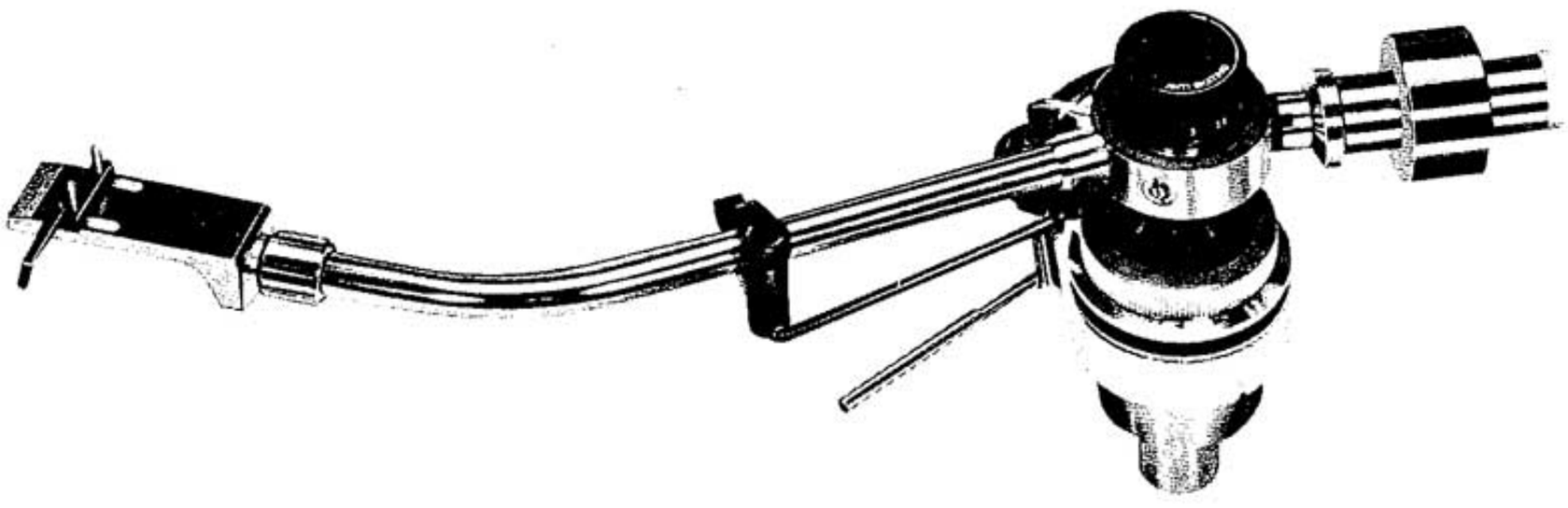
JVC

SERVICE MANUAL

MODEL UA-7045

TONEARM



No. 2392
DEC. 1976

Contents

1. Specifications

Type: T.H. (Tracing-Hold) system, static balance, new gimbal support

Overall length	: 350mm
Effective length	: 245mm
Off-set angle	: 21°40′
Tracking error	: +1°48′, -1°31′
Overhang	: 15mm
Tracking force range	: 0 — 3g (0.1g direct reading)
Weight range (including shell)	: 12 — 32g
Height range	: 40 — 60mm
Weight	: Approx. 610g

Facilities:
1. Chucking lock head shell connector
2. Helicoid type arm elevating system
3. Forged head shell
4. Oil-damped arm elevator
5. Anti-skating system
6. Low capacitance signal cords

Design and specifications subject to change without notice.

2. Features

1. New gimbal support tonearm
The bearing system, utilizing high precision miniature radial ball bearings positioned symmetrically, permits the operational center of the bearings to be looked upon as a single point. This new structure is achieved with micron accuracy thanks to a new precision machining technique. The advantages of both one-point and gimbal support systems are combined in the UA-7045; big sensitivity and excellent trackability on the one hand and easy operability and outstanding durability on the other hand.

2. Chucking lock head shell connector
The head shell connector is double structured and the inside cylinder is tapered expanding toward the outside. As you turn the plug-in nut to insert the head shell, the inside cylinder sinks deeper into the connector and the head shell becomes secured gradually thanks to the cone-shape structure of the inside cylinder. The head shell connector thus permits the UA-7045 to combine the high tone quality of integrated type tonearms with the convenience of universal type tonearms.

3. Forged aluminum head shell
The head shell is forged from molten pure aluminum to prevent blow holes, thus completing the resonance-free design and ensuring excellent tone quality.

4. Tubular arm containing shock absorber
A light shock-absorbing material is packed inside the tonearm to prevent resonance at a certain frequency.

5. Lift point
The lift point is provided to avoid unwanted horizontal movement of the tonearm when descending and ascending. Perpendicular movement is always assured.

6. Rotary type anti-skating knob
An easy-to-operate rotary type anti-skating knob is provided on the upper side of the tonearm. Operation feeling is exactly the same as that of the iris mechanism on a camera, thus projecting that feeling of high precision.

7. Arm height fine adjustment
Arm height can be adjusted as smoothly as the zoom lens of a camera, even while listening to a record, and a height obtained which reduces the vertical tracking error to a minimum.

8. Arm rest with locking facility
Providing the arm rest with a dial type locking system increases durability and minimizes the danger of damage to the cartridge caused by accidental movement of the tonearm.

9. Easy zero balancing and tracking force adjustment
Sliding the counterweight back and forth permits you to coarse-adjust the zero balance. The fine adjustment is then easily performed by merely turning the counterweight axis. Tracking force adjustment is quite easy. Align the tracking force dial with the "0" mark, then turn the weight shaft until you obtain the tracking force you want.

10. Tubular arm of aluminum-magnesium-silicon alloy
Strength is three times that of conventional pure aluminum arms. This greatly reduces resonance.

3. Technical Comment on New Gimbal Support

(Comparison with gimbal support system previously employed)

Since the distances from each horizontal or vertical bearing to the assumed "zero" point are equal, moving the arm in the direction of the arrow imparts an equal amount of torque and turn angle to each bearing, thereby providing extremely smooth motion, with quality comparable to the one point support.

