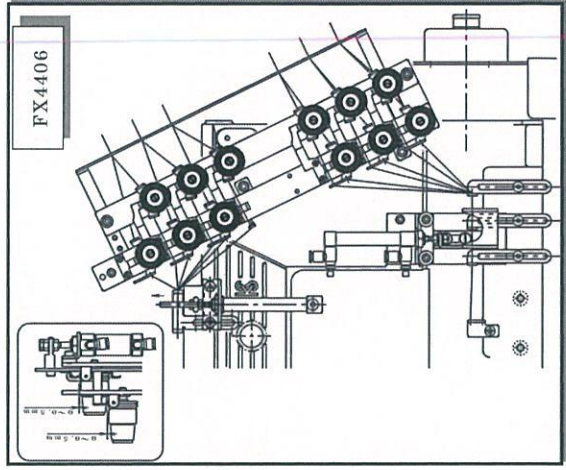
Thread the machine correctly by referring to the illustration on the right. Adjust the standby position of the releaser block for the needle and looper threads according to the distance in the illustration below.

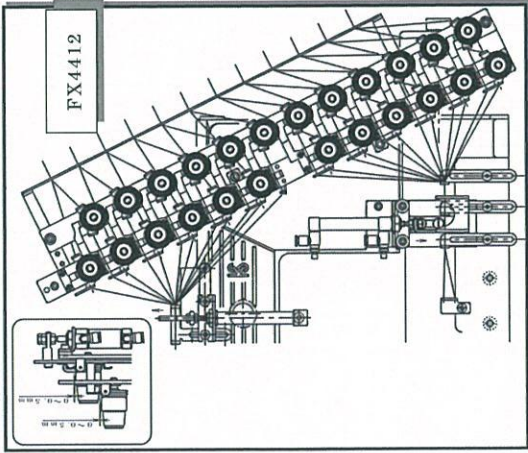
To increase the amount of the thread to be released, decrease distance A. To decrease the amount of the thread to be released, increase distance A. If stretchable threads are used, decrease distance A.



21-2 For 6- to 12-needle machines

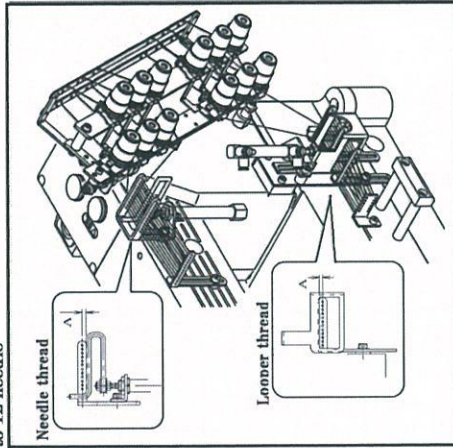
Thread the machine correctly by referring to the illustration on the right.





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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