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SME

PRECISION GRAMOPHONE EQUIPMENT

Service Manual

SERIES II & SERIES II IMPROVED

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SERIES II IMPROVED MODELS 3009 and 3009/S2. (incorporating latest design changes)

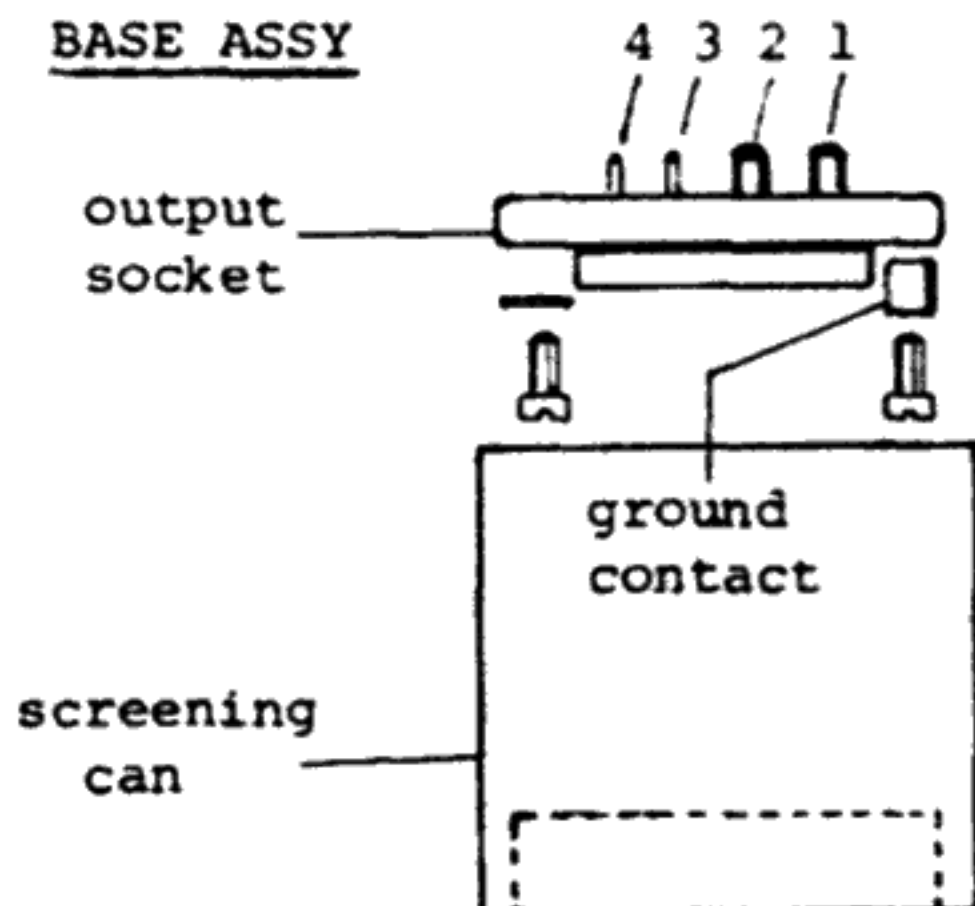
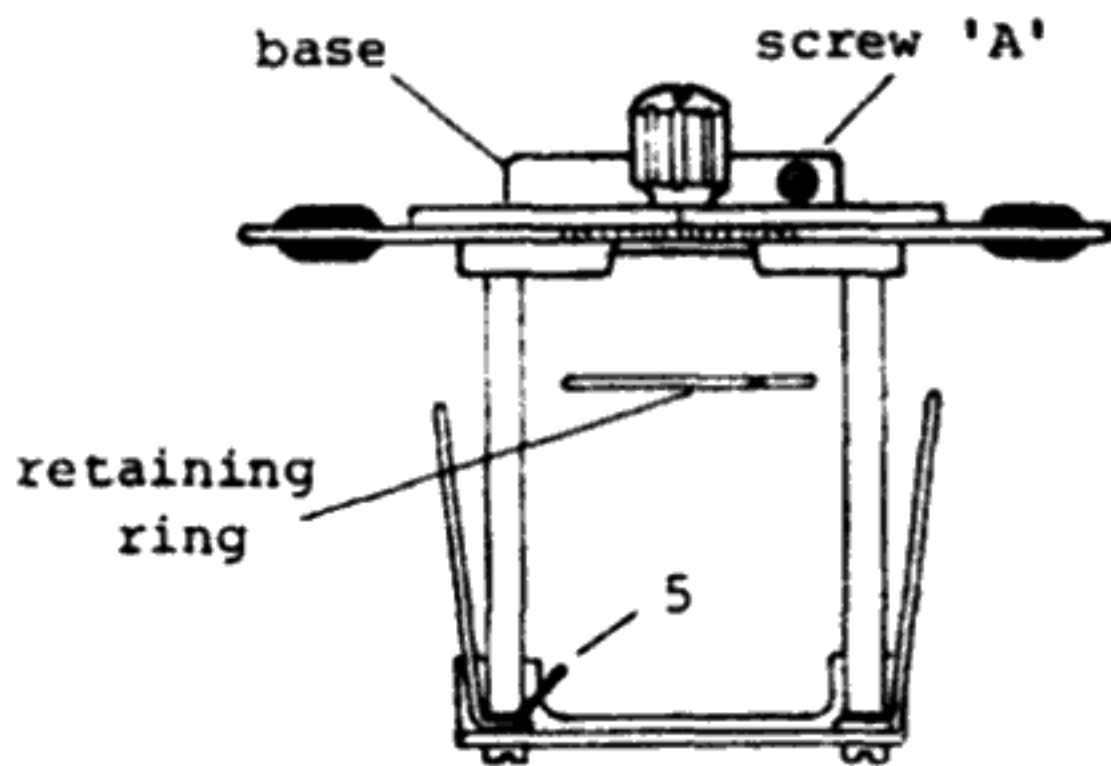
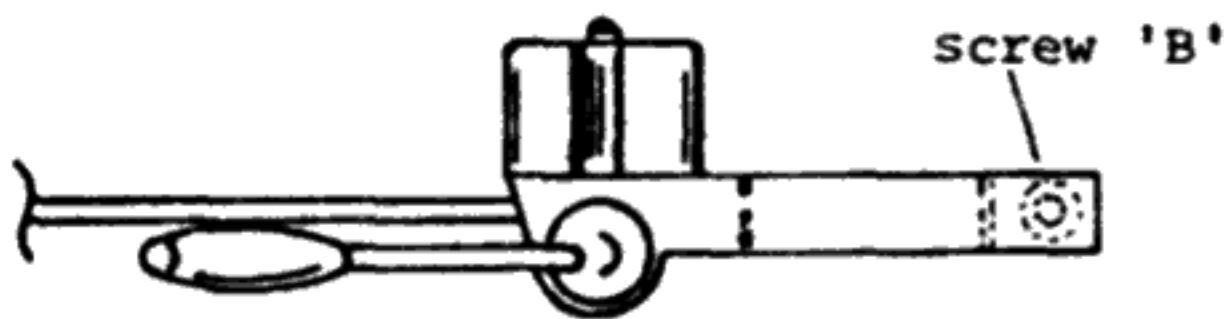
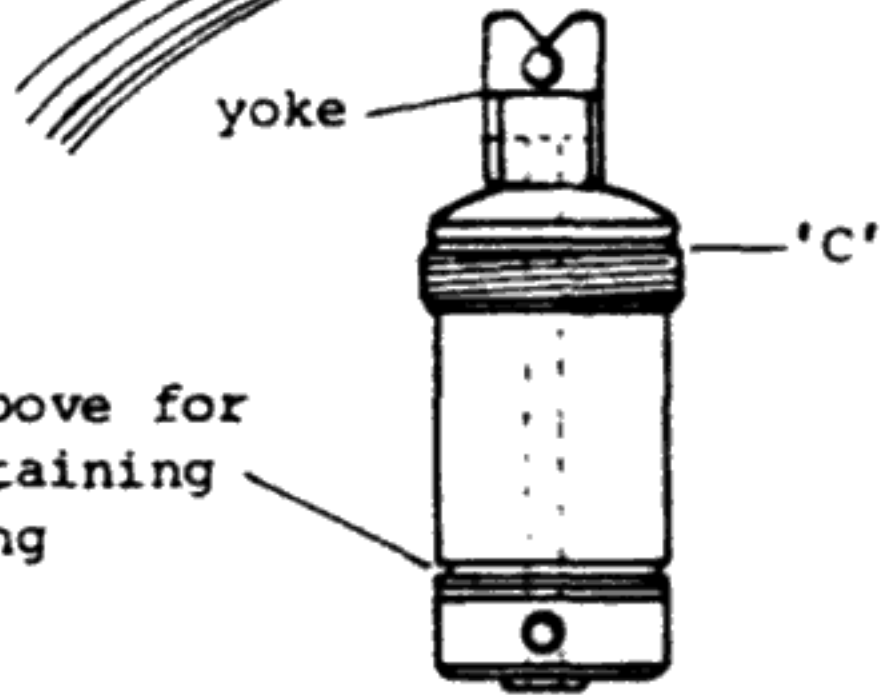
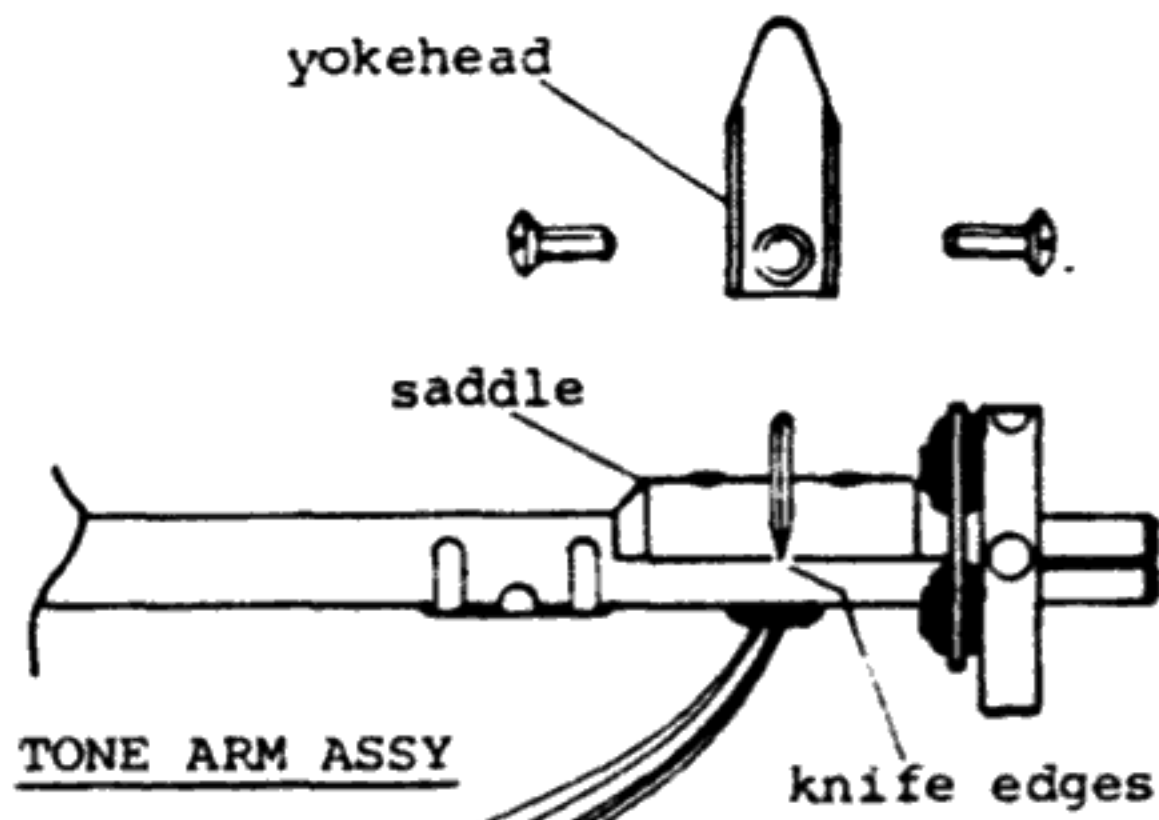
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- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Remove the retaining ring from the pillar.
- (f) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly from the base.
- (g) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from pillar.
- (h) Remove the yokehead from the new pillar assembly (2 screws).
- (i) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- (j) Re-fit the pillar assembly into the base, lock setscrew 'A' and re-fit the retaining ring.
- (k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
- (l) Re-fit the yokehead (2 screws).
- (m) Separate the wires and re-solder.

WHITE to No. 1 pin
 RED to No. 2 pin
 BLUE to No. 3 pin
 GREEN to No. 4 pin
 BLACK to ground tag No. 5

Arrange the wires to relieve torsion.

- (n) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

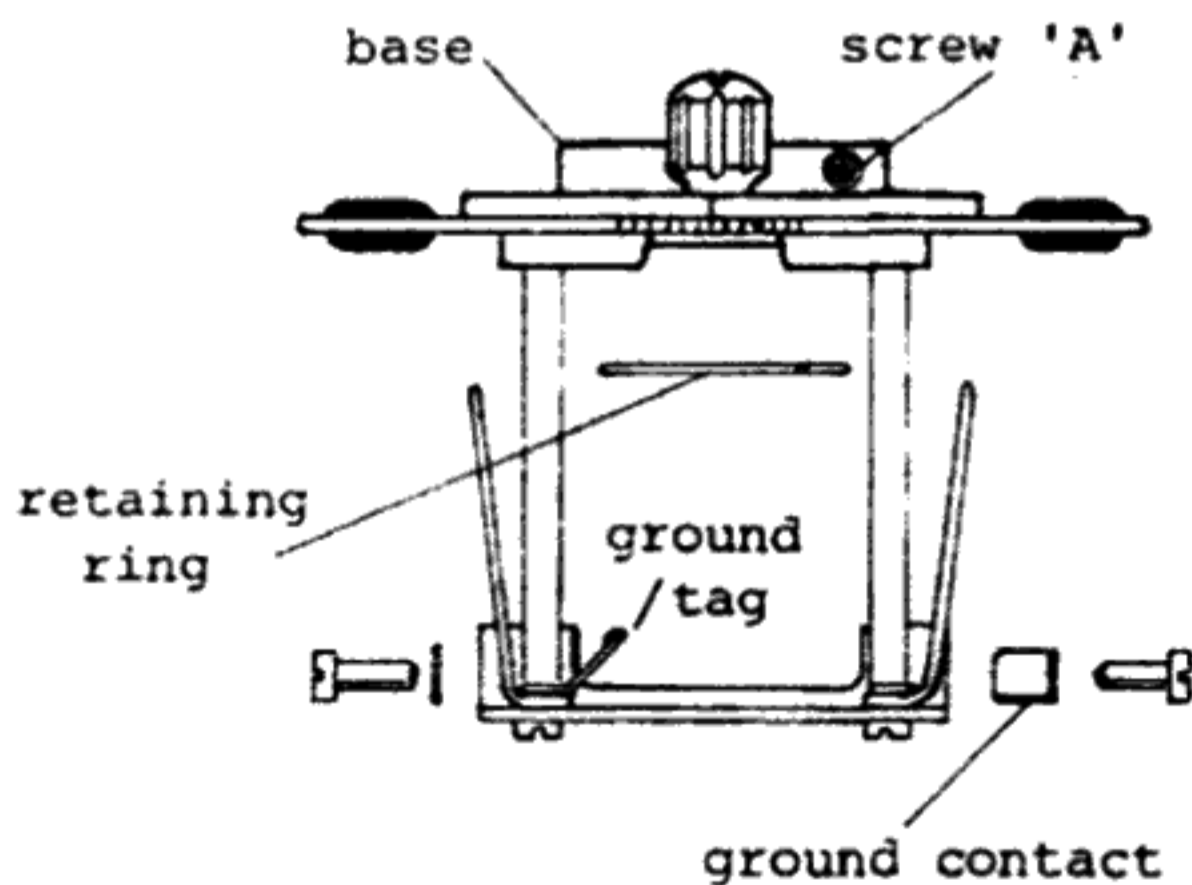
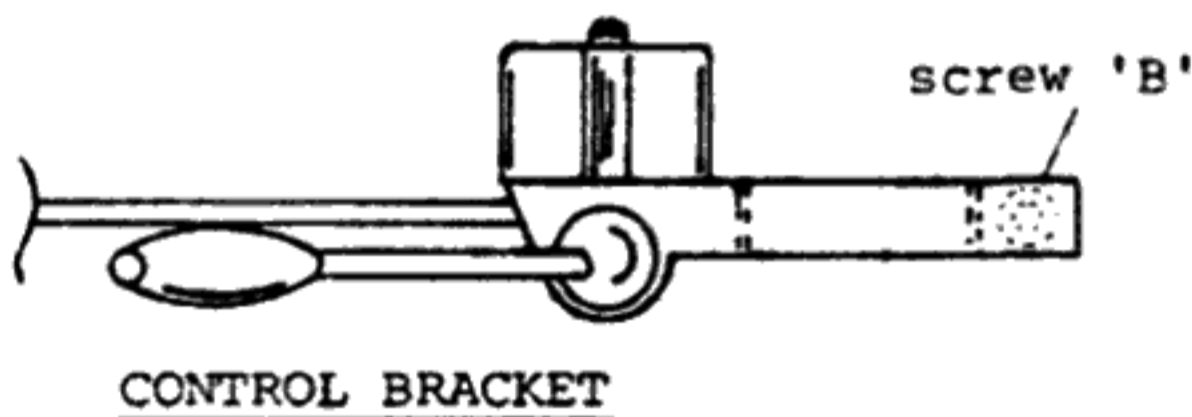
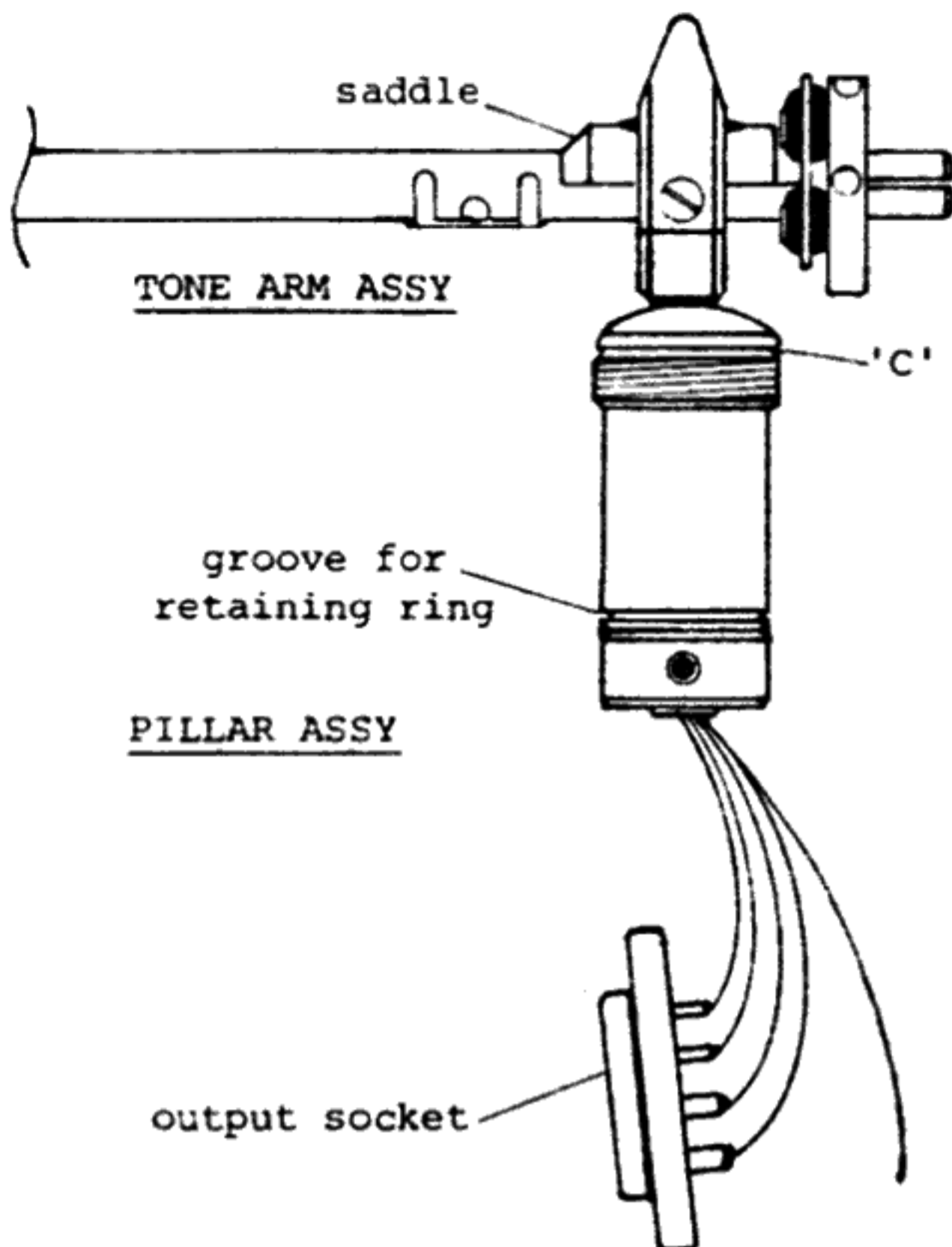
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