The big difference between previous gimbal support systems and the new gimbal support is that 4 bearings are incorporated in a single unit, thus producing greater precision, stability, sensitivity and reliability. With previous systems, pulling the tubular arm with force F exerts torque FS on the horizontal bearings, thus subjecting them to breakdown.

While, with the new gimbal support, S is zero and no torque is exerted on the horizontal bearing, thus ensuring freedom from breakdown.

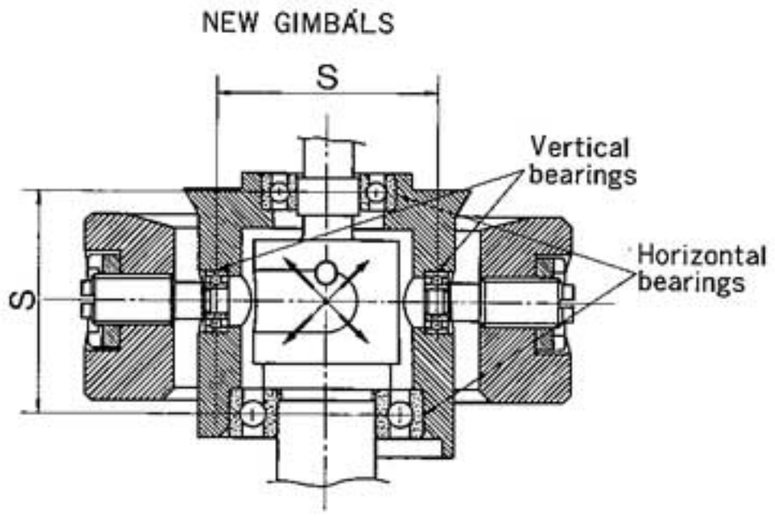


Fig. 1

4. Names of Parts

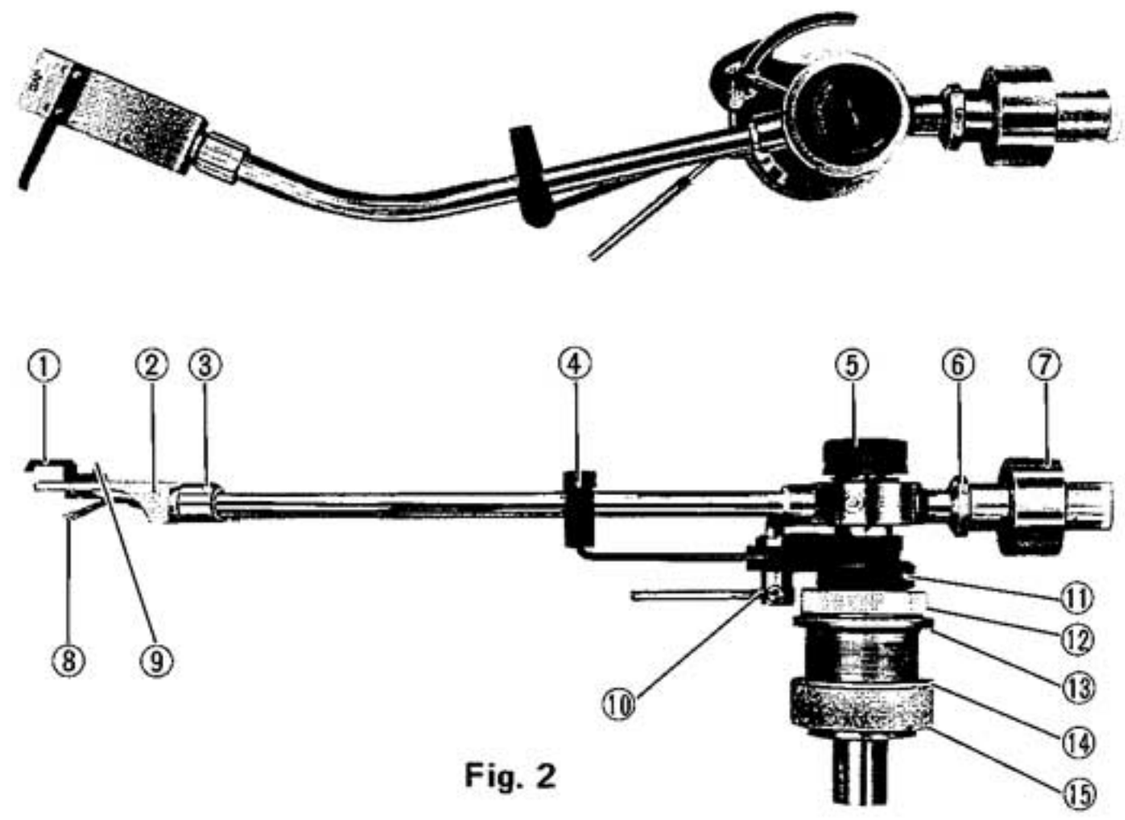


Fig. 2

1) Finger
2) Head shell
3) Plug-in nut
4) Arm rest
5) Anti-skating dial
6) Tracking force dial
7) Counterweight
8) Lead wires
9) Screw
10) Arm elevator
11) Fine adjustment knob
12) Lock ring
13) Arm base
14) Washer
15) Base nut

5. Mounting, Setting-up and Adjustment

5-(1) Tonearm mounting

Referring to the template supplied as an accessory, determine the tonearm mounting point. Be sure that the back of the counterweight or head shell does not touch the player dust cover at any point in tonearm travel.

5-(2) Arm base mounting

Loosen the lock ring by turning counterclockwise, remove the arm base from the tonearm, then secure the arm base to the tonearm board as shown in Fig. 3. Be sure that the pin inside the arm base is positioned to the rear.

