

Nikonos-III

ニコノス III 型

REPAIR MANUAL (Revised-2)

修 理 指 針 (改訂-2)



NIPPON KOGAKU K.K.

Tokyo, Japan

CONTENTS

I. Repair manual

	Page
1. Marks in the parts list	1
2. Lubricant and binding agent list	3 - 4
3. Specifications	5
4. Illustration of Each Parts	7 - 21
5. Assembling points	22, 24, 26 28, 30, 32

II. Parts list

1. Parts list	1 - 28
2. Subassembly list	29 - 32

1. MARKS IN THE PARTS LIST 記号説明

(1) Standard mechanical elements 標準機械要素

Mark 記号	Shape 形状	Name 名称	Mark 記号	Shape 形状	Name 名称
JCIS ⊕ PM		JCIS Pan Head Machine Screw JCIS十字穴付きなべ小ねじ	HS		Hexagon Socket Head Set Screw 六角穴付き止めねじ
JCIS ⊕ CM		JCIS Countersunk Head Machine Screw JCIS十字穴付きさら小ねじ	HSB		Hexagon Socket Head Bolt 六角穴付きボルト
JCIS ⊕ OCM		JCIS Oval Countersunk Head Machine Screw JCIS十字穴付き丸さら小ねじ	(45°)P		Oval Countersunk Head Special Machine Screw すりわり付き特殊丸さら小ねじ
⊕ PM		Pan Head Machine Screw 十字穴付きなべ小ねじ	(45°)Q		Countersunk Head Special Machine Screw すりわり付き特殊さら小ねじ
⊕ CM		Countersunk Head Machine Screw 十字穴付きさら小ねじ	⊕ PTB		Pan Head Tapping Screw Type B 十字穴付きなべタッピンねじB
⊕ OCM		Oval Countersunk Head Machine Screw 十字穴付き丸さら小ねじ	⊕ CTB		Countersunk Head Tapping Screw Type B 十字穴付きさらタッピンねじB
⊕ RM		Round Head Machine Screw 十字穴付き丸小ねじ	⊕ OCTB		Oval Countersunk Head Tapping Screw Type B 十字穴付き丸さらタッピンねじB
⊕ TM		Truss Head Machine Screw 十字穴付きトラス小ねじ	⊕ PT		Pan Head Tapping Screw 十字穴付きなべタッピンねじ
SR		Set Screw Round Point すりわり付き止めねじ丸さき	⊕ CT		Countersunk Head Tapping Screw 十字穴付きさらタッピンねじ
SC		Set Screw Cone Point すりわり付き止めねじとがりさき	⊕ OCT		Oval Countersunk Head Tapping Screw 十字穴付き丸さらタッピンねじ
SH		Set Screw Half Point すりわり付き止めねじくぼみさき	N		Hexagon Nut 六角ナット
TP		Taper Pin テーパピン	SPP		Spring Pin スプリングピン
STP		Straight Pin 平行ピン	E		E-ring E型止め輪

Expression 表示法

☆ Standard screw 標準ねじ

Mark, Diameter × Pitch × Length, Type or, Mark, Diameter × Length, Type
記号 ねじの呼び径 ピッチ 長さ 種別 又は 記号 ねじの呼び径 長さ 種別

Ex. ⊕ RM 3×0.5×4

JCIS ⊕ PM 2×2.5 Type (3)

☆ Pin ピン

Mark, Diameter × Length
記号 呼び径 長さ

Ex. TP 2×12

☆ Nut ナット

Diameter of internal thread, Mark-Type
ねじの呼び径 記号 種別

Ex. 8N-Type (3)

☆ E-ring E型止め輪

Mark-Diameter
記号 呼び径

Ex. E-8

(2) The term of sale column 販売区分欄

Mark 記号	Explanation 説明
○	Can be supplied individually 単独部品として販売するもの
△	Not supplied individually but only as subassembly 部組品でなければ販売しないもの
○△	Supplied either as part or subassembly 単独部品でも部組品でも販売するもの
×	Not considered as repair part 修理部品とは考えないもの
※	Should be sent to the factory if the repair is needed 単体では交換できないので、組む場合に工場での加工が必要なもの
☐	Delivered as a product from the sales department (i.e., not supplied as repair part) 商品として販売店で販売しているもの(修理部品扱いはしない)

(3) The remarks column 備考欄

32FB1≧664	Part number used in common 共通部品番号
(Blue×125mn)	Lead wire (color×length) コードの色と長さ
53F2013 (FN-780028)	Technical information ref. number (number in parenthesis: English edition) 製品技術資料番号。 内は英文 No.
(2.1×3.8×0.007)	Washer (internal diameter ×external diameter×thickness) ワッシャーの(内径×外径×厚さ)
(Black)	Black-finished parts 黒部品
(d=0.2)	Diameter of wire. 線径=0.2
(t=1)	Thickness 厚さ=1
Rev.	Revision 訂正
Add.	Addition 追加
Dis.	Discontinuation 廃止

2. Lubricant and binding agent list 潤滑剤・接着剤一覧表

I.LUBRICANTS 潤滑剤

Oil 油	Usage 用途	Items number 番 号	Items 商品名	
			Japanese 日 本	Remarks 備 考
Liquid oil 液体油	At a normal temperature 常 温 用	L 1212	日本石油 白スピンドル油 No.5	
		L 1233	シェル石油 トナイル #33	
		L 1309	モービル石油 モービルーブ HD80-90	
		L 1314	モービル石油 モービルーブ HD140	
	At a low temperature 低 温 用	L 2010	ウィリアム・エフ・ナイ(木村産業) アストロオイル	
		L 2113	三陽化工 D. O. S	
		L 2215	エクリプス・バイオニア エクリプス・バイオニア #10(シャイロ油)	
		L 3016	理研製油 スクワレル LA-10	
		L 3025	理研製油 スクワレル M-1	
		L 3034	理研製油 スクワレル M-2	
		L 3044	理研製油 スクワレル M-5	
		L 3047	理研製油 スクワレル H-1	
Grease oil グリース	At a normal temperature 常 温 用	G 5201	社 内 調 合	
		G 5204	社 内 調 合	
		G 5214	社 内 調 合	
		G 6053	日本鉱油 パーマルブ H1003	
		G 6252	出光興産 グフニコロネックス 2	
		G 6372	シェル石油 シェラルバニア 2	
		G 6414	杉浦研究所 光学用グリース Z-2	
		G 6433	杉浦研究所 光学用グリース X-2	
		G 7821	丸善石油 リマックバ 2	
		G 8681	ロックレー(大東商事) リキモリオート LM-81	
	At a low temperature 低 温 用	G 7100	理研製油 スクワグリース L-2	
		G 7811	日本鉱油 ファートルブ 024	
		G 7812	日本鉱油 ファートルブ 025	
		G 7813	社 内 調 合	
		G 7814	協同油相 マルテンブリ'S No.1	
		G 7815	協同油相 マルテンブリ'S No.2	
		G 7833	東レシリコーン シリコーンSH-33(F)グリース	
		G 7848	日本石油 ユニナシブグリース	
		G 7854	日本鉱油 パーマルブ C-1	
		G 7855	日本鉱油 パーマルブ C-2	

LUBRICANTS 潤滑油

Oil 油	Usage 川 途	Items number 番 号	Items 商 品 名	
			Japanese 日 本	Remarks 備 考
Grease oil グリース	At a low temperature 低 温 川	G 7856	日本鉱油 パーマルブ C-3	
		G 7862	日本鉱油 パーマルブ F-2	
		G 7866	日本鉱油 フェートルブ 023	
		G 7870	モービル石油 モービルグリース 27	
		G 8181	社 内 調 合	
		G 8610	ロックレー(大東商事) リキモリペースター LM-83	
		G 8613	ロックレー(大東商事) リキモリパウダー LM-13	

BINDING AGENTS 接着剤

Usage 用 途	Items number 番 号	Items 商 品 名	
		Japanese 日 本	Remarks 備 考
For leather or rubber goods. 皮革, ゴム類	# 330	スミボンド VA-100	
	# 501	ブライオボンド #30	
For make metal goods together with metal goods or glass with metal 一般金属相互 ガラスと金属	# 616	セメダインスーパー (家庭用)	
		セメダイン #1500 (工業用)	
	# 621	セメダイン #1565	
	# 631	アラルダイト AT1	
	# 634	主剤 アラルダイト AY 101 硬化剤 ハードナー HY 951	
	# 645HB, # 645HE	DM K 5	
For temporary adhesion in the process 工程上の仮止め	# 201	セラック オレンジ色, レモン色可	
	# 350	ねじロック	
	# 410	ロックタイト (B/M黄, ST/L赤 SC/L紫, N/L青, D橙)	
	# 921	アロンアルファ # 201	
	# 922	アロンアルファ # 202	
For replenishment 欠損を主とする接着	# 503	ウェザーバンシーラー	
	# 506	スリーボンド #64	
	# 508	シラシール 3DW	
	# 512	シラシール FSXS-1548	
	# 646HB, # 646HE	DM D 6	
	# 647HB, # 647HE	DM K 3	

3. Specifications

- Type of camera: 35mm amphibious camera.
- Picture format: 24mm x 36mm (35mm format).
- Lenses available: Nikkor 35mm f/2.5 as standard; three addition-lenses from super-wideangle to telephoto.
- Viewfinder: Bright-line viewfinder built into body; used with 35mm and 80mm lenses.
- Shutter: Vertical-travel (downward) focal-plane type; speeds from 1/30 to 1/500 sec. and "B"; shutter released via special film-advance/shutter-release lever.
- Film winding: Via single-stroke, combination-action lever; lever also used for shutter release.
- Film rewinding: Manual via film rewind crank.
- Flash synchronization: Direct when using Nikonos III Underwater flash; manual with others, via adapter mounted in synchro-socket in base of camera.

Range

M and MF bulbs: 1/30 sec.

FP bulbs: 1/500 - 1/60 sec.

Speedlights: 1/60, 1/30 sec. and "B".

- Frame counter: Shows number of frames exposed (additive type); automatically reset to start position (2 frames before "0") when camera is opened; film advance indicator built into counter.
- Dimensions: 144mm x 99mm x 47mm (Body only)
- Weight (with standard lens): 780g on land.
About 270g in water

3 主 要 諸 元

- 型 式 ----- 35mm判, フォーカルプレーンシャッター式
完全防水カメラ
- 画面サイズ ----- 24mm X 36mm
- レンズ ----- 標準レンズニッコール35mm F2.5
- ファインダー ----- 採光式ブライトフレーム (35mm用, 80mm用)
- シャッター ----- 上下走行式メタルフォーカルプレーンシャッター
セフティロック付き
シャッタースピード ----- B, 1/30, 1/60, 1/125,
1/250, 1/500秒
- {
 - フィルム巻き上げ ----- レバー式1作動回転角73°
 - シャッターリリース ----- レバー式回転角6.5°
 - シャッターチャージ ----- レバー式1作動回転角73°
- フィルム巻き戻し ----- クランク式 (シャッターダイヤルで切り換え操作必要)
巻き戻し完了確認機構付き
- シンクロ接点 ----- FPおよびX接点 (防水式特殊ソケット)
M, MF ----- 1/30sec.
FP ----- 1/500, 1/60 sec.
スピードライト ----- 1/60, 1/30, sec. & B
- コマ数計 ----- 自動複元順算式
- 寸 法 ----- 144mm X 97mm X 47mm (ボディのみ)
- 重 量 (標準レンズ付) ----- 780g (陸上)
約270g (水中)

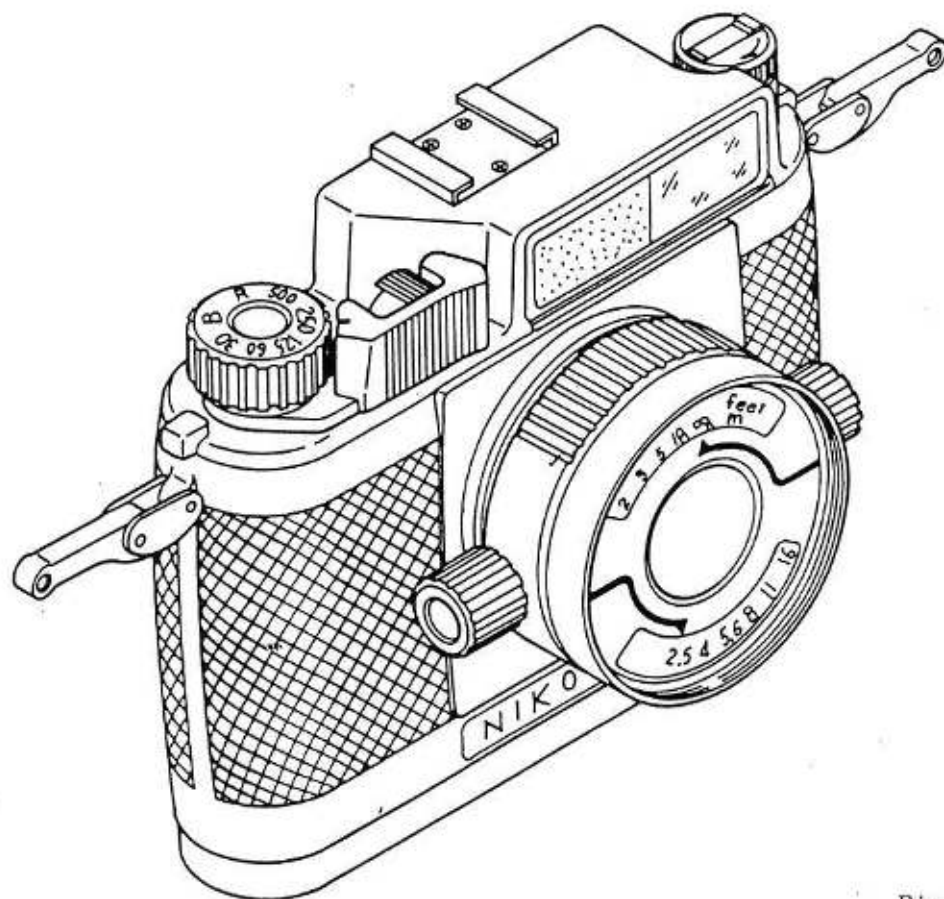
4. Illustration of Each Parts 展 開 図

Fig. 1

Note

- a. The number and page enclosed by  represent corresponding No. of section and page of Assembling Points.
- b. The number enclosed by () represent corresponding No. of lubricant or binding agent.