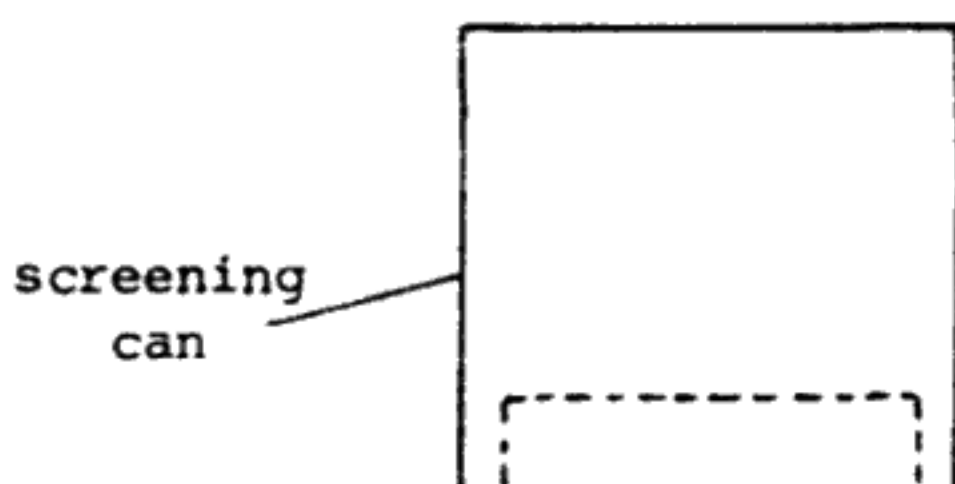
Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



BASE ASSY



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder the black wire from the ground tag.
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly together with the output socket, from the base.
- (e) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from the pillar.
- (f) Unlock capscrew 'B' of the new control bracket.
- (g) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- (h) Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring.
- (i) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- (j) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

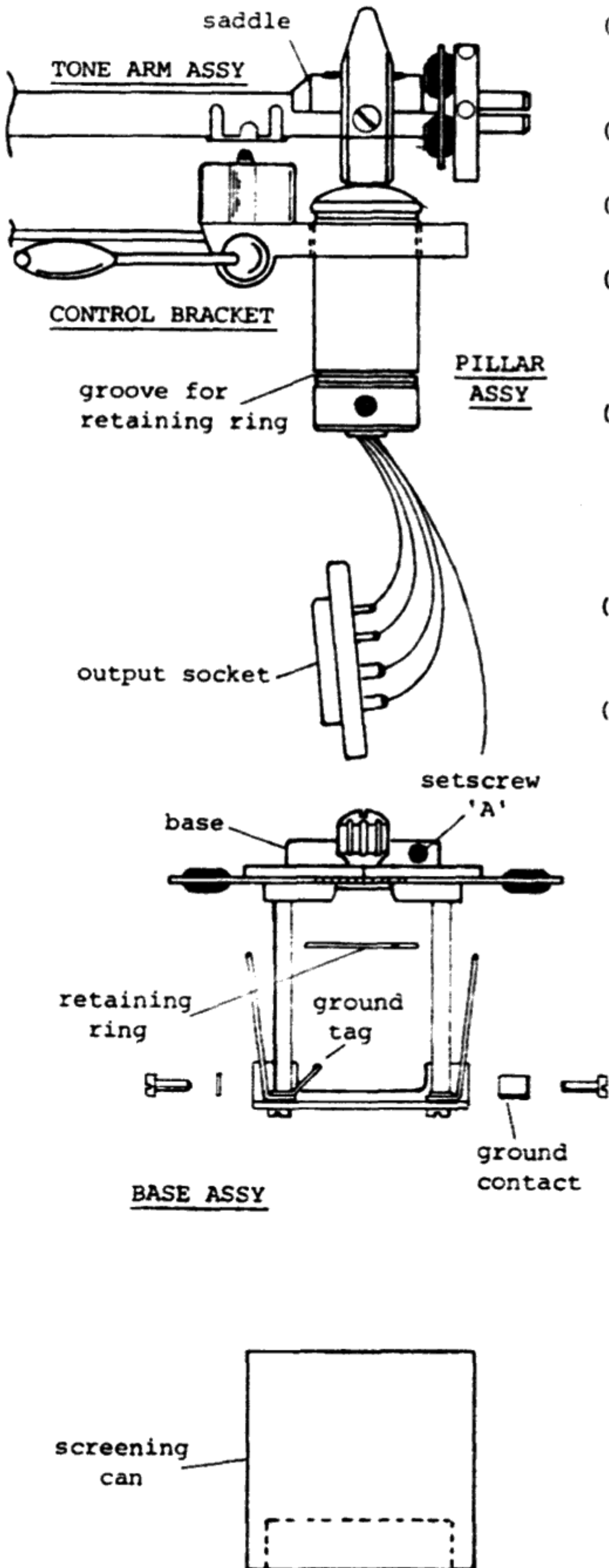
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder the black wire from the ground tag.
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly and the output socket, from the base.
- (e) Re-assemble with the new base assembly. Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring.
- (f) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- (g) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.

(a) Dismantle the output socket (2 screws) and remove the screening can.

(b) Unsolder all five wires.

(c) Remove the yokehead (2 screws).

(d) Remove the tone arm assembly.

(e) Fit the new tone arm assembly. Carefully twist the free ends of the wires together for about $\frac{1}{4}$ ". Thread them through the pillar. Nest the knife edges into the yoke.

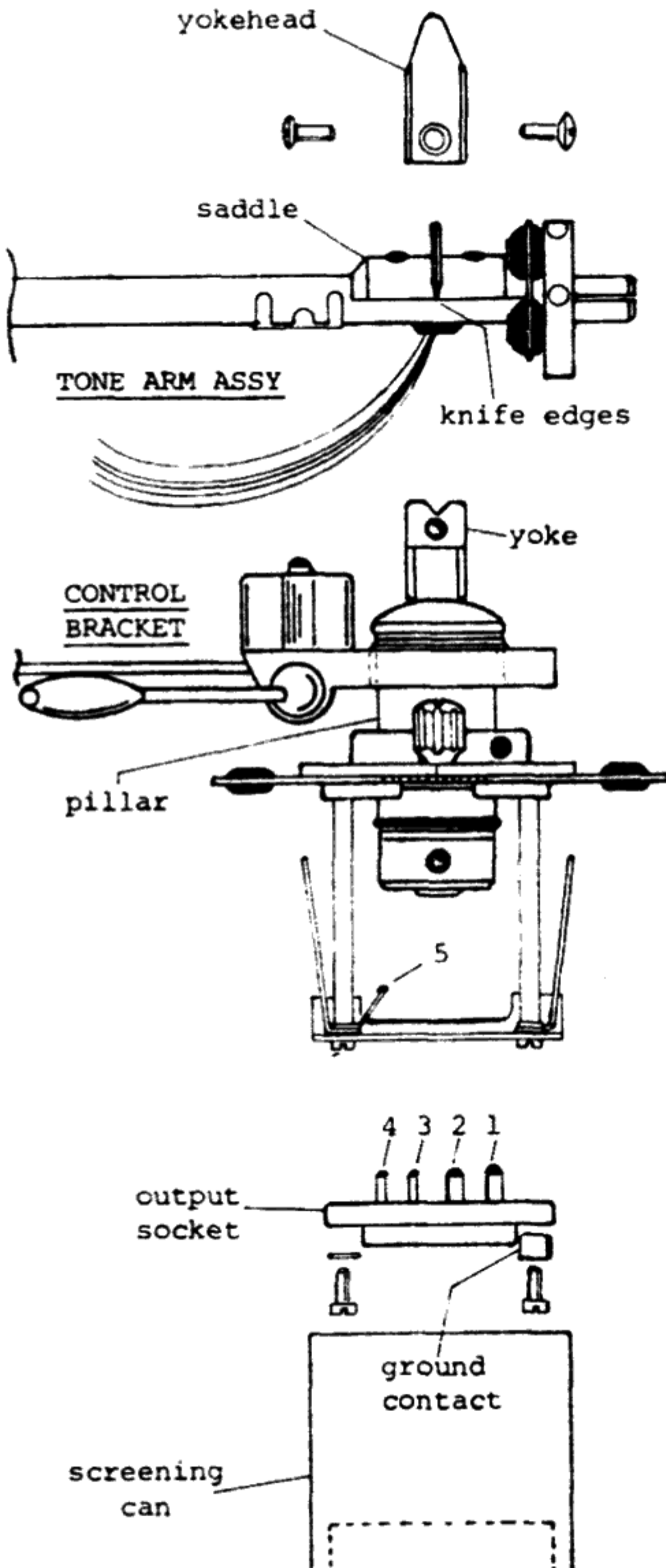
(f) Re-fit the yokehead (2 screws).

(g) Separate the wires and re-solder.

WHITE to No. 1 pin
RED to No. 2 pin
BLUE to No. 3 pin
GREEN to No. 4 pin
BLACK to ground tag No. 5

Arrange the wires to relieve torsion.

(h) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).



IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

Do not remove the screws securing the saddle. They can only be replaced at the factory.

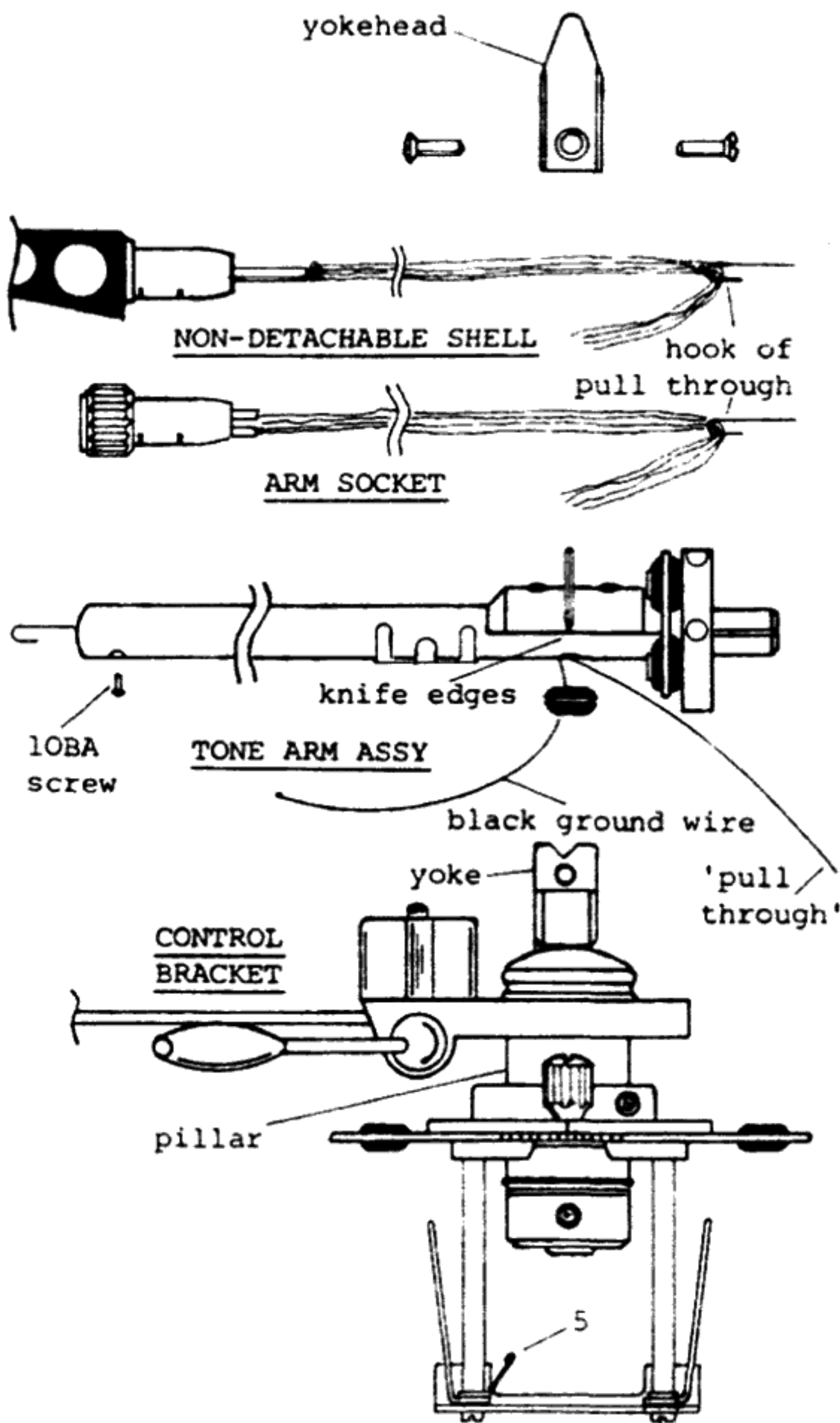
PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.

NOTE The ARM SOCKET and the NON-DETACHABLE SHELL are NOT interchangeable on the two models. The tone arms differ in their length and the balance weights vary in size. To convert one model to the other, the complete tone arm assembly must be changed.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Remove the 10 BA screw retaining the arm socket or the non-detachable shell.
- (f) Remove the arm socket or non-detachable shell. Ensure the black ground wire is not carried into the tone arm, when the four wires are withdrawn.
- (g) Remove the rubber grommet from the tone arm below the saddle.
- (h) Make a 'pull through' from a suitable gauge of wire approx. 12" in length. Pass it through the tone arm from the grommet hole.
- (i) Hook the wires of the arm socket or non-detachable shell, about 1½" from the end. Draw the wires through the tone arm. Take care not to hook and break the black ground wire, as this can only be replaced at the factory.
- (j) Pass the five wires through the rubber grommet and re-fit into the tone arm.
- (k) Carefully twist the free ends of the wires together for about ¼". Thread them through the pillar. Nest the knife edges into the yoke.
- (l) Re-fit the yokehead (2 screws).
- (m) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
 Arrange the wires to relieve torsion.
- (n) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

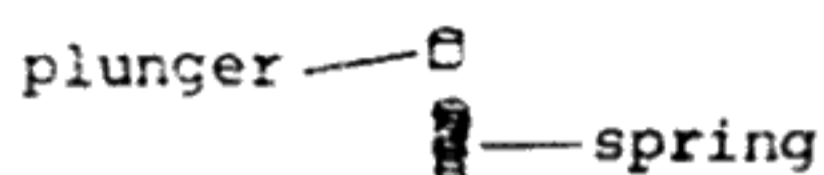
Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



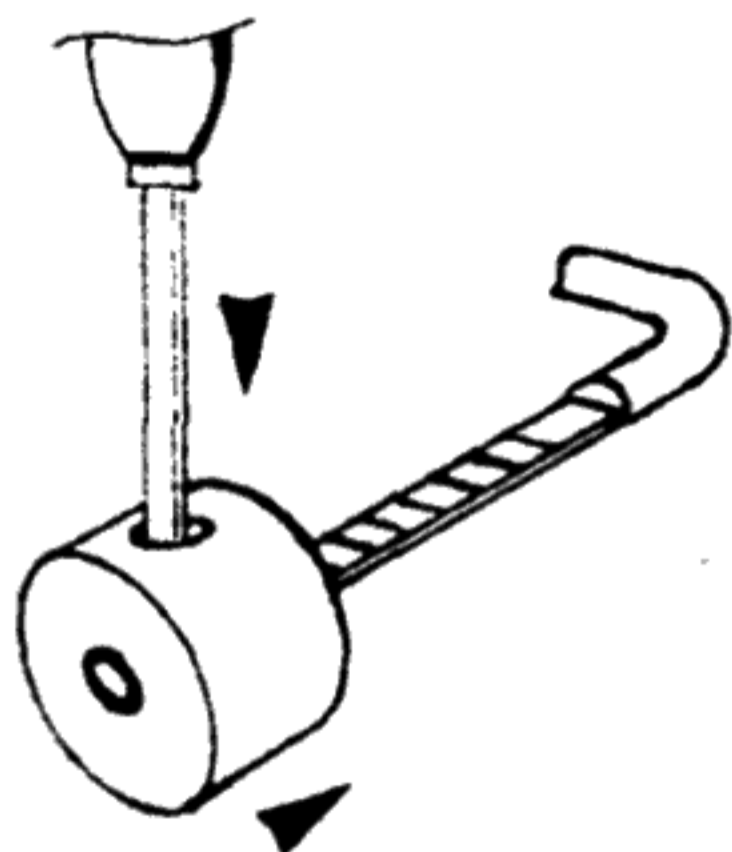
To remove the rider weight, rotate it 180° so that the hole is at the top and withdraw from the wayrod. Place a finger over the hole to stop the plunger and spring from flying out.