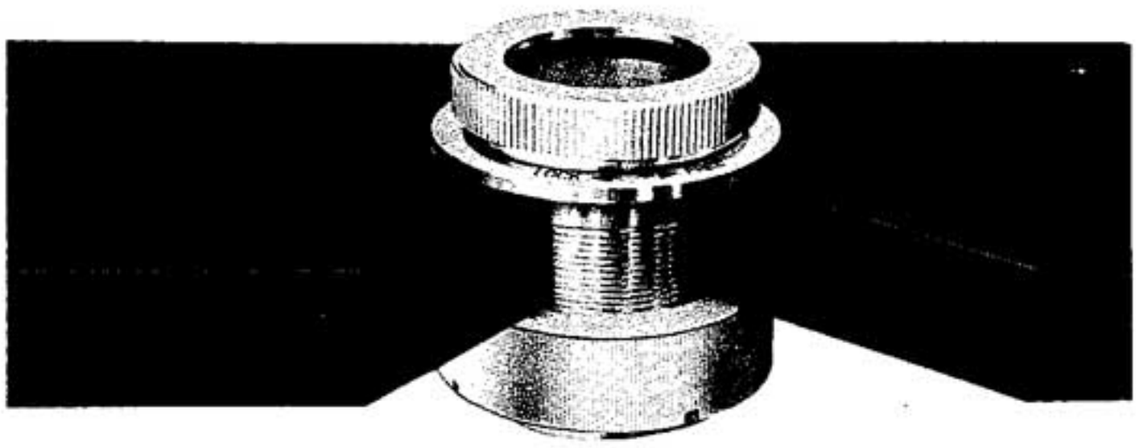
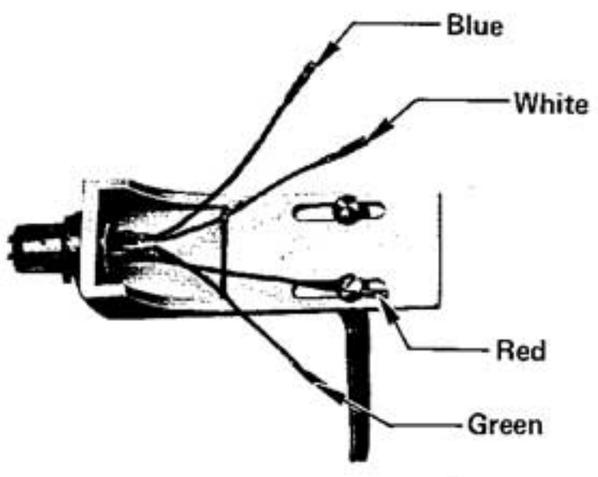


Fig. 3

5-(3) Cartridge mounting

The head shell is equipped with socket type lead wires, which are connected to the appropriate cartridge terminals.



Red wire . . . . . to R+
Green wire . . . . to R–
White wire . . . . . to L+
Blue wire . . . . . to L–

Fig. 4

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5-(4) Tonearm setting-up

1) Tonearm height adjustment (Fig. 5)
   Set the fine adjustment knob to "0", then mount the tonearm on the arm base. With the tonearm supported by the arm rest, adjust the height of the tonearm until the clearance between the stylus tip and record surface is 0 – 3mm. Turn the lock ring clockwise to secure the tonearm, then perform precision adjustment using the fine adjustment knob.
2) Connect the signal cords to the proper terminals from the back of the tonearm boards. Connect the pin plugs to the PHONO terminals on the amplifier, red to (R) and white to (L). Connect the ground wire to the ground terminal on the amplifier.

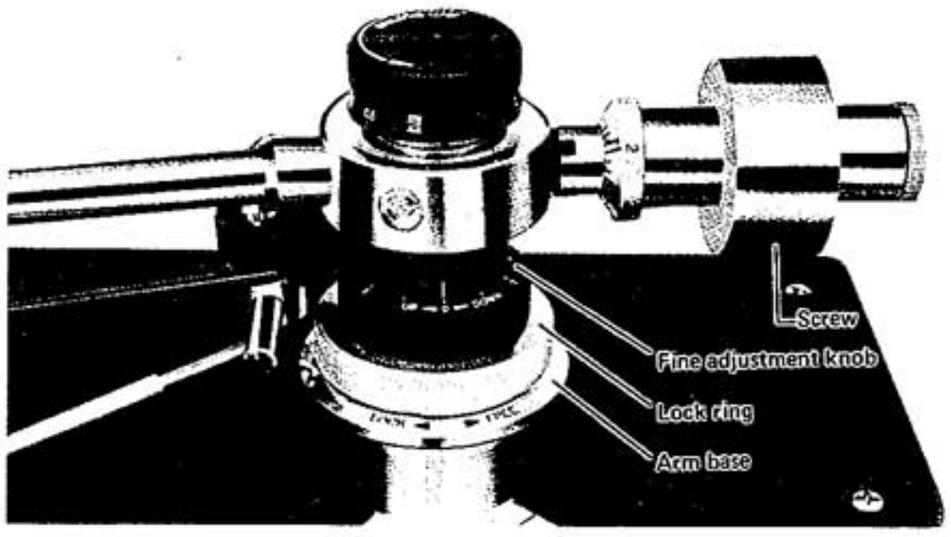


Fig. 5

5-(5) Zero balance and tracking force adjustment

1) Zero balance
   Zero balance can be obtained in two ways:
   a) Slide the counterweight back and forth, then set at approximately the middle of the weight shaft. Adjust for zero balance by turning the weight shaft clockwise or counterclockwise. (See Fig. 6.)
   b) Keep the weight shaft 10 – 15mm away from the shaft holder, then sliding the counterweight back and forth until zero balance is obtained.
2) Tracking force adjustment (See Fig. 7.)
   After zero balance is obtained, align the "0" mark on the tracking force dial with the index line. Turning the weight shaft counterclockwise, as viewed from the front of the tonearm, increases tracking force in 0.1g increments. One complete turn of the shaft increases the tracking force by 3g.
3) The counterweight and shaft have been adjusted to slide smoothly. Adjusting the screw with the screwdriver, supplied as an accessory, permits you to obtain just the degree of smoothness you want.
4) No need to worry even if using an extremely heavy cartridge. In the case of a heavy cartridge, fit the sub-weight (supplied) onto the end of the weight shaft, by screwing clockwise. (See Fig. 8.)