注 記

- a. 図中の  は、組立要点のナンバーとページ数を表わす。
- b. 図中の () 内の番号は、潤滑剤、接着剤の番号を表わす。

Top main body

本体上部

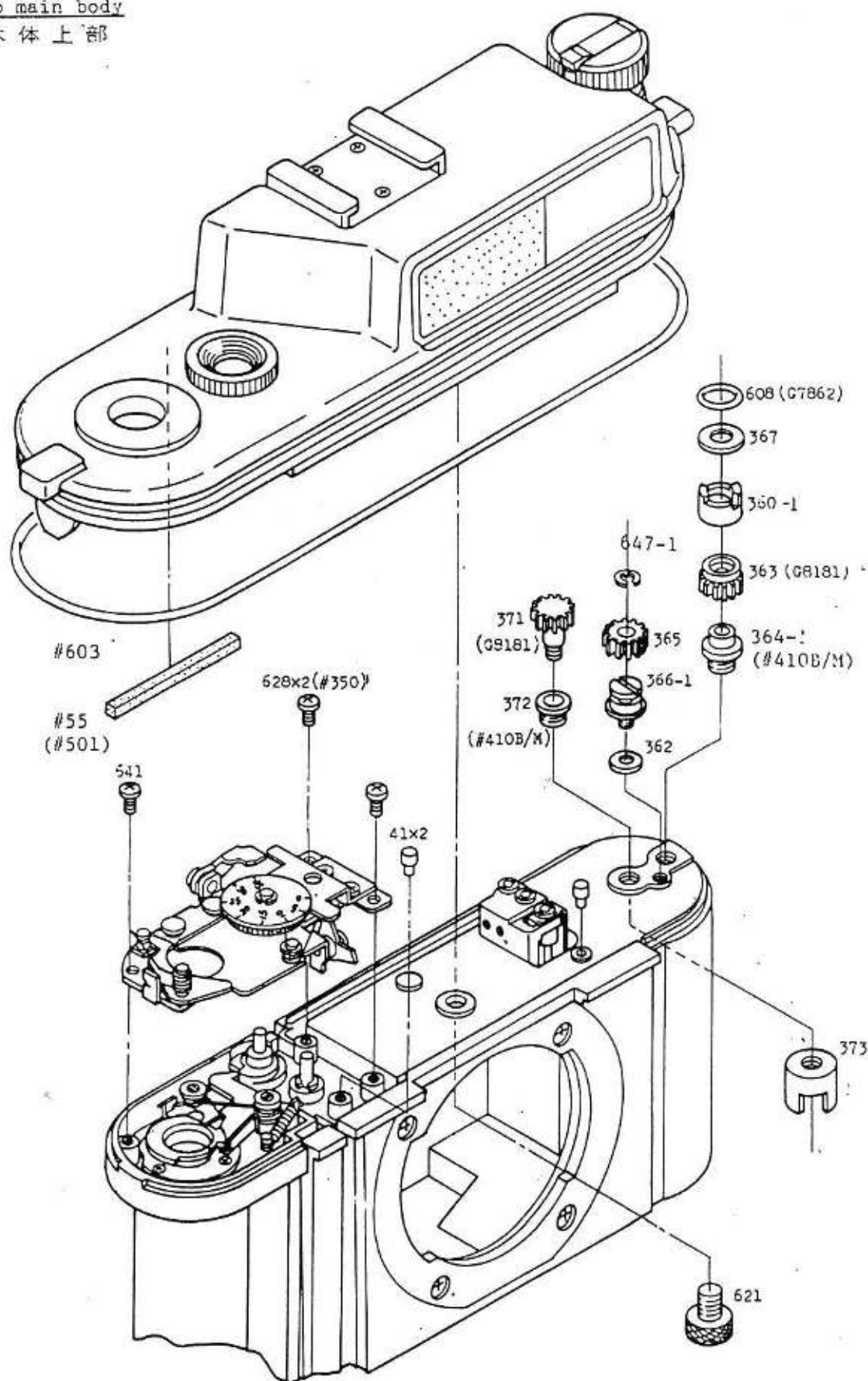


Fig. 2

Top cover

軍艦部

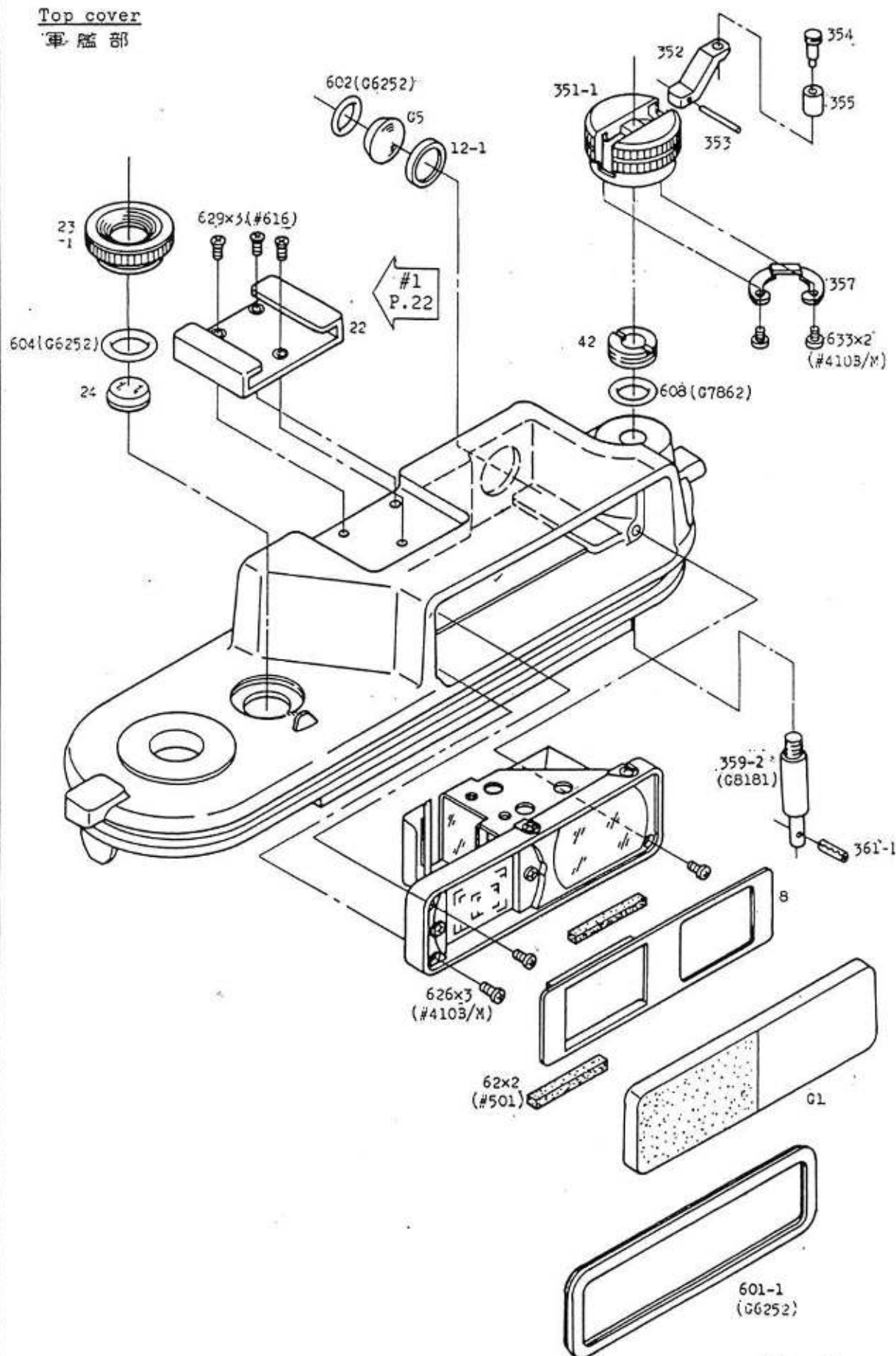


Fig. 3

Take-up lever

巻上レバー部

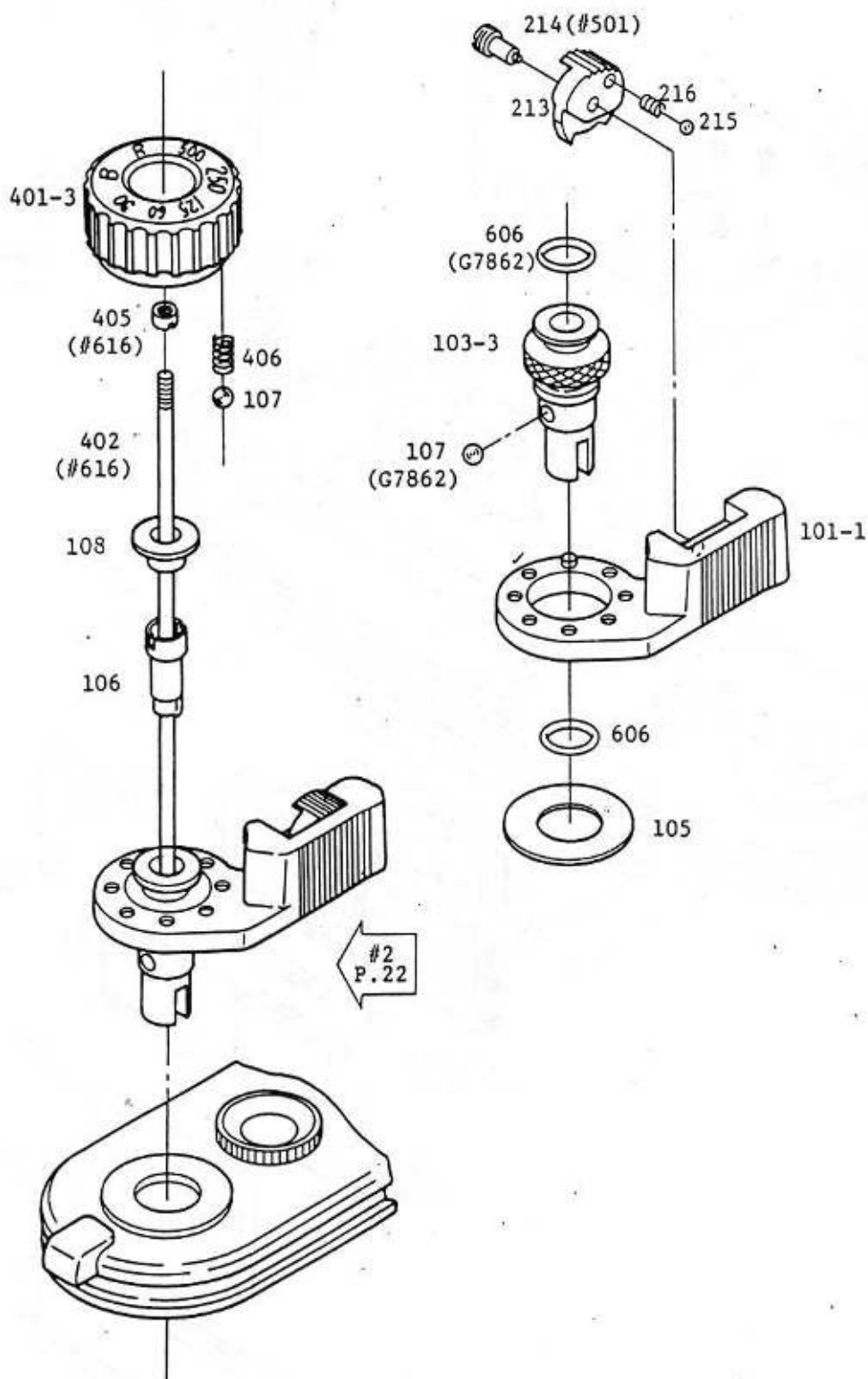


Fig. 4

Fig. 5

Finder
ファインダー

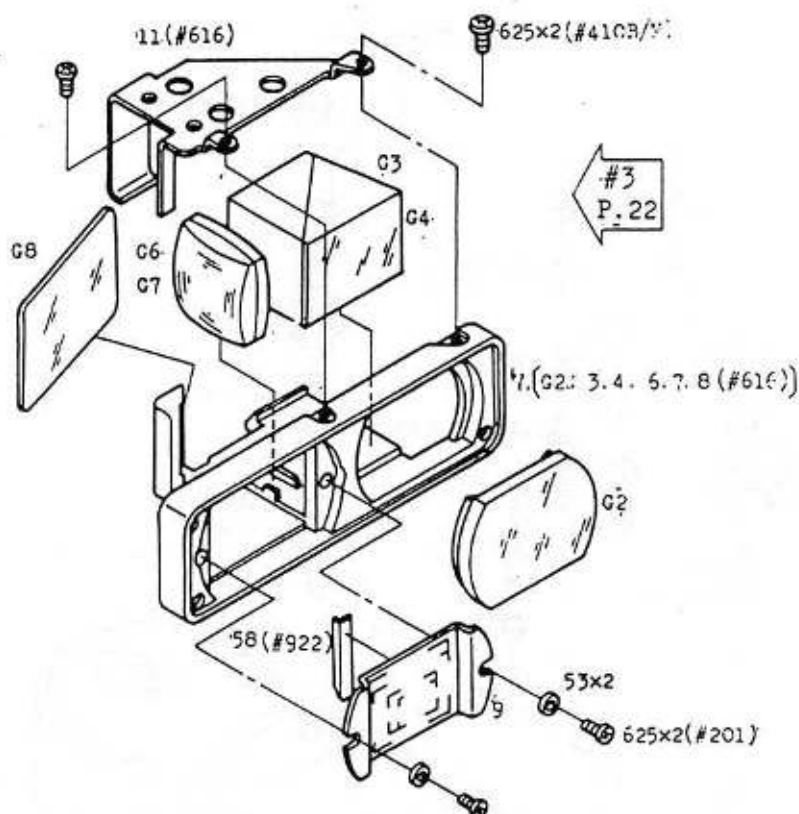


Fig. 6

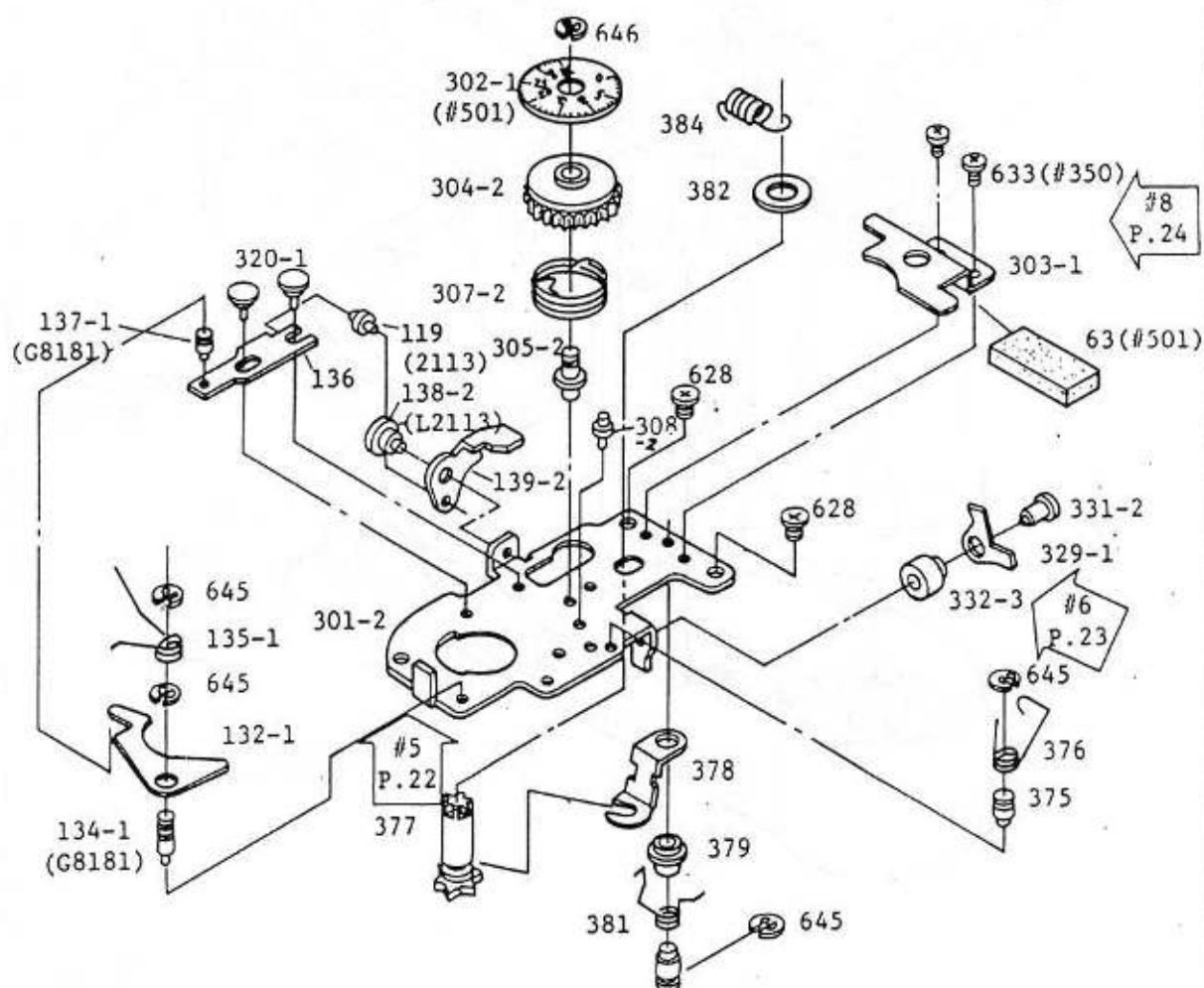


Fig. 7

Main body

本 体

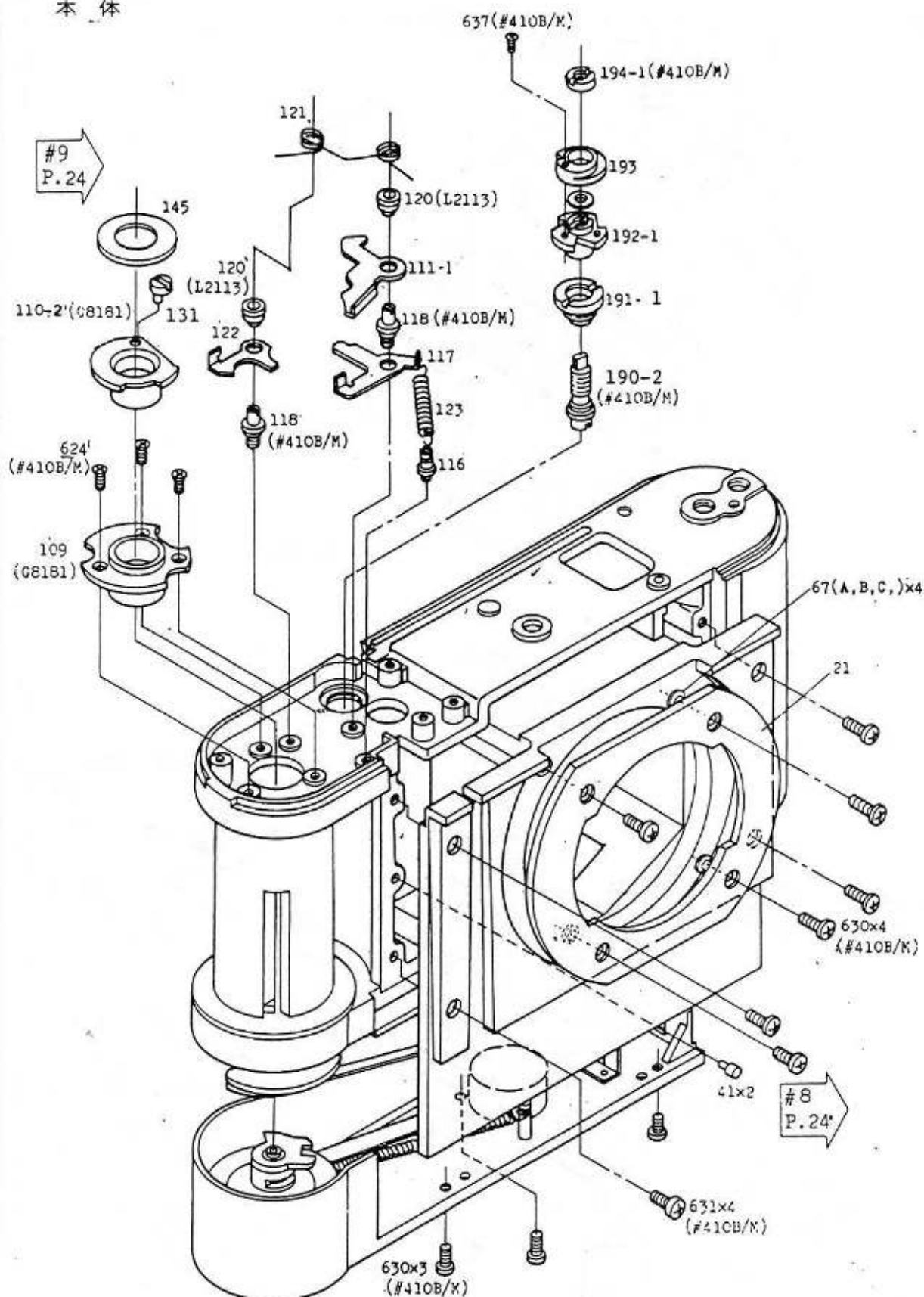


Fig. 8

Spool and take-up shaft

スプール, 巻上軸

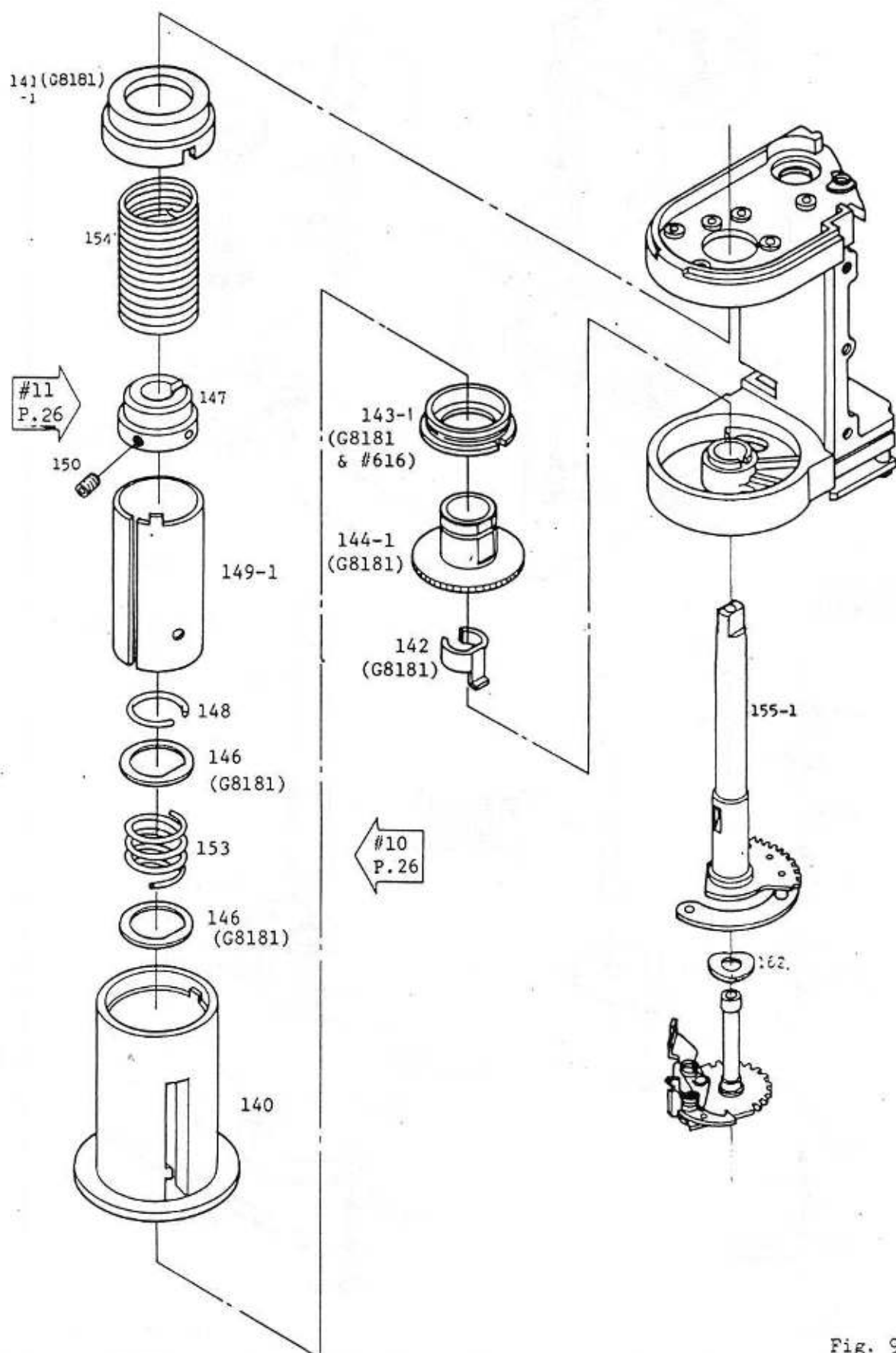


Fig. 9

Take-up gear

巻上ギヤ

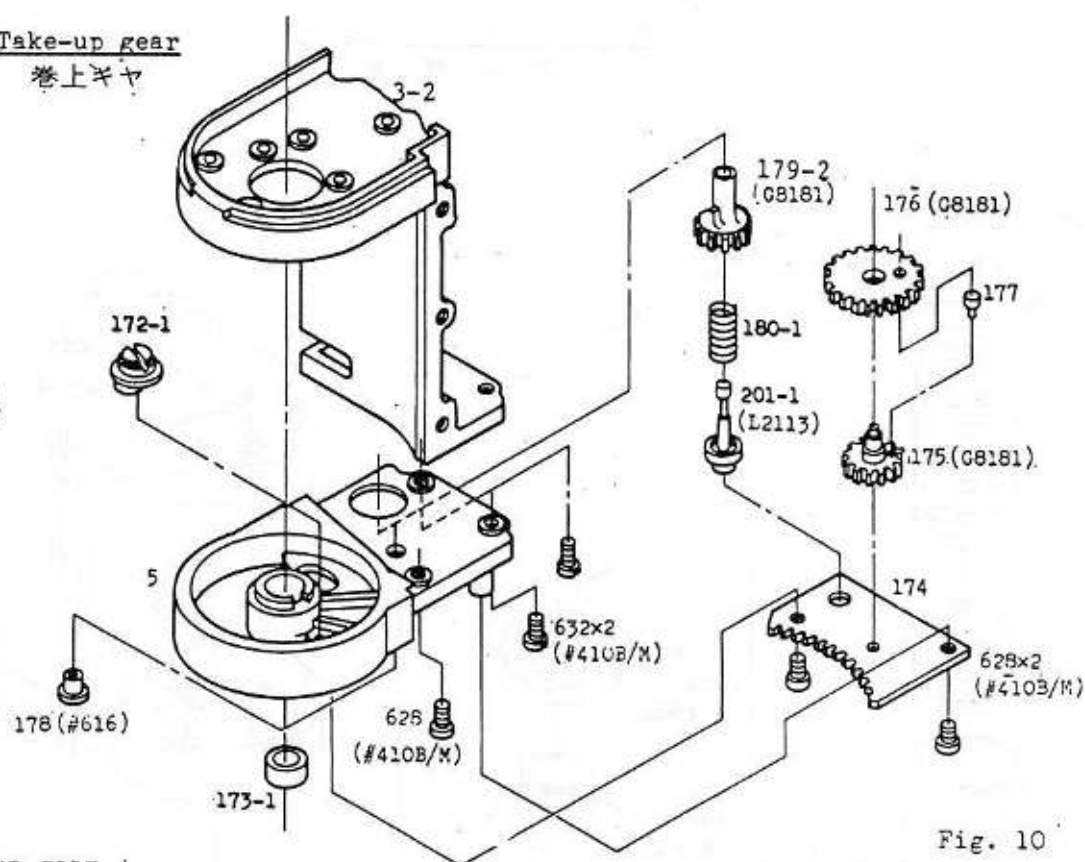
#12
P.26

Fig. 10

Sun gear

太陽歯車部

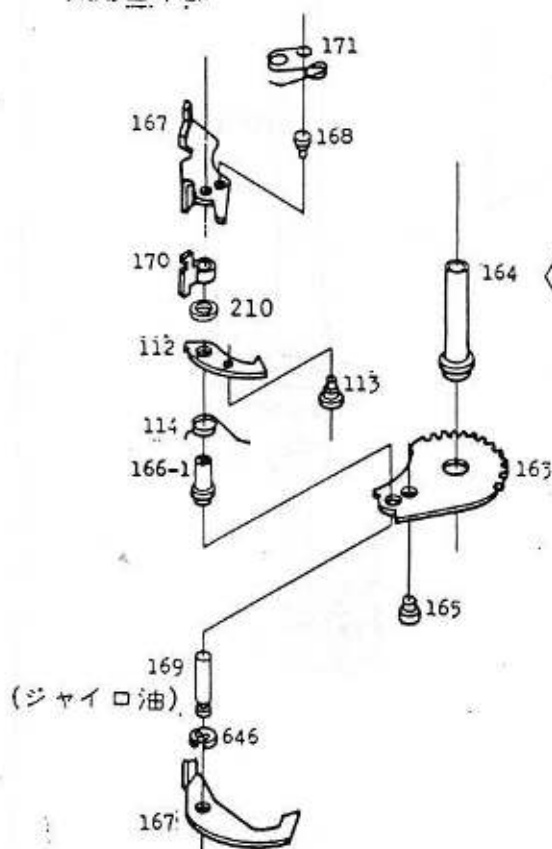


Fig. 11

Take-up shaft

巻上軸

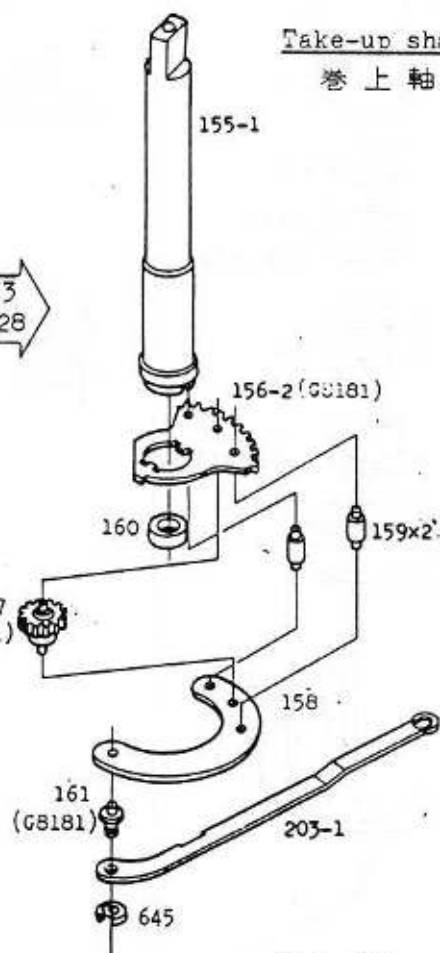
#13
P.28

Fig. 12

Sprocket
スプロケット

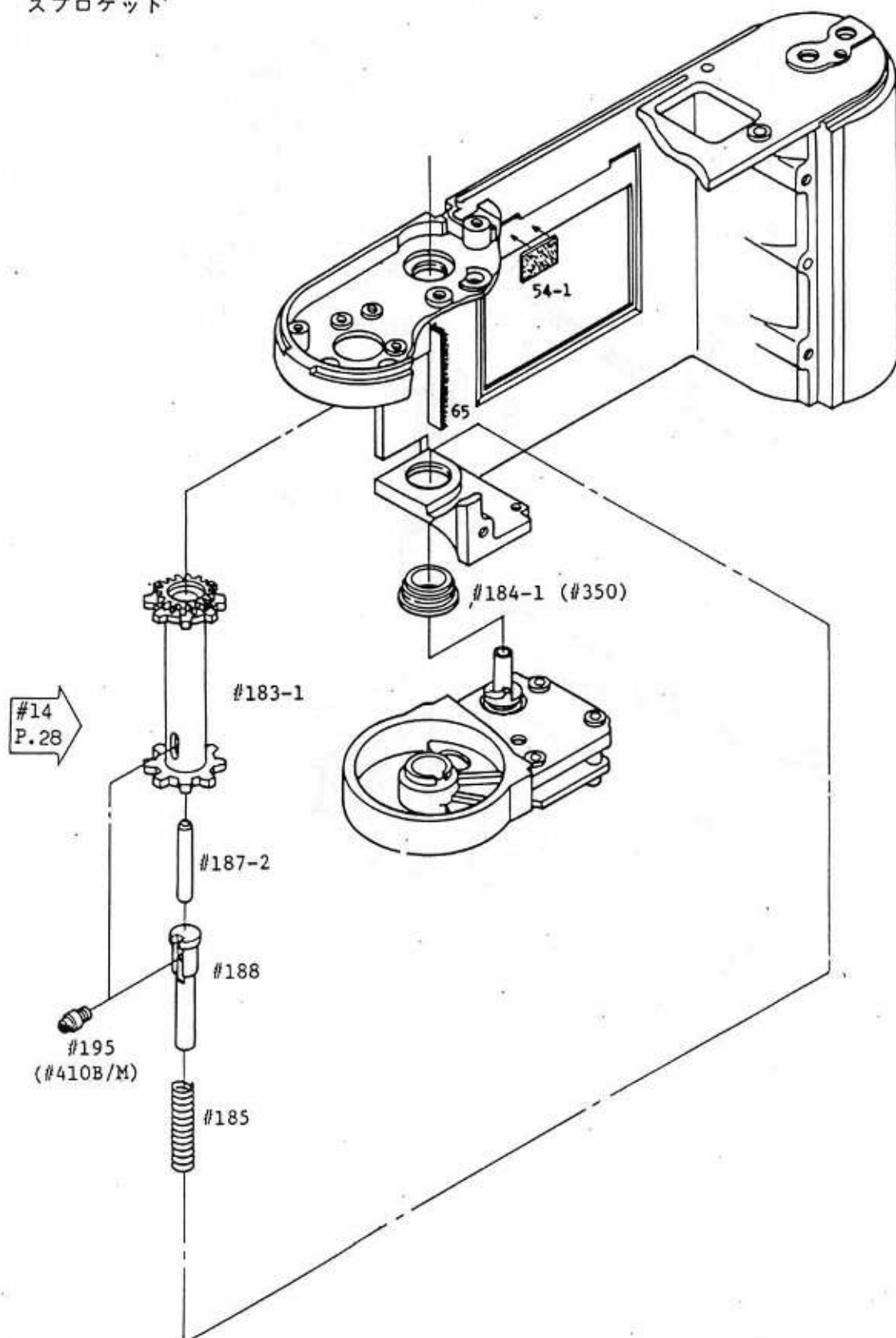


Fig. 13

Bottom plate

底板部

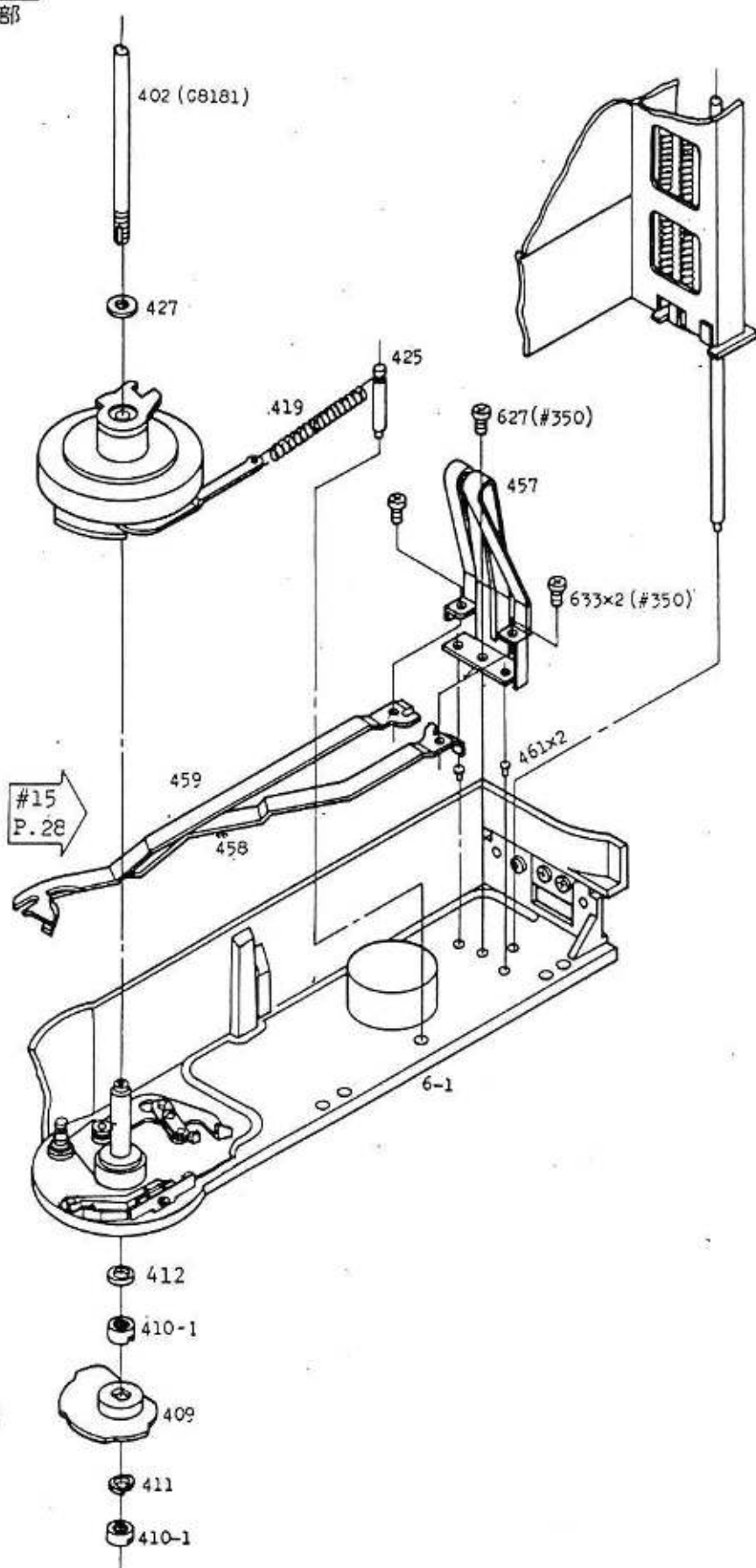


Fig. 14

Inner housing
中 箱 部

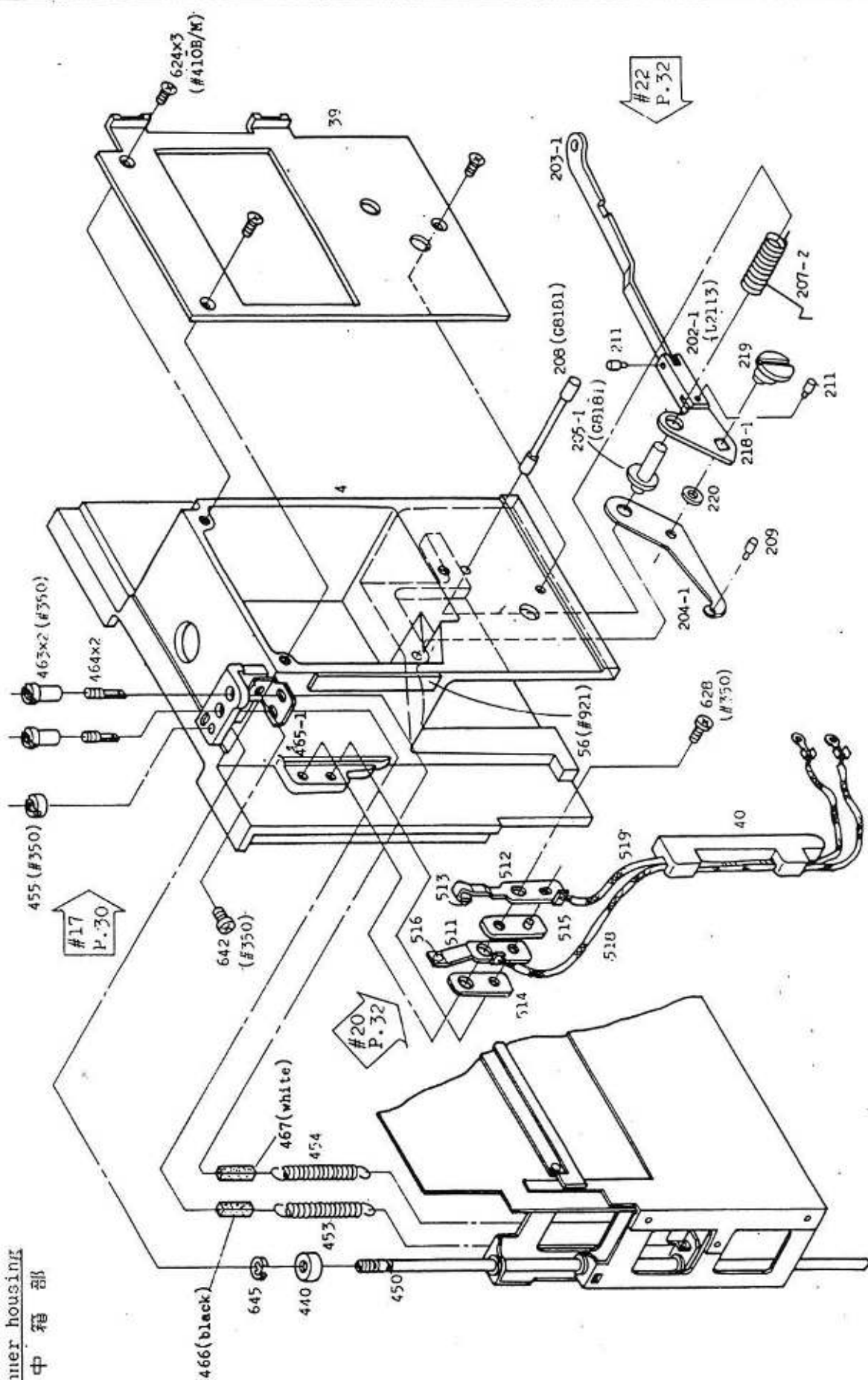


Fig. 17

Shutter curtain

シャッター幕

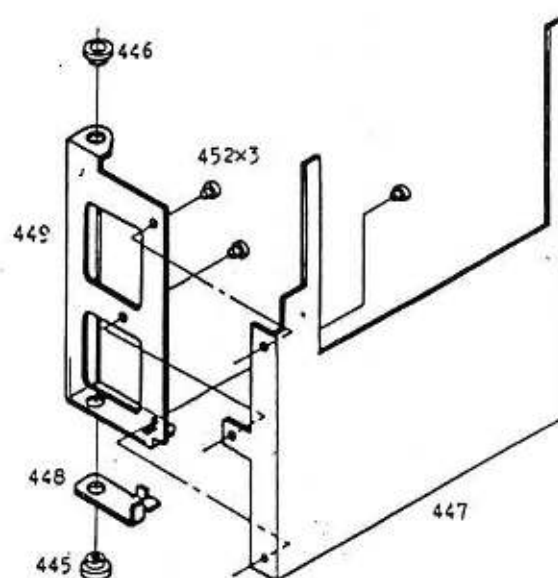
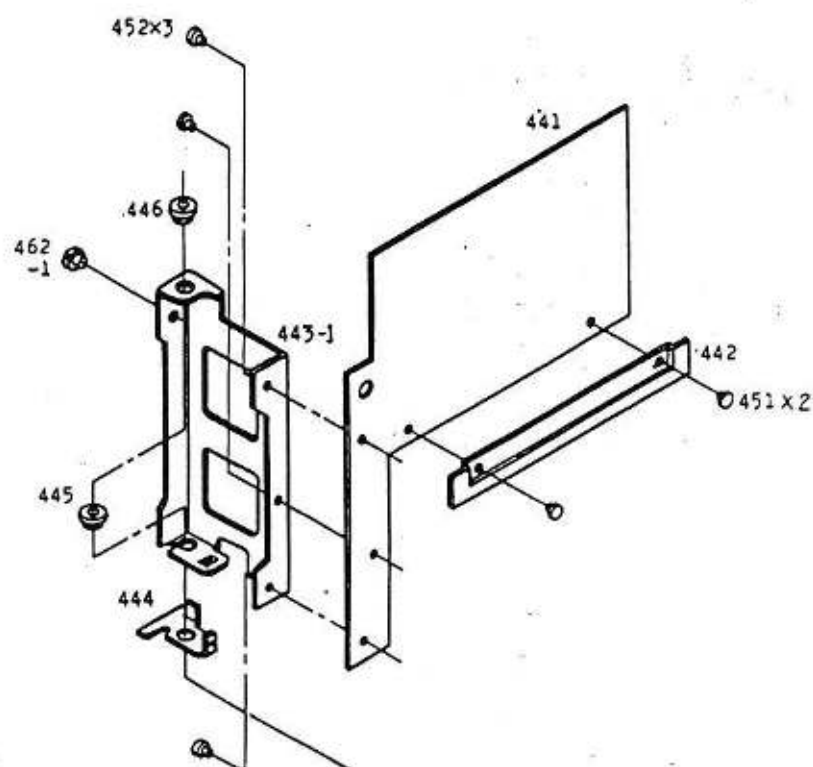


Fig. 18