1. Insert the spring and plunger.



2. Compress the spring fully using a small screwdriver or similar rod.

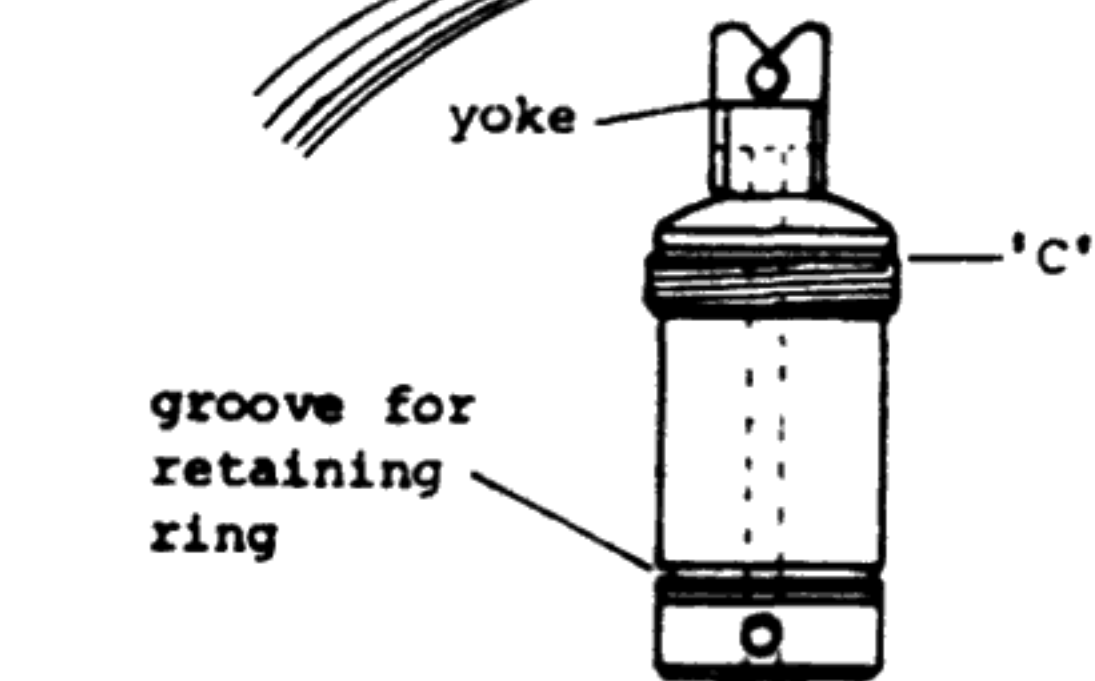
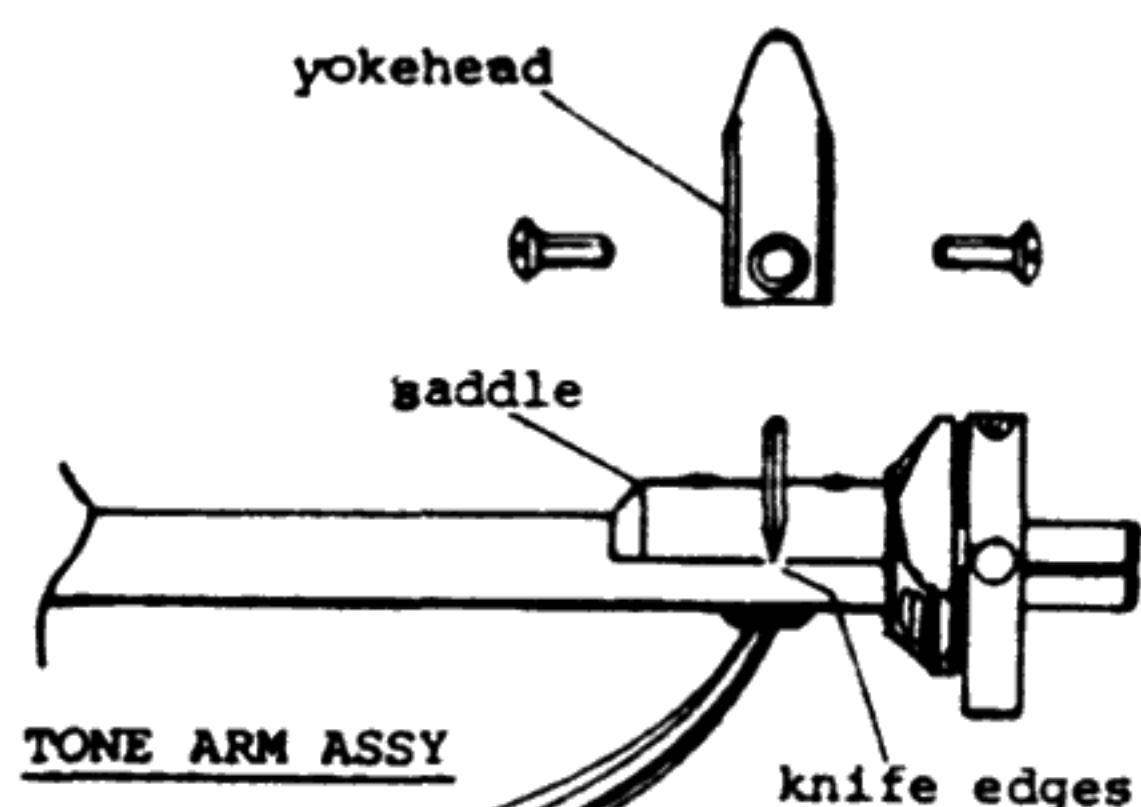


3. Enter the wayrod up to the screwdriver.

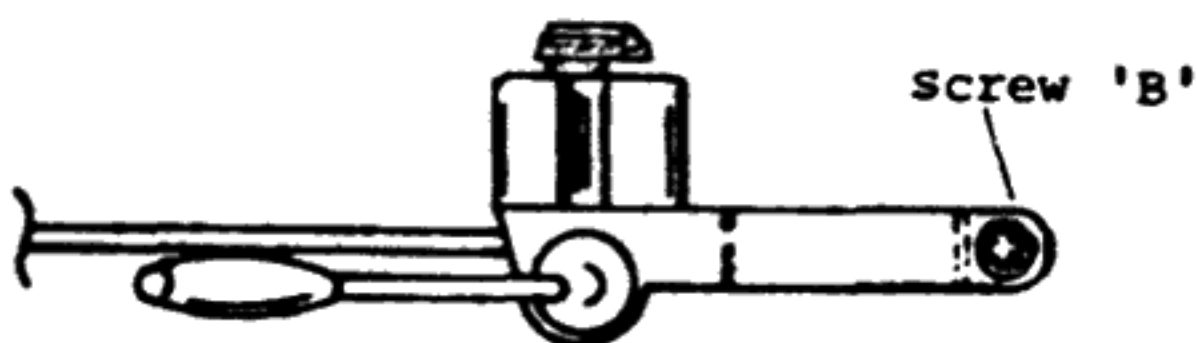


4. Maintain pressure on the rider weight whilst withdrawing the screwdriver so that the wayrod passes over the plunger.

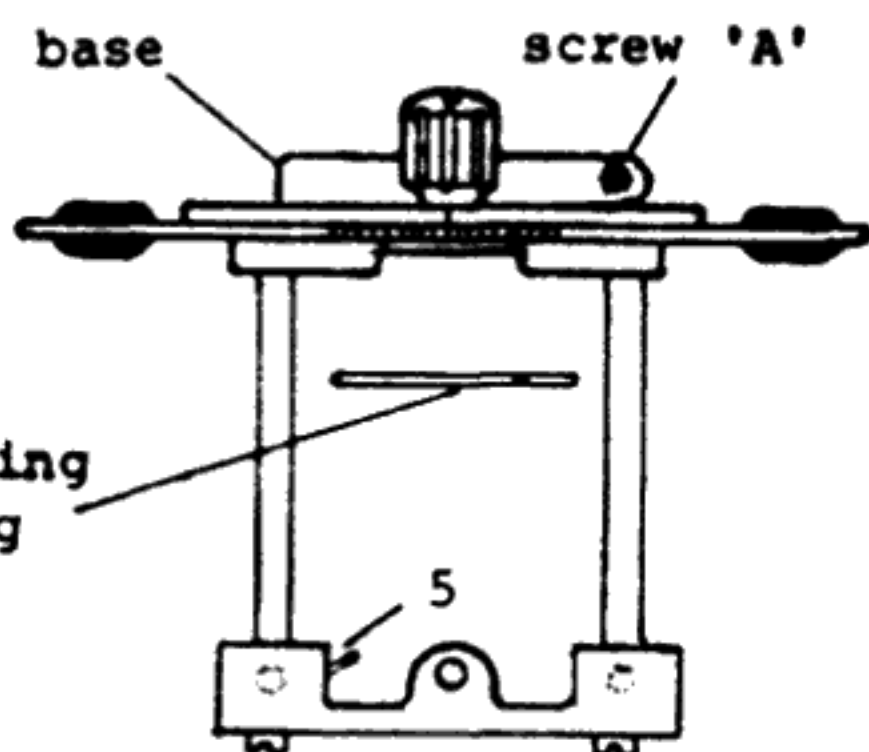
5. Rotate the rider weight 180° so that the hole is underneath and that the plunger engages the flat on the wayrod.



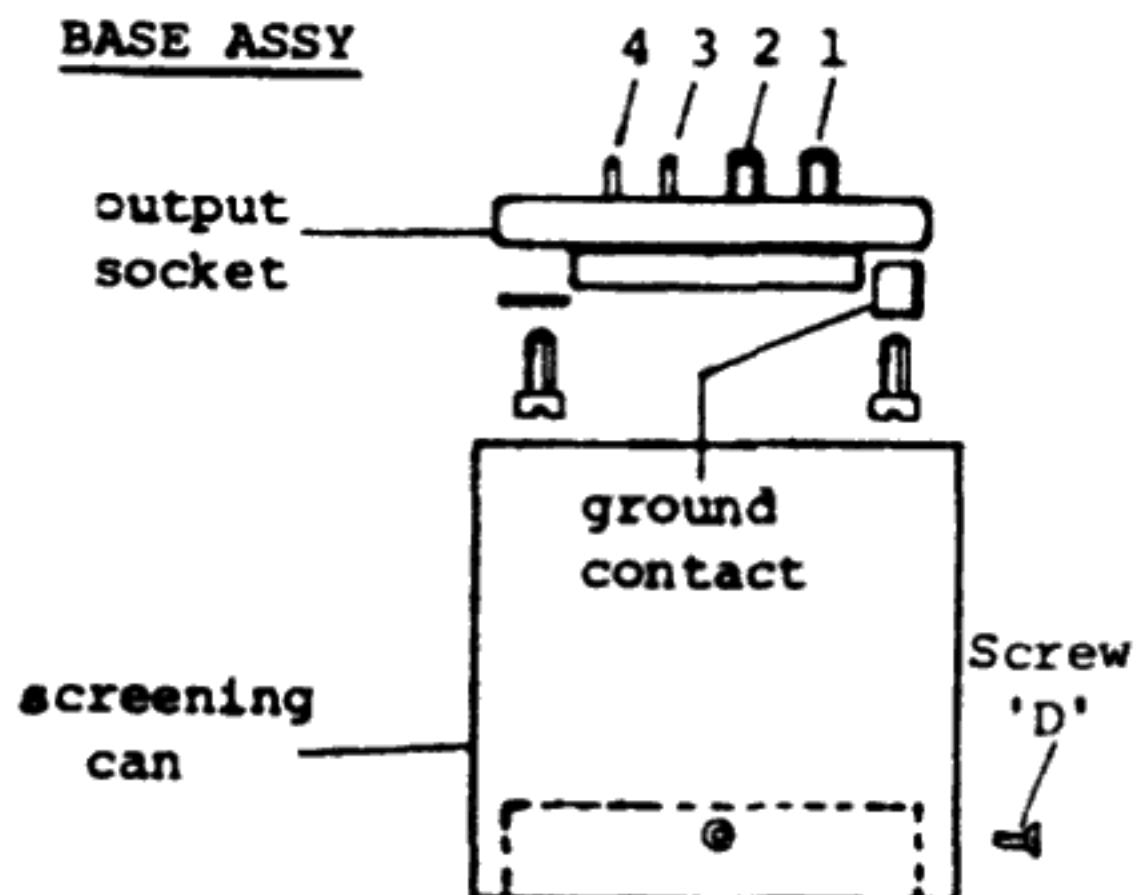
PILLAR ASSY



CONTROL BRACKET



BASE ASSY



- a) Dismantle the output socket (2 screws) and remove the screening can (screw 'D')
- b) Unsolder all five wires.
- c) Remove the yokehead (2 screws).
- d) Remove the tone arm assembly.
- e) Remove the retaining ring from the pillar.
- f) Unlock capscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly from the base.
- g) Unlock capscrew 'B' (1/16" A/F Allen key) and unscrew the control bracket from pillar.
- h) Remove the yokehead from the new pillar assembly (2 screws).
- i) Screw the pillar into the control bracket leaving the chamfer 'C' and one complete turn of the thread above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- j) Re-fit the pillar assembly into the base, lock capscrew 'A' and re-fit the retaining ring.
- k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
- l) Re-fit the yokehead (2 screws).
- m) Separate the wires and re-solder.

- WHITE to No. 1 pin
- RED to No. 2 pin
- BLUE to No. 3 pin
- GREEN to No. 4 pin
- BLACK to ground tag No. 5

Arrange the wires to relieve torsion.

- n) Slide on screening can, secure screw 'D' and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

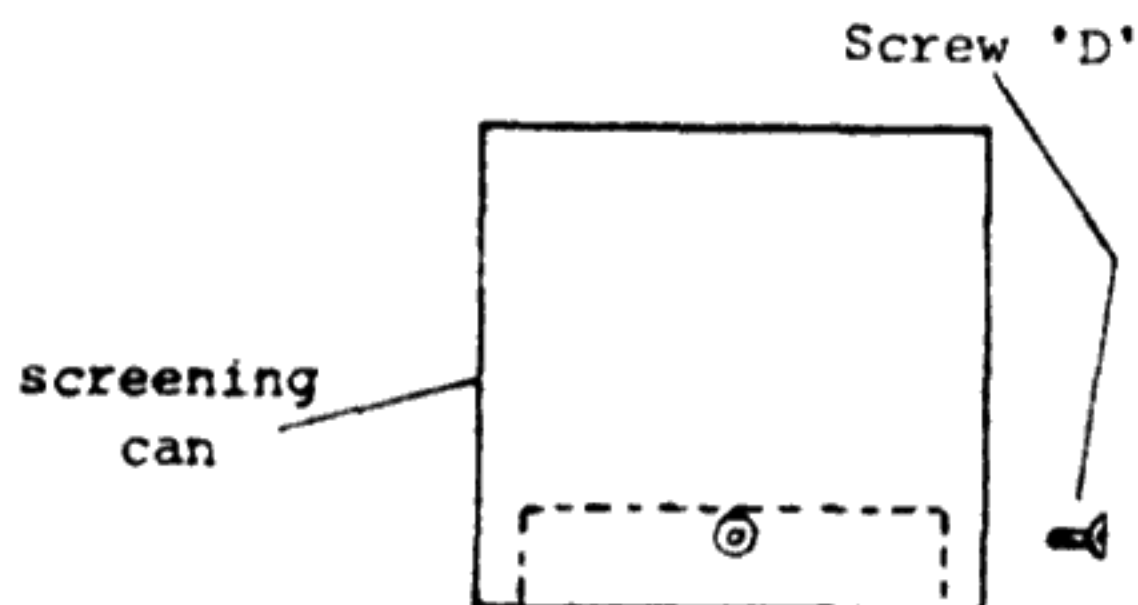
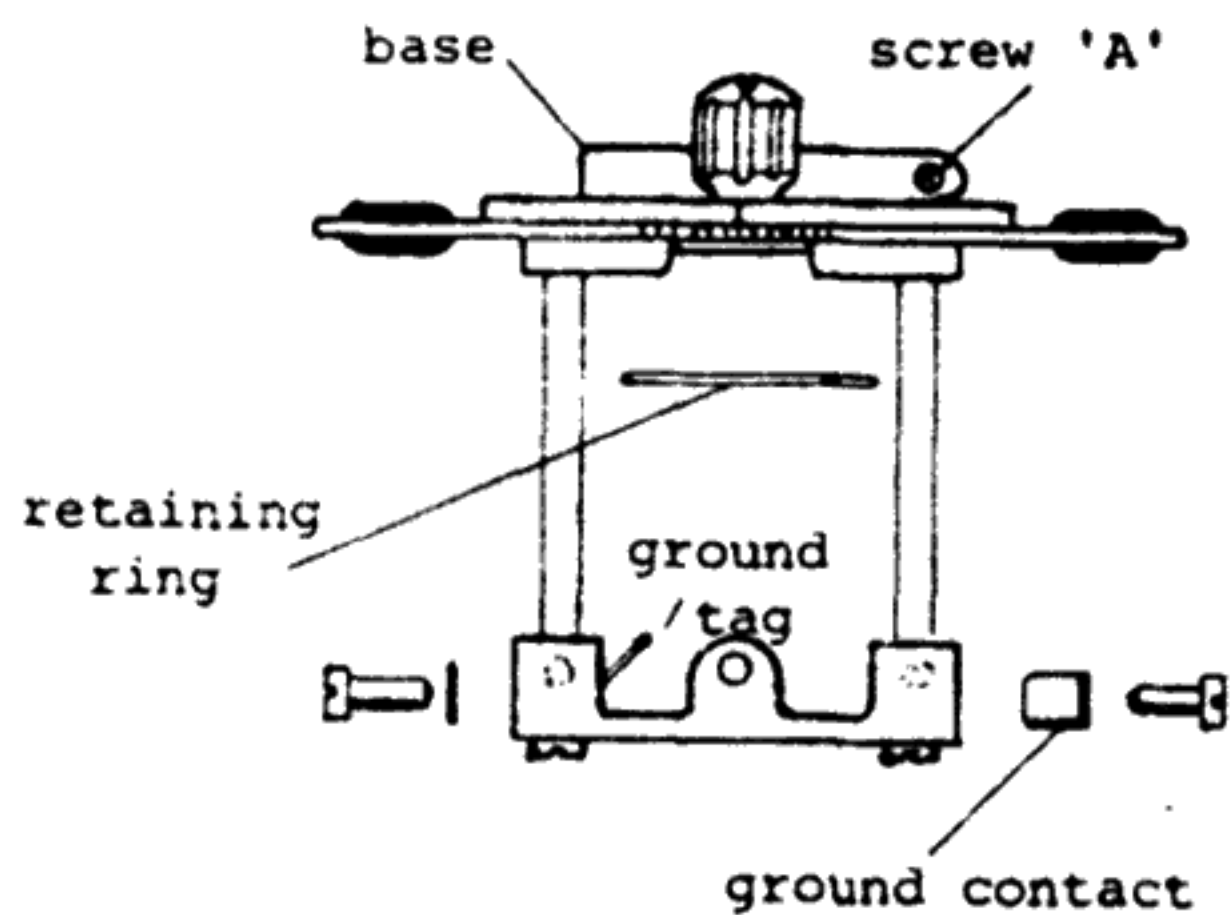
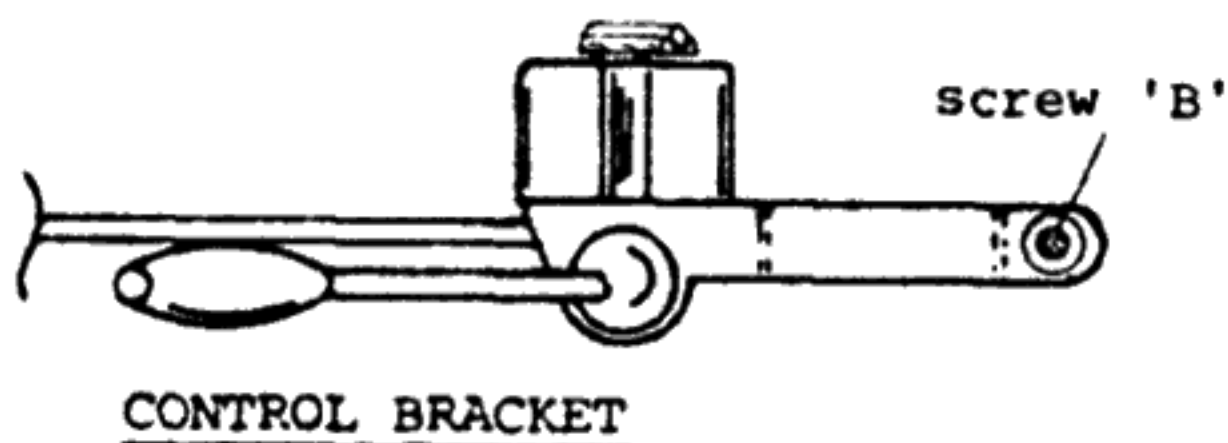
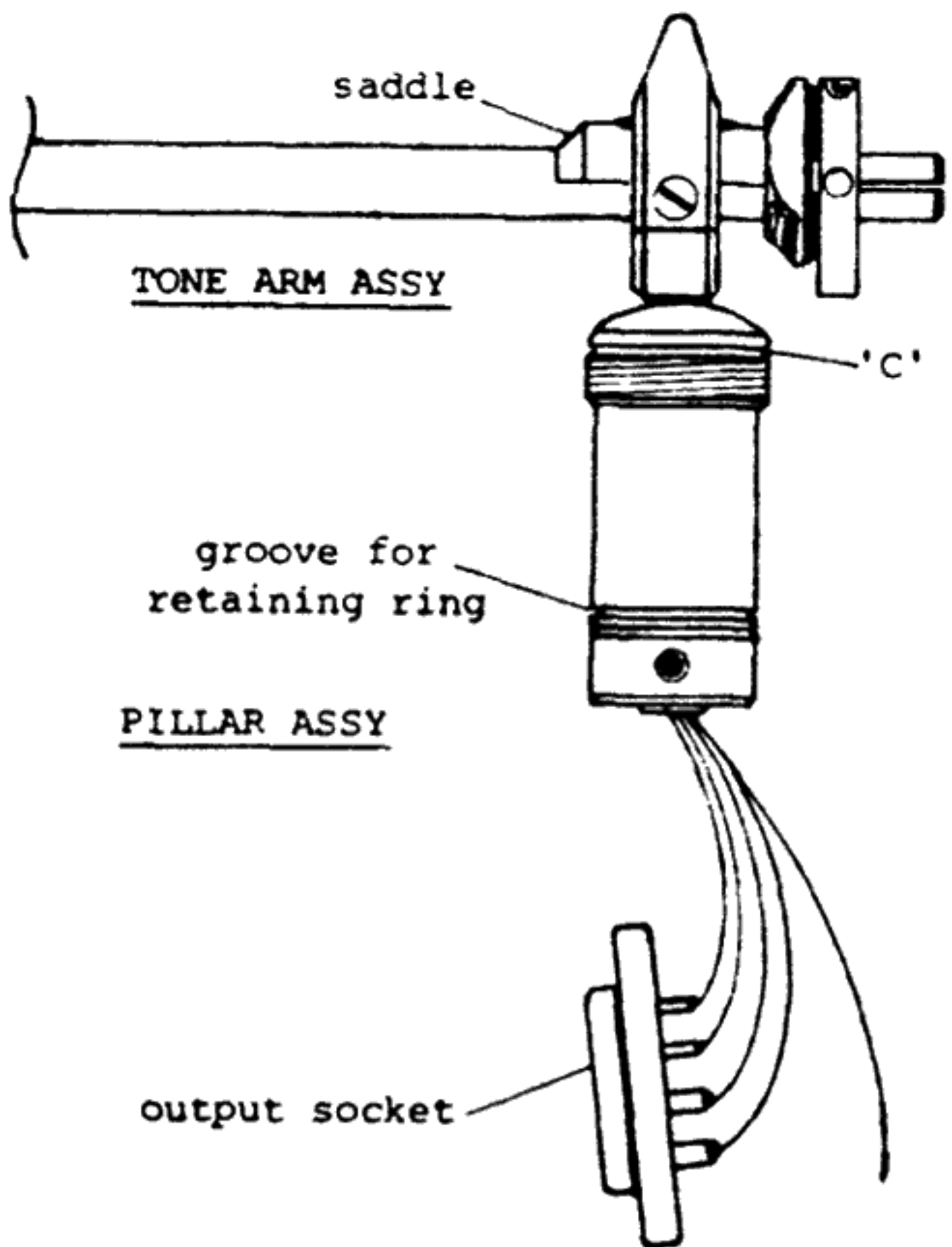
Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY.