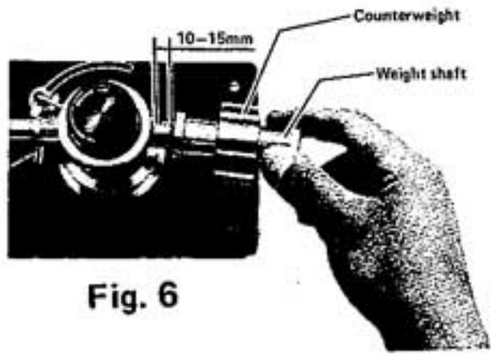


Fig. 6

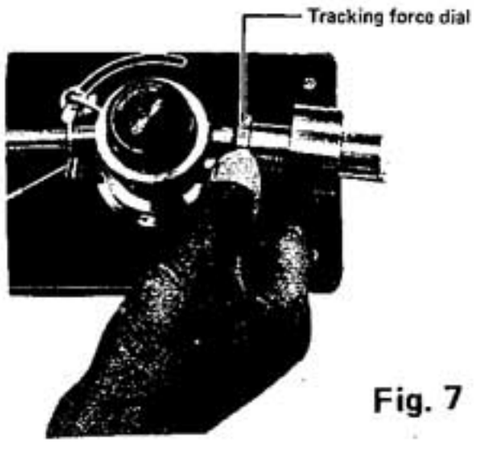


Fig. 7

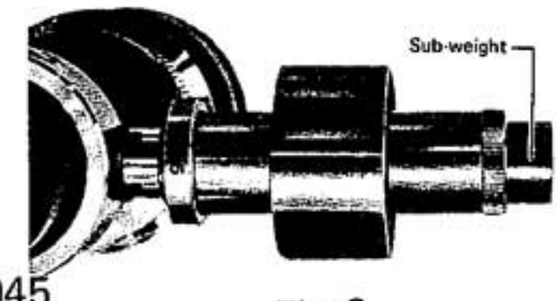


Fig. 8

5-(6) Anti-skating adjustment

The UA-7045 adopts the rotary knob type anti-skating system for easier operability. For example, if the optimum cartridge tracking force is 1g, turn the anti-skating knob in the direction of the arrow until the "1" mark on the anti-skating dial is aligned with the index line.

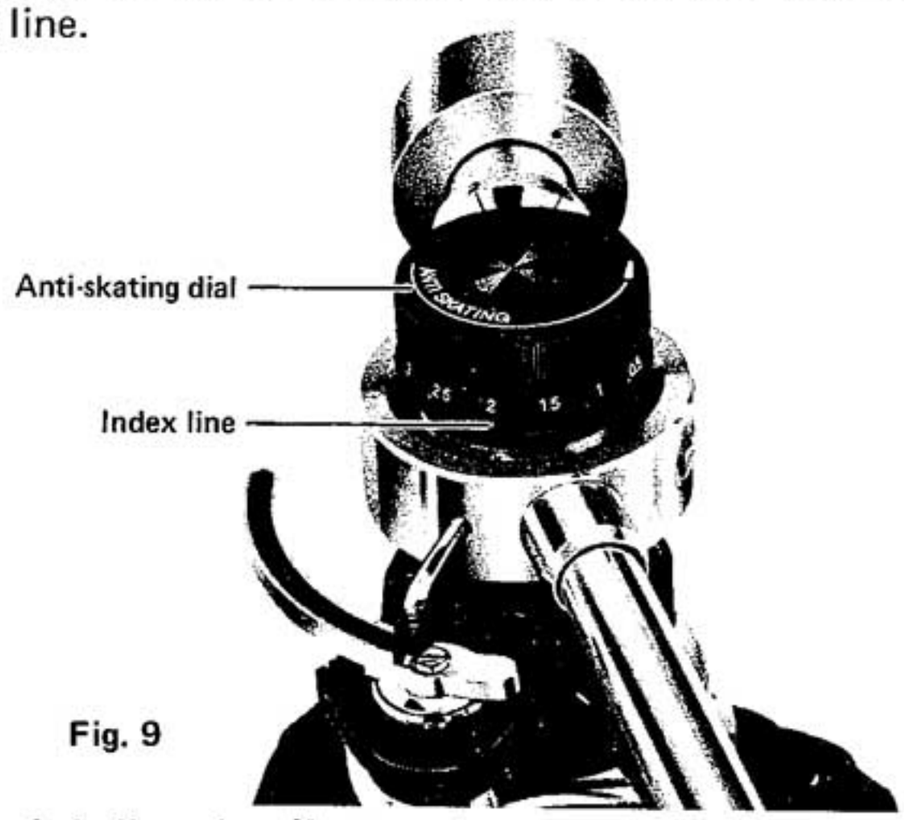


Fig. 9

5-(7) Head shell angle adjustment

If the stylus tip is not perpendicular to the surface of a record, loosen the lock screws on the lower side of the tonearm, with the small screwdriver supplied (as in Fig. 10), then adjust the head shell until it is parallel to the platter. Be sure to re-tighten the screws after the adjustment is completed. For reference purposes, measurement by eye is sufficient. The upper part of Fig. 10 shows an example of an incorrect head shell angle.