Back main body

本体背面

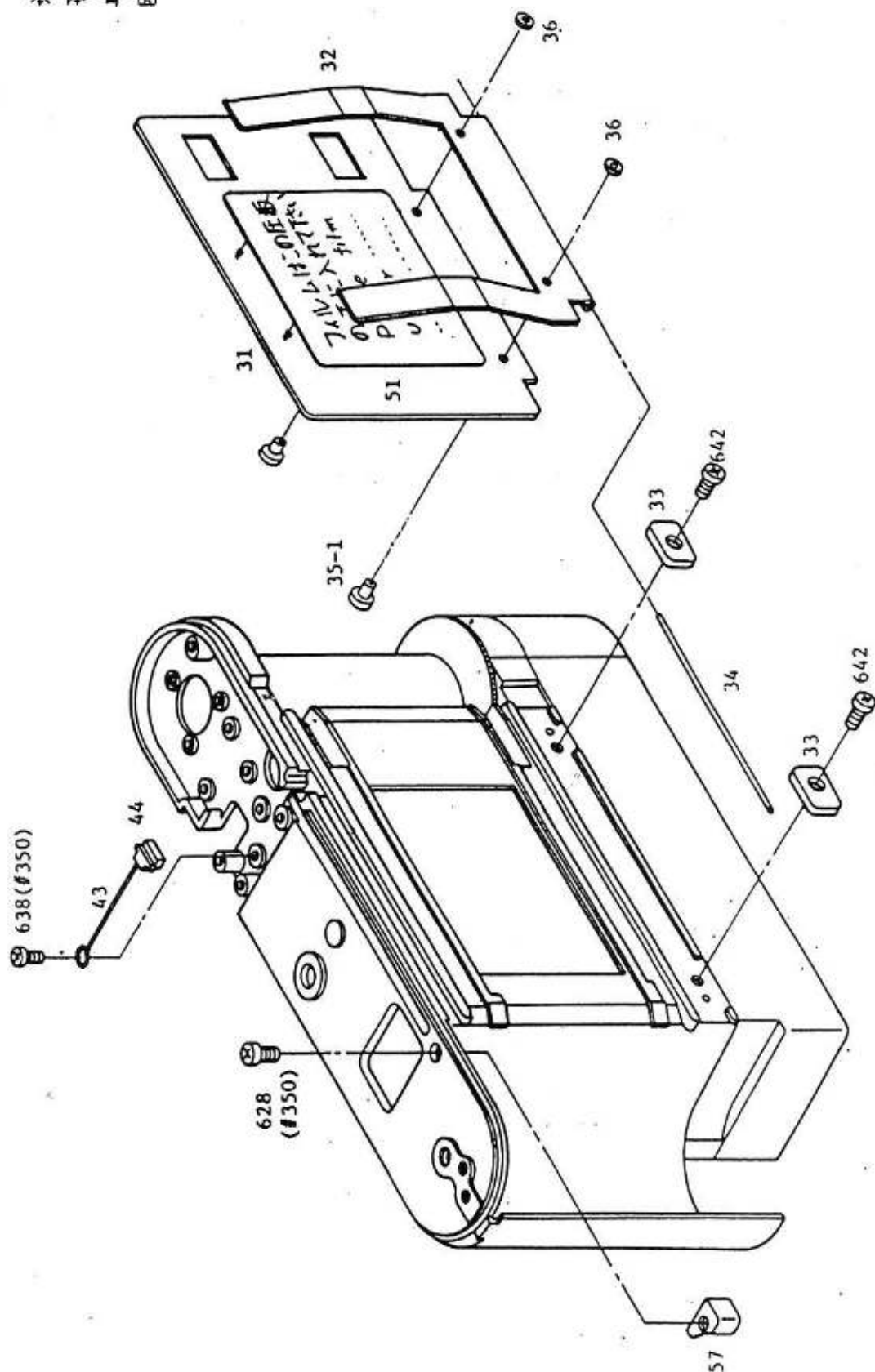


Fig. 19

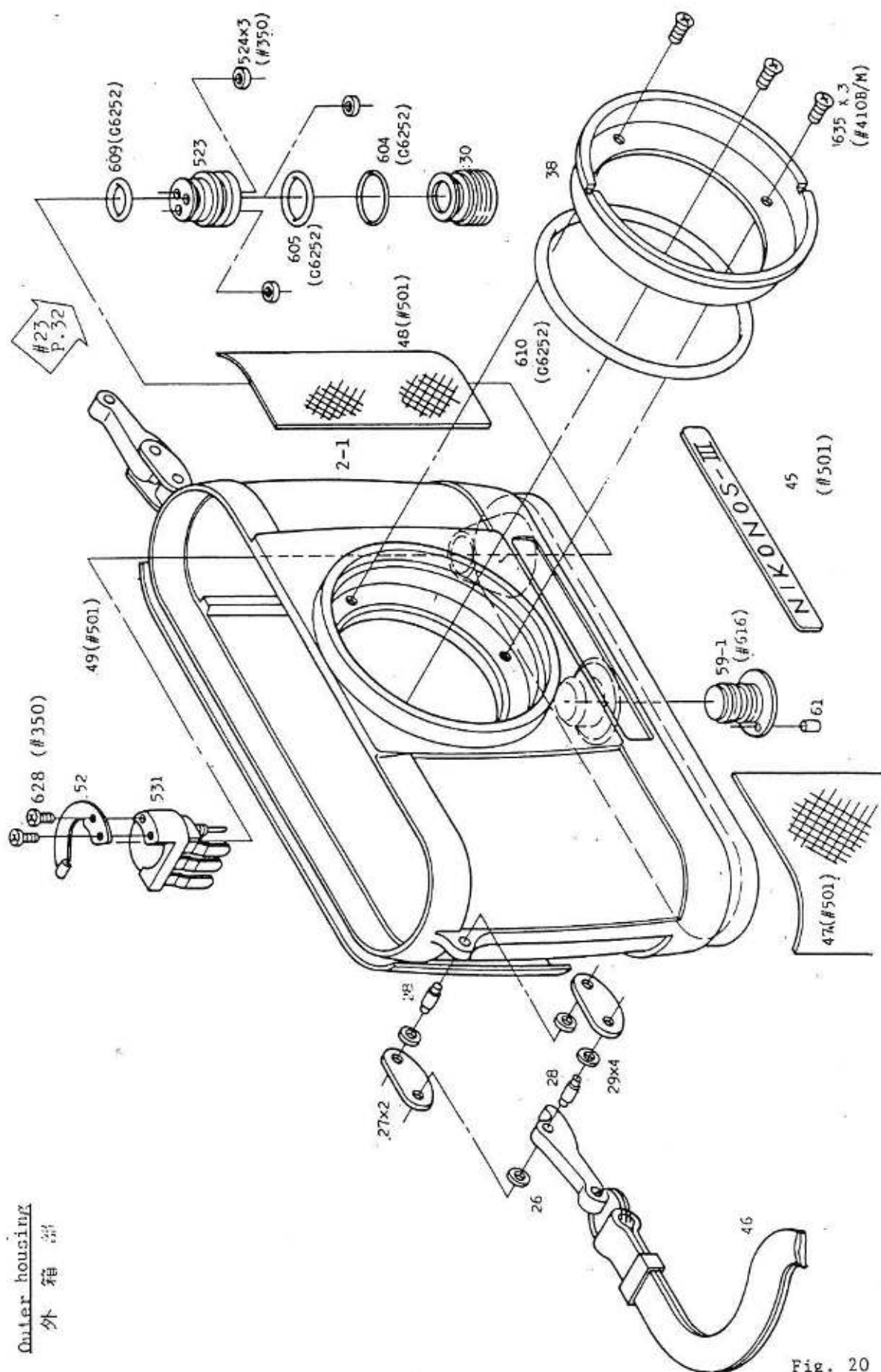


Fig. 20

5. Assembling points

Reassembly

1. Aiming error of shoe

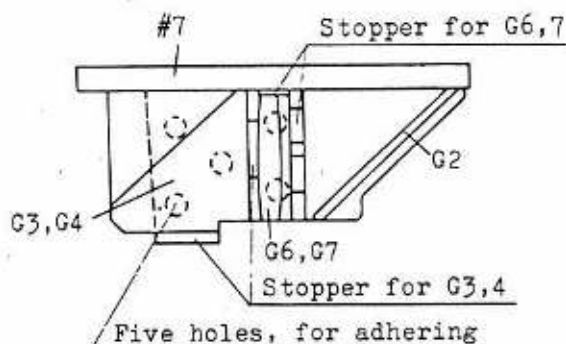
To be within $\pm 20'$, vertically and laterally.

2. Take-up lever

Should keep a clearance over 0.5mm against the top cover of camera body, after shutter released.

3. Reassembly of finder

i) G3,4 and G6,7 are to be adhered positively, pressed against stopper of #7. Fix them in position with adhering agent #616, filling up the five holes in #7 and #11 with the agent.



ii) If black paint (POLYEUR) is found peeling off, the adhesion should be made, after the paint has been laid on.

Finder frame

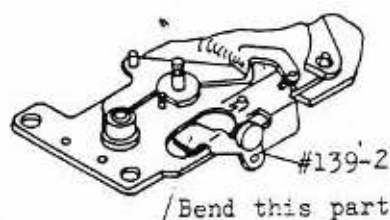
Use the finder test chart (for 0.8m distance), the finder frame should be seen within the picture frame allowance given on the chart. If not, release #625 and move #9 for adjustment.

Picture frame counter

5. AR lever

When the shutter dial is set to R, the sprocket is to be free perfectly.

For adjustment, bend #139-2 or move #301-2 right or left.