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY.

Do not adjust or lubricate the bearings.



- a) Dismantle the output socket (2 screws) and remove the screening can (screw 'D').
- b) Unsolder the black wire from the ground tag.
- c) Remove the retaining ring from the pillar.
- d) Unlock capscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly together with the output socket, from the base.
- e) Unlock capscrew 'B' (1/16" A/F Allen key) and unscrew the control bracket from the pillar.
- f) Unlock capscrew 'B' of the new control bracket.
- g) Screw the pillar into the control bracket leaving the chamfer 'C' and one complete turn of the thread above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- h) Pass the output socket down through the base and re-fit the pillar assembly. Lock capscrew 'A' and re-fit the retaining ring.
- i) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- j) Slide on screening can, secure screw 'D' and re-assemble the output socket (2 screws washer and ground contact).

IMPORTANT

TOOLS

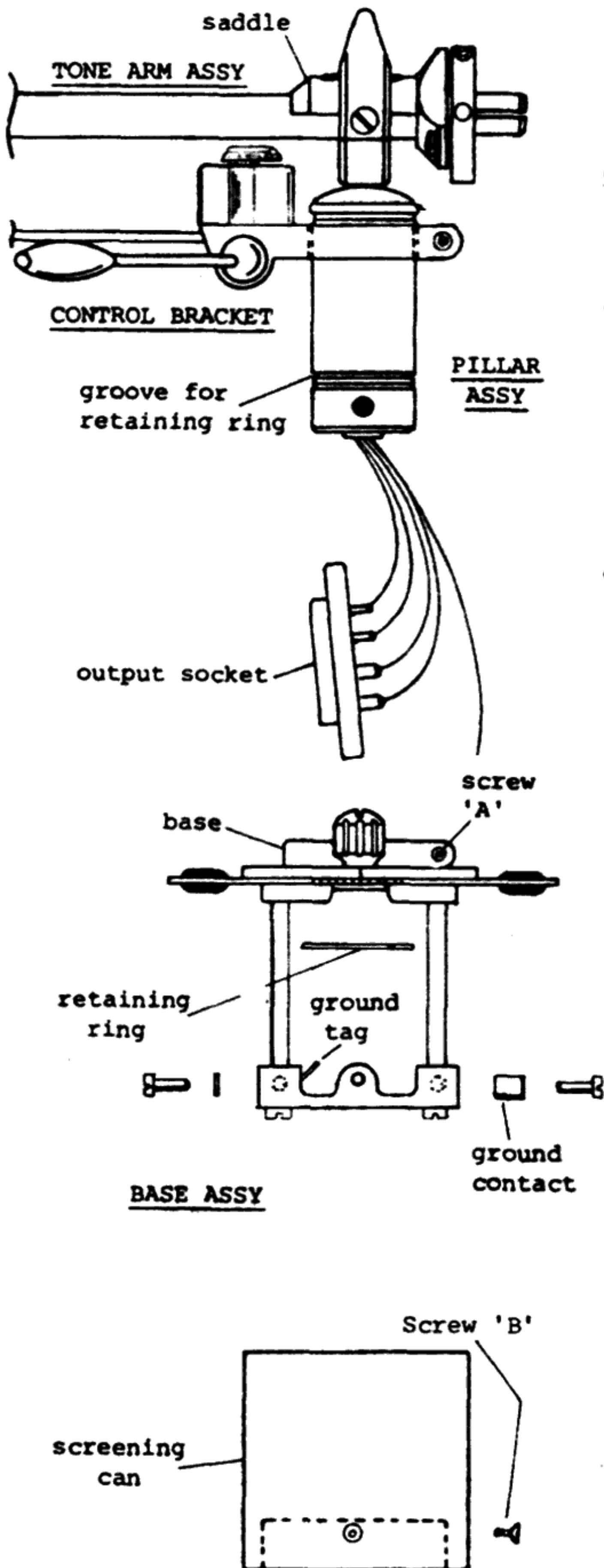
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TONE ARM ASSY.

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY.

Do not adjust or lubricate the bearings.



- a) Dismantle the output socket (2 screws) and remove the screening can (screw 'B')
- b) Unsolder the black wire from the ground tag.
- c) Remove the retaining ring from the pillar.
- d) Unlock capscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly and the output socket from the base.
- e) Re-assemble with the new base assembly. Pass the output socket down through the base and re-fit the pillar assembly. Lock capscrew 'A' and re-fit the retaining ring.
- f) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- g) Slide on screening can, secure screw 'B' and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY.

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY.

Do not adjust or lubricate the bearings.

SERIES II IMPROVED MODELS 3009 and 3009/S2

a) Dismantle the output socket (2 screws) and remove the screening can (screw 'A').

b) Unsolder all five wires.

c) Remove the yokehead (2 screws).

d) Remove the tone arm assembly.

e) Fit the new tone arm assembly. Carefully twist the free ends of the wires together for about $\frac{1}{4}$ ". Thread them through the pillar. Nest the knife edges into the yoke.

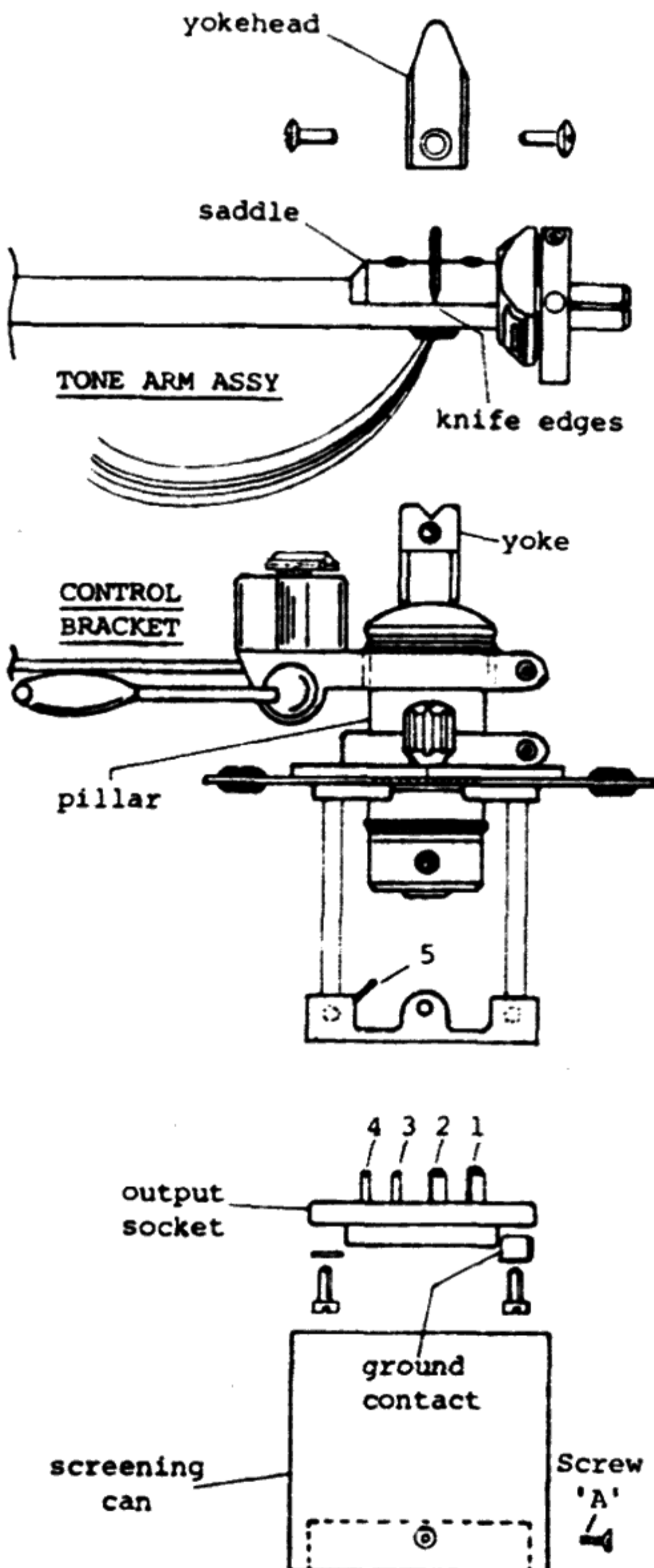
f) Re-fit the yokehead (2 screws).

g) Separate the wires and re-solder.

WHITE to No. 1 pin
RED to No. 2 pin
BLUE to No. 3 pin
GREEN to No. 4 pin
BLACK to ground tag No. 5

Arrange the wires to relieve torsion.

h) Slide on screening can, secure screw 'A' and re-assemble the output socket (2 screws, washer and ground contact).



IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

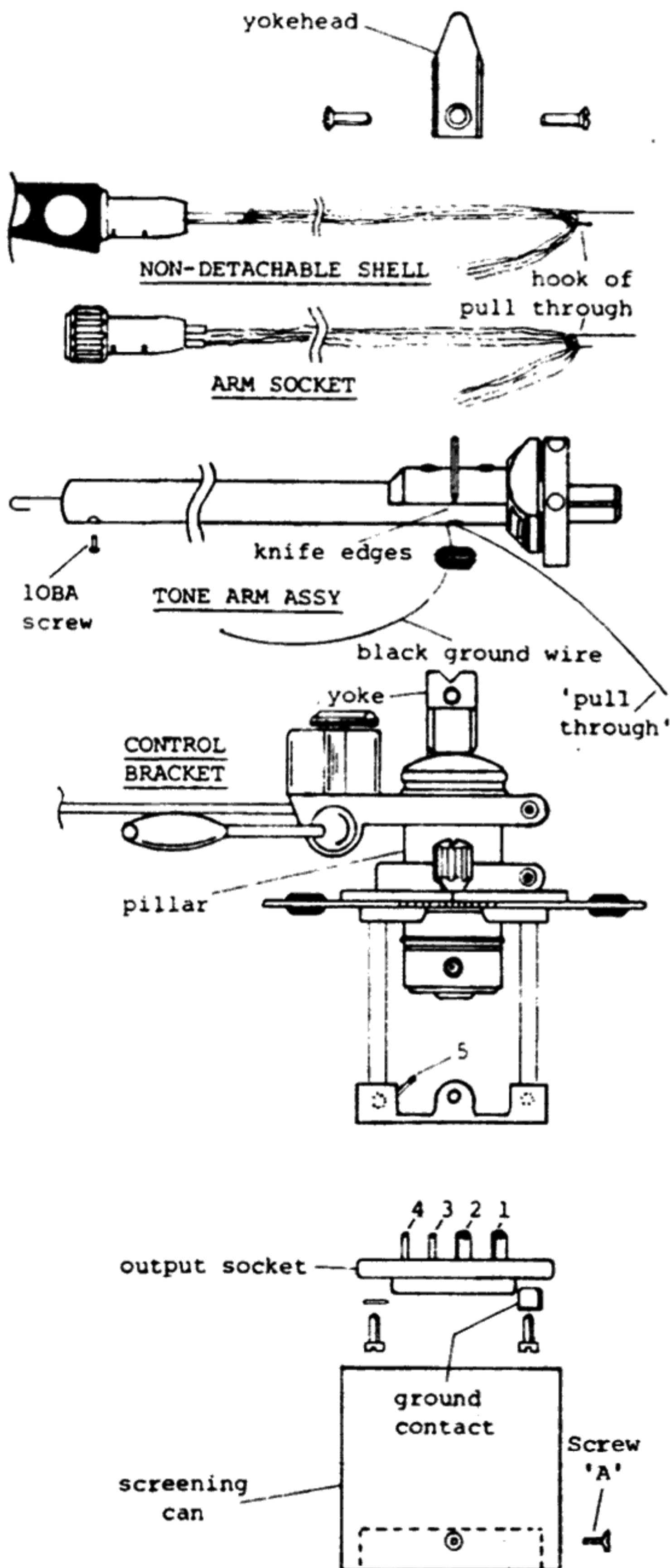
TONE ARM ASSY.

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY.

Do not adjust or lubricate the bearings.

NOTE: The ARM SOCKET and the NON-DETACHABLE SHELL are NOT interchangeable on the two models. The tone arms differ in their length and the balance weights vary in size. To convert one model to the other, the complete tone arm assembly must be changed.



- a) Dismantle the output socket (2 screws) and remove the screening can (screw 'A').
- b) Unsolder all five wires.
- c) Remove the yokehead (2 screws).
- d) Remove the tone arm assembly.
- e) Remove the 10 BA screw retaining the arm socket or the non-detachable shell.
- f) Remove the arm socket or non-detachable shell. Ensure the black ground wire is not carried into the tone arm when the four wires are withdrawn.
- g) Remove the rubber grommet from the tone arm below the saddle.
- h) Make a 'pull through' from a suitable gauge of wire approx. 12" in length. Pass it through the tone arm from the grommet hole.
- i) Hook the wires of the arm socket or non-detachable shell, about 1 1/2" from the end. Draw the wires through the tone arm. Take care not to hook and break the black ground wire, as this can only be replaced at the factory.
- j) Pass the five wires through the rubber grommet and re-fit into the tone arm.
- k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
- l) Re-fit the yokehead (2 screws).
- m) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
 Arrange the wires to relieve torsion.
- n) Slide on screening can, secure screw 'A' and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

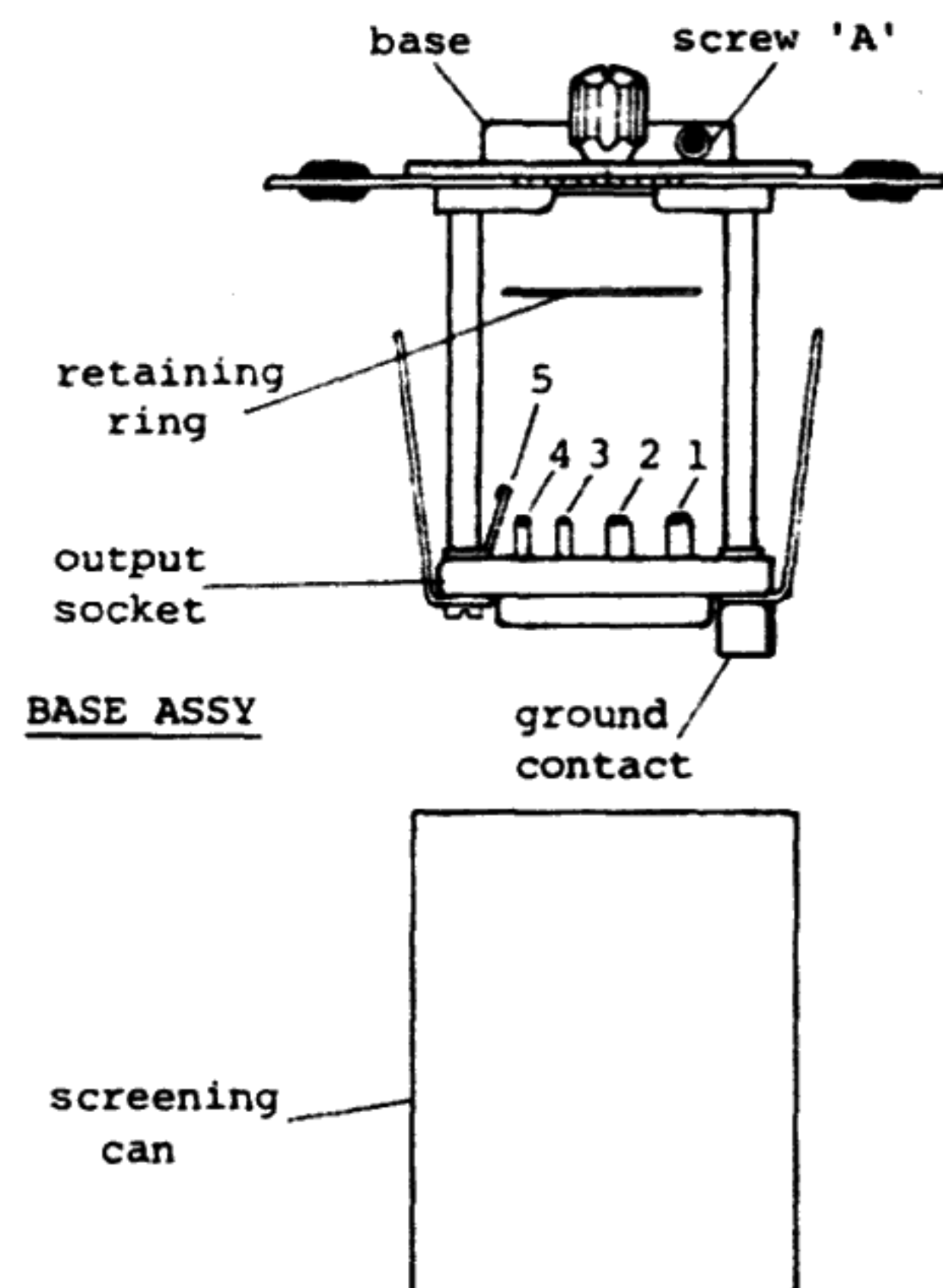
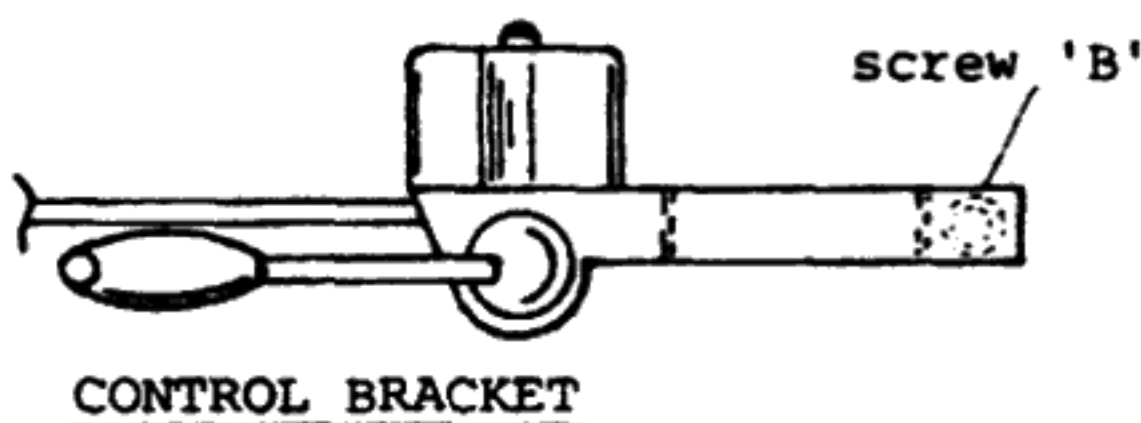
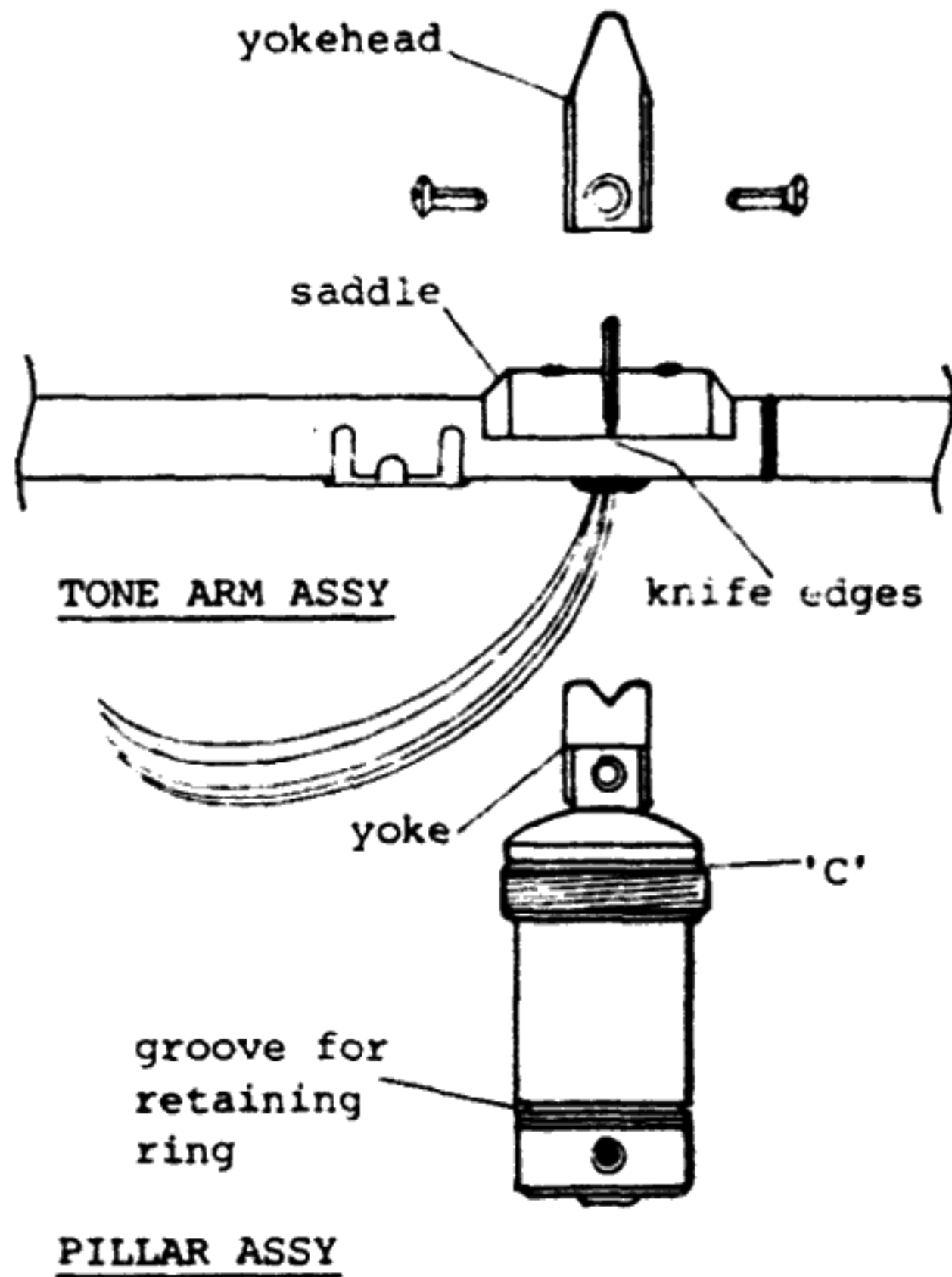
Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY.

Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY.

Do not adjust or lubricate the bearings.



- (a) Remove screening can.
 - (b) Unsolder all five wires.
 - (c) Remove the yokehead (2 screws).
 - (d) Remove the tone arm assembly.
 - (e) Remove the retaining ring from the pillar.
 - (f) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly from the base.
 - (g) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from pillar.
 - (h) Remove the yokehead from the new pillar assembly (2 screws).
 - (i) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
 - (j) Re-fit the pillar assembly into the base, lock setscrew 'A' and re-fit the retaining ring.
 - (k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
 - (l) Re-fit the yokehead (2 screws).
 - (m) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
- Arrange the wires to relieve torsion.
- (n) Slide on screening can.

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

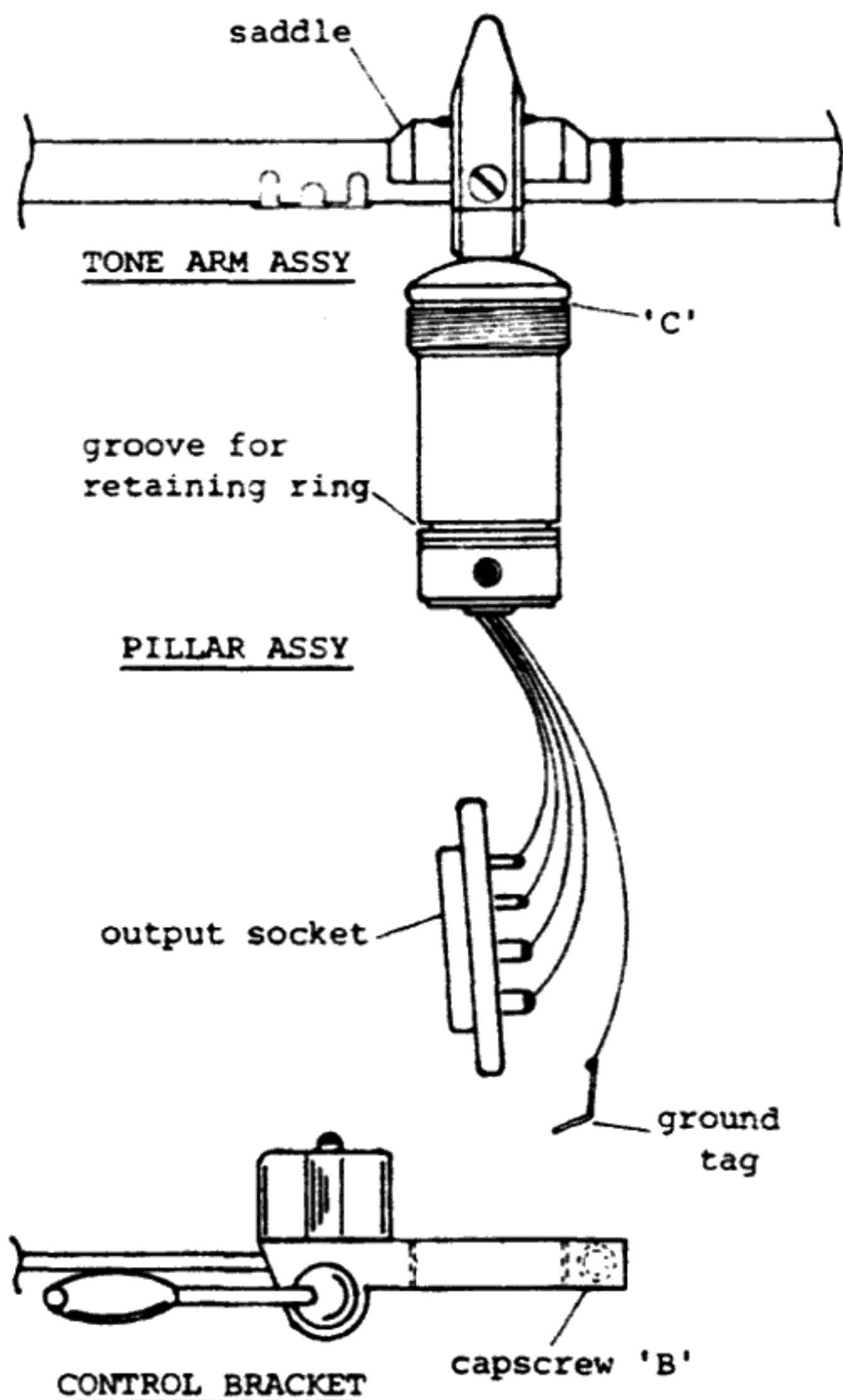
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

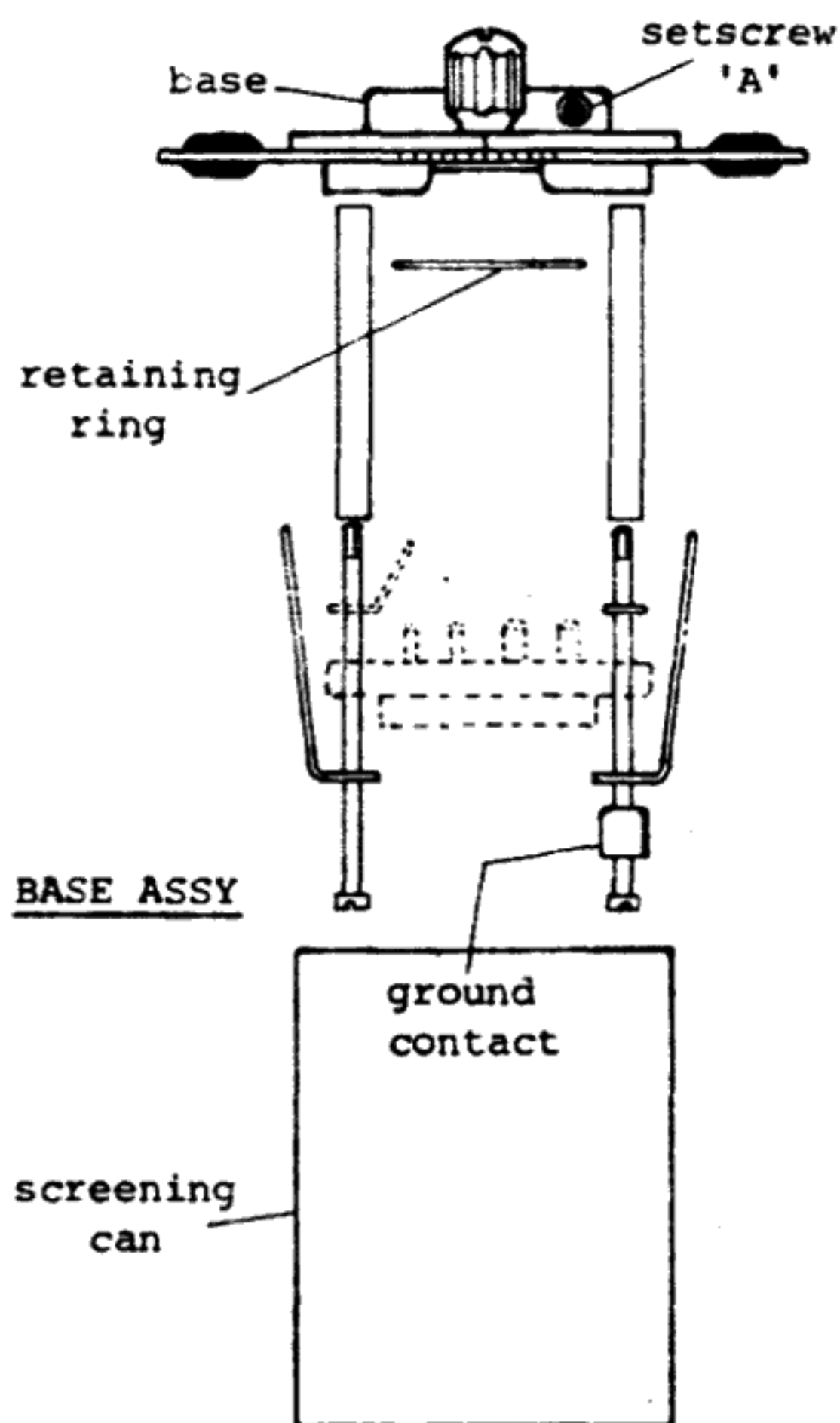
Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Remove the screening can.
- (b) Dismantle the output socket (2 long screws).
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly together with the output socket, from the base.
- (e) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from the pillar.
- (f) Unlock capscrew 'B' of the new control bracket.
- (g) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- (h) Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring. Arrange the wires to relieve torsion.
- (i) Re-assemble the output socket (2 long screws) as illustrated and slide on screening can.



IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

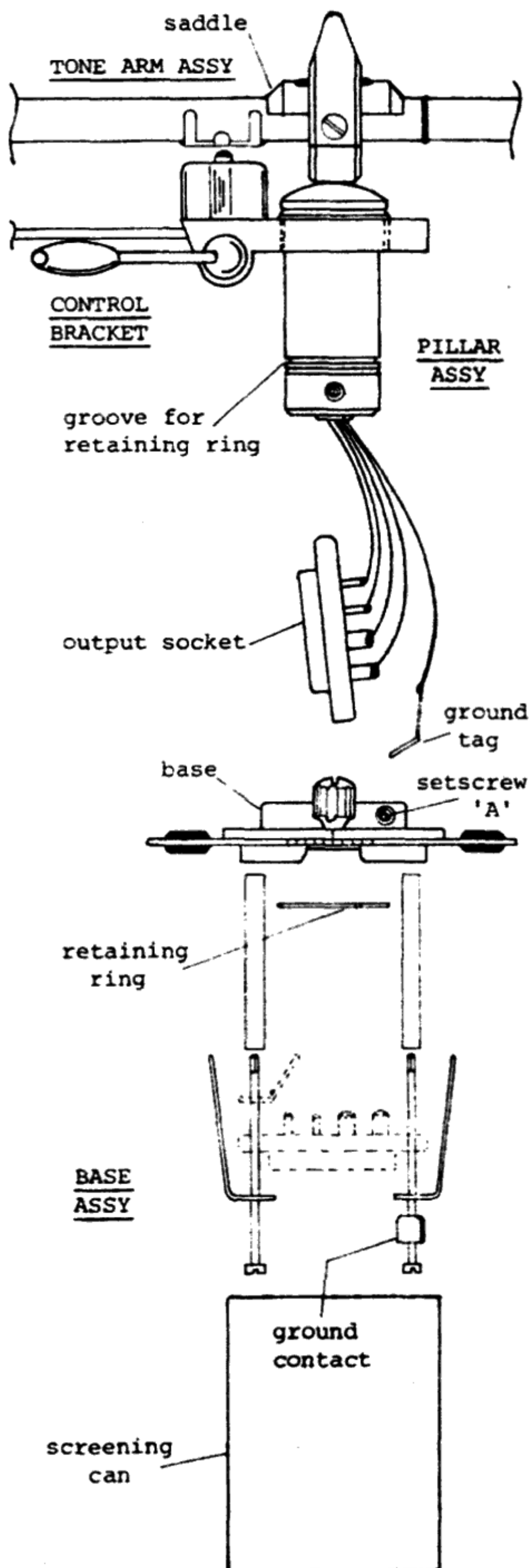
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Remove the screening can.
- (b) Dismantle the output socket (2 long screws).
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly.
- (e) Re-assemble with the new base assembly. Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring.
Arrange the wires to relieve torsion.
- (f) Re-assemble the output socket (2 long screws) as illustrated and slide on screening can.

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

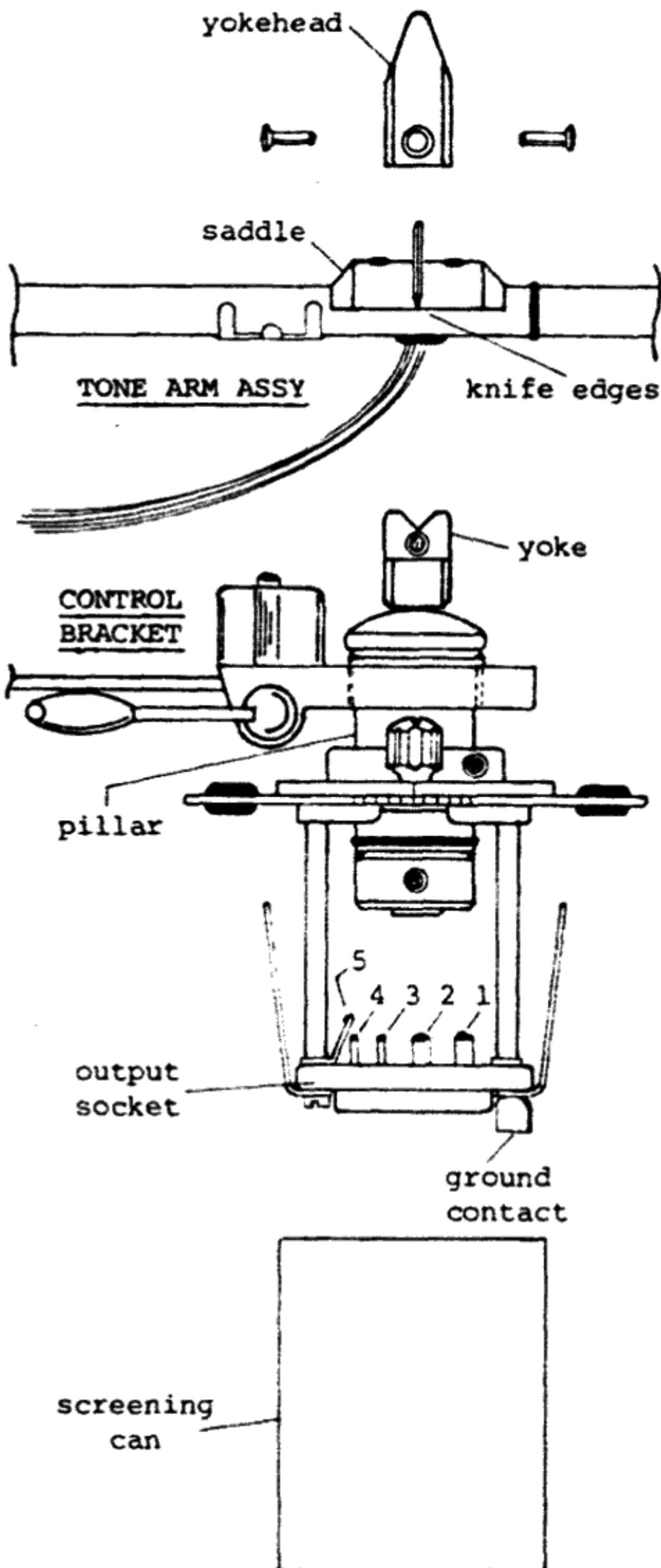
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Fit the new tone arm assembly. Carefully twist the free ends of the wires together for about $\frac{1}{4}$ ". Thread them through the pillar. Nest the knife edges into the yoke.
- (f) Re-fit the yokehead (2 screws).
- (g) Separate the wires and re-solder
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
 Arrange the wires to relieve torsion.
- (h) Slide on screening can.