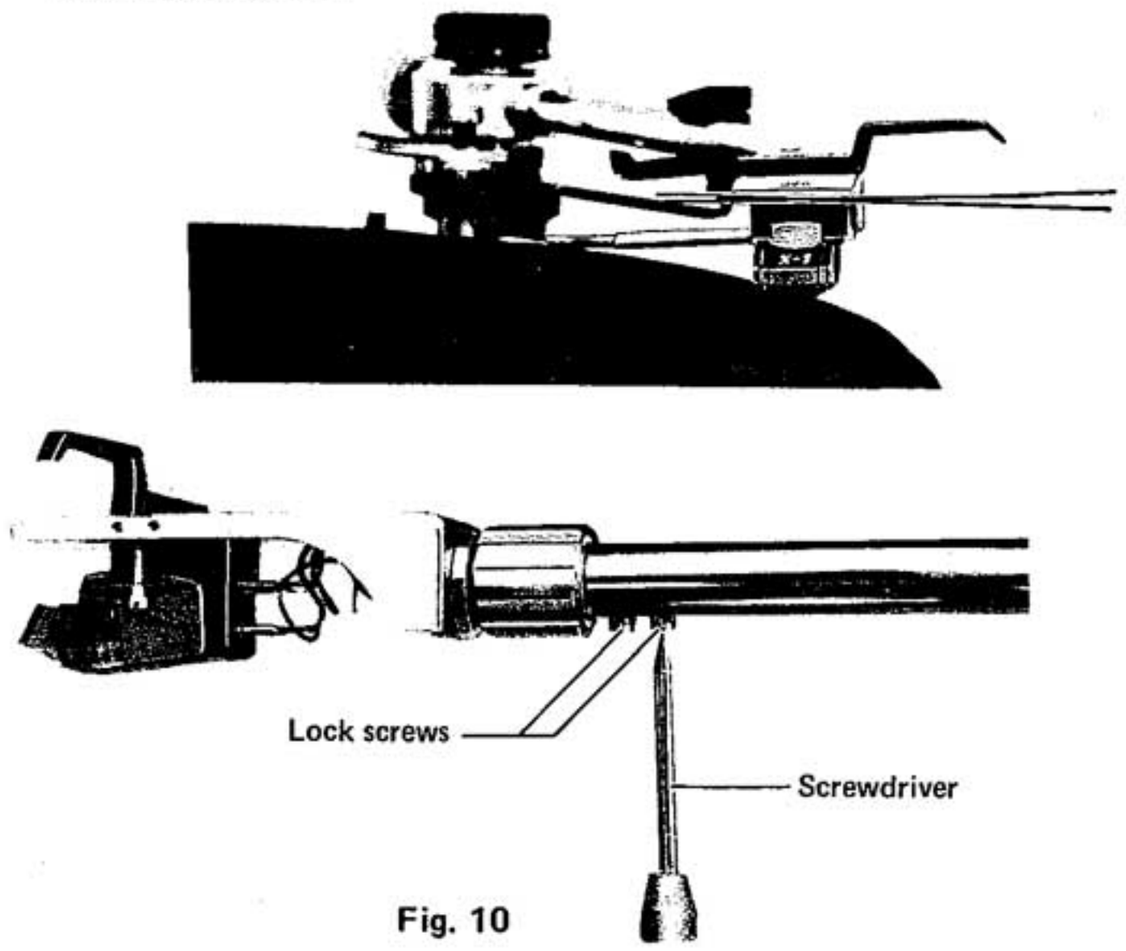


Fig. 10

5-(8) Overhang adjustment

Proper overhang is easily obtained by fitting the tonearm according to the template. Errors within 1 – 2mm are negligible from the practical point of view. To check the overhang, fit the overhang indicator (supplied) onto the turntable spindle with the arrow-shaped end pointing toward the tonearm pivot, then confirm that the stylus tip has an overhang of 15mm.

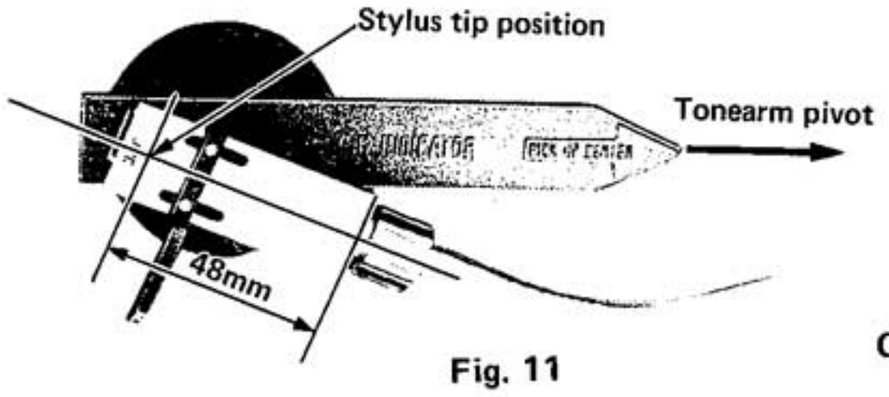


Fig. 11

Overhang; 15mm

5-(9) Arm rest

The arm rest of the UA-7045 has a lock system incorporating a spring. To prevent damage to the tonearm caused by accidental motion when not in use, turn the locking knob of the arm rest in the direction of the arrow to lock the arm. Fig. 12 shows the unlocked position of the knob.