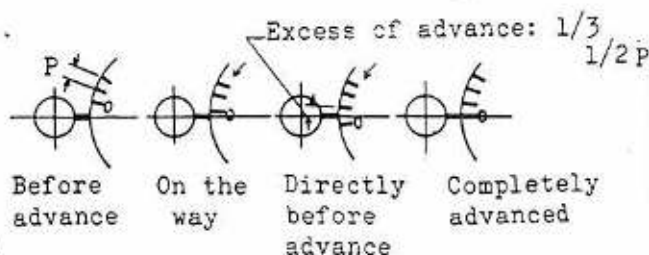


6. Zero-return lever

Under the state where #330-1 is pushed up and the counter is advanced, even when the lever is freed gently, it should return positively to 0 (zero) position.

7. Advance of counter

i) Each advance is to be $1\frac{1}{3}$ of one division, with an excess of $\frac{1}{3}$ -- $\frac{1}{2}$ (see the figure). If not, make adjustment,



5. 組立要点

組立

1. シューの標準方向誤差

上下、左右 $\pm 20'$ 以内に調整のこと

2. 巻上レバー

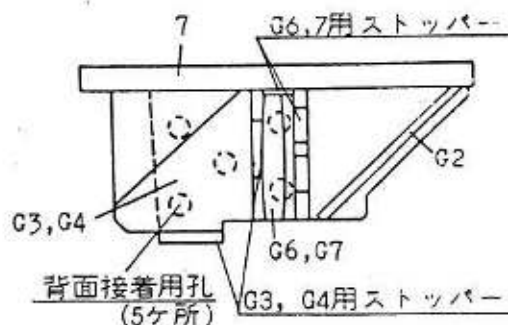
リリース後の車輪との余裕は0.5以上あること

3. ファインダー組立

1) G3, G4及びG6, G7は#7のストッパーに
確実に押当て接着のこと

#7及び#11の孔5か所より接着剤#616
を充填して固定のこと

11) 黒色塗料（ポリジュール）がはがれた場
合、必ず塗料を塗り乾燥後接着のこと



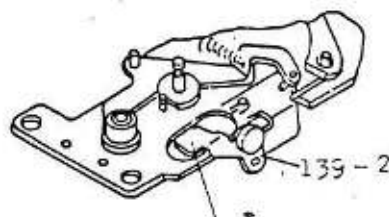
4. フレーム調整

0.8mm用ファインダー標板を使用して、ファインダーフレームがファインダー視野和
許容範囲内にあること。外れているときには#616をゆるめて#9を動かして調整する
こと。

枚数計

5. ARレバー調整

シャッターダイヤル上の目盛をRにした時
スプロケットは完全にフリーになること。
#139-2を曲げて調整、又は#391-2を
左右に動かす。



この部分曲げて調整

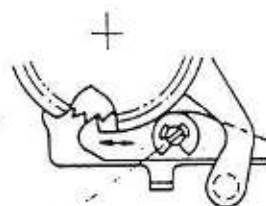
6. 0戻しレバー調整

#329を押し上げ枚数計を進めた状態で、
静かに離しても枚数計は確実に0に復帰
すること。

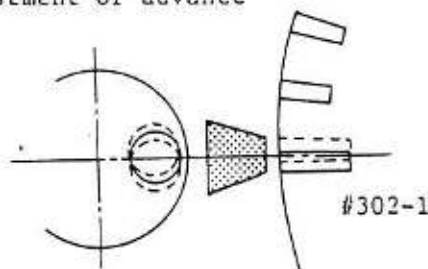
8. Disalignment of index

Scale #302 should align with the width of Index #303-1.

Affix #302-1 by aligning with #303-1.



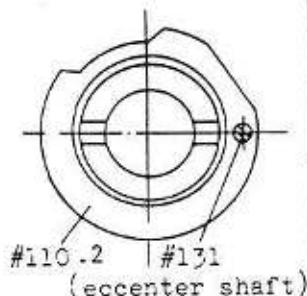
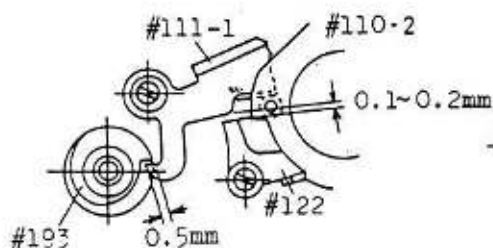
Adjustment of advance



Sprocket stopper

9. Clearance of sprocket lever

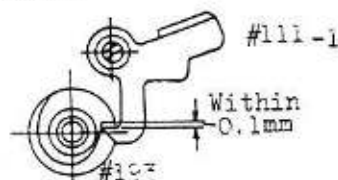
- i) Under the state where the take-up lever is wound up and the shutter charged, see if each of #110-1, #111, #122, #117 and #192-1 is in the position as specified below:



If not, use eccentric shaft #131 for adjustment.

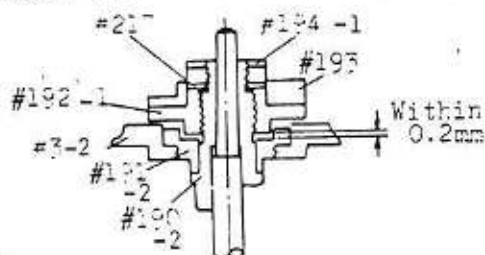
- ii) Under the state of winding-up, #111-1 to settle fully into #193.

Clearance between #193 and #111-1 within 0.1mm.



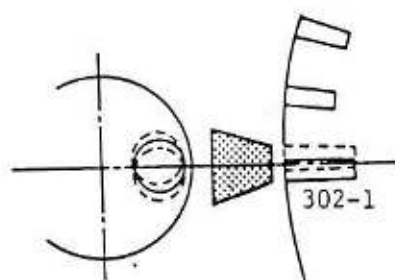
- iii) Thrusting slackness of sprocket stopper cam

The thrusting slackness is to be adjusted within 0.2mm, after screwing of #192-1 and #193 into #190-2. Thereafter, make adjustment of relative positions of the parts denoted above i) and ii).



8. 指標スレ

- #303-1指標線太さ以内に#302-1目盛
を合わせること
#302-1貼付は#303-1指標板に合わせて
貼付けること。

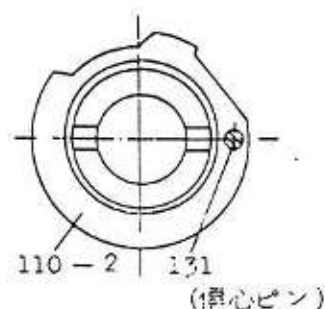
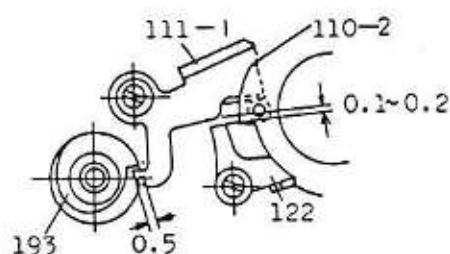


スプロケット制限

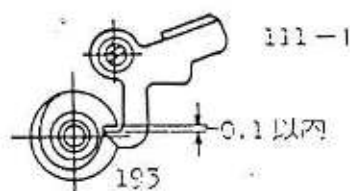
9. スプロケットレバー間隔調整

1) 巻上げレバーシャッターチャージ状態 (レバー跳上り)

#131の偏心ピンにて調整する。

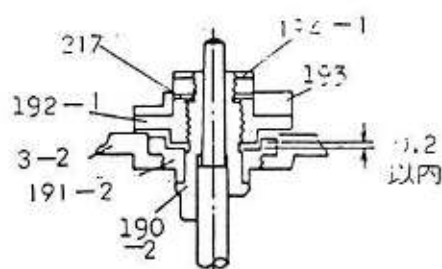


- 11) 巻上状態にて#111-1は#193に確実に
落ち込むこと。#193と#111-1とのす
き間0.1以内



111) スプロ制限カムスラストカタ

- #192-1, #193は#190-2にネジ込み後、
スラストカタ0.2以内に調整して上記
の各部品間の相互関係を調整する。
と。



Spool**10. Adjustment of friction**

i) On the way of winding up the take-up lever, friction of the spool is to be 180--230g on the outer circumference of the spool.

ii) Under the state of wind-up lever stored, the friction is to be 80 -- 230g, and its uniformity within 50g throughout.

For adjustment, increase or decrease the diameter of #142.

11. Assembling of spool spring

i) Insert #147, #154 and #141-1 into the spool subassembly. Bring the screw hole in #147 for screw #150 in coincidence with the tool hole in #149-1 and #140.

Insert from the spool groove

a screw driver or the like

into the another tool hole

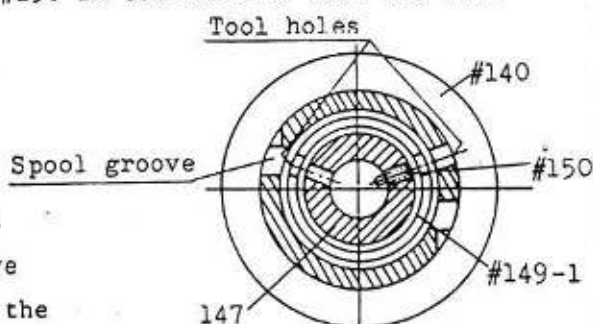
in #149 (#147). Bring the end

of spring #154 into the groove

of #147, and set #141-1 into the

spool, with the groove fitted to the projection of the inside of #140.

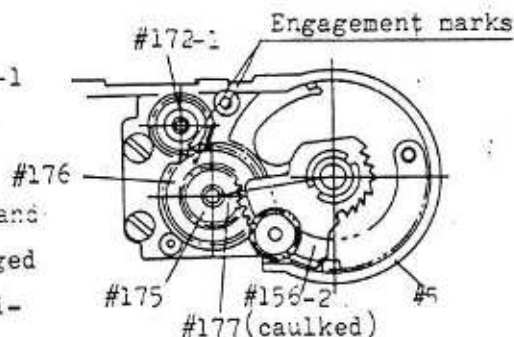
ii) Insert #155-1 subassembly from below, and put the end of spring #154 into the groove of #109. Insert a screw driver into the tool hole for #150, rotating the driver about 1.5 rotation to set #150 into the set groove of #155-1.

**Take-up gear****12. Engagement of take-up gear**

i) Bring the engagement mark on #172-1 opposite to the mark on #176, and assemble #174 to #5.

ii) Insert #156-2 subassembly to #5, and have the first tooth of #156 engaged with the tooth of #175 at the position of locating pin #177 on #175.

iii) Fix #174 as close as possible to the spool side in such a position that each gear rotates smoothly.



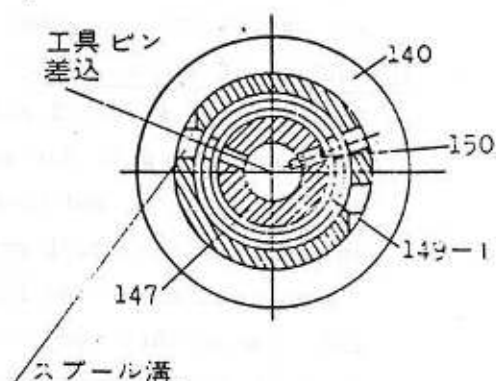
スプール

10. スプールフリクション

- ① 巻上レバー巻上途中でスプール外径にて130~230gのこと。
- ② 巻上レバー格納状態にてフリクション80~230g、ムラ50g以内のこと。
- ③ #142の径を大きく又は小さくして調整する。

11. スプールバネ巻込み

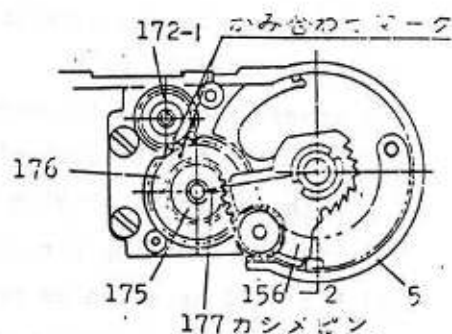
- ① #147, #154, #141-1をスプール組品に入れ、#147の#150用ネジ孔と#149-1、#140の#150用工具孔の位置を合わせる。スプール溝から#147工具孔に工具ピンを差込む。#154を#147溝に入れ、#141-1をスプールに嵌める（溝を正位に合わせる）。
- ② #155-1組品を下から差込み、#154バネ一端を#109溝に嵌め込む。工具ドライバーを約1.5回転させて#150を#155-1セット溝にセットする。



巻上ギア

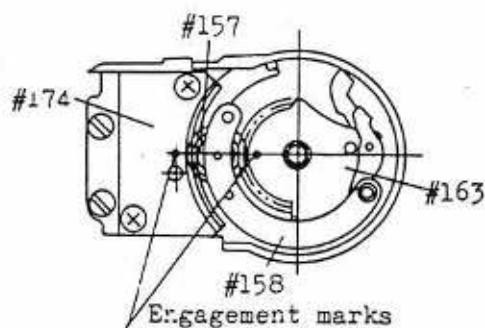
12. 巻上ギアかみ合わせ

- ① #172-1と#176のかみ合わせマークを合わせ、#174をギアに組付け。
- ② #155-2ギアをギアに通込み、一次目のマークと#175のカシメピン#177とが合うようにかみ合わせる。
- ③ #174はなるベイスプール径に寄って、各ギアが円滑に回転するに調整する。



13. Engagement of planet gear

- i) Insert #163 subassembly into #156-2 subassembly. Have the planet and sun gears engaged each other, so that the engagement marks on #174 and #163 are in line with the hole center of #157 on #158.



- ii) Spool drive lever #167

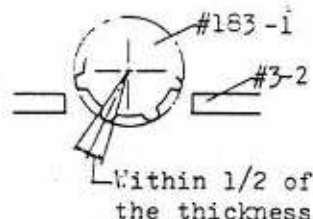
Thrusting slackness is to be within 0.2mm, and swing play within 0.3mm. Drive change-over lever #170 and #167 should follow positively.

- iii) Reverse claw #112

Swing play is to be within 0.5mm. Drive change-over lever #170, and #112 should follow positively.

14. Sprocket

- i) Pushing lightly the sprocket with the finger, see if, when the take-up lever has been wound, two of the teeth can be parallel to the rail surface, and within a permissible range of 1/2 of the tooth thickness.

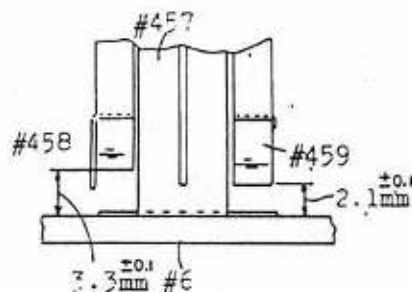


- ii) The ends of the teeth should protrude from the inside surface of the rail.

Shutter

15. Shutter curtain actuators

- i) Relative positions of actuators #458 (for first curtain), #459 (for second curtain), S-spring #457 and S-shaft hole are to be as specified in the right-hand figure.

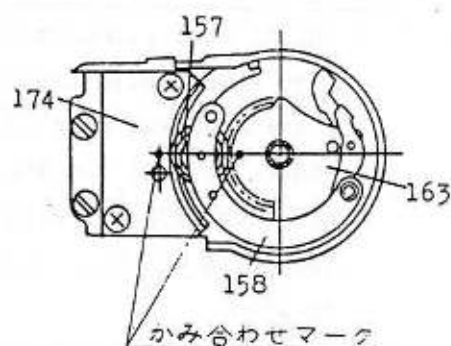


- ii) Clearance between actuators #458 with #459, and synch contact pin #423 is to be as specified in the right-hand figure. (State of the shutter charge)



13. 遊星ギヤかみ合わせ

- 1) #156-2組品に#163組品を差し込み
#174及び#163のかみ合わせマークと#158
#158の#157軸孔中心が一直線になる
ように、各ギヤをかみ合わせる



11) #167スプールまわしレバー

スラストガタ0.2以内、あおりガタ0.3以内

#170を倒して確実に追従のこと

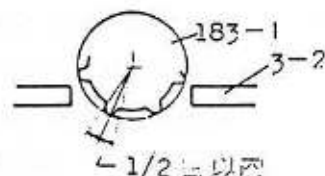
・#112逆転止めつめ

あおりガタ0.5以内、切替レバー#170を倒

して確実に#112が追従のこと

14. スプロケット

- 1) スプロケットを指で軽く押えながら巻上げ、
レバーをチャージして、二つの歯がレーン
面に対し平行が基準。基準に対し倒れ左右
 $\frac{1}{2}$ 歯以内

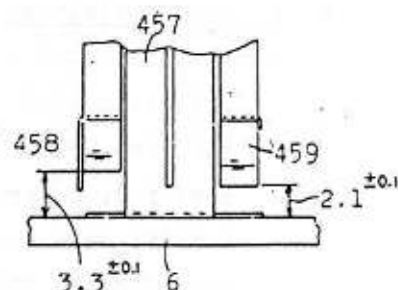


- 11) 歯先端が内レーン面より露出していること。

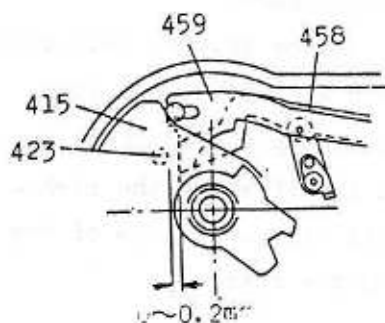
シャッター

15. 作用杆

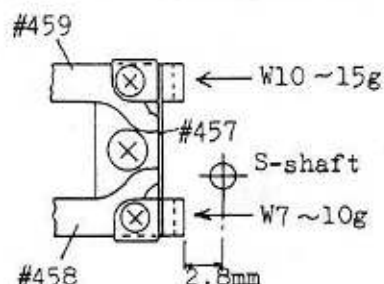
- 1) 作用杆#458 (先) = #459 (後)と
Sバネ#457、S軸孔との関係は右図
による。



- 11) 作用杆#458, #459とシ・フロ
導通ピン#423とのカタは右図によ
る。(シャッターセット状態)



- iii) No rubbing between the first and second curtain actuators is permissible.
Strength of the spring is to be as specified in righthand figure.



16. Speed adjusting cam

i) Attaching #409

Push #412 into #402. After fastening #410-1 lightly and releasing it by 1--1/2 rotation, attach #409. At this time, adjust the tightness of #410-1 so that the take-up lever operates smoothly.

ii) B-adjustment

With the shutter dial set to B, when the take-up lever is released and the second curtain starts running, the first curtain should not come in sight in the picture angle. For the position where #409 is to be attached under the state of the shutter being changed, refer to the righthand figure.



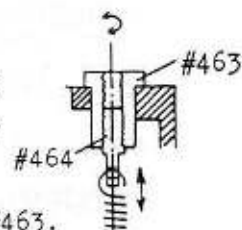
No twist of #402 is permissible.

17. Running speed of shutter curtains

- i) At 1/500 sec. both first and second curtains should run at almost the same speed within an allowance of 10.5--11.5ms.

- ii) Running speed of curtains is adjusted by rotating #463.

Clockwise rotation increase the speed.



18. Adjustment of shutter speeds 1/500--1/30

- i) For parallel adjustment of all the speeds

Rotate cccenter pin #428-1.

- ii) For balancing at the start, midway and the end of the speeds, adjust the strength of springs #453 and #454 by rotating #463, respectively.

Synch contacts

19. FP-synchronization

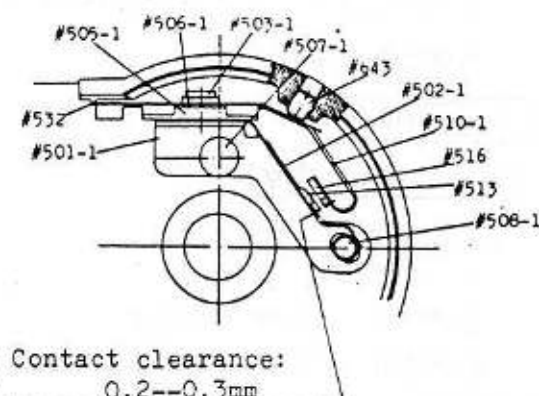
- i) Time-lag at 1/500 sec. is to be 19--24ms.

Contact efficiency:

2.5ms, over 70%

Insulation resistance:

over 50MΩ (500V megger)

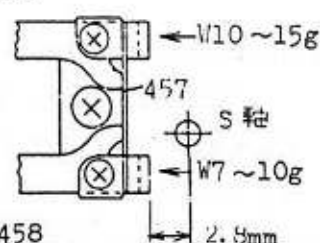


Contact clearance:
0.2--0.3mm

111) 前後作用杆はヤリのないこと

バネ力量は右図による。
(シャッターセット状態)

459



16. S 調整カム

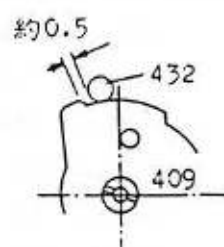
1) #409取付

#402に#412を押し込み#410-1を軽く締付けてから $1 \sim \frac{1}{2}$ 回転ゆるめて、#409取付ける。この時巻上レバーはゴリがなく円滑に作動するよう#410

11) B調整

シャッターダイヤルをBにして巻上レバーをリリース後幕がスタートする時先幕は画角に出ないこと。

#409取付の目安は、シャッターチャージ状態にて右図参照。#402のねじれ注意のこと。

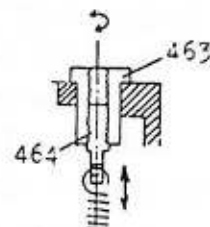


17. 幕速走行時間調整

1) $1/500$ 秒にて先幕、後幕とも10.5~11.5 ms 調整

規格内にて先後幕ともほぼ同時間に調整のこと。

11) 幕速調整は#463を回して行う。右へ回すと速くなる。

18. $1/500 \sim 1/30$ タイム調整

1) タイムの平行調整

#428-1偏心ピンを調整する

11) 元、中末バランス

#463を回して、スプリング#453, #454の強弱を調整する

シンクロ接点

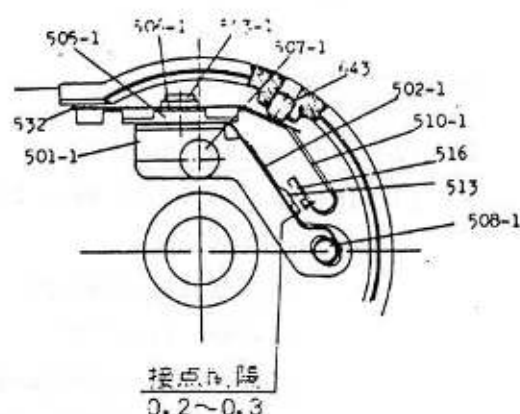
19. FPシンクロ調整

1) $1/500$ 秒にてタイムラグ

19 ~ 24 ms

接点効率 2.5 ms 70%以上

絶縁抵抗 500 V.メガ 50 M Ω 以上



- ii) For adjustment of contact efficiency and time lag, rotate the screw #643 on bottom plate #6-1.

20. X-synchronization

- i) Time-lag at $1/60$ sec. is to be 0.3--0.8ms.

Contact efficiency:

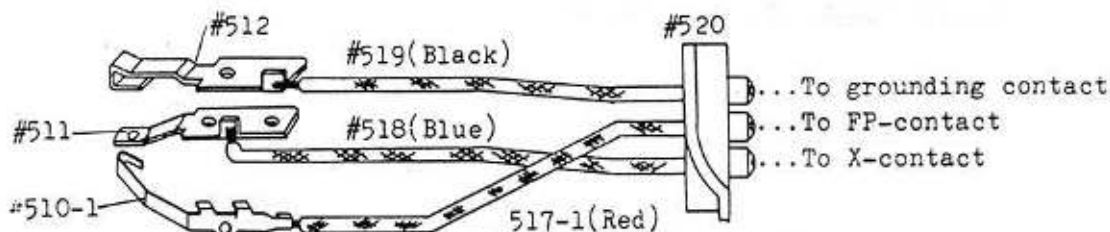
1ms, over 55%

Insulation resistance:

The same as for FP-synch.