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

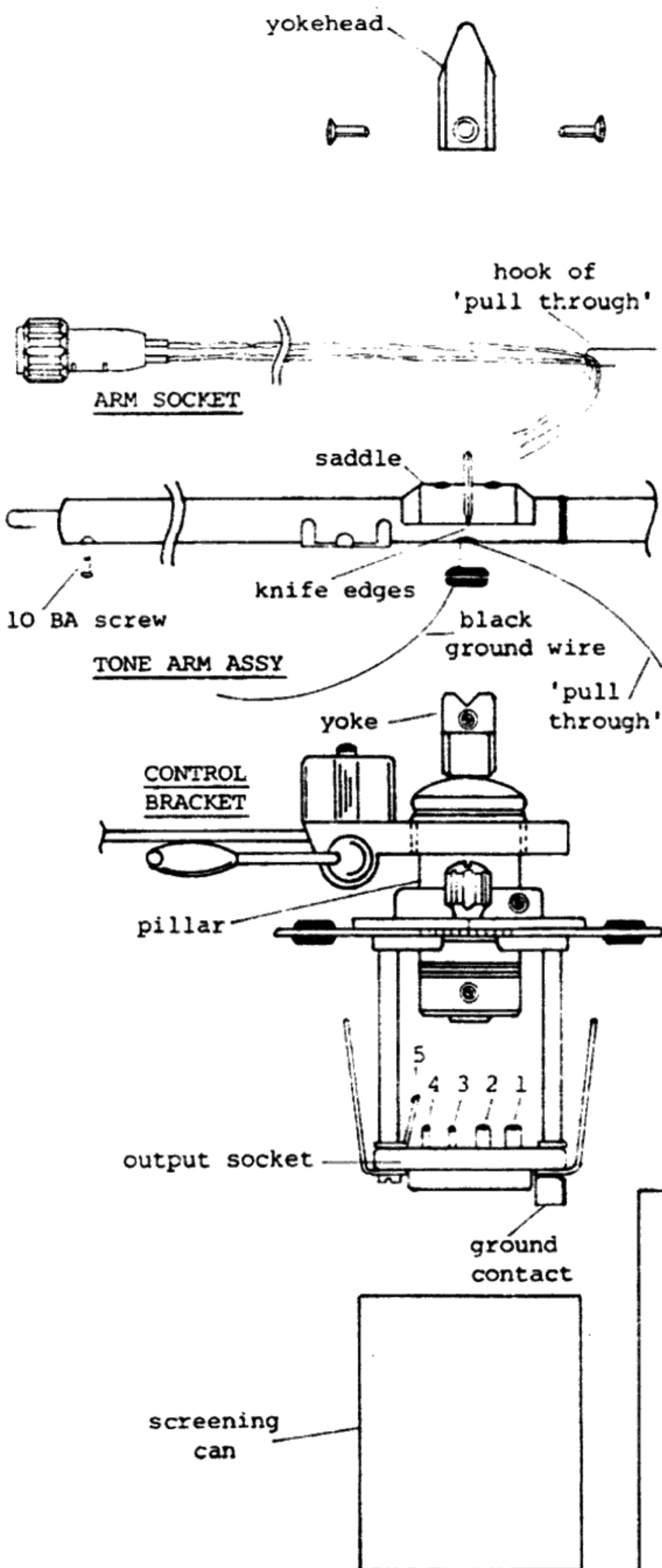
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Remove the 10 BA screw retaining the arm socket.
- (f) Remove the arm socket.
Ensure the black ground wire is not carried into the tone arm when the four wires are withdrawn.
- (g) Remove the rubber grommet from the tone arm below the saddle.
- (h) Make a 'pull through' from a suitable gauge of wire approx. 12" in length. Pass it through the tone arm from the grommet hole.
- (i) Hook the wires of the arm socket about 1½" from the end. Draw the wires through the tone arm. Take care not to hook and break the black ground wire, as this can only be replaced at the factory.
- (j) Pass the five wires through the rubber grommet and re-fit into the tone arm.
- (k) Carefully twist the free ends of the wires together for about ¼". Thread them through the pillar. Nest the knife edges into the yoke.
- (l) Re-fit the yokehead (2 screws).
- (m) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
 Arrange the wires to relieve torsion.
- (n) Slide on screening can.

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

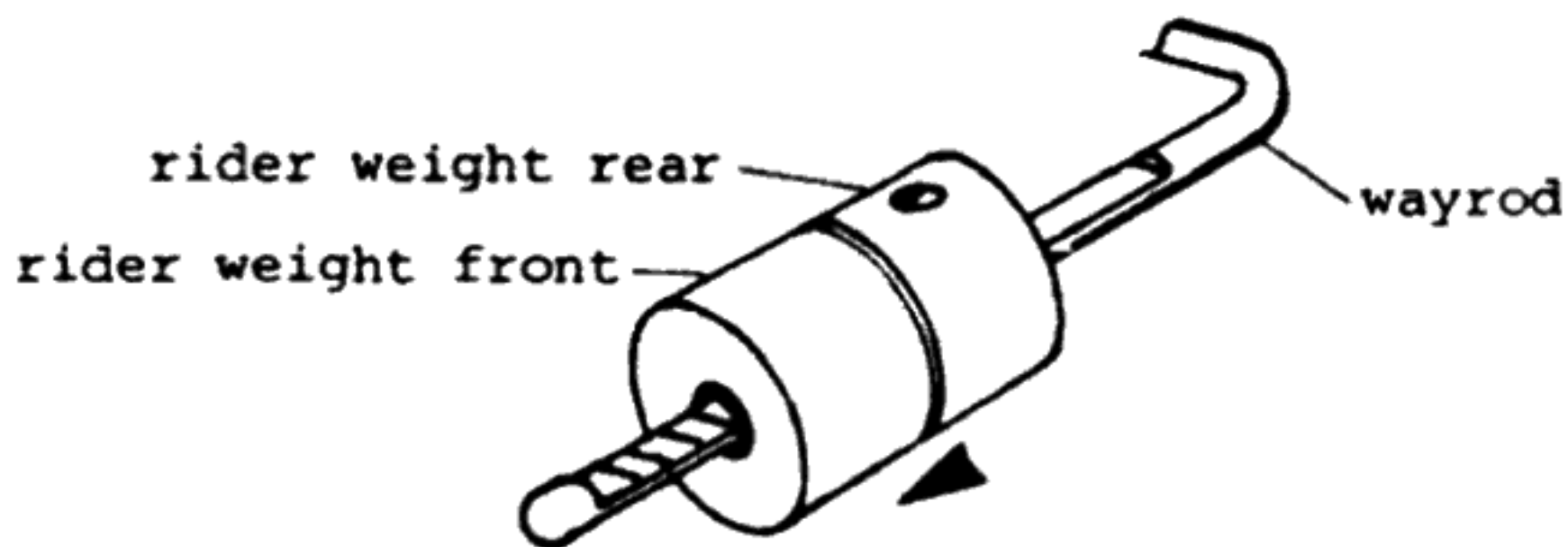
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

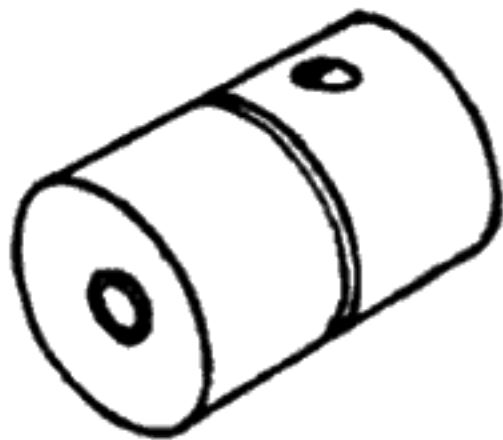
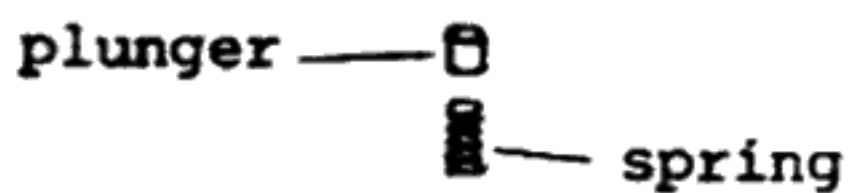
Do not adjust or lubricate the bearings.

CONTROL BRACKET

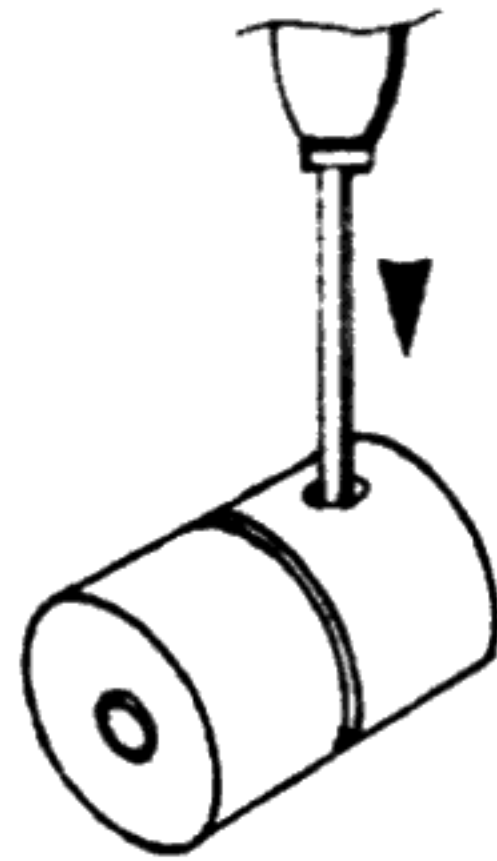
Do not dismantle or lubricate. The control can only be serviced at the factory.



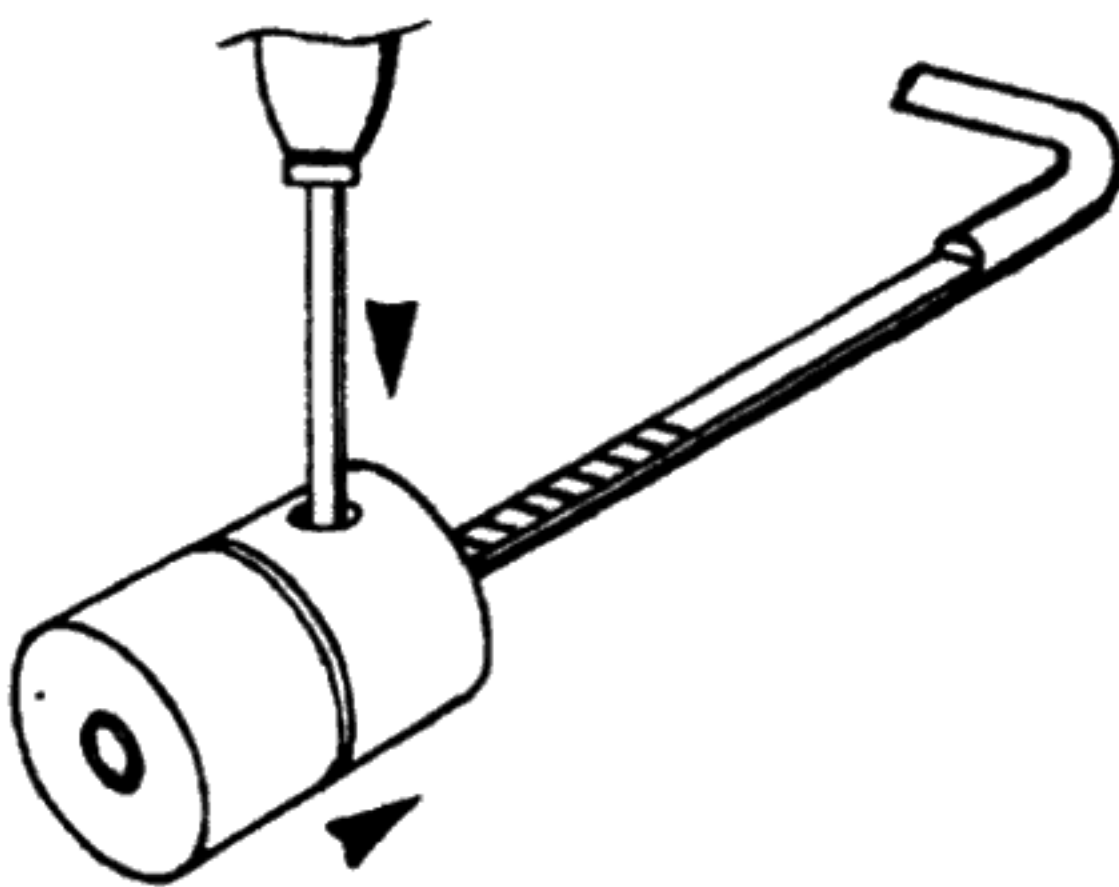
To remove the rider weight, rotate it 180° so that the hole is at the top and withdraw from the wayrod. Place a finger over the hole to stop the plunger and spring from flying out.



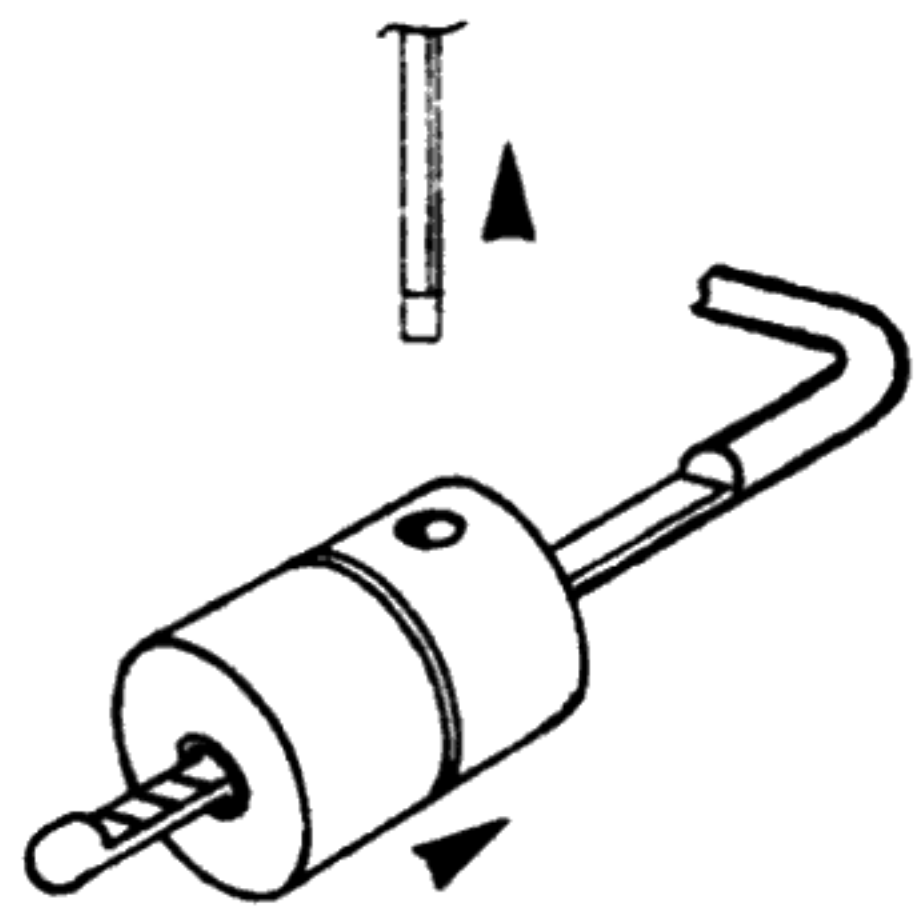
1. Insert the spring and plunger.



2. Compress the spring fully using a small screwdriver or similar rod.

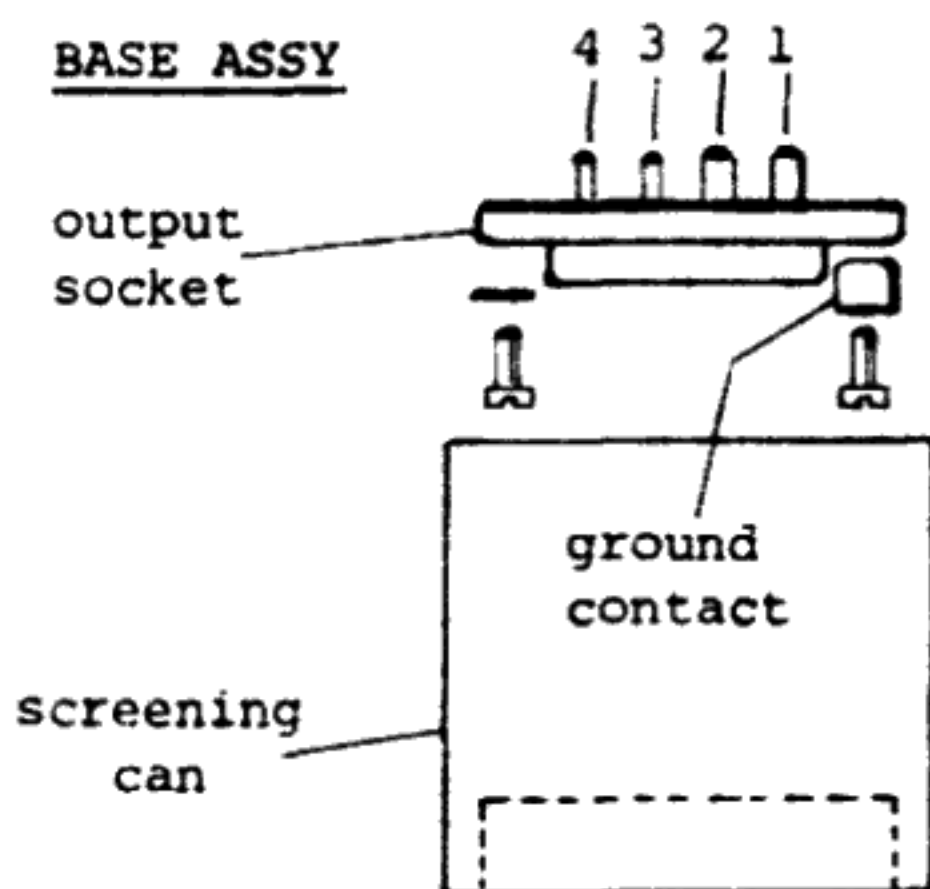
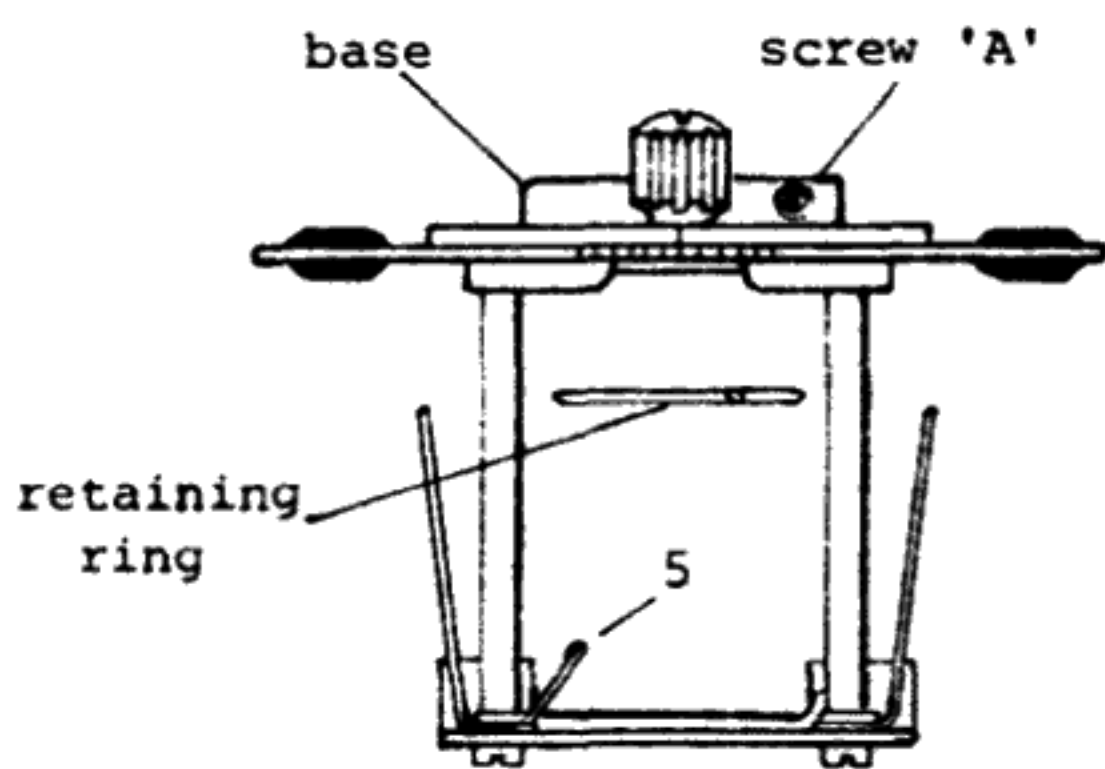
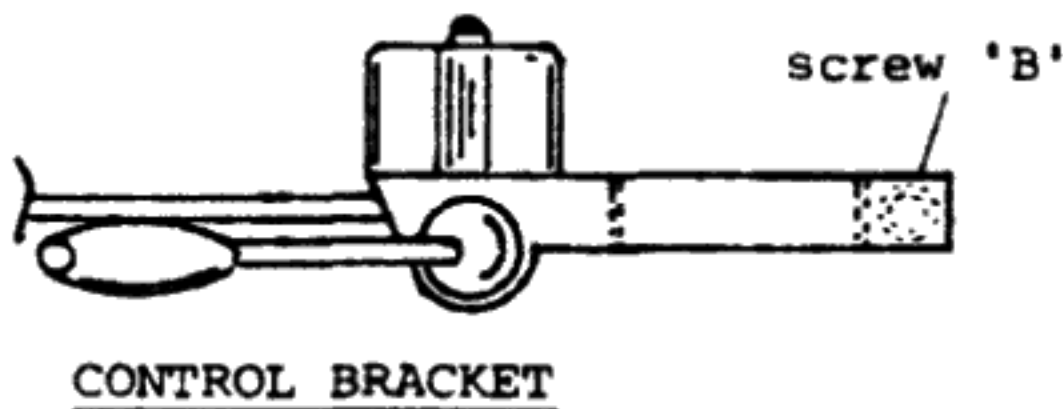
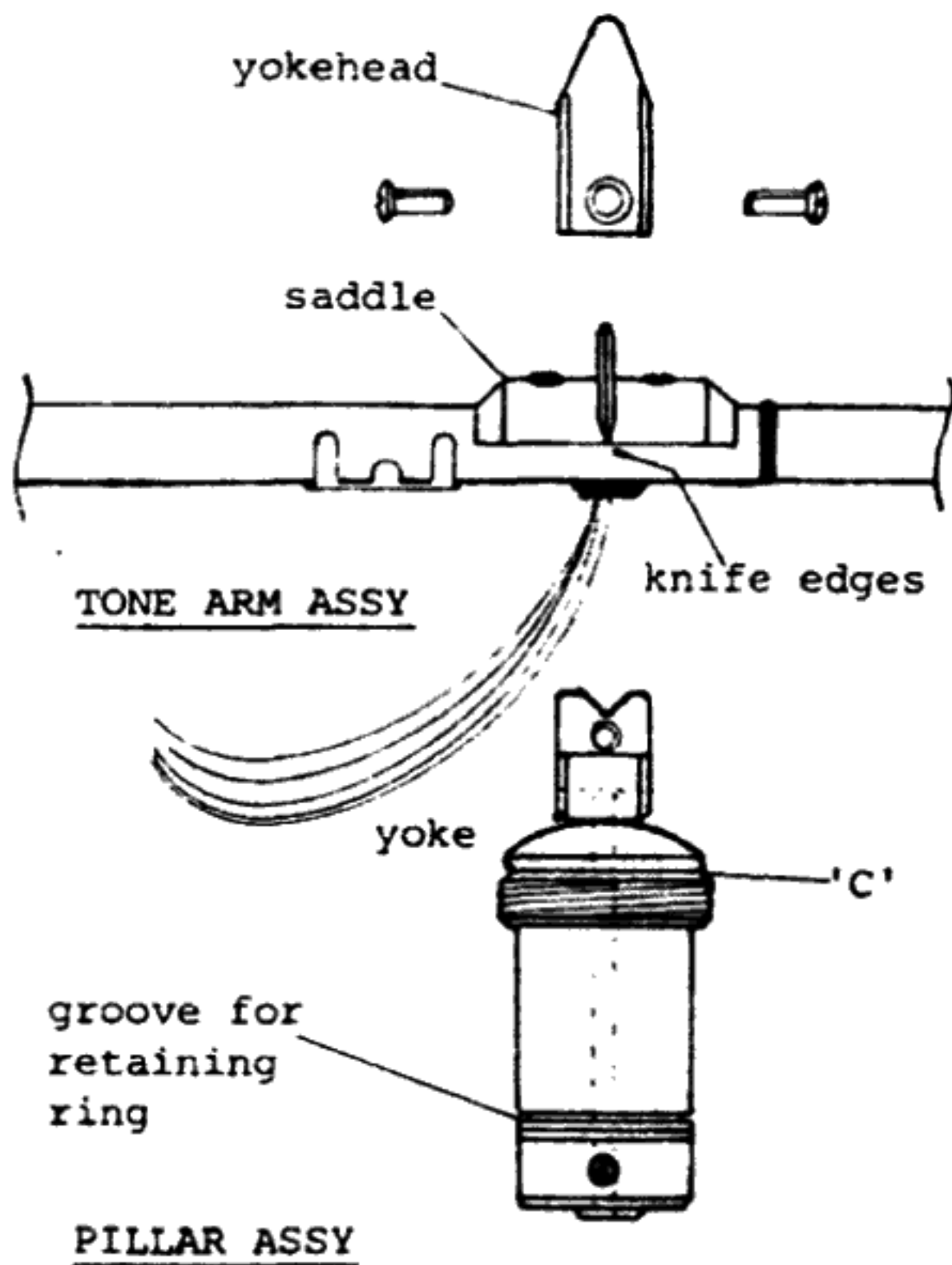