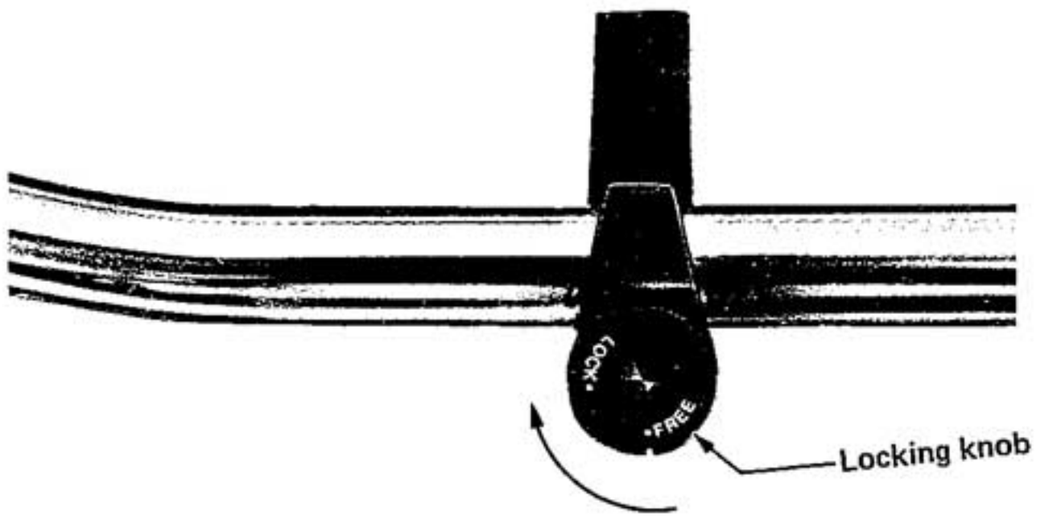
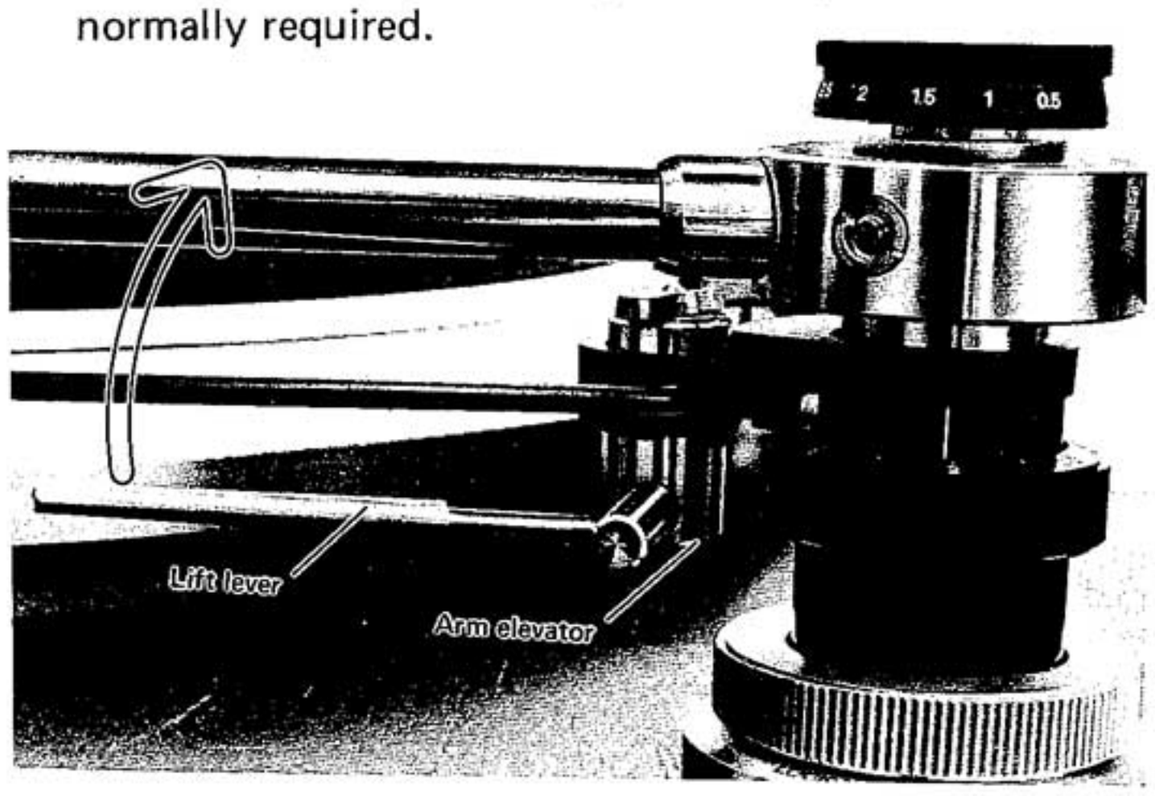


Fig. 12

5-(10) Arm elevator assembly

Raising the lift lever in the direction of the arrow elevates the tonearm.

After moving the tonearm to the desired position on the record, flip the lever down. The tonearm will gently lower and playing begins. When the record ends, lift the lever again, return and lock the tonearm to the arm rest. With some types of cartridge or head shell, the lift arm may come in contact with the lift point. If this should occur, loosen the lock screw, with the screwdriver supplied and adjust the height of the arm elevator assembly. This adjustment is not normally required.