- ii) For adjustment, bend #510 only; never apply oil or the like.

21. Wiring for synch circuit



Do not use any adhering agent for grounding contact screw #640.

22. Charge lever

- i) Assembling

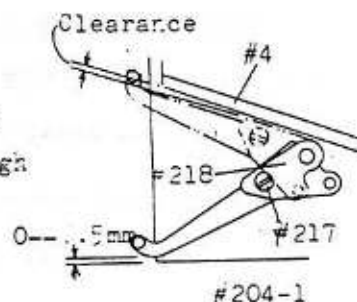
Wind up #207-2 by 1 rotation, and set in place.

- ii) Position of charge lever #204-1

Under the state of the shutter released, there should be a clearance between the ceiling of #4 and #204-1.

Under the state of the shutter charged, there should be a clearance of 0--0.5mm between the floor of #4 and #204-1.

- iii) For adjustment, pushing the lever #204-1 up to obtained no clearance, rotate #218 through the tool hole provided on #39.



23. Synch socket

If water finds its way into the interior of the synch socket owing to careless use, reassembly is to be made after disassembling, washing and drying, because otherwise poor insulation, corrosion, etc. will result in the contacts.

11) 調整

＃6-1の＃643を回転させて、接点位置、タイムラグを調整する

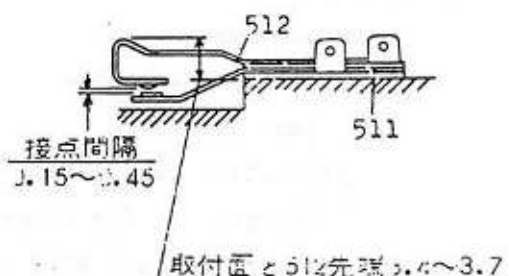
20. X シンクロ調整

1) 1/60秒にてタイムラグ

0.3 ~ 0.8ms

接点効率: 1ms 55%以上

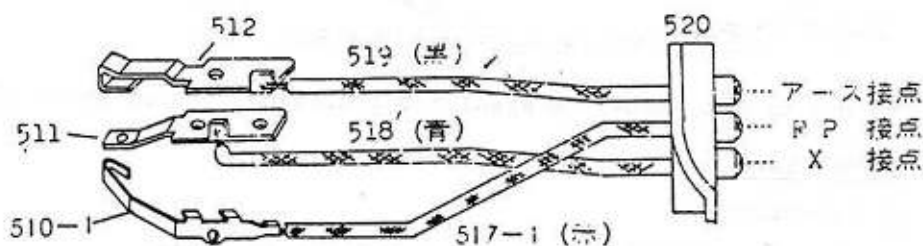
絶縁抵抗: FPに同じ



11) 調整

＃511曲げて調整、油等は用いぬこと

21. シンクロ回路配線



アース接点と＃640は接着剤使用不可

22. チャージレバー

1) チャージレバーはねきこみ

＃207-2を1回転巻込みでットする。

11) チャージレバー位置

(イ) リリース状態で＃4の天付と＃204-1が余隙のあること。

(ロ) シャッターチャージ状態にて＃4の底面と

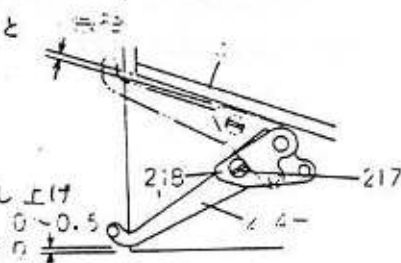
＃204-1との余隙0 ~ 0.5にあること。

111) 調整

11) の (ロ) の位置は＃204-1を上方に押し上げ

ガタのない状態にして、＃4の工具穴より

＃218を回転して調整する。



23. シンクロソケット

使用上の不注意によりシンクロソケット内部に泥が入った場合は点内にて絶縁不良、腐蝕などが起るので、分解して洗じよう乾燥後、組立てる。

PARTS LIST

部 品 表

1. 部品表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
1 - 1	軍 艦 Top cover	1	A5-1	4	△	- 1 x 2900/4000 51F1028
2 - 1	外 箱 Outer housing	1	B	20	△	
3 - 1	本 体 Main body	1	F-2		×	53F1021 (N-780059) Dis.
3 - 2	本 体 Main body	1	F-3	10	×	53F1021 (N-780059) Dis.
4	中 箱 Inner housing	1	F-2 E26	17	△	
5	軸受台 Take-up shaft base	1	E3	10	△	
6 - 1	底 板 Bottom plate	1	C-1	14,16	△	52F1011 -7 x 3001/5000
7	ファインダー支持枠 Finder housing	1	A1-1	6	△	
8	前遮光板 Finder front frame	1	A	3	○△	
9	フレーム Finder picture angle frame mask	1	A2	6	△	
11	プリズム押え Prism retainer	1	A1-1	6	△	
12-1	接眼座金 Eyepiece lens washer	1	A	3	○△	-1 x 2900/4000
13	後遮光板 Finder rear frame	1	A1-1	6	△	
21	内側バヨネット Bayonet mount ring	1		8	○	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
22	シュー座 Shoe	1		3	○	
23-1	こま数計窓 Frame-counter window	1	A5-1	3	○△	53F1005 (N-780013)
24	こま数計窓ガラス Window glass	1	A5-1	3	○△	
25	こま数計窓座金 Window washer	1	A5		○△	53F1005 (N-780013) Dis.
26	てこ Inner housing raiser	2	B	20	○△	9F2B#845
27	てこ支え板 Raiser support	4	B	20	○△	9F2B#846
28	つり皮ピン Neck strap pin	4	B	20	○△	9F3B#848
29	てこ座金 Washer	8	B	20	○△	9F2B#848
30	シンクロ接点蓋 Synch terminal cover	1	B	20	○△	
31	圧 板 Pressure plate	1	E17	19	△	-1
32	圧板ばね Pressure plate spring	1	E17	19	△	
33	铰番軸受 Hinge bearing	2		19	○	
34	铰番軸 Hinge shaft	1		19	○	
35-1	圧板かしの鉄 Pressure plate rivet	2	E17	19	△	52F1028 -8

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
36	圧板ばね座金 Washer	1	E17	19	△	9F2B/852
37	防じん蓋 Dust-tight pad	1		16	○	
38	外箱マウント Outer housing lens mount	1	B	20	○△	
39	画角補助板 Aperture aux. plate	1	E-2 E26	17	○△	
40	チャージレバー受 Charge lever stopper	1	E-2 E26	17	○△	
41	位置決めピン Dowel pin	6	F-2 F-3 E26	2,8	○△	
42	巻戻し軸 Oリング押え Rewind shaft O-ring retainer	1	A5-1	3	○△	
43	圧板押えばね Pressure plate retaining spring	1	E10	19	△	
44	圧板押え Pressure plate retainer	1	E10	19	△	
45	ネームプレート Name plate	1	B	20	○△	
46	つり皮 Neck strap	1		20	☐	
46A	さる環 Binding rings	1			○	
46B	英 錠 Buckle	1			○	
46C	つづみ鉤 Link	2			○	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
46D	ベルト Belt	1			×	
46E	丸 環 Ring	2			○	
47	前左レザー Front leatherette, left	1	B	20	○△	
48	前右レザー Front leatherette, right	1	B	20	○△	
49	裏側レザー Rear leatherette	1	B	20	○△	
51	取扱い注意板 Caution plate	1			○	9F2B#858
52	バトロローネ板ばね Film cassette spring	1	B2	20	○△	
53	フレーム座金 Washer	2	A1-1	6	○△	
54-1	遮光テレンプ Light-tight strip	1	F-2 F-3	13	○△	-3 x 3000/4000
55	遮光モルトブレン Light-tight sponge	1	A5-1	2	○△	
56	先幕制限板 First curtain stopper	1	F-2 E26	17	○△	
57	バトロローネ制限 Film-cassette stopper	1	F-2 F-3	19	○△	
58	フレーム板遮光 Picture frame light-baffle	1	A2	6	△	
59-1	三脚取付ねじ Tripod socket	1	B	20	△	-7 x 1001/5000

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
61	ノックピン Straight pin	1	B	20	△	
62	フレーム遮光 Light-tight sponge	2	A	3	○△	
63	こま数計遮光 Frame-counter light-tight	1	D-1	7	○△	
64	漏光防止板 Synchro plate	1				-10 Dis.
65	シャッター遮光テレンプ Shutter light-tight strip	1	F-2 F-3	13	○△	-2 x 601/4000 51F1011
66	底板コマ Bottom cover	1			○	51F1005, -7 Dis.
67A	バック調整用座金 Back adjusting washer (t=0.03)	4		8	○△	-2 x 3001/4000
67B	バック調整用座金 Back adjusting washer (t=0.05)	4		8	○△	-2 x 3001/4000
101	巻上げレバー Take-up lever	1	E16-2		△	53F1020 (N-780058) Dis.
101-1	巻上げレバー Take-up lever	1	E16-3	5	△	53F1020 (N-780058)
102	巻上げレバー指当て Take-up lever knob	1	E16-2		○△	53F1020 (N-780058) Dis.
103-2	巻上げA軸 Take-up shaft A	1	E16-2		△	52F1008 53F1020 (N-780058) Dis.
103-3	巻上げA軸 Take-up shaft A	1	E16-3	5	△	53F1020 (N-780058)
104	巻上げかしめピン Take-up lever rivet	2	E16-2		△	53F1020 (N-780058) Dis.
67C	バック調整用座金 (t=0.07) Back adjusting washer	4		8	○△	-2 x 3001/4000

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
105	巻上げレバー座金 Washer	1		5	○	
106	AR 切換えカム AR change-over cam	1		4	○	9F2B#821
107	AR カムボール AR cam ball 1/8"	2		4,5	○	
108	シャッターダイヤル受け Shutter speed dial bearing	1		4	○	
109	カム軸受 Cam bearing	1	F-2 F-3	8	○△	
110-2	巻上げ制限ラチェット Take-up stopper ratchet	1	E9-2	8	△	-7 x 1001/5000 52F1008
111-1	巻上げ制限レバー Take-up stopper lever	1	E7	8	△	
112	逆転止め爪 Reverse claw	1	E15-1	11	△	
113	逆転止め爪ピン Reverse claw pin	1	E15-1	11	△	
114	逆転止めばね Reverse claw spring	1	E15-1	11	○△	
115C	逆転止め座金 Reverse claw washer	2	D,F-2		○△	-7 x 1001/5000 53F1021 (N-780059) Dis.
116	ばね掛け軸 Spring holder	1	F-2 F-3	8	○△	
117	スプロケット制限レバー Sprocket stopper lever	1	F-2 F-3	8	○△	
118	スプロケット制限レバー軸 Stopper lever axle	2	F-2 F-3	8	○△	

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
119	AR レバーピン AR lever pin	1	D-1	7	△	
120	巻上げ制限レバー軸 Take-up stopper lever axle	2	E7, E8	8	△	
121	制限レバーばね Stopper lever spring	1	F-2 F-3	8	○△	
122	解除レバー Release lever	1	E8	8	△	
123	スプロケット制限レバーばね Sprocket stopper lever spring (d=0.18)	1	F-2 F-3	8	○△	
124	シャッターダイヤル制限ピン Shutter dial stopper pin	1	E16-2		△	53F1020 (N-780058) Dis.
131	巻上げ制限ラチエットピン Take-up stopper ratchet pin	1	E9-2	8	△	
132-1	AR レバー AR lever	1	D-1	7	○△	52F1010 -7
134-1	AR レバー軸 AR lever shaft	1	D-1	7	△	-7 52F1010
135-1	AR レバーばね AR lever spring	1	D-1	7	○△	52F1010 -7
136	AR 中間レバー AR middle lever	1	D-1	7	△	
137-1	AR 中間レバーピン AR middle lever pin	1	D-1	7	△	-7 52F1010
138-1	AR 作動レバー軸 AR actuating lever axle	1	D		△	52F1003 -6 x 1/4000
138-2	AR 作動レバー軸 AR actuating lever axle	1	D-1	7	△	53F1021 (N-780059)

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 備 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
139-1	AR 作動レバー AR attaching lever	1	D.		△	52F1003 -6 x 1/4000
139-2	AR 作動レバー AR attaching lever	1	D-1	7	△	53F1021 (N-780059)
140-1	スプール Spool	1	E2	9	△	
141	スプール軸受 Spool upper bearing	1	F-2		○△	
141-1	スプール軸受 Spool upper bearing	1	F-3	9	○△	53F1006 (N-780015)
142	スプールばね Spool spring band	1	E2	9	○△	
143	スプール下側受け Spool lower bearing	1	E2	9	△	
144-1	スプールラチェット Spool ratchet	1	E2	9	○△	53F-1006 N-780015
145	かんむり座金 Washer	1	F-2 F-3	8	○△	-5 x 3501/4000 52F1007
146	フリクションばね受け Friction spring ring	2	E2	9	○△	
147	巻上げばね受け Take-up spring holder	1	F-2 F-3	9	○△	
148	引きスプリング Spring	1	E2	9	○△	53F1006 (N-780015)
149-1	巻上げばねカバー Take-up spring sleeve	1	E2	9	○△	
150	巻上げばね受けねじ Take-up spring retaining screw	1	F-2 F-3	9	○△	

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
153	フリクションばね Friction spring d=0.8	1	E2	9	○△	
154	巻上げばね Take-up spring d=1	1	F-2 F-3	9	○△	
155-1	巻上げB軸 Take-up shaft B	1	E6-2	9,12	△	-3 x 1001/4000
156-2	巻上げ歯車 Take-up gear	1	E6-2	12	△	-7 x 1001/5000 52F1008
157	遊星歯車 Planet gear	1	E6-2	12	△	
158	巻上げ運動レバー Take-up coupling lever	1	E6-2	12	△	9F2B#784
159	支え軸 Coupling lever pillar	2	E6-2	12	△	
160	巻上げ歯車軸受 Take-up gear bearing	1	E6-2	12	△	
161	巻上げ運動ピン Take-up coupling pin	1	E6-2	12	△	9F2B#785
162	摩擦止め合金 Spring washer	1	F-2 F-3	9	○△	9F2B#788
163	太陽歯車 Sun gear	1	E15-1	11	△	
164	太陽歯車軸 Sun gear shaft	1	E15-1	11	△	
165	まわしレバーストッパー Spool driver lever stopper	1	E15-1	11	△	
166-1	切換えレバー軸 Change-over lever shaft	1	E15-1	11	△	-7 x 1001/5000 52F1008

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
167	スプールまわしレバー Spool driver	1	E15-1	11	△	9F2B#801
168	まわしレバーピン Spool driver pin	1	E15-1	11	△	9F2B#802
169	切換えレバー軸 Change-over lever shaft	1	E15-1	11	○△	9F2B#805
170	切換えレバー Change-over lever	1	E15-1	11	○△	-1 x 1/4000
171	切換えばね Change-over spring	1	E15-1	11	○△	
172-1	まわしレバー制限ピン Spool driver stopper pin	1	E3	10	△	51F1029 -3 x 1001/4000
173-1	巻上げ軸受 Take-up shaft bearing	1	E3	10	△	51F1029 -3 x 1001/4000
174	固定歯車 Fixed internal gear	1	E5	10	△	
175	中間歯車 A Idle gear A	1	E4	10	△	
176	中間歯車 B Idle gear B	1	E4	10	△	
177	位置決めピン Locating pin	1	E4	10	△	
178	中間歯車軸受 Idle gear bearing	1	E3	10	△	
179-1	スプロケット歯車 Sprocket gear	1	F-2		○△	53F1021 (N-780059) Dis.
179-2	スプロケット歯車 Sprocket gear	1	F-3	10	○△	53F1021 (N-780059)

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
180-1	スプロケット歯車ばね Sprocket gear spring	1	F-2 F-3	10	○△	-3 51F1008
182	スプロケットクラッチ Sprocket clutch	1	F-2		○△	53F1021 (N-780059) Dis.
183	スプロケット Sprocket	1	F-2		○△	53F1021 (N-780059) Dis.
183-1	スプロケット Sprocket	1	F-3	13	○△	53F1021 (N-780059)
184	スプロケット受 Sprocket mount base	1	F-2		○△	53F1021 (N-780059) Dis.
184-1	スプロケット受 Sprocket mount base	1	F-3	13	○△	53F1021 (N-780059)
187-2	スプロケット軸 A Sprocket shaft A	1		13	○	53F1021 (N-780059)
188	スプロケット軸 B Sprocket shaft B	1	F-3	13	○	53F1021 (N-780059)
189	AR 切換え軸 AR change-over axle	1	E1		△	
190-1	制限調整軸 Stopper adjusting shaft	1	F-2		○△	-2 x 3001/4000 53F1021 (N-780059) Dis.
190-2	制限調整軸 Stopper adjusting shaft	1	F-3	8	○△	53F1021 (N-780059)
191	スプロケット軸受 Sprocket bearing	1	F-2	8	○△	53F1021 (N-780059)
191-1	スプロケット軸受 Sprocket bearing	1	F-3	8	○△	53F1021 (N-780059)
192-1	スプロケット制限カム Sprocket stopper cam	1	F-2 F-3	8	○△	-2 x 3001/4000

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
193	こま数計送りカム Frame-counter advance cam	1	F-2 F-3	.8	○△	
194-1	制限調整ナット Stopper adjusting nut	1	F-2 F-3	8	○△	-2 x 3001/4000
195	スプロケットねじ Sprocket screw	1	F-2 F-3	13	○△	
196	巻戻し確認歯車 Rewind check gear	1	F-2		○△	53F1021 (N-780059) Dis.
197	スプリングピン Spring pin	1	E1		△	53F1021 (N-780059) Dis.
198	巻戻し確認歯車軸受 Rewind check gear bearing	1	F-2		○△	53F1021 (N-780059) Dis.
199	巻戻し確認指標 Rewind check index	1	F-2		○△	53F1021 (N-780059) Dis.
200	スプロケットリング Sprocket ring	1	F-2		○△	53F1021 (N-780059) Dis.
201-1	スプロケット歯車軸 Sprocket gear shaft	1	E5	10	△	51F1008 -3
202-1	自在継手 Universal joint	1	E18-1	17	△	-7 x 1001/5000 52F1009
203-1	連結レバー Coupling lever	1	E18-1	12,17	△	-7 x 1001/5000 52F1009
204-1	チャージレバー Charge lever	1	E18-1	17	△	-7 x 1001/5000 52F1009
205-1	チャージレバー受け Charge lever holder	1	E18-1	17	△	-7 x 1001/5000 52F1009
206-1	チャージレバーばね受 Charge lever spring holder	1	F-2		○△	-7 x 1001/5000 52F1009 -13 Dis.

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
207-1	チャージレバーばね Charge lever spring d=0.55	1	F-2 E26	17	○△	9F2B#605 52F1009 -7 x 1001/5000
208	チャージレバー軸 Charge lever shaft	1	F-2 E26	17	○△	
209	チャージレバーピン Charge lever pin	1	E18-1	17	△	
210	切替レバー軸座金 Change-over lever shaft washer t=0.2	1	E15-1	11	○△	-7 x 1001/5000 52F1008
211	自在継手ピン Universal joint pin	2	E18-1	17	△	
212	ばね受け固定ねじ Spring holder screw	1	F-2			-13 Dis.
213	リリース安全レバー Release safety lever	1	E16-2 E16-3	5	○△	
214	リリース安全レバー軸 Release safety lever axle	1	E16-2 E16-3	5	○△	
215	経 球 Click ball (Steel ball 1/16")	1	E16-2 E16-3	5	○△	
216	クリックばね Click spring d=0.2	1	E16-2 E16-3	5	○△	
217	回転止め座金 Washer	1	F-2 F-3	8	○△	-2 x 3001/4000
218	チャージレバー A Charge lever A	1	E18-1	17	△	-7 x 1001/5000 52F1009
219	チャージ偏心ピン Charge eccentric pin	1	E18-1	17	△	-7 x 1001/5000 52F1009
220	チャージワッシャー Charge washer	1	E18-1	17	△	-7 x 1001/5000, 52F1009

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
221	AR レバーピンワッシャー Washer	1	D-1	7	○△	53F1021 (N-780059)
301-1	こま数計地板 Frame counter base plate	1	D		△	53F1021 (N-780059) Dis.
301-2	こま数計地板 Frame counter base plate	1	D-1	7	△	53F1021 (N-780059)
302	こま数計目盛板 Frame-counter dial	1	D		○△	53F1021 (N-780059) Dis.
302-1	こま数計目盛板 Frame-counter dial	1	D-1	7	○△	53F1021 (N-780059)
303	こま数計指標板 Frame-counter index plate	1	D		○△	53F1021 (N-780059) Dis.
303-1	こま数計指標板 Frame-counter index plate	1	D-1	7	○△	53F1021 (N-780059)
304-1	ラチェット Ratchet	1	D		△	53F1021 (N-780059) Dis.
304-2	ラチェット Ratchet	1	D-1	7	△	53F1021 (N-780059)
305-1	ラチェット軸 Ratchet shaft	1	D		△	53F1021 (N-780059) Dis.
305-2	ラチェット軸 Ratchet shaft	1	D-1	7	△	53F1021 (N-780059)
307-1	ゼロ戻しばね Counter reverse spring	1	D		○△	53F1021 (N-780059) Dis.
307-2	ゼロ戻しばね Counter reverse spring	1	D-1	7	○△	53F1021 (N-780059)
308-1	回転制限ピン Rotation stopper pin	2	D		△	53F1021 (N-780059) Dis.