3. Enter the wayrod up to the screwdriver.



4. Maintain pressure on the rider weight whilst withdrawing the screwdriver so that the wayrod passes over the plunger.

5. Rotate the rider weight 180° so that the hole is underneath and the plunger engages the flat on the wayrod.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Remove the retaining ring from the pillar.
- (f) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly from the base.
- (g) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from pillar.
- (h) Remove the yokehead from the new pillar assembly (2 screws).
- (i) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- (j) Re-fit the pillar assembly into the base, lock setscrew 'A' and re-fit the retaining ring.
- (k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
- (l) Re-fit the yokehead (2 screws).
- (m) Separate the wires and re-solder.

WHITE to No. 1 pin
 RED to No. 2 pin
 BLUE to No. 3 pin
 GREEN to No. 4 pin
 BLACK to ground tag No. 5

Arrange the wires to relieve torsion.

- (n) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

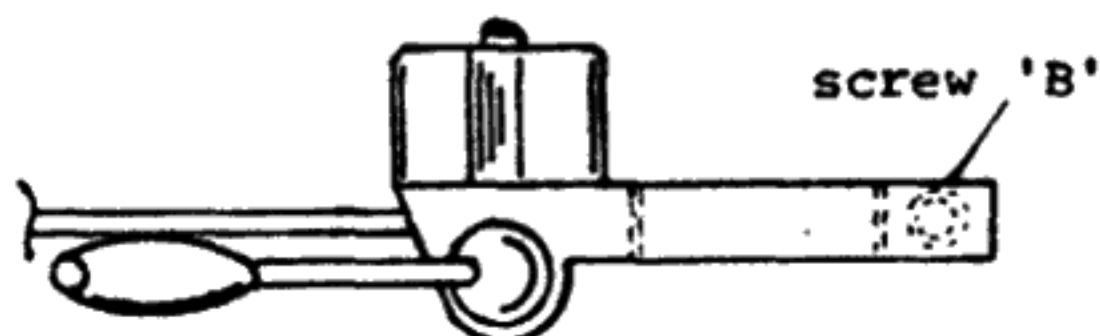
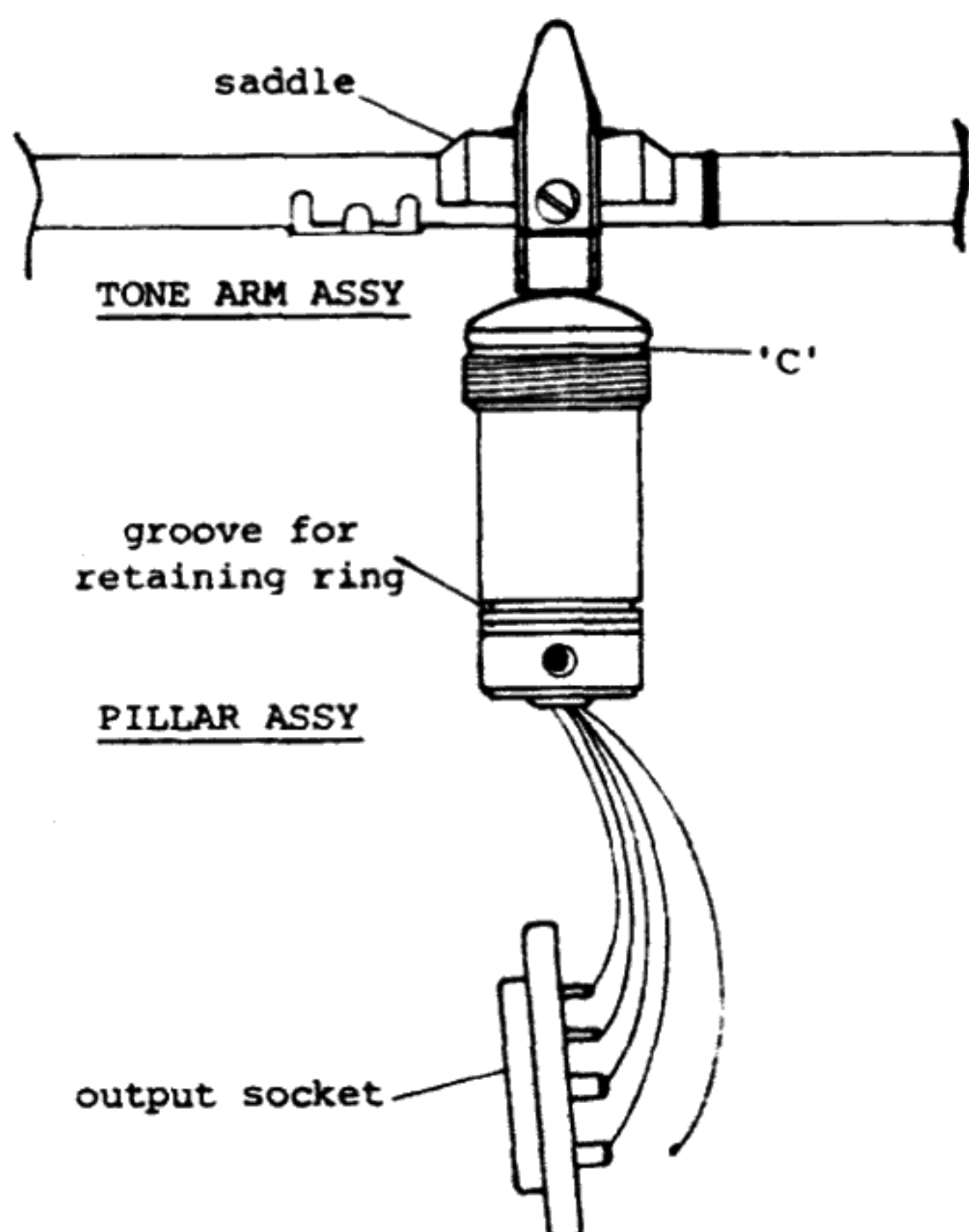
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

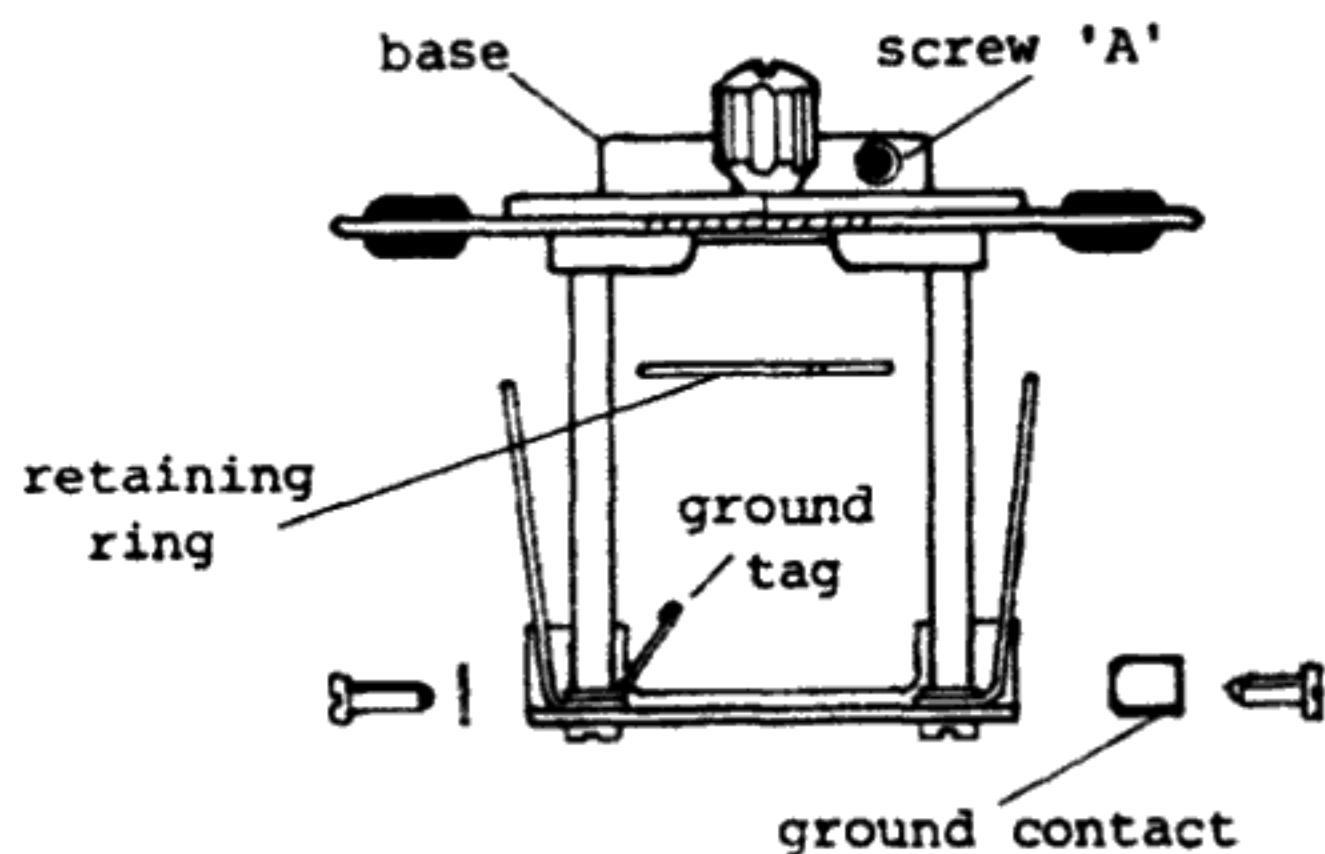
Do not adjust or lubricate the bearings.

CONTROL BRACKET

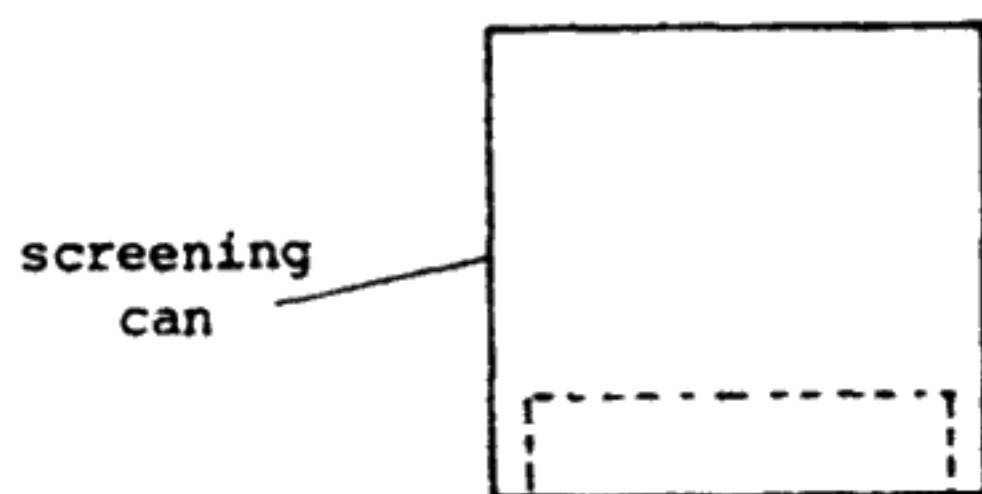
Do not dismantle or lubricate. The control can only be serviced at the factory.



CONTROL BRACKET



BASE ASSY



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder the black wire from the ground tag.
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly together with the output socket, from the base.
- (e) Unlock capscrew 'B' (5/64" A/F Allen key) and unscrew the control bracket from the pillar.
- (f) Unlock capscrew 'B' of the new control bracket.
- (g) Screw the pillar into the control bracket leaving only the chamfer 'C' at the top of the threaded portion above the upper surface of the bracket. Lock capscrew 'B'. For final adjustment of the control bracket when the arm is fully assembled refer to Service Sheet 24.
- (h) Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring.
- (i) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- (j) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

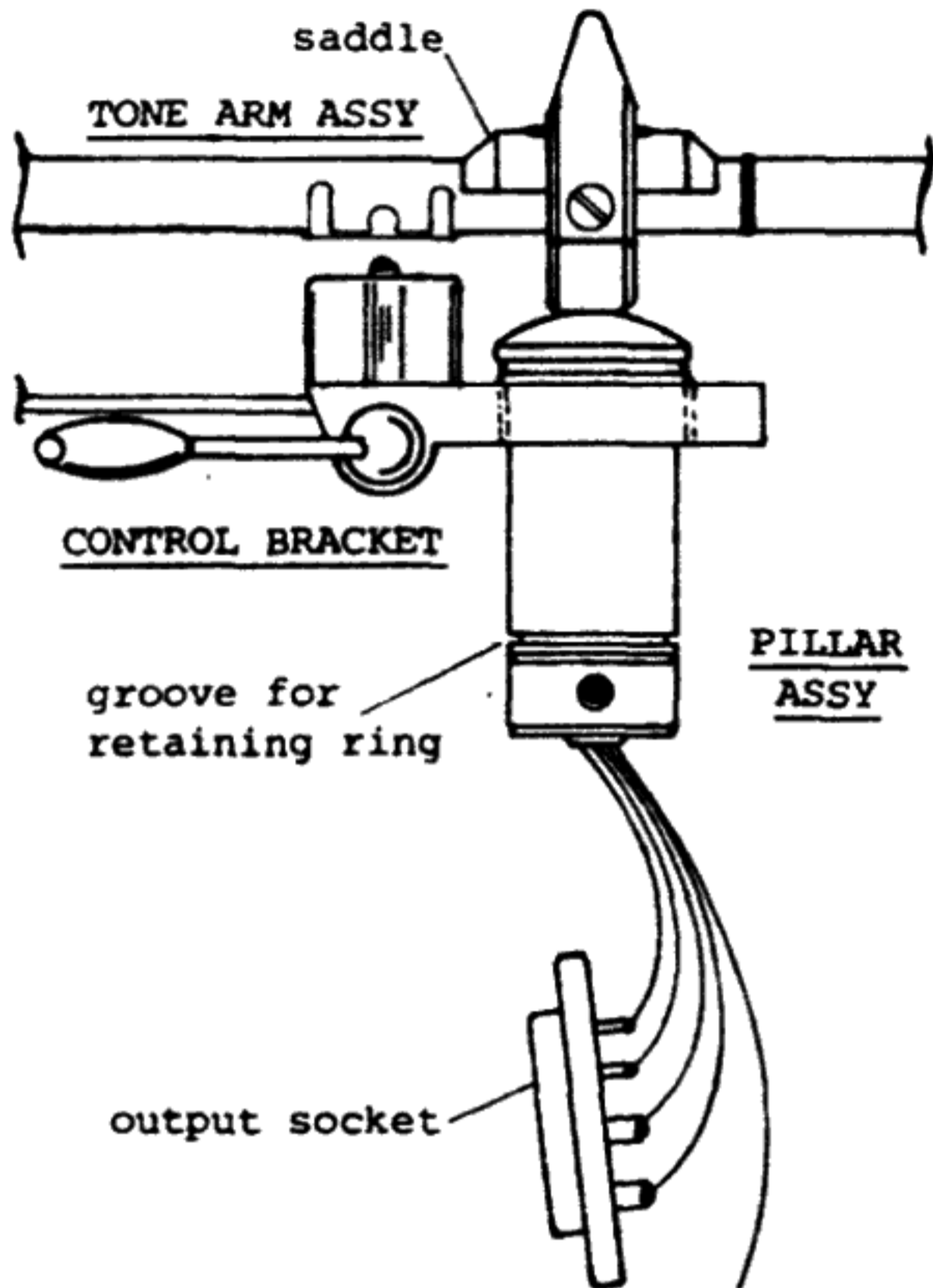
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