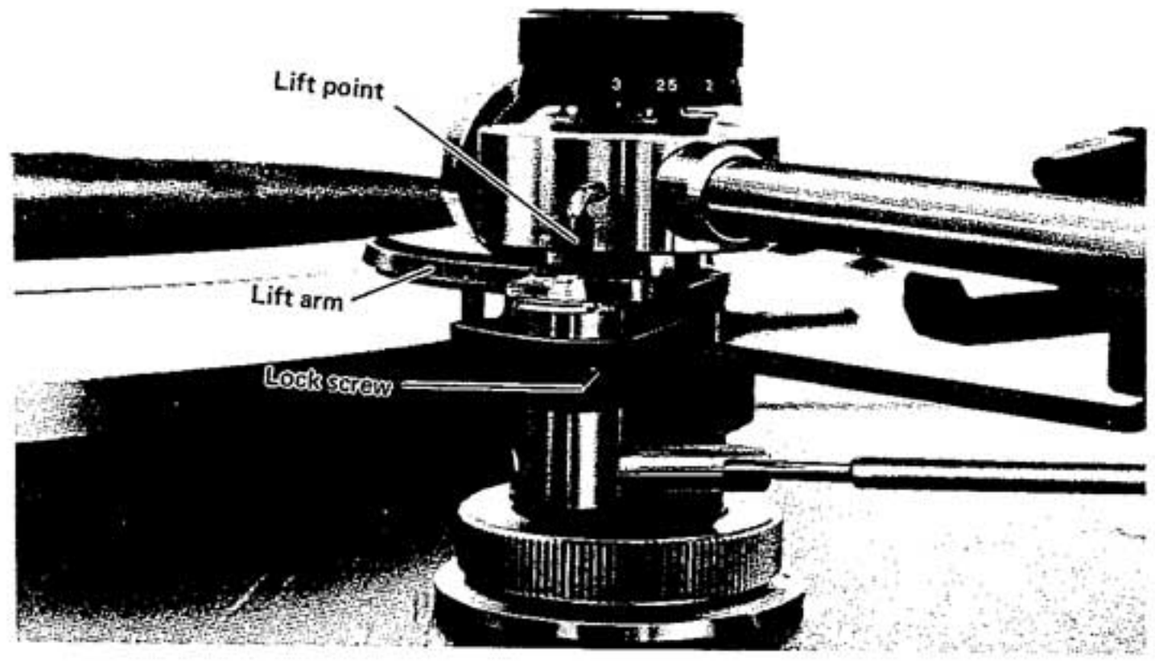


Fig. 13

6. Main Dimensions

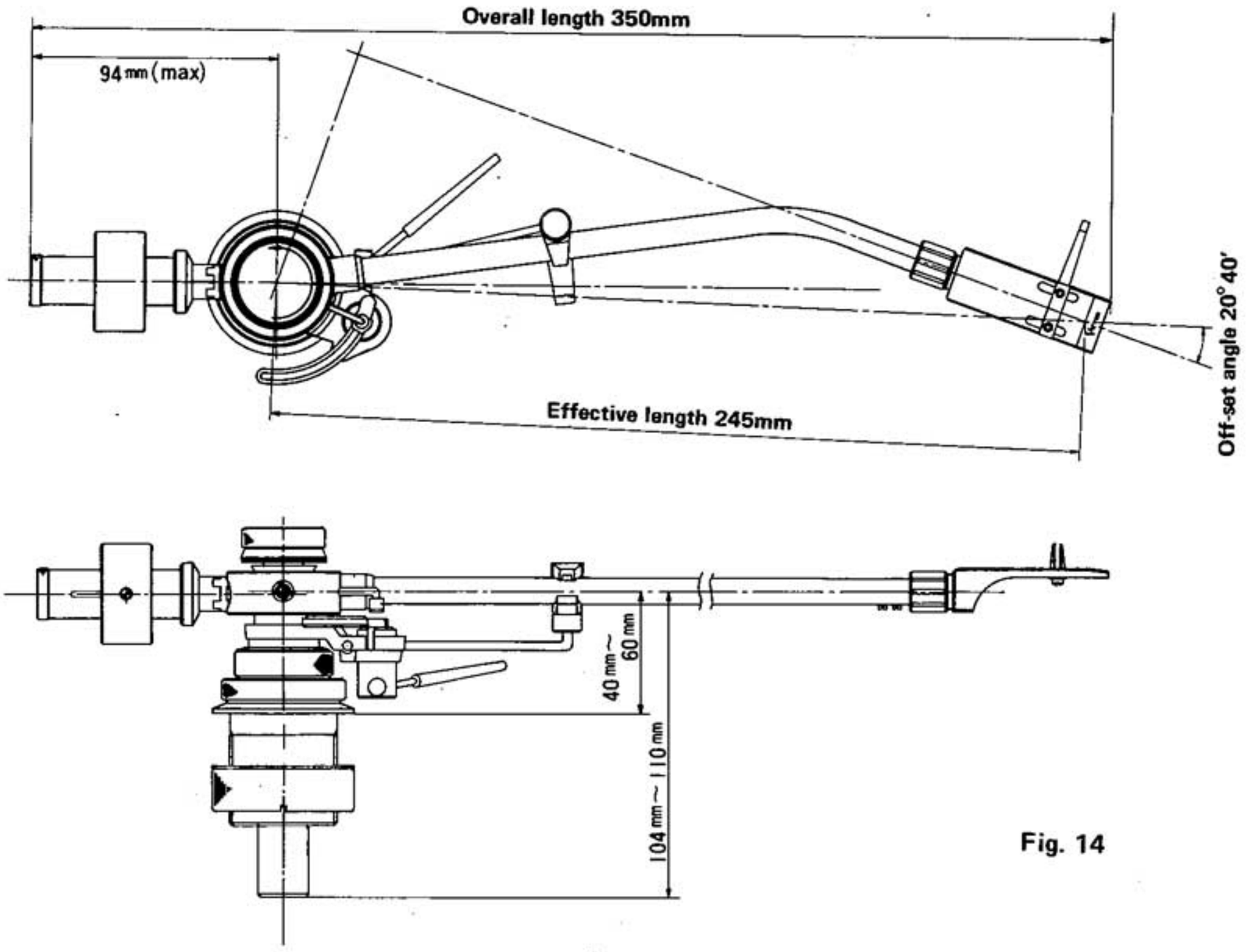


Fig. 14

7. Exploded Views and Part Numbers

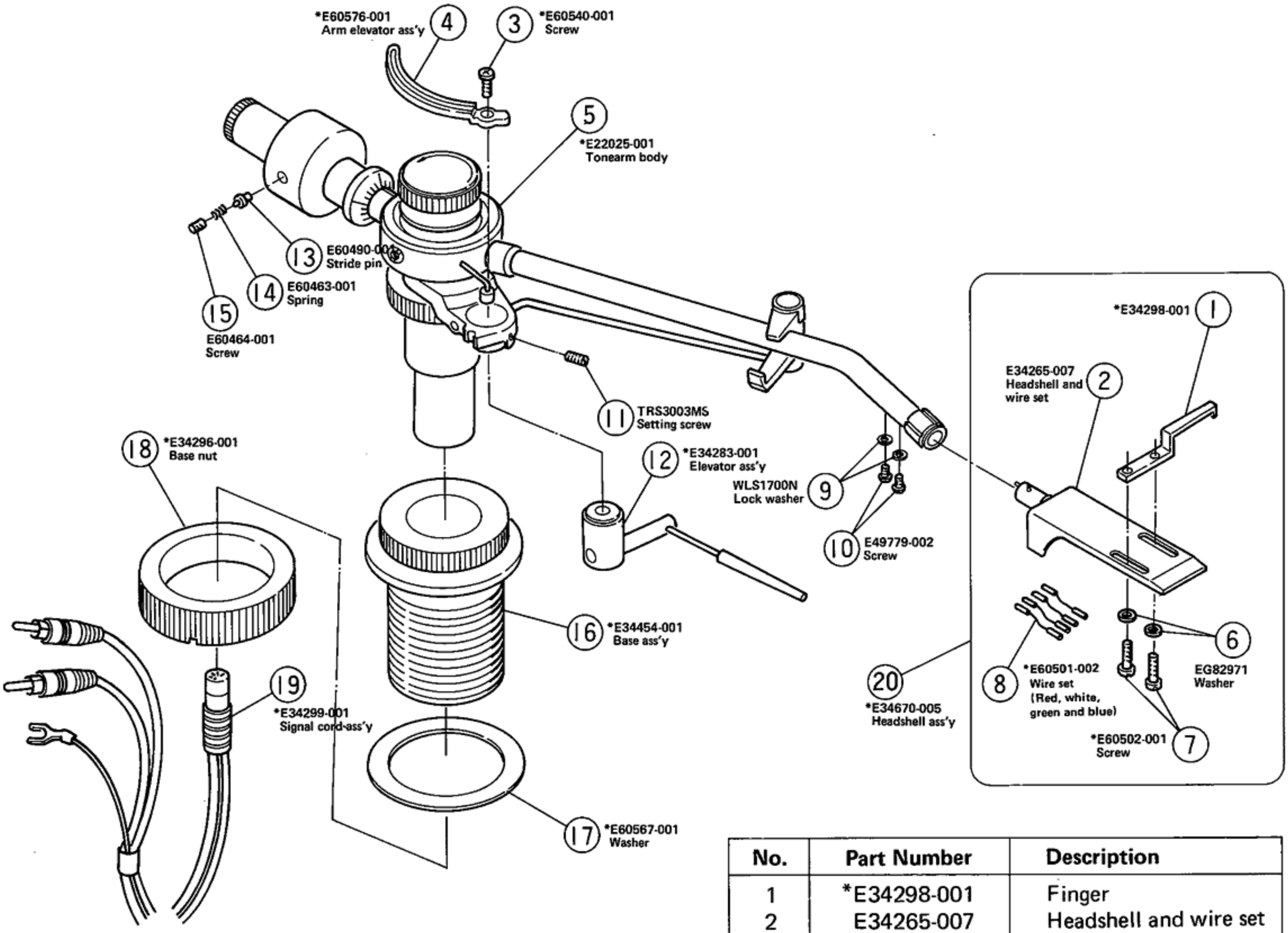


Fig. 15

No.	Part Number	Description
1	*E34298-001	Finger
2	E34265-007	Headshell and wire set
3	*E60540-001	Screw
4	*E60576-001	Arm elevator ass'y
5	*E22025-001	Tonearm body
6	EG82971	Washer
7	*E60502-001	Screw
8	*E60501-002	Wire set
9	WLS1700N	Lock washer
10	E49779-002	Screw
11	TRS3003MS	Setting screw
12	*E34283-001	Elevator ass'y
13	E60490-001	Stride pin
14	E60463-001	Spring
15	E60464-001	Screw
16	*E34454-001	Base ass'y
17	*E60567-001	Washer
18	*E34296-001	Base nut