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
308-2	回転制限ピン Rotation stopper pin	2	D-1	7	△	53F1021 (N-780059)
309	運動板ばね Coupling plate spring	1	D		○△	53F1021 (N-780059) Dis.
310	運動板 Coupling plate	1	D		△	53F1021 (N-780059) Dis.
311	運動板ローラー軸 Coupling plate roller axle	1	D		△	53F1021 (N-780059) Dis.
312	ローラー Roller	1	D		△	53F1021 (N-780059) Dis.
313	送り爪軸 Advance pawl shaft	1	D		△	53F1021 (N-780059) Dis.
314	送り爪 Advance pawl	1	D		△	53F1021 (N-780059) Dis.
315	送り爪ばね Advance pawl spring	1	D		○△	53F1021 (N-780059) Dis.
316	爪軸受 Pawl shaft bearing	1	D		△	53F1021 (N-780059) Dis.
317	止め爪 Detent pawl	1	D		△	53F1021 (N-780059) Dis.
318-1	止め爪ばね Detent pawl spring	1	D		○△	53F1021 (N-780059) Dis.
319-1	止め爪軸 Detent pawl shaft	1	D		△	53F1021 (N-780059) Dis.
320	運動板軸 Coupling plate axle	2	D		△	53F1021 (N-780059) Dis.
320-1	運動板軸 Coupling axle	2	D-1	7	△	53F1021 (N-780059)

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 of Sale	備 考 Remarks
321	運動板軸座金 Coupling plate axle washer	1	D		○△	53F1021 (N-780059) Dis.
322	ゼロ戻しレバー軸 Counter reverse lever axle	1	D		△	53F1021 (N-780059) Dis.
323	運動板軸受座 B Coupling plate axle washer B	1	D		○△	53F1021 (N-780059) Dis.
324	ゼロ戻しレバー Counter reverse lever	1	D		△	53F1021 (N-780059) Dis.
325	ゼロ戻しレバーピン A Counter reverse lever pin A	1	D		△	53F1021 (N-780059) Dis.
326	ゼロ戻しレバーピン B Counter reverse lever pin B	1	D		△	53F1021 (N-780059) Dis.
327-1	ゼロ戻しレバーばね Counter reverse lever spring d=0.2	1	D		○△	53F1021 (N-780059) Dis.
328	ゼロ戻しレバー軸受 Counter reverse lever bearing	1	D		△	53F1021 (N-780059) Dis.
329	ゼロ戻し運動レバー Counter reverse coupling lever	1	D		△	53F1021 (N-780059) Dis.
329-1	ゼロ戻し運動レバー Counter reverse coupling lever	1	D-1	7	△	53F1021 (N-780059)
330-1	ゼロ戻し補助レバー Counter reverse aux. lever	1	D		△	53F1021 (N-780059) Dis.
331-1	ゼロ戻し運動レバー軸 Counter reverse lever axle	1			△	53F1021 (N-780059) Dis.
331-2	ゼロ戻し運動レバー軸 Counter reverse lever axle	1	D-1	7	△	53F1021 (N-780059)
332-2	ゼロ戻し運動レバー軸カラー Counter reverse lever collar	1			△	53F1021 (N-780059) Dis.

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区 分 Term of Sale	備 考 Remarks
332-3	ゼロ戻し連動レバー軸カラー Counter reverse lever collar	1	D-1	7	△	53F1021 (N-780059)
333-2	補助レバーばね Aux. lever spring	1			△	53F1021 (N-780059) Dis.
334	止め爪軸 Pawl axle	1			△	53F1021 (N-780059) Dis.
351-1	巻戻しノブ Rewind knob	1	A3-1	3	○△	
352	巻戻しクランク Rewind crank	1	A4	3	△	
353	クランク軸 Crank pin	1	A3-1	3	○△	
354	クランクつまみ軸 Crank knob shaft	1	A4	3	△	
355-1	クランクつまみ Crank knob	1	A4	3	△	
357	クランクばね Crank spring	1	A3-1	3	○△	
358	巻戻し軸座金 Rewind shaft washer	1	F-2		○△	51F1039 -5 x 2001/4000 Dis.
359-2	巻戻し軸 Rewind shaft	1	E13-1	3	△	53F1008 (N-780027)
360	クラッチ筒 Coupling clutch	1	E12		△	53F1008 (N-780027) Dis.
361-1	クラッチピン Clutch pin	1	E13-1	3	○△	53F1008 (N-780027)
362	アイドル軸座金 Idle gear shaft washer	1	F-1 E26	2	○△	
360-1	クラッチ筒 Coupling clutch	1	E12-1	2	△	53F1008 (N-780027)

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
363	巻戻し歯車 Rewind gear	1	E12 E12-1	2	△	
364	巻戻し歯車軸 Rewind gear shaft	1	F-2		○△	53F1008 (N-780027) Dis.
364-1	巻戻し歯車軸 Rewind gear shaft	1	F-3	2	○△	53F1008 (N-780027)
365	巻戻し C歯車 Rewind C-gear	1	F-2 F-3	2	○△	
366-1	C歯車軸 C-gear axle	1	F-2 F-3	2	○△	-1 x 3001/4000
367	O- リング皿金 O-ring washer	1	A5-1	2	○△	
371	巻戻し D歯車 Rewind D-gear	1	F-2 F-3	2	○△	
372	D歯車軸受 D-gear bearing	1	F-2 F-3	2	○△	
373	巻戻しフォーク Rewind fork	1	F-2 F-3	2	○△	
374	巻戻し調整ワッシャー Washer	1	F-3	2	○△	-8
375	駆動ばね Spring retainer	1	D-1	7	△	53F1021 (N-780059)
376	歯車駆動ばね Spring	1	D-1	7	○△	53F1021 (N-780059)
377	歯車軸 Gear shaft	1	D-1	7	○△	53F1021 (N-780059)
378	歯車軸支持板 Gear shaft retainer	1	D-1	7	△	53F1021 (N-780059)

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
379	歯車軸支持板ボス Gear shaft retainer boss	1	D-1	7	△	53F1021 (N-780059)
380	歯車軸支持板軸 Retainer shaft	1	D-1		△	53F1021 (N-780059)
381	ゼネバ押付ばね Geneva hold spring	1	D-1	7	○△	53F1021 (N-780059)
382	遮光環 Light-tight washer	1	D-1	7	○△	53F1021 (N-780059)
383	歯車軸押え Gear shaft holder	1	F-3 D-1		○△	53F1021 (N-780059)
384	歯車軸引張りばね Spring	1		7	○	53F1021 (N-780059)
385	コマ数計遮光モルト Light-tight sponge	1	A		○△	53F1021 (N-780059)
401-3	シャッターダイヤル Shutter speed dial	1	E14-2	4	△	
402	シャッターダイヤル軸 Shutter speed dial shaft	1	E14-2	4, 14	△	
405	押えナット Nut	1	E14-2	4	△	
406	クリックばね Click spring	1		4	○	
409	スピード調整カム Speed adjusting cam	1		14	○	
410-1	調整カムナット Adjusting cam nut	2		14	○	-2 x 3001/4000
411	緩み防止座金 Spring washer	1		14	○	

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区 分 Term of Sale	備 考 Remarks
412	シャッター軸座金 Shutter shaft washer	1		14	○	
414	シャッターカム軸受 Shutter speed cam bearing	1	C2	15	△	
415	シャッターカム Shutter speed cam	1	C2	15	△	
416	リリース爪 Shutter release pawl	1	C2	15	△	
417	フライホイール Fly wheel	1	C2	15	△	
418	フリクションばね Friction spring d=0.55	1	C2	15	△	9F2B#738
419	フライホイールばね Fly wheel spring d=0.26	1	C-1	14	○△	9F2B#741
420	フライホイール連動レバー Fly wheel coupling lever	1	C2	15	△	9F2B#731
421	連動レバー皿金 Coupling lever washer	1	C2	15	△	9F2B#732
422	連動レバー軸 Coupling lever axle	1	C2	15	△	9F2B#733
423	シンクロ導通ピン Synch contact pin	1	C2	15	△	
424	フライホイール軸受 Fly wheel shaft bearing	2	C2	15	△	
425	フライホイールばね掛け Fly wheel spring holder	1	C-1	14	△	
426	フライホイール軸 Fly wheel shaft	1	C-1	16	△	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区 分 Term of Sale	備 考 Remarks
427	フライホイール押え皿 Fly wheel washer	1	C-1	14	○△	
428-1	作用杆調整レバー軸 Actuator adjusting lever axle	1	C-1	16	△	-3 x 1001/4000 51F1027
429	作用杆レバー Actuator lever	1	C-1	16	△	
430	速度調整レバー Shutter speed adjusting lever	1	C-1	16	△	
431-1	作用杆調整レバー Actuator adjusting lever	1	C-1	16	△	-3 x 1001/4000 51F1027
432	速度調整レバーピン Speed adjusting lever pin	1	C-1	16	△	
433	速度調整レバーピン皿 Lever pin mount	1	C-1	16	△	
434	作用杆調整レバーピン Actuator adjusting lever pin	1	C-1	16	△	9F2B#667
435	調整レバー軸 Adjusting lever axle	1	C-1	16	△	
436	調整レバーばね Adjusting lever spring	1	C-1	16	○△	
437	調整レバー皿 Adjusting lever washer	2	C-1	16	△	
438-1	作用杆レバー軸 Actuator lever axle	1	C-1	16	△	-3 x 1001/4000
439-1	作用杆調整皿 Actuator adjusting washer	1	C-1	16	△	-3 x 1001/4000 51F1027
440	緩衝ゴム Cushion rubber pad	1	F-2 E26	17	○△	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
441	先 幕 First curtain	1	E21	18	△	
442	遮光板 Light baffle plate	1	E21	18	△	
443-1	先幕補助 First curtain holder	1	E21	18	△	
444	先幕爪 First curtain pawl	1	E21	18	△	
445	軸受 (A) Curtain bearing (A)	2	E21, E22	18	△	
446	軸受 (B) Curtain bearing (B)	2	E21, E22	18	△	
447	後 幕 Second curtain	1	E22	18	△	
448	後幕爪 Second curtain pawl	1	E22	18	△	
449	後幕補助 Second curtain holder	1	E22	18	△	
450	幕 軸 Shutter shaft	1	F-2 E26	17	○△	
451	遮光鉚 Light baffle rivet	2	E21	18	△	
452	シャッター幕かしめ鉚 Shutter curtain rivet	6	E21, E22	18	△	
453	先幕シャッターばね First curtain spring d=0.2	1	E23	17	△	
454	後幕シャッターばね Second curtain spring d=0.2	1	E24	17	△	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
455	シャッター軸ナット Shutter shaft nut	1	F-2 E26	17	○△	
457	駆動ばね Curtain hold spring	1	C-1	14	○△	
458	先幕作用杆 First curtain release lever	1	C-1	14	○△	
459	後幕作用杆 Second curtain release lever	1	C-1	14	○△	
460	ガイドピン Guide pin	1	C-1	16	△	
461	駆動ばねガイドピン Release spring guide pin	2	C-1	14	△	9F2B#654
462-1	X シンクロピン X-synch contact point	1	E21	18	△	
463	シャッターばね調整環 Shutter spring adjusting ring	2	F-2 E26	17	○△	
464	シャッターばね調整ねじ Shutter spring adjusting screw	2	F-2 E26	17	○△	
465-1	シャッターばね調整ガイド Shutter spring adjusting guide	1	F-2 E26	17	○△	-3 x 1001/4000
466	振動防止モルトブレン A Vibration-proof sponge A for #453 (black)	1	E23	17	○△	
467	振動防止モルトブレン B Vibration-proof sponge B for #454 (white)	1		17	○	-4 x 250/4000
501-1	FPシンクロ A接片 FP synch A-contact	1	C-1	16	△	9F2B#674 -7 x 3001/4000
502-1	FPシンクロ B接片 FP synch B-contact	1	C-1	16	△	9F2B#675 -7 x 3001/5000 52F1011

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
503-1	接片止め鉋 Contact rivet	1	C-1	16	△	-7 x 3001/5000 52F1011
504	端子 Terminal tip	3	C-1 F-2 E26	16	○△	
505-1	絶縁A座 Insulating A-plate	1	C-1	16	△	9F2B#682 -7 x 3001/5000 52F1011
506-1	絶縁 A リング Insulating A-ring	1	C-1	16	△	9F2B#683 -7 x 3001/5000 52F1011
507-1	Aリング鉋 A-ring rivet	1	C-1	16	△	-7 x 3001/5000 52F1011
508-1	Bリング鉋 B-ring rivet	1	C-1	16	△	-7 x 3001/5000 52F1011
510-1	FP シンクロ接片 EP synch grounding contact	1	C-1	16	△	-7 x 3001/5000 52F1011
511	X シンクロ接片 X synch contact	1	E19	17	△	
512	X アース接片 X synch grounding contact	1	E20	17	△	
513	パラジウム接片 A Palladium contact point A	2	C-1, E20	16, 17	△	
514	X シンクロ絶縁座 A X synch insulator A	1	F-2 E26	17	○△	
515	X シンクロ絶縁座 B X synch insulator B	1	F-2 E26	17	○△	
516	パラジウム接点 B Palladium contact point B	2	C-1, E19	16, 17	△	
517-1	FP コード FP contact lead wire	1	C-1	16	○△	-7 x 3001/5000 52F1011

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
518	X コード X contact lead wire	1	F-2 E26	16,17	○△	
519	アースコード Grounding wire	1	F-2 E26	16,17	○△	
520	FP・X絶縁座 FP・X insulating contact base	1	E25	16	○△	
521	絶縁座カバー Base plate cover	1	F-2 F-3	16	○△	
522	FP・Xナット FP・X nut	3	F-2 F-3	16	○△	
523	シンクロガイド環 Synch terminal mount	1	B	20	○△	
524	ナット Nut	3	B	20	○△	
525	シンクロ導通軸 Synch contact shaft	3	B2		△	
527	FP接片 FP contact	1	B2		△	
528	X 接片 X contact	1	B2		△	
529	アース接片 Grounding contact	1	B2		△	
531	シンクロ接片カバー Synch contact cover	1	B2	20	△	
532	FP 絶縁片 FP Insulation	1	C-1	16	△	-7 x 3001/5000 52F1011
601-1	G1 パッキン G1 packing ring	1	A	3	○△	52F1029 -9

部品番号 Part No.	名 称 Name	1 台 個数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売区 区分 Term of Sale	備 考 Remarks
602	G5 O- リング G5 O-ring	1	A	3	○△	
603	軍座嵌合部 O- リング Top cover O-ring	1		2	○	
604	シンクロソケットO- リング Counter window O-ring, synch socket O-ring	2	A5-1 B	3,20	○△	
605	シンクロカバーO- リングA Synch cover O-ring	1	B	20	○△	
606	巻上げレバーO- リング Take-up lever O-ring	2		5	○	
608	巻戻し軸O- リング Rewind shaft O-ring	1	A5-1	3,2	○△	9F2B#556
609	シンクロカバーO- リング B Synch cover O-ring B	1	B	20	○△	
610	マウント部O- リング Lens mount O-ring	1	B	20	○△	
621	軍座取付けボルト Top cover bolt	1		2	○	
622	小ねじ JCIS ⊕ PM 2x3 Type (1) Screw	2	F-2 F-3	16	○△	
624	小ねじ JCIS ⊕ CM 2x2.8 type (1) Screw	6	F-2 F-3 E26	8,17	○△	
625	小ねじ JCIS ⊕ PM 1.7x1.8 Type (1) Screw	4	A1-1	6	○△	
626	小ねじ ⊕ 1.7x0.5x4 Screw	3	A	3	○△	
627	小ねじ JCIS ⊕ PM 2x2 Type (1) Screw	2	C-1 F-3	14	○△	

部 品 表 Parts List

9F3B-R.2028.C

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販売 区分 Term of Sale	備 考 Remarks
628	小ねじ JCIS ⊕ PM 2x4 Type (3) Screw	9	F-2 F-3 B-2 E26	2, 10, 17, 19, 20	○△	-6
629	小ねじ JCIS ⊕ CM 2x4 Type (1) Screw	3		3	○	
630	小ねじ ⊕ 2x3.6 Screw	7	F-2 F-3	8	○△	32FB#805
631	小ねじ JCIS ⊕ PM 2x6 Type (3) Screw	6	E16-2 E16-3 F-2 F-3	5, 8	○△	
632	軸受台取付ねじ JCIS ⊕ PM 1.4x2 Type (3) Take-up shaft base screw	2	F-2 F-3	10	○△	
633	小ねじ JCIS ⊕ PM 1.4x2 Type (3) Screw	6	A3-1 C-1 D-1	3, 7, 14	○△	
634	止めねじ ⊖ 2x5 Set screw - 2x5	2	F-2	17	○△	53F1007 (N-780014) Dis.
635	小ねじ JCIS ⊕ CM 2x2.2 Type (1) Screw	3	B	20	○△	
637	小ねじ JCIS ⊕ CM 1.4x2.8 Type (1) Screw	1	F-2 F-3	8	○△	
638	小ねじ JCIS ⊕ PM 2x2.5 Type (3) Screw	1	F-2 F-3	19	○△	-6
639	止めねじ Set screw ⊖ 1.7x3	3	E2		○△	53F1006 (N-780015) Dis.
640	小ねじ JCIS ⊕ PM 1.7x4 Type (1) Screw	3	C-1 E25	16	○△	
641	小ねじ JCIS ⊕ PM 2x4 Rype (1) Screw	1	F-2 F-3	2	○△	
642	小ねじ JCIS ⊕ PM 2x2.5 Type (1) Screw	4	F-2 E26	17, 19	○△	

部品番号 Part No.	名 称 Name	1 台 個 数 Pcs. per Unit	部組品No. Sub- assembly No.	参照図番 Reference Fig. No.	販 売 区 分 Term of Sale	備 考 Remarks
643	小ねじ 1.7x2.5 Screw	1	C-1	16	○△	52F1011
645	E-13	6	D F-2 F-3 E26	7,8 12,17	○△	-1 52F1011
646	E-10	2	D-1 E15-1	7,11	○△	
647	E-20	1	F-2 F-3	2	○△	-1 x 3001/4000
G1	レンズ Lens	1	A	3	○△	
G2	レンズ Lens	1	A1-1	6	○△	
G3	レンズ Lens	1	A1-1	6	△	
G4	レンズ Lens	1	A1-1	6	△	
G5	レンズ Lens	1	A	3	○△	
G6	レンズ Lens	1	A1-1	6	△	
G7	レンズ Lens	1	A1-1	6	△	
G8	レンズ Lens	1	A1-1	6	△	

2. 部組品一覧表 Subassembly list

9F3B-R.2028.C

部組品番号 No. of Sub- assembly	名 称 Name	1 台 個数 Pcs. per Unit	構 成 部 品 番 号 No. of Constituent Parts	参照図番 Reference Fig. No.	備 考 Remarks
A	軍艦部 Top cover unit	1	8, 12-1, 62x2, 601x1, 602, 626x3, 385 G1, G5	3	
A1-1	ファインダー支持枠 Finder housing	1	7, 11, 13, 53x2, 625x4, A2, G2, G3, G4, G6, G7, G8	6	52F1029
A2	フレーム Picture angle frame mask	1	9, 58	6	
A3-1	巻戻しノブ Rewind knob	1	351-1, 353, 357, 633x2, A4	3	51F1039
A4	巻戻しクランク Rewind crank	1	352, 354, 355-1	3	51F1039
A5-1	軍艦 Top cover	1	1-1, 23-1, 24, 42, 55 367, 604, 608, A3-1, E13-1	3	53F1005 (N-780013)
B	外 箱 Outer housing unit	1	2-1, 26x2, 27x4, 28x4, 29x8, 30, 38, 45, 47, 48, 49, 59-1, 61, 523, 524x3, 604, 605, 609, 610, 635x3, B2	20	
B2	シンクロ接点カバー Synch contact cover	1	52, 525x3, 527, 528, 529, 531, 628x2	20	
C-1	底板部 Bottom plate unit	1	6-1, 419, 425, 426, 427, 428-1, 429, 430, 431-1, 432, 433, 434, 435, 436, 437, 438-1, 439-1, 457, 458, 459, 460, 461x2, 501-1, 502-1, 503-1, 504, 505-1, 506-1, 508-1, 510-1, 513, 516, 517-1, 532, 627, 633x2, 640, 643, C2 507-1	14, 16	52F1011 (N-770040)
C2	フライホイール Fly wheel	1	414, 415, 416, 417, 418, 420, 421, 422, 423, 424x2	15	
D	こま数計部 Frame counter unit	1	63, 115C, 119, 132-1, 134-1, 135-1, 136, 137-1, 138-1, 139-1, 301-1, 302, 303, 304-1, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318-1, 319-1, 305-1, 307-1, 308-1, 320x2, 329, 330-1, 331-1, 332-1, 333-2, 334, 327-1, 321, 322, 323, 324, 325, 326, 328, 633x2, 645x2, 646		53F1021. (N-780059) Dis.

部組品一覧表 Subassembly list

9F3B-R.2028.C

部組品番号 No. of Sub- assembly	名 Name	1台 個数 Pcs. per Unit	構成部品番号 No. of Constituent Parts	参照図番 Reference Fig. No.	備 考 Remarks
D-1	こま数計部 Frame counter unit	1	63,119,221,132-1, 134-1,135-1,136,137-1, 138-2,139-2,301-2, 302-1,303-1,304-2, 305-2,307-2,308-2, 320-1x2,329-1,331-2, 332-3,375,376,377,378, 379,380,381,382,385, 633x2,645x2,646	7	51F1031 53F1021 (N-780059) Add.
E1	スプロケット軸 Sprocket shaft	1	187-1, 189, 197	13	53F1021 (N-780059) Dis.
E2	スプール Spool	1	140-1,142,143,144-1, 146x2,148, 149-1, 153	9	53F1006 (N-780015)
E3	受 台 Take-up shaft base	1	5, 172-1, 173-1, 178	10	51F1029
E4	中間歯車 Idle gear	1	175, 176, 177	10	
E5	固定歯車 Fixed internal gear	1	174, 201-1	10	
E6-2	巻上B軸 Take-up shaft B	1	155-1, 156-2, 157, 158, 159x2, 160, 161	12	51F1032 52F1008
E7	巻上げ制限レバー Take-up stopper lever	1	111-1, 120	8	
E8	解除レバー Release lever	1	120, 122	8	
E9-2	巻上げ制限ラチェット Take-up stopper ratchet	1	110-2, 131	8	52F1008
E10	圧板押え Pressure plate retainer	1	43, 44	19	
E12	巻戻し軸 Rewind gear	1	360, 363	2	53F1008 (N-780027) Dis.
E12-1	巻戻し軸 Rewind gear	1	360-1, 363	2	53F1008 (N-780027) Add.
E13-1	巻戻し軸 Rewind shaft	1	359-2, 361-1	3	53F1008 (N-780027)
E14-1	シャッターダイヤル Shutter speed dial	1	401-3, 402, 405	4	53F1008 (N-780027)

部組品一覧表 Subassembly list

9F3B-R.2028.C

部組品番号 No. of Sub- assembly	名 称 Name	1 台 個 数 Pcs. per Unit	構 成 部 品 番 号 No. of Constituent Parts	参照図番 Reference Fig. No.	備 考 Remarks
E15-1	太陽歯車 Sun gear shaft	1	112, 113, 114, 163, 164, 165, 166-1, 167, 168, 169 170, 171, 210, 646	11	52F1008
E16-1	巻上げレバー Take-up lever	1	101, 102, 103-2, 104x2, 124, 213, 214, 215, 216, 631x2	5	53F1020 (N-7800518) Dis.
E16-2	巻上げレバー Take-up lever	1	101-1, 103-3, 213, 214, 215, 216, 631x2	5	53F1020 (N-7800518) Add.
E17	圧 板 Pressure plate	1	31, 32, 35-1x2, 36x2	19	52F1009 (N-770038)
E18-1	連結チャージレバー Charge lever	1	202-1, 203-1, 204-1, 205-1, 209, 211x2, 218, 219, 220	17	52F1009 (N-770038)
E19	X シンクロ接片 X synch contact	1	511, 516	17	
E20	X アース接片 X synch grounding contact	1	512, 513	17	
E21	先 幕 First curtain	1	441, 442, 443, 444, 445, 446, 451x2, 452x3, 462-1	18	
E22	後 幕 Second curtain	1	455, 446, 447, 448, 449, 452x3	18	
E23	先幕シャッターばね First curtain shutter spring	1	453, 466	17	
E24	後幕シャッターばね Second curtain shutter spring	1	455, 467	17	
E25	FP・X 絶縁板 FP・X insulating contact base	1	520, 640x2	16	
E26	中箱部 Inner housing	1	4, 39, 40, 41x2, 56, 207-1, 208, 362, 440, 450, 455, 463x2, 464x2, 465-1, 504x2, 514, 515, 518, 519, 624x3, 642, 645, 628, E18-1, E19, E20	17	53F1007 (N-780014)

部組品一覽表 Subassembly list

9F3B-R.2028.C

部組品番号 No. of Sub- assembly	名 称 Name	1 台 個 数 Pcs. per Unit	構 成 部 品 番 号 No. of Constituent Parts	参照図番 Reference Fig. No.	備 考 Remarks
F-2	本体、中箱 Main body, Inner housing	1	(Main body) 3-1, 41x4, 54-1, 57, 65, 109, 115C, 116, 117, 179-1, 118x2, 121, 123, 141, 147, 150, 154, 180-1, 182, 183, 184, 185, 190-1, 191, 192-1, 193, 194-1, 195, 196, 198, 199, 200, 217, 358, 362, 364, 365, 366-1, 371, 372, 373, 624x3, 647 628x6, 632x2, 637, 638, 641, 645, D, E1, E2, E3, E4, E5, E6-1, E7, E8, E9-2 (Inner housing) 4, 39, 40, 41x2, 56, 206-1, 207-1, 208, 212, 440, 450, 455, 463x2, 464x2, 465-1, 504x2, 514, 515, 518, 519, 624x3, 642, 645, 628, E18-1, E19, E20 (The others) 145, 162, 521, 522x3, 622x2, 630x3, 631x4, 645, C-1, E15-1, E21, E22, E23, E24, E25		53F1008 (N-780058) Dis.
F-3	本体、中箱 Main body, Inner housing	1	3-2, 41x4, 54-1, 57, 65, 109, 116, 117, 118x2, 121, 123, 141-1, 147, 150, 154, 179-2, 180-1, 183-1, 184-1, 185, 190-2, 191-1, 192-1, 193, 194-1, 195, 217, 364-1, 365, 366-1, 371, 372, 373, 374, 624x3, 628x6, 632x2, 637, 638, 641, 645, 647, D-1, E2, E3, E4, E5, E6-2, E7, E8, E9-2, 188, 383, 627, 145, 162, 521, 522x3, 622x2, 630x3, 631x3, C-1, E15-1, E21, E22, E23, E24, E25, E26	2, 8, 9, 10, 13, 17, 19	53F1008 (N-780058) Add.

SERVICING INFORMATION

When Nikonos III has been brought in for servicing the trouble reported in this information, replace old parts with new parts combined. Although old G1 packing(P/N 601) can be compatibly used with old Finder Housing(P/N 7), P/N 601 seats below the surface of G1.

G1 and P/N 601-1 Positioning Procedures:

- 1) Visually inspect the G1 for proper radii at the four corners; excessive radii are likely to result in a loose G1 fitting and the insufficient radii can cause scratch on P/N 601-1, both resulting in water leakage.



Figure 2

- 2) Clean P/N 601-1 with lens cleaning paper soaked with a small amount of grease(G6252). If burred edge has been detected in cleaning P/N 601-1, remove the burr so as to be 0.1mm in height and 0.15mm in thickness at maximum.
- 3) Position P/N 601-1 in place in the following sequences.
 - a) Clean the both surfaces of G1 and install in place.
 - b) Thinly coat P/N 601-1 with grease G6252 and install P/N 601-1, first pressing the shorter side ① and ② as illustrated in Figure 3. The radii at the four corners should be pressed down in place at this step. Also, note that P/N 601-1 should be positioned with its G1 side kept toward you to prevent G1 from chipping off.
 - c) Press down the longer sides at the center, first ③ side, then ④.
 - d) Inspect the P/N 601-1 for even seating.
 - e) Performing the water pressure test, clean the G1 surface with ether to see if no blur appears on the G1 surface. If detected, water leakage is possible, therefore, repeat the P/N 601-1 positioning procedures from the step (1).

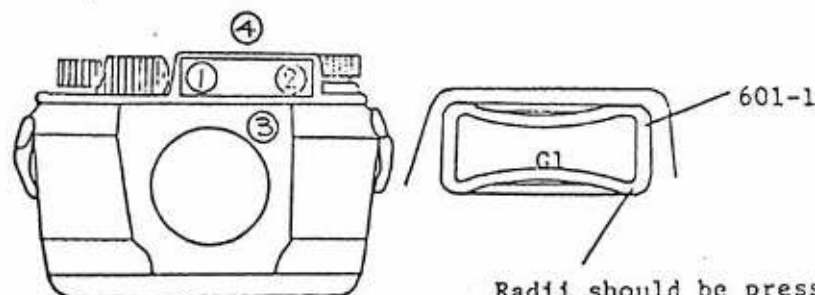


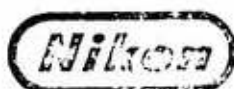
Figure 3

Radii should be pressed when shorter sides set in place

Nihon TECHNICAL INFORMATION

Inspections required after parts replacement:

- 1) When Rack Retainer or L-Shaped Lever is replaced, insufficient return of L-Shaped Lever is possible, causing improper engagement with rack. Therefore, inspect L-Shaped Lever for proper operation in the following procedures.
 - a) Setting the shutter speed at one of the slow speed setting from 2 sec. to 8 sec., wind the film-advance lever.
 - b) Depress the shutter release button, and immediately after the first curtain released, apply a pressure to the film-advance lever in the winding direction.
 - c) After the rear curtain released, gently wind the lever as far as it goes.
 - d) After finishing the winding operation, apply a pressure again to the film-advance lever to confirm that the lever cannot be wound, with L-Shaped Lever engaged with rack.
- 2) After replacement of L-Shaped Lever, be sure to adjust MW Switch Mount (Assy No. WX-1) properly.
- 3) If Rivet (P/N 472-1) is filed, do the followings;
 - a) Thinly apply a lubricant (L2113) to the area filed to prevent possible rust.
 - b) Readjust the sprocket gears' position, sprocket stopper and the pendulum's returning point.
 - c) Adjust the rack engagement to prevent the shutter from being exceedingly cocked.



TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770041

Modified From: February 1977

Date: December 26, 1977

Subject:

Takeup Stopper Mechanism Improvement

BACKGROUND INFORMATION

Some instances of malfunctioning takeup stopper mechanisms have been reported. Film takeup operation may occur in its return process if pressure is applied to the lever in the film-advance direction. The result is insufficient shutter cocking. To deal with this, a new spacer washer has been incorporated in the Nikonos III camera, effective February 1977.

DETAILS OF CONDITION

Normally, if one tries to turn the takeup lever backward while it is in the return process, the takeup stopper lever (P/N 111) engages the takeup stopper ratchet (P/N 110-1) to stop the reverse movement. However, if the gap between P/N 110-1 and the frame counter base plate (P/N 301-1) is too great, the takeup stopper ratchet will rise up, allowing the takeup stopper lever to slip under it. The lever and ratchet then disengage, freeing the takeup lever to turn in the film-advance direction and causing insufficient shutter cocking. Defective takeup stopper levers and loose takeup stopper lever axles (P/N 118) are also apt to cause similar situations.

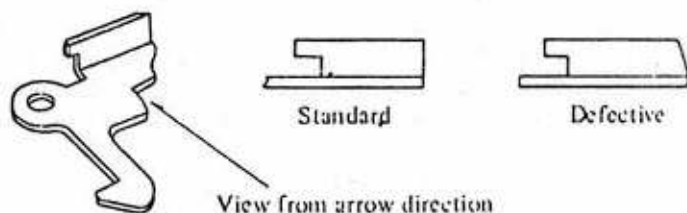


Figure 1 Takeup Stopper Lever

Nikon TECHNICAL INFORMATION

Figure 2

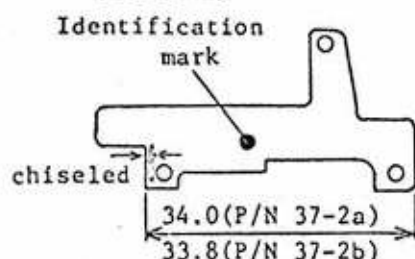
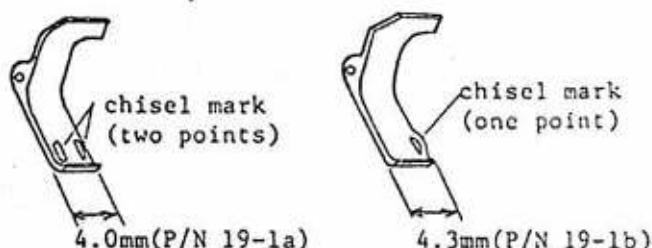


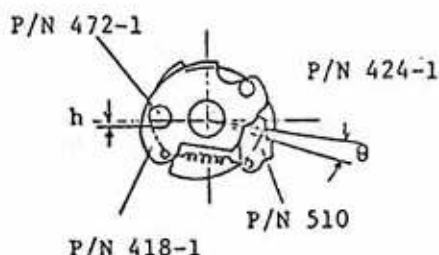
Figure 3



Description	Part No. (P/N)		Qty	Ref Assy	T/S	Remarks
	Former	New				
Rack Retainer	37-2	37-2a	1	A5-1a	△	Modified. From one kind into two
		37-2b	1	A5-1b	△	
L-Shaped Lever	19-1	19-1a	1	A3	○	Modified From one kind into two
		19-1b	1	A3	○	

SERVICING INFORMATION

When Nikkormat ELW or Nikon EL2 has been brought in for servicing the trouble explained in this report, replace old rack retainer assembly(A5-1) with new subassembly (A5-1a or A5-1b); use of A5-1a is recommended because 60% of this trouble can be solved with the installation of A5-1a. If still unsatisfactory, also replace the L-Shaped Lever with P/N 19-1a. Only a few Nikkormat ELW or Nikon EL2 cameras may still cause the same trouble even after the above procedures. In this case, slightly file off the lower side of the rivet(P/N 472-1) to increase the film-advance stroke. Larger stroke can provide a wider clearance shown as θ between charge cam(P/N 424-1) and advance claw(P/N 510), which prevents P/N 424-1 from being contacted or rotated with P/N 510, and thus the sprocket does not rotate even if an additional pressure has been applied to the film-advance lever.



Area(h) to be filed

Note: Use P/N 19-1b combined with A5-1b only. Otherwise, P/N 19-1b ceases to operate properly.

Nihon TECHNICAL INFORMATION

DETAILS OF MODIFICATION

- To solve the trouble, a 0.2-mm washer has been inserted between P/N 110-1 and P/N 301-1 to prevent P/N 100-1 from rising up (Fig. 2), and P/N 111 from slipping beneath P/N 110-1.

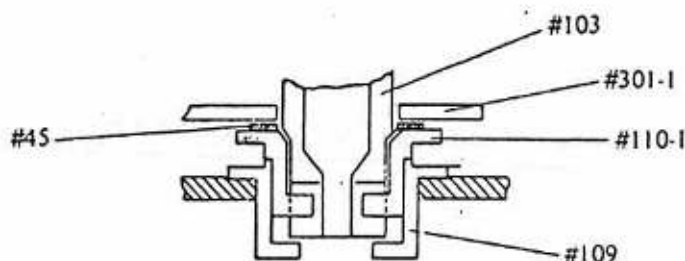


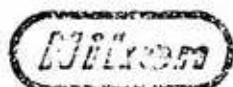
Figure 2 Modified Unit

PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
Washer	—	145	1	F-1	○△	Added

SERVICING INFORMATION

When servicing is required for the trouble covered in this report, insert a washer as specified above. If P/N 111 has slipped beneath P/N 110-1, the bottom of the ratchet (P/N 110-1) and the pawl end may be damaged. If so, replace these parts and then modify as detailed above. For defective P/N 111 or loose P/N 118, replace or tighten respectively.



TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770036

Modified From:

Date: December 26, 1977

Subject: Frame Counter Mechanism Parts Change

BACKGROUND INFORMATION

Provisional modifications to deal with failures of the frame counter have already been performed. These, however, are still insufficient. Here, information on additional modifications taken to improve the action of the frame counter and to prolong its service life are given.

DETAILS OF CONDITION

1. Failure to advance from zero (0)

The most prevalent cause of this type of frame counter failure has been a disengaged counter reverse spring (P/N 307), for which provisional modifications have been previously performed. Other times, the cause has been found to be either the frame counter ratchet riding up toward the stopper pin or else insufficient adjustment of the advance pawl eccentricity. Both cases are due to improper relative positions of the frame counter ratchet stopper parts.

2. Failure to move from a certain digit halfway between 0 and 36

One of the causes behind this type of failure is an improper balance between the spring forces of the counter reverse spring (P/N 307) and the detent pawl spring (P/N 318).

3. Failure to reset

The most prevalent cause of reset failure is a poor action of the counter reverse coupling lever (P/N 329), for which provisional modifications have been previously performed. Failure to reset also has occurred due to an improper balance among the spring forces of the counter reverse spring (P/N 307-1), advance pawl spring (P/N 315), detent pawl spring (P/N 318), counter reverse coupling lever spring (P/N 327), and auxiliary lever spring (P/N 333-1).

DETAILS OF MODIFICATIONS

The following measures have been taken to settle the frame counter's malfunctionings permanently.

1. To solve condition 1, "Failure to advance from zero (0)," the shape of the frame counter ratchet (P/N 304) has been changed, which eliminates poor frame counter advancing caused by poor stopper position, and facilitates installation of the frame counter spring.
2. To solve condition 2, "Failure to move from a certain digit halfway between 0 and 36," the counter reverse auxiliary lever unit has been modified and the detent pawl spring (P/N 318), counter reverse lever spring (P/N 327), and auxiliary lever spring (P/N 333-1) have been strengthened. These measures also help solve condition 3.
3. To solve condition 3, "Failure to reset," eccentricity has been given to the detent pawl shaft, facilitating the adjustment of the advance pawl.

PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
Frame counter base plate	301	301-1	1	D	Δ	Modified
Ratchet	304	304-1	1	D	Δ	Modified
Ratchet shaft	305	305-1	1	D	Δ	Modified
Stopper screw	306	—	1		Δ	No longer used
Rotation stopper pin	308	308-1	1	D	Δ	Modified
Detent pawl spring	318	318-1	1	D	○Δ	Modified
Detent pawl shaft	319	319-1	1	D	Δ	Eccentricity given
Counter reverse lever spring	327	327-1	1	D	○Δ	Lengthened
Counter reverse lever axle	331	331-1	1	D	Δ	Lengthened
Counter reverse lever collar	332-1	332-2	1	D	Δ	Lengthened
Auxiliary lever spring	333-1	333-2	1	D	Δ	Diameter widened
Detent pawl shaft	—	334	1	D4	Δ	Added

SERVICING INFORMATION

Replace old frame counter subassembly D with a new, modified one. For easier identification of a new subassembly, look for a slot in the detent pawl shaft head of the frame counter subassembly (Fig. 1).

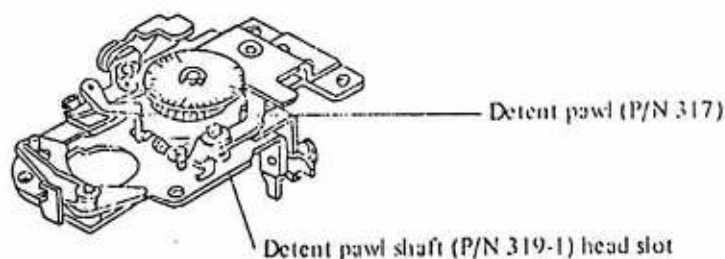


Figure 1 Modified Frame Counter

Nikon TECHNICAL INFORMATION

NOTE

To adjust the detent pawl (P/N 317) to provide proper clearance between P/N 317 and P/N 304-1, first set the P/N 304-1 stopper against the rotation stopper pin (P/N 308-1). In this position, adjust the eccentric detent pawl shaft (P/N 319-1) so that the detent pawl (P/N 317) engages the ratchet (P/N 304-1) and the gap between the pawl and ratchet will be of a standard clearance of 0 to 0.1mm. (Fig. 2).

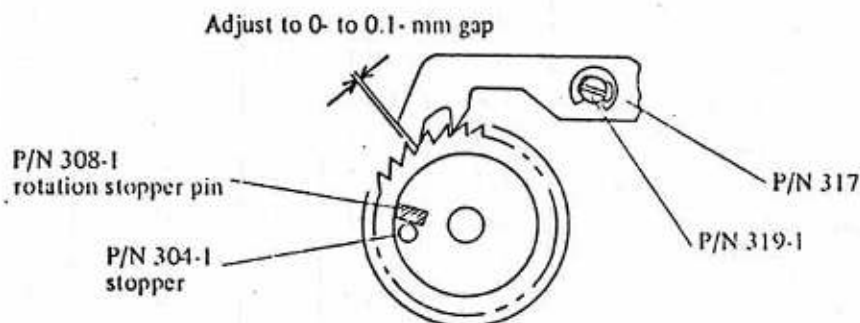


Figure 2 Adjustment of Detent Pawl

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770037

Modified From: March 1977

Date: December 26, 1977

Subject: Change of AR Actuating Lever

BACKGROUND INFORMATION

It has been reported at the assembly stage that the AR actuating lever (P/N 139) is difficult to bend to the standard angle. This is one of the causes behind failure of "R" setting or failure of "R" release. To facilitate bending of the AR actuating lever, parts modification have been performed, effective March 1977. Failure of "R" setting or release is also effectively dealt with by this measure.

DETAILS OF MODIFICATIONS

To solve these problems, the AR actuating lever has been thinned from 0.6 mm to 0.3 mm. The modified lever is now designated P/N 139-1. P/N 139-1 can be easily bent and pressed down with less pressure, enough to free the sprocket for rewinding or to set it for film-advance operation. In keeping with this modification, the AR actuating lever axle (P/N 138) has also been modified, designated P/N 138-1.

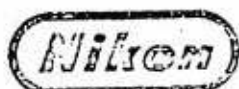
PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
AR actuating lever axle	138	138-1	1	D	Δ	Modified
AR actuating lever	139	139-1	1	D	Δ	Modified
Frame counter base plate assy.	D1	—				Available as assy. D

SERVICING INFORMATION

When servicing is required on frame counter unit parts, replace the old unit with a new, modified unit (subassembly D).

Previously, a heavy pressure has been required to press down on the AR actuating lever at the "R" setting in order to free the sprocket to rotate. When the pressure applied is too light, rewinding operation is impossible for film unloading. On the other hand, if the pressure applied is too heavy, the AR actuating lever may be bent too much, which will free the sprocket to rotate even if the shutter speed dial is set at one of the shutter speed settings except "R", that is, a failure of "R" release.



TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770038

Modified From: May 1977

Date: December 26, 1977

Subject: Bulb Operation Mechanism Parts Change

BACKGROUND INFORMATION

At the "B" setting on the shutter speed dial, the second curtain should be released before the first curtain appears in the camera's aperture immediately after pressure is removed from the lever, springing the lever outward 60° for the start of the next film advance. However, some instances have been reported where the first curtain appears in the aperture before completion of the second curtain's travel, that is, a failure of Bulb ("B") operation. To solve this, charge lever component parts have been modified, effective May 1977.

DETAILS OF CONDITION

At the "B" setting, squeezing the film advance lever in a 6.5° stroke will release the first curtain, and the shutter will remain open holding the second curtain out of the aperture as long as the lever is held depressed. When pressure is removed from the lever, the lever springs outward and the second curtain starts to travel, finishing the "Bulb" operation. However, accumulation of allowable errors, such as a positioning error of the speed adjusting cam (P/N 409) and an error of the correlative position between the film-advance lever and charge lever (P/N 204), have cocked the first curtain with P/N 204 while the lever is springing out, which results in the first curtain's appearance in the camera aperture before the second curtain's travel. Also, just before the film-advance lever returns to its fully extended position, P/N 204 has been apt to strike the bottom plate (P/N 6), causing insufficient shutter cocking, or failure of shutter release.

DETAILS OF MODIFICATION

The charge lever (P/N 204) directly coupled to the film-advance lever has been modified to consist of two component parts; charge lever A and B, designated P/N 218 and P/N 204-1 respectively. The two parts have been positioned with a newly-installed charge eccentric pin (P/N 219). As a result, in the new cameras, the timing to cock the first curtain with the charge lever (P/N 204-1 and P/N 218) has been delayed. This ensures the completion of the second curtain's travel before the first curtain's cocking starts, after the film-advance lever springs outward to certain angles. Also, adjusting the eccentricity of P/N 219 prevents P/N 204-1 from striking P/N 6, thus ensuring proper shutter cocking and release.

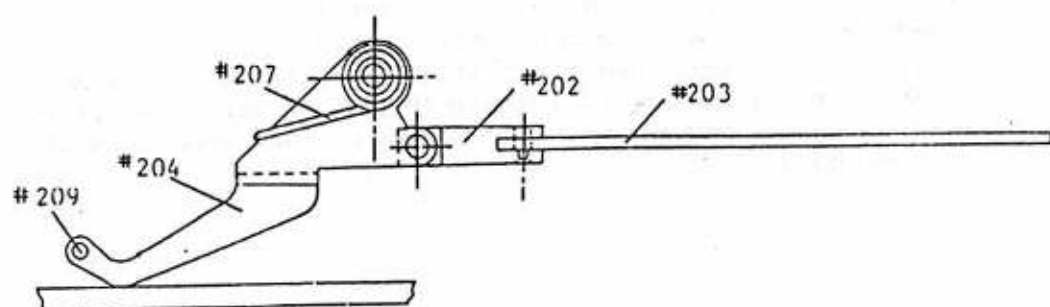


Figure 1 Former Unit

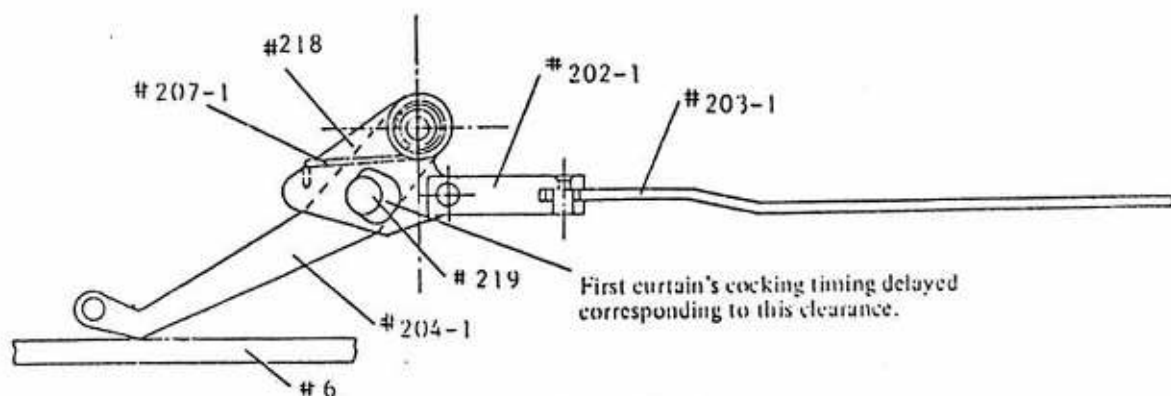


Figure 2 Modified Unit

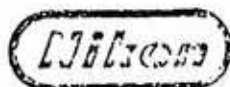
PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
Inner housing	4	4	1	F-1	Δ	Access hole drilled
Aperture aux. plate	39	39	1	F-1	○Δ	Access hole drilled
Universal joint	202	202-1	1	E18-1	Δ	Sideways dimension shortened
Coupling lever	203	203-1	1	E18-1	Δ	Modified
Charge lever B	204	204-1	1	E18-1	Δ	Modified
Charge lever holder	205	205-1	1	E18-1	Δ	Modified
Charge lever spring holder	206	206-1	1	F-1	○Δ	Lengthened
Charge lever spring	207	207-1	1	F-1	○Δ	Modified
Charge lever A	—	218	1	E18-1	Δ	Added
Charge eccentric pin	—	219	1	E18-1	Δ	Added
Charge washer	—	220	1	E18-1	Δ	Added

Nikon TECHNICAL INFORMATION

SERVICING INFORMATION

When a Nikonos III camera has been brought in for servicing for the trouble covered in this report, first determine if the camera was produced before or after the modification. If produced before modification, replace old parts with P/N 206-1, P/N 207-1 and 1:18-1 in combination. Note that old inner housing (P/N 4) and aperture aux. plate (P/N 39) need not to be replaced with new ones since the only difference between the old and new ones is the access hole.



TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770039

Modified From: April 1977

Date: December 26, 1977

Subject: AR Lever Mechanism Parts Modification

BACKGROUND INFORMATION

Parts modifications in addition to those described in Technical Information No. N-770037 have been performed to ensure proper operation at the "R" setting, effective April 1977. As a result, failures of rewinding operation and accidental shutter releasing at the "R" setting have been terminated.

DETAILS OF CONDITION

When the shutter speed dial (P/N 401-1) is set at "R", the AR cam ball (P/N 107) moves in place to press the AR lever (P/N 132). The AR lever is coupled to the AR actuating lever (P/N 139-1), which frees the sprocket to turn for the rewinding operation. The AR cam ball, however, has been found in certain instances to slip under the AR lever. When this happens, P/N 132 is not pressed sufficiently for P/N 139-1 to lower enough to depress the sprocket shaft. The sprocket clutch thus fails to disengage and the sprocket is not freed to turn for the rewinding operation.

The AR cam ball's not pressing the lever sufficiently also leads to the AR stopper lever (P/N 125-1) moving less. This causes insufficient engagement between the claw of P/N 125-1 and the takeup stopper ratchet (P/N 110-1). This insufficient engagement means that the takeup lever may be wound even when the shutter speed dial is at "R". The result is accidental shutter releasing at "R".

To solve the slippage of P/N 107 under P/N 132, P/N 132 has been thickened from 0.8 mm to 1.5 mm, with related modifications of the associated parts.

PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
AR lever	132	132-1	1	D	○△	Modified
AR lever bearing	133	—	1			No longer used
AR lever axle	134	134-1	1	D	△	Modified
AR lever spring	135	135-1	1	D	○△	Modified
AR middle lever pin	137	137-1	1	D	△	Modified
Snap ring A	645	645-1	1	D, F-1	○△	Modified
Frame counter base plate assembly	D1	—				Included as assembly D, thus no longer available
AR lever assembly	D7	—				
AR middle lever assembly	D8	—				

SERVICING INFORMATION

When servicing is required for the trouble covered in this report, replace the old frame counter unit (assembly D) with a new one. Note that the new assembly letter remains the same.

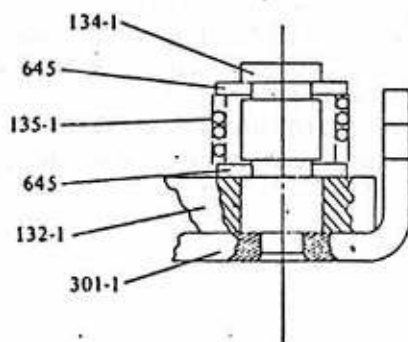


Figure 1 Frame Counter Unit



TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Modified From: June 1977

Ref. No. N-770040

Date: 77.12.29

Subject:

Improvement of FP Contact Unit

BACKGROUND

Instances of improper time lag, unsatisfactory contact efficiency, and defective insulation of the FP contact unit have been reported. Several modifications have been made to settle these situations.

DETAILS OF CONDITIONS

The complicated FP contact unit mechanism required a very subtle adjustment. Thus, deviations in the contact point were apt to occur. Also the time lag adjusted in a lower range at the assembly line led to cases of the time lag dropping below the lower limit of the standard value. For these reasons, improper FP time lags occurred. To compensate for the shorter time lag, attempts to shorten the contact interval resulted in defective insulation. Further, since the contact polarity was opposite, cases of current leakage via the synch contact pin (P/N423) occurred before the contact was closed, causing unsatisfactory contact efficiency.

DETAILS OF MODIFICATIONS

To solve these problems, part's modifications have been performed, effective June 1977, providing the following improvements:

1. Easier assembly procedures
2. Correction of insufficient time lag
3. Polarity correction and the insulation improvement
4. Easier adjustment of the contact interval (i.e. time lag and contact efficiency) without disassembly.

SERVICING INFORMATION

The former bottom plate unit subassembly (Assy. C) and new one (Assy. C-1) are not interchangeable. Therefore, when a Nikonos III camera has been brought in for servicing of the FP contact, first determine whether the camera was produced before or after this modification. New cameras can be readily identified from the newly installed screw (P/N643) as shown in Figure 1. By turning P/N643, adjust the time lag or contact efficiency to the Nikon standard. (see Repair Manual 9F3B-R. 2028.B p. 30 item 19)

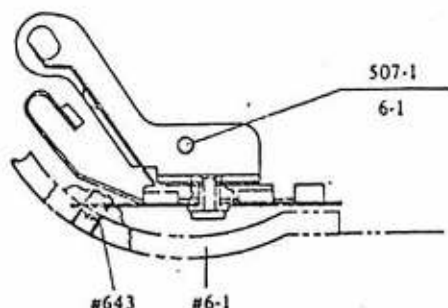


Figure 1 Modified Bottom Plate Unit.

Nikon TECHNICAL INFORMATION

PART CHANGES

Description	Part No. (P/N)		Qty	Ref. Subassy.	T/S	Remarks
	Former	New				
Bottom plate	6	6-1	1	C-1	Δ	Modified
Insulating tube	60	—	1	—		No longer used
FP synch A contact	501		1	C-1	Δ	Modified
FP grounding contact A		501-1	1			
FP synch B contact	502		1	C-1	Δ	Modified
FP grounding contact B		502-1	1			
Contact rivet	503		1	C-1	Δ	Modified
FP contact rivet		503-1	1			
Insulating A-plate	505		1	C-1	Δ	Modified
FP insulating plate		505-1	1			
Insulating A-ring	506		1	C-1	Δ	Modified
FP Insulating ring		506-1	1			
A-ring rivet	507		1	C-1	Δ	Modified
FP grounding contact A rivet		507-1	1			
B-ring rivet	508		1	C-1	Δ	Modified
FP grounding contact B rivet		508-1	1			
Insulating B-ring	509	—	1	C-1		No longer used
FP synch grounding	510		1	C-1	Δ	Modified
FP synch contact		510-1	1			
FP insulator	—	532	1	C-1	Δ	Added
FP synch contact adjusting screw	—	643	1	C-1	○ Δ	Added
FP contact lead wire	517	517-1	1	C-1	○ Δ	Lengthened
Bottom plate unit subassemblies	C	C-1				Modified

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III (9F3B)

Ref. No. N-770042

Modified From: Serial No. 310600 and later

Date: 77.12.29

Subject:

Synch Terminal Mount Modification

BACKGROUND INFORMATION

When the Flash Unit Adapter or Nikonos Underwater Flash Unit P is used with a Nikonos III camera, instances of broken connector mounts have been reported. To solve this, synch terminal mount parts have been modified from Nikonos III cameras bearing serial No. 310600 and later. This report is meant to guide authorized Nikon service facilities for proper servicing of synch terminal mount troubles.

DETAILS OF CONDITION

With Nikonos III cameras bearing serial No. before 310600, the synch contact shafts (P/N 525) protrude above the synch terminal mount (P/N 523). Therefore, when disconnecting the Flash Unit Adapter or Underwater Flash Unit P from the camera body, the tips of P/N 525 may still remain inside the connector socket contacts even when the connector mount (9FA11G3 P/N 37) comes apart from P/N 523. Also, when mounting the flash unit or adapter on the camera body, P/N 525 may accidentally enter into the space between one of the connector socket contacts and the surrounding insulator part, without the connector mount cut aligned with camera's flash unit or adapter mounting guide. If excessive force is applied to the connector mount to remove or mount the unit in these situations, P/N 525 is likely to bend or break, or the black, plastic part of the connector mount is likely to break. To solve this, the synch contact shafts have been shortened by 1.1 mm and the chamfer of the synch terminal mount has been reduced by 0.5 mm. Note that the part numbers of the two parts remain unchanged.

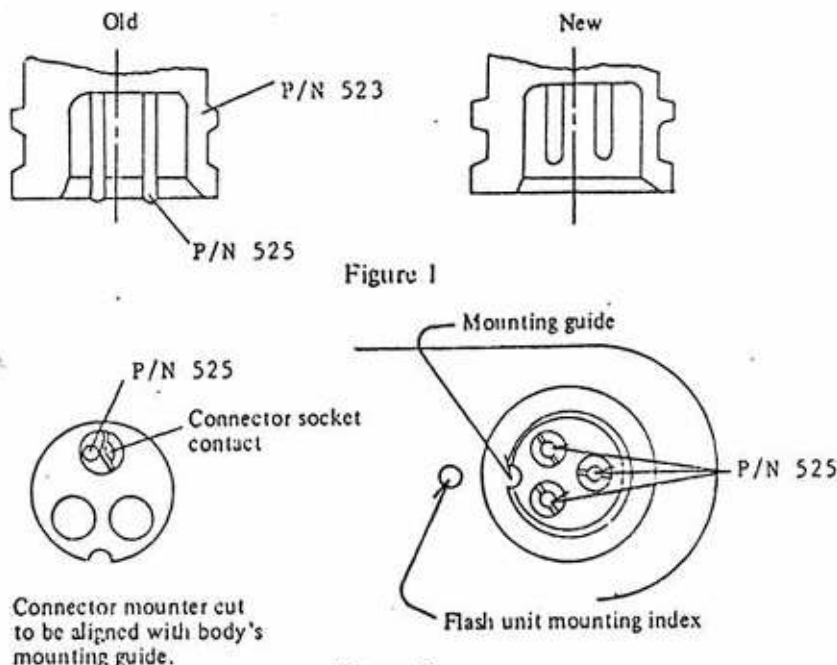


Figure 2

DEFINITION TECHNICAL INFORMATION

SERVICING INFORMATION

When servicing is required for the trouble covered in this report, replace P/N 525 and synch contact cover assembly B2 with modified ones.

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III(9F3B)

Ref. No. N-780013

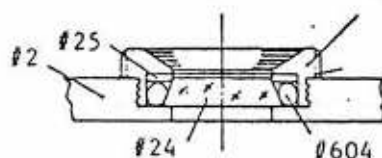
Modified From: July 1978

Date: Feb. 9, 1978

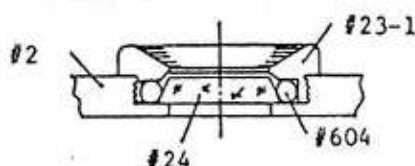
Subject: Frame-Counter Window parts modification

CONTENT OF MODIFICATION

To reduce the production cost, the knurling process of Frame-Counter Window(P/N 23) will be deleted, effective July 1978, still maintaining the original performance to secure O-ring (P/N 604) in place for perfect watertightness. Also, Window washer(P/N 25) will be disused along with this modification.



Old



New

Description	Part Number(P/N)		Qty	Ref Assy	T/S	Remarks
	Former	New				
Frame-Counter window	23	23-1	1	A5	○△	Modified
Window washer	25	-	1	A5	○△	No longer used

SERVICING INFORMATION

When old Nikonos camera is brought in for repair requiring replacement of the frame-counter window, remove both P/N 23 and P/N 25 to replace with P/N 23-1.

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III(9F3B)

Ref. No. N-780014

Modified From: April 1978

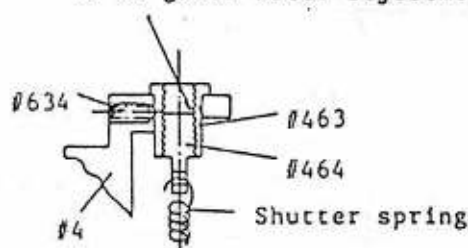
Date: Feb. 9, 1978

Subject: Shutter Speed Adjusting Mechanism modification

CONTENT OF MODIFICATION

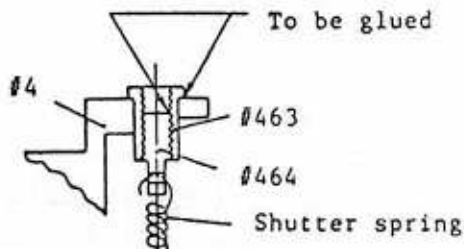
After shutter speed has been adjusted by rotation of shutter spring adjusting ring(P/N 463), P/N 463 is secured by set screw (P/N 634) to maintain the proper speed. However, to reduce the production cost, still maintaining the original performance, modified ring(P/N 463) will be glued in place with LOCTITE after completion of shutter speed adjustment. This change will be effective April 1978.

to be glued after adjustment



Former

To be glued



New

PART CHANGE

Note that part interchangeability is maintained between old and new part. When new part used, be sure to glue the part.

Description	Part Number(P/N)		Qty	Ref Assy	T/S	Remarks
	Former	New				
Inner housing	4	4	1	F-1	△	Screw hole for P464 removed
Shutter spring Adjusting ring	463	463	2	F-1	○△	Modified
Set Screw	464	-	2	F-1	○△	Obsolete

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III(9F3B)

Ref. No. N-780015

Modified From: July 1978

Date: Feb. 9, 1978

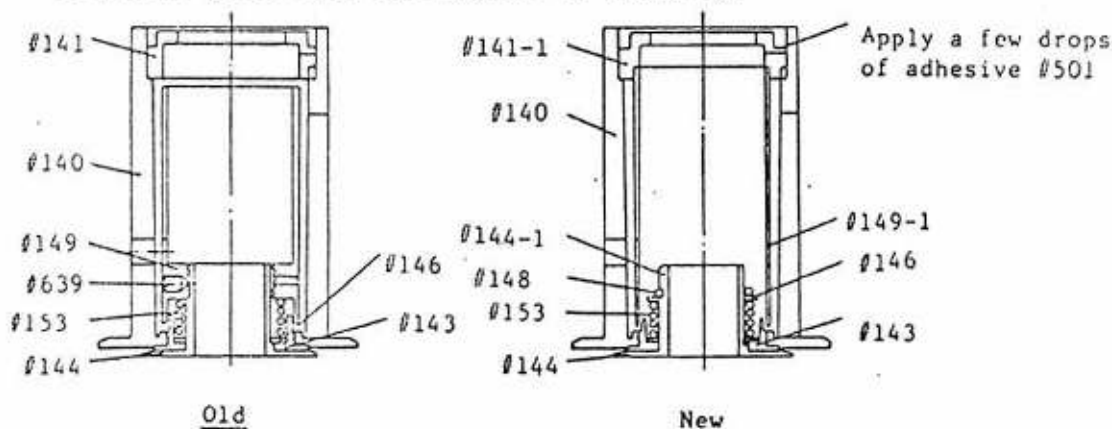
Subject: Spool Mechanism parts modification

BACKGROUND INFORMATION

To reduce the production cost, spool mechanism parts will be simplified, still maintaining the original performance. This modification starts from July 1978.

CONTENT OF MODIFICATION

Spool friction adjustment is indispensable to install the present Spool assembly(E2) for smooth film-take-up operation, thus requiring very precise and complicated assembling procedures. To simplify the assembling procedures and to reduce the production cost, Spool assembly has been modified so as to be installed without a friction torque adjustment after assembling. With this modification, Spool friction of 160 - 240g can be pre-adjusted only by assembling the individual component parts into the complete E2 assembly.

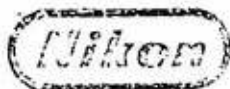


Description	Part Number (P/N)		Qty	Ref Assy	T/S	Remarks
	Former	New				
Spool upper bearing	141	141-1	1	F-1	○△	Modified
Spool Ratchet	144	144-1	1	E2	○△	Modified
Take-up spring sleeve	146	146	2	E2	○△	Qty increased
Retaining spring	-	148	1	E2	○△	Added
Set screw	149	149-1	1	E2	○△	Modified
Friction Spring Ring	639	-				Obsolete

Nikon TECHNICAL INFORMATION

SERVICING INFORMATION

When Nikonos III camera has been brought in for general repair requiring replacement of Spool component parts, it is recommended to replace the old E2 assembly with new one. When installed, be sure to apply a few drops of adhesive between P/N 140 and P/N 141-1 to secure the new E2 assembly in place.



TECHNICAL INFORMATION

Product Name: Nikonos III

Modified From: May 1978

Ref. No. N-780027

Date: May 11, 1978

Subject: Malfunction of Rewind Knob

BACKGROUND

During one of our routine assembly line inspections, we discovered instances in which the camera's rewind knob failed to operate. Countermeasures have accordingly been readied, with effect from May 1978.

DETAILS OF MALFUNCTION

Careful scrutiny has revealed the following:

- (1) The clearance between Top Cover P/N 1 and Coupling Clutch P/N 360 tends to become larger than the diameter of Clutch Pin P/N 361 due to the accumulation of tolerance deviations in various components; this causes P/N 359 to enter through the clearance.
- (2) When the rewind knob is pulled up, and then turned in order to "shove in" P/N 359, the clutch pin engages the coupling pin and then pushes P/N 1 up; this results in the rewind knob "running idly." (See Figures 1 and 2)

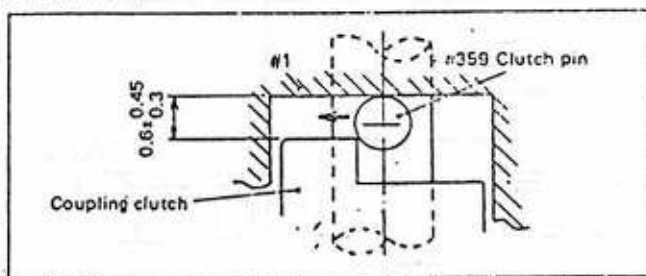


Fig. 1

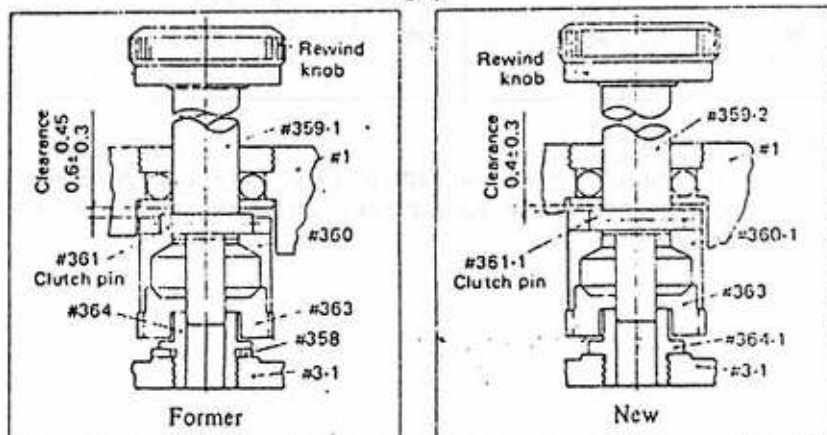
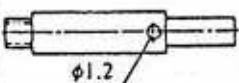
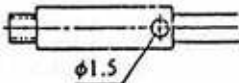
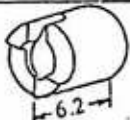
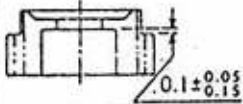
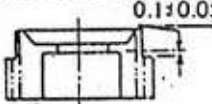


Fig. 2

SOLUTION

To prevent the above from recurring in the future, the accumulation of deviations in tolerances has been decreased. The diameter of the clutch pin has been enlarged, and other associated parts have likewise been modified (see Parts Change Table). In like manner, P/N 364 has been modified, and P/N 358 has altogether been discontinued.

PARTS CHANGE TABLE

Description	Former		New		Q'ty	Sub-ass'y No.	T/S	Remarks
	P/N	Figure	P/N	Figure				
Rewind shaft	359-1		359-2		1	E-13-1	○△	Modified
Coupling clutch	360		360-1		1	E-12-1	△	Modified
Clutch pin	361		361-1		1	E-13-1	○△	Modified
Rewind shaft washer	358				1			No longer used
Rewind gear	363		363-1		1	E-12-1	△	Modified
Rewind gear shaft	364		364-1		1		○	Modified

SERVICING INFORMATION

When servicing is required, be sure to replace E-12, E-13 and P/N 364 all at the same time. The difference between new parts and former ones can be determined by measuring the diameter of Clutch Pin P/N 361.

Nikon

TECHNICAL INFORMATION

Product Name: Nikonos III(9F3B)

Ref. No. N-770028

Modified From: September 1977

Date: Oct. 24, 1977

Subject: Viewfinder Lens(G1) Falling Off

BACKGROUND INFORMATION

Some instances have been reported that the viewfinder lens(G1) of Nikonos III camera has fallen off the front part of the viewfinder. Following are the considerable causes for the trouble.

- 1) Air pressure inside the camera has exceeded the atmospheric pressure when carrying Nikonos III camera at high altitudes such as in an airplane.
- 2) Grease has been excessively applied on the G1 packing.
- 3) Defective radius of viewfinder lens(G1)

To solve this trouble, modification has been performed with Nikonos III camera, effective September 1977.

DETAILS OF MODIFICATION

To secure the G1 lens in place, new Finder Housing(P/N 7) has been thinned by 0.5mm than old part, although part No. remains unchanged. Also, G1 packing has been thickened by 0.5mm, designated P/N 601-1. With the modification of these two parts, G1 and P/N 601-1 can contact each other in the wider area than before, thus securing G1 in place more tightly; G1 in new Nikonos III camera can endure the pressure difference of 0.76Kg/cm at maximum.

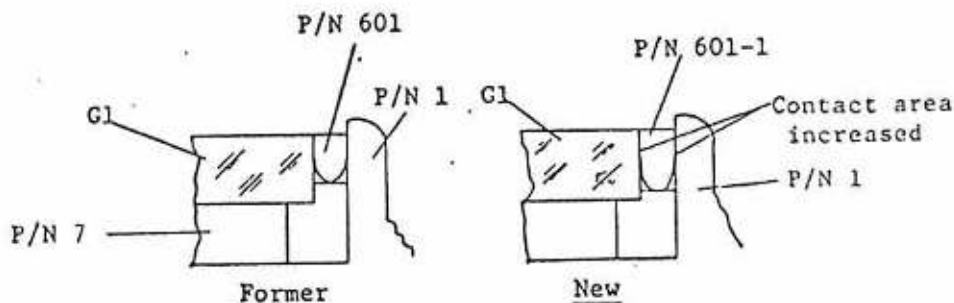


Figure 1

Parts Change Table:

Description	Part Number(P/N)		Qty	Ref Subassy	T/S	Remarks
	Former	New				
Finder Housing	7	7	1	A1	○△	Modified
G1 Packing	601	601-1	1	A	○△	Modified