19	*E34299-001	Signal cord ass'y
20	*E34670-005	Headshell ass'y

*New Part Number

8. Packing Materials and Accessories Part Numbers

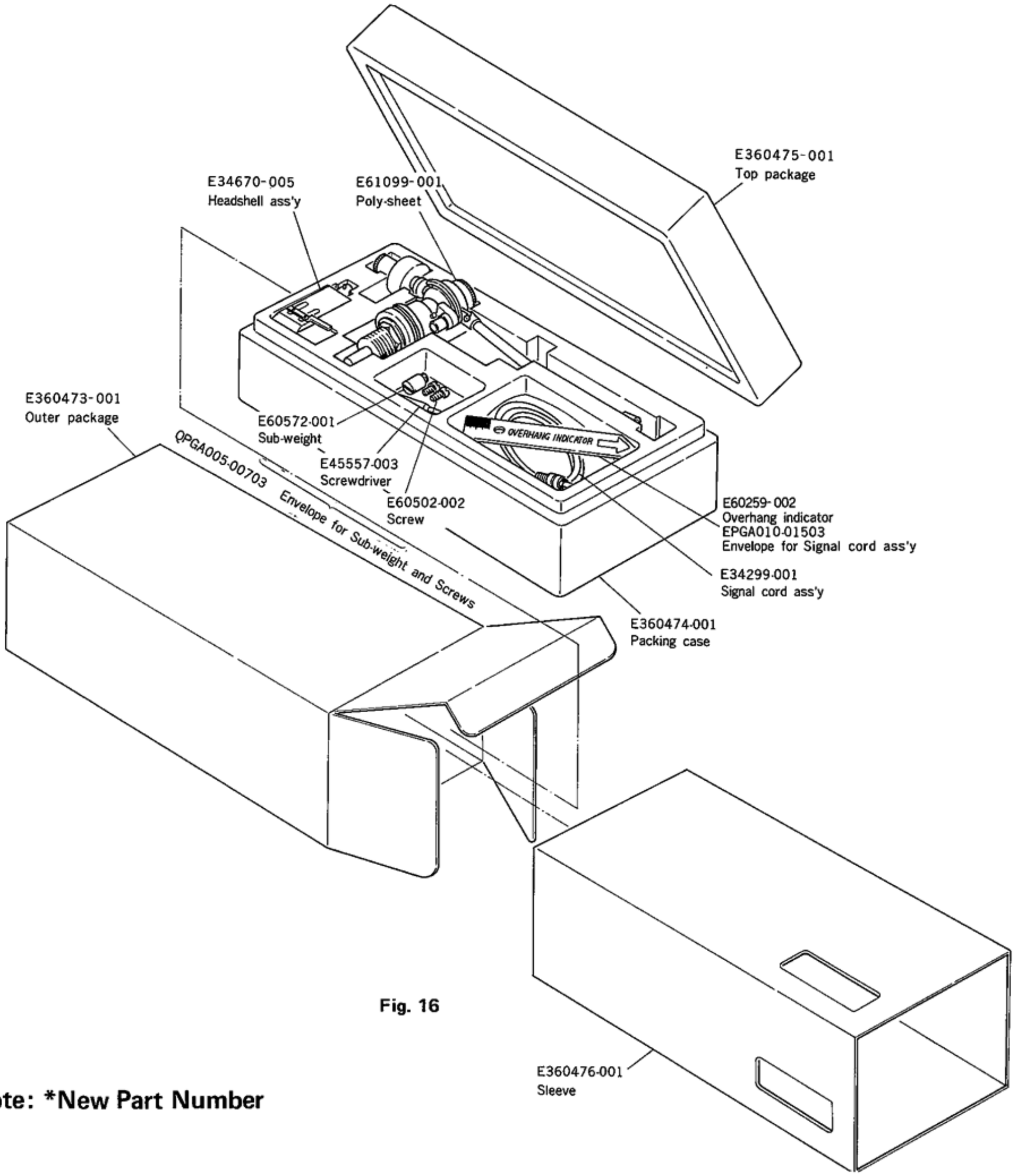


Fig. 16

Note: *New Part Number

Accessories List

Part Number	Description	Q'ty
E60259-002	Overhang indicator	1
*E60502-002	Screw	2
E45557-003	Screwdriver	1
*E60572-001	Sub-weight	1
*E34300-001	Template	1
*E30580-564A	Instruction book	1
E62201-001	Guarantee	1
E63102-010	User card	1
BS9001	Information on JVC service centers	1

*New Part Number

Warranty Card	U.S.A.	Australia	U.K.	European countries	PACEX and other countries
	BT20020C	BT20029	BT20013	Not enclosed	BT20014

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