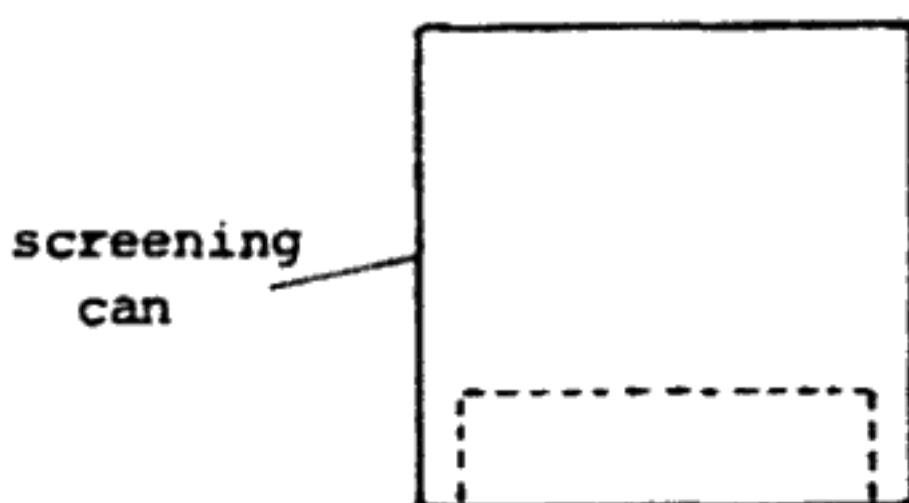
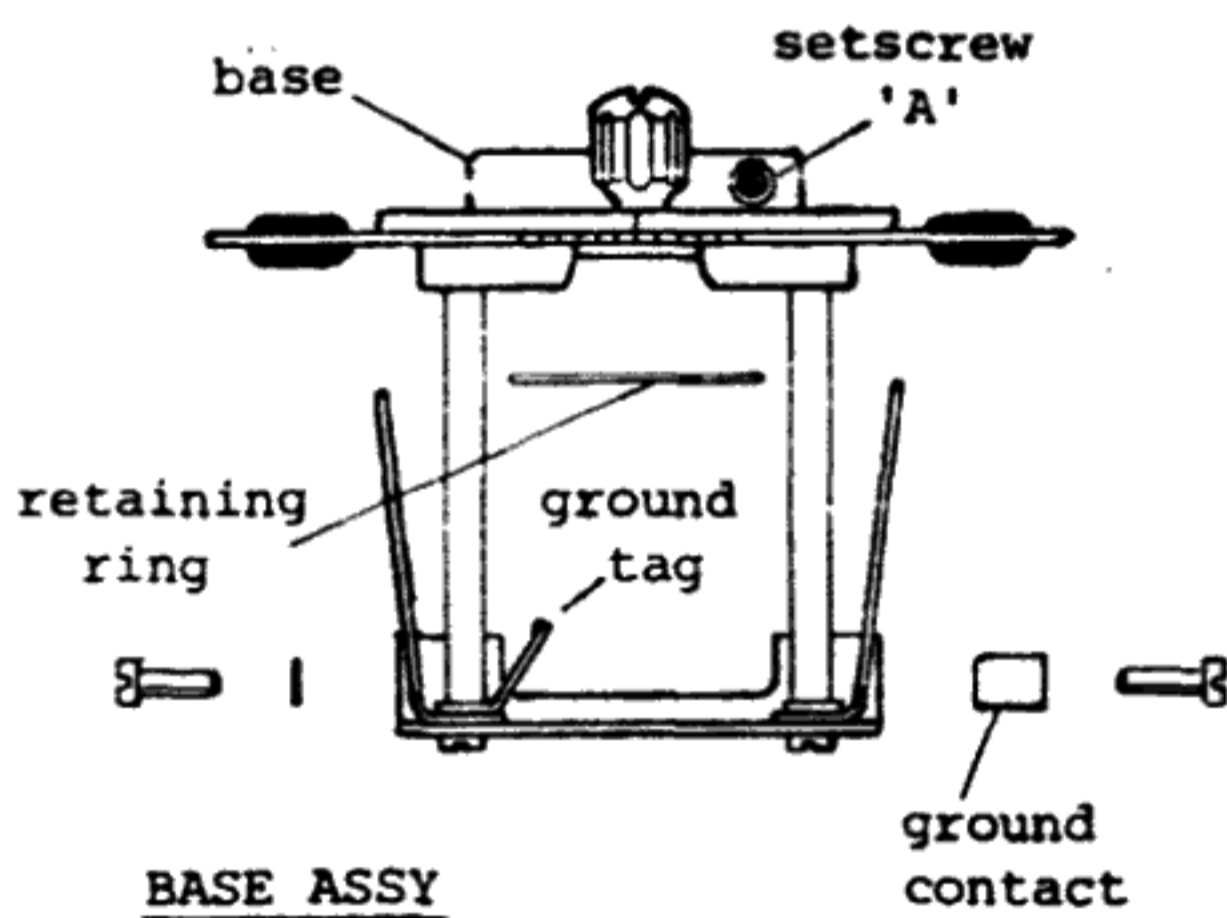
Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder the black wire from the ground tag.
- (c) Remove the retaining ring from the pillar.
- (d) Unlock setscrew 'A' (1/16" A/F Allen key) and lift out the pillar assembly and the output socket, from the base.
- (e) Re-assemble with the new base assembly. Pass the output socket down through the base and re-fit the pillar assembly. Lock setscrew 'A' and re-fit the retaining ring.
- (f) Re-solder the black wire to the ground tag. Arrange the wires to relieve torsion.
- (g) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).



IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

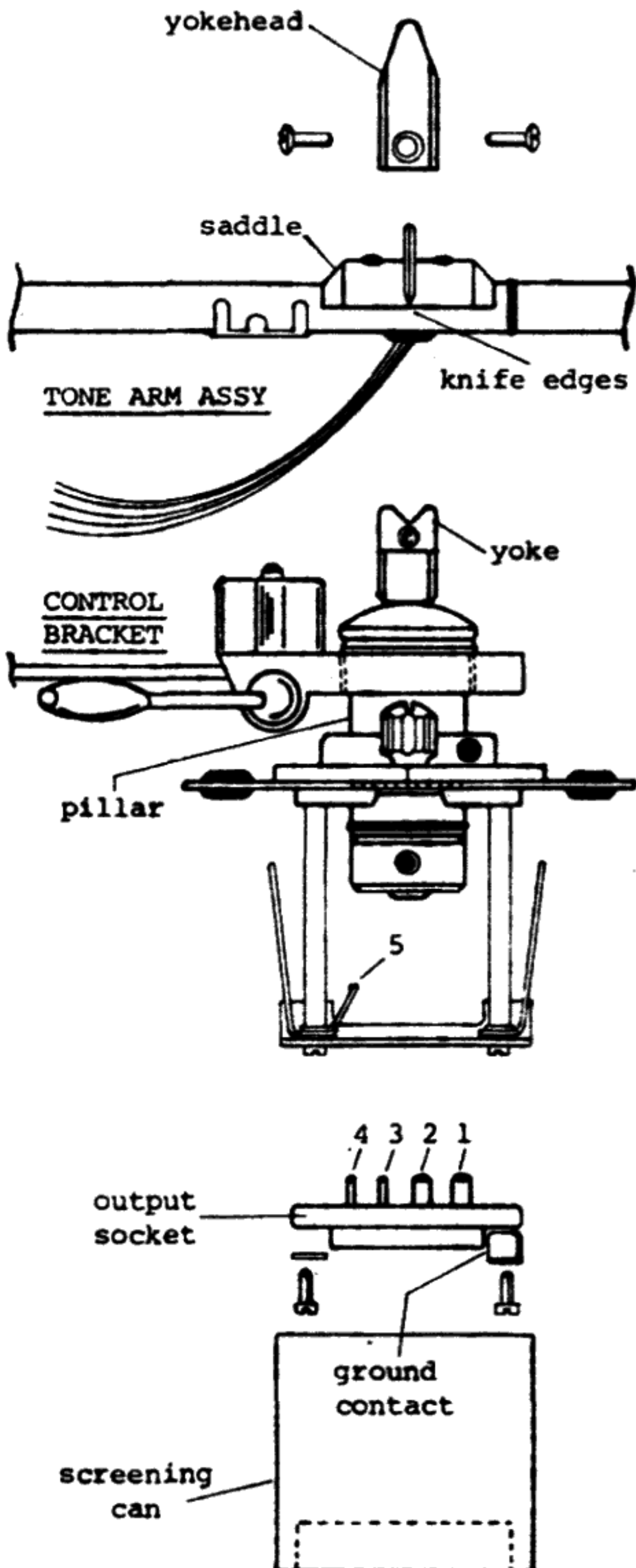
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Fit the new tone arm assembly. Carefully twist the free ends of the wires together for about $\frac{1}{4}$ ". Thread them through the pillar. Nest the knife edges into the yoke.
- (f) Re-fit the yokehead (2 screws).
- (g) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5Arrange the wires to relieve torsion.
- (h) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

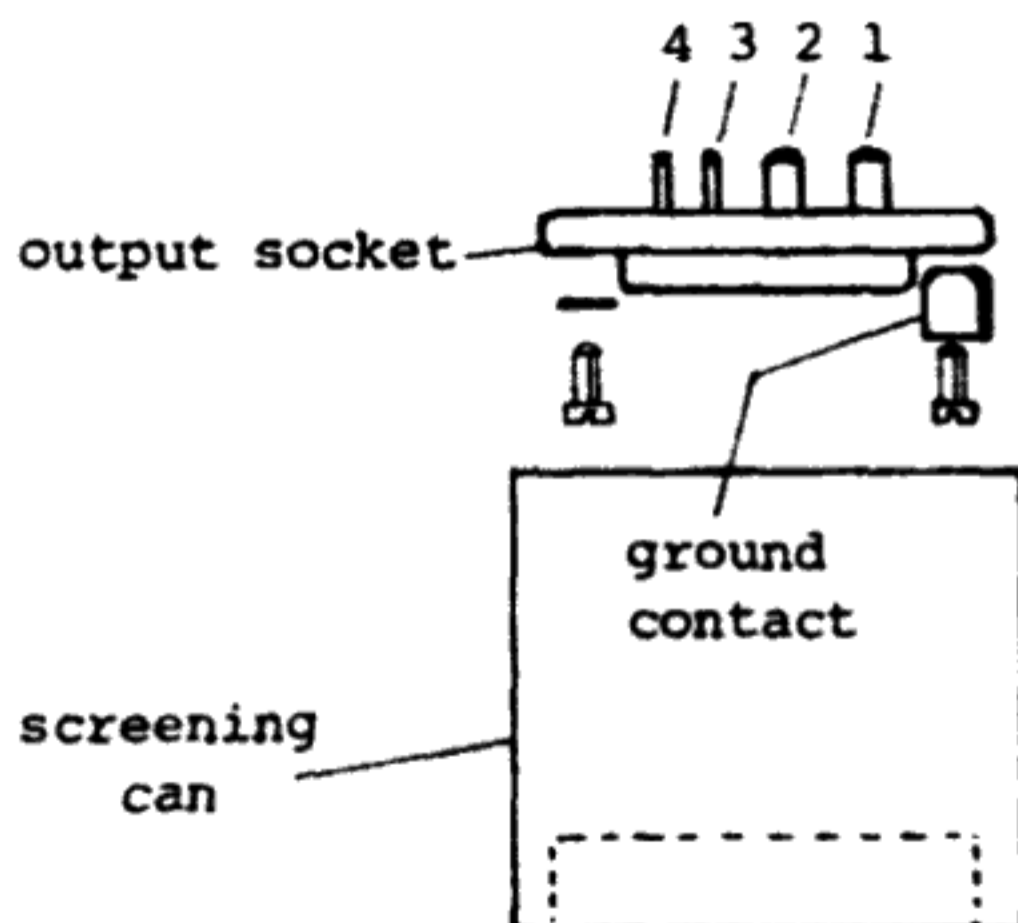
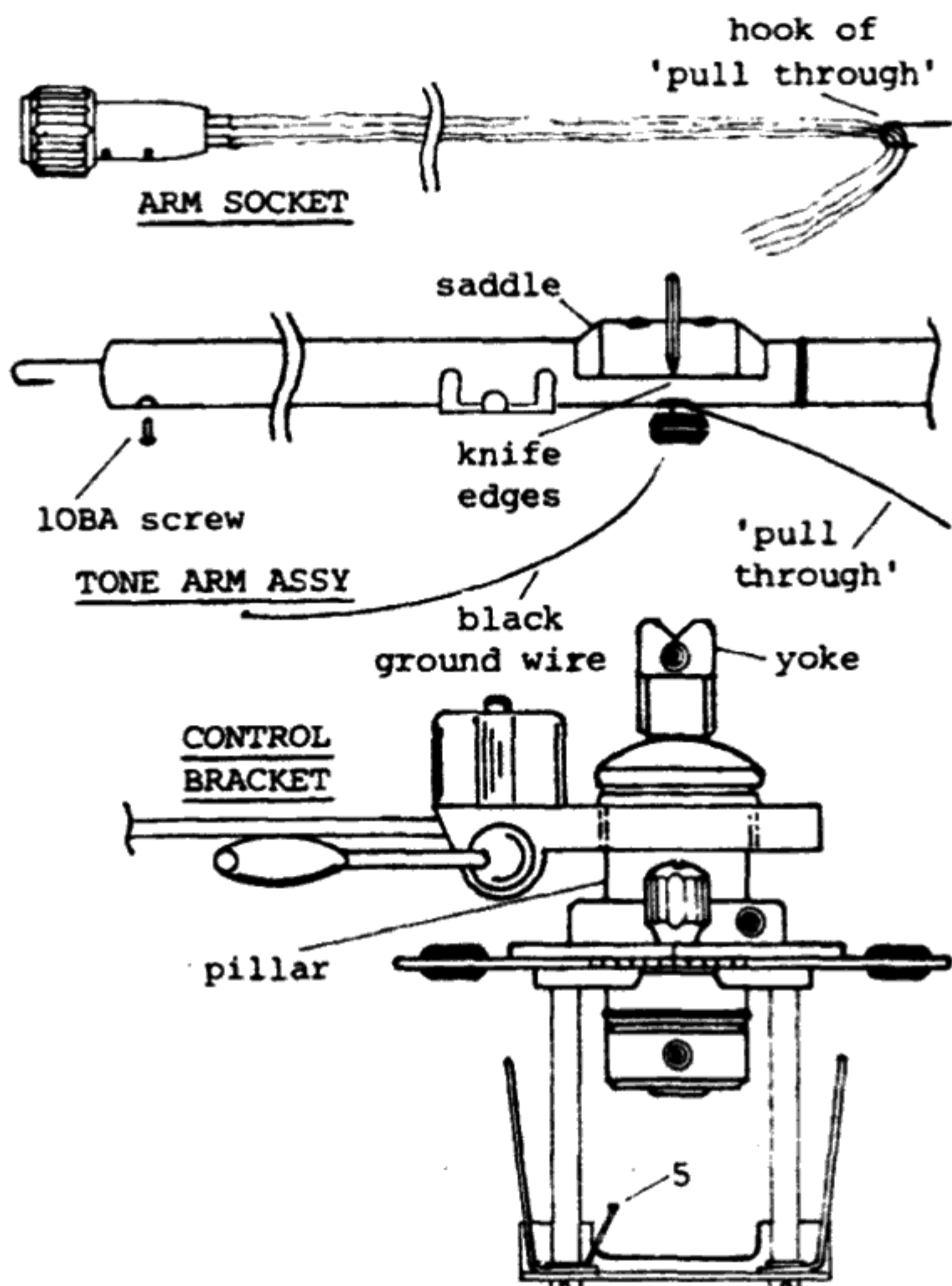
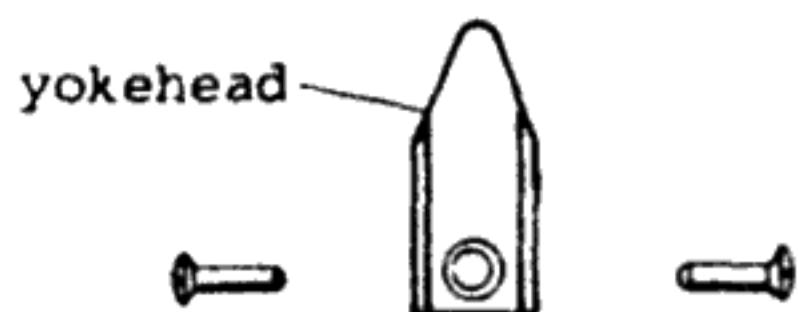
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



- (a) Dismantle the output socket (2 screws) and remove the screening can.
- (b) Unsolder all five wires.
- (c) Remove the yokehead (2 screws).
- (d) Remove the tone arm assembly.
- (e) Remove the 10 BA screw retaining the arm socket.
- (f) Remove the arm socket.
Ensure the black ground wire is not carried into the tone arm when the four wires are withdrawn.
- (g) Remove the rubber grommet from the tone arm below the saddle.
- (h) Make a 'pull through' from a suitable gauge of wire approx. 12" in length. Pass it through the tone arm from the grommet hole.
- (i) Hook the wires of the arm socket, about 1 1/2" from the end. Draw the wires through the tone arm. Take care not to hook and break the black ground wire, as this can only be replaced at the factory.
- (j) Pass the five wires through the rubber grommet and re-fit into the tone arm.
- (k) Carefully twist the free ends of the wires together for about 1/4". Thread them through the pillar. Nest the knife edges into the yoke.
- (l) Re-fit the yokehead (2 screws).
- (m) Separate the wires and re-solder.
 - WHITE to No. 1 pin
 - RED to No. 2 pin
 - BLUE to No. 3 pin
 - GREEN to No. 4 pin
 - BLACK to ground tag No. 5
 Arrange the wires to relieve torsion.
- (n) Slide on screening can and re-assemble the output socket (2 screws, washer and ground contact).

IMPORTANT

TOOLS

Always select a screwdriver of the correct size in good condition. The appearance of the arm will be spoilt if the screw heads are damaged. Do not use a worn Allen key, it can permanently damage the screw sockets. Always use an instrument soldering iron, 10 WATTS maximum.

TONE ARM ASSY

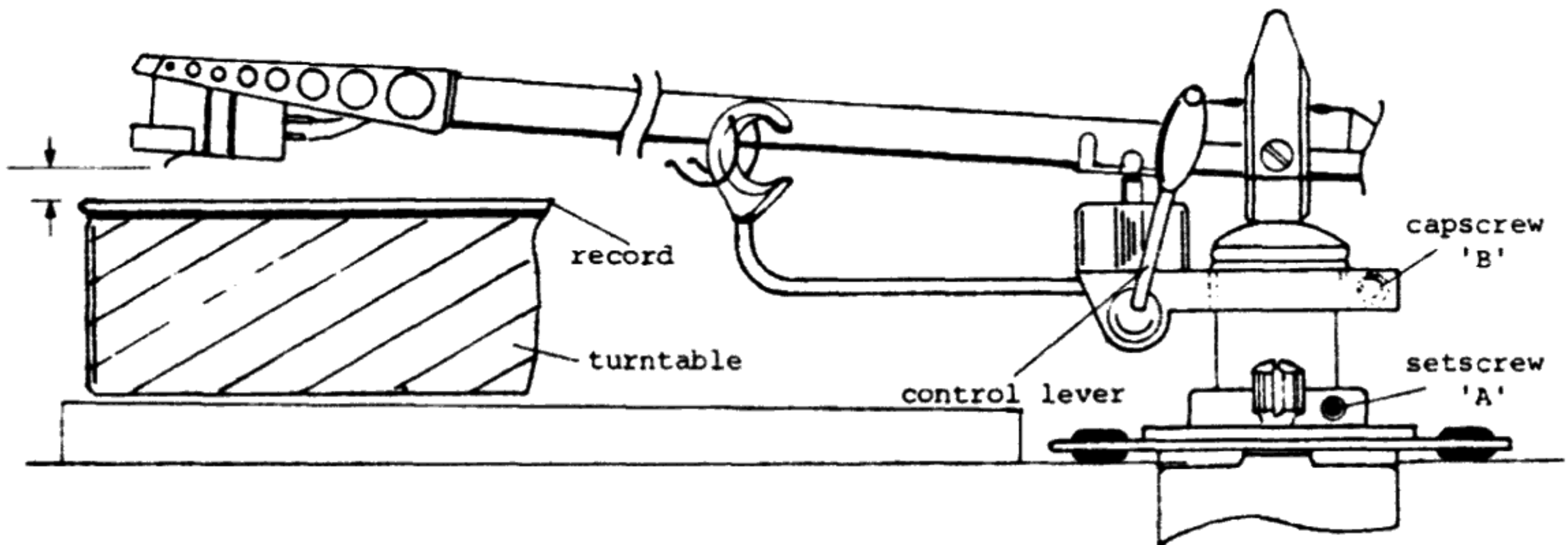
Do not remove the screws securing the saddle. They can only be replaced at the factory.

PILLAR ASSY

Do not adjust or lubricate the bearings.

CONTROL BRACKET

Do not dismantle or lubricate. The control can only be serviced at the factory.



The control is set at the factory so that the stylus is approx. 5/16" above the surface of the record with the control lever in the raised position.

Should the control need adjustment, i.e.

- (a) when the control bracket has been refitted as in Service Sheets 7, 8, 13, 14, 19 and 20

OR

- (b) for some special reason a change from the normal setting is required proceed as follows:
 1. Check that the pillar height is correctly adjusted and that the arm is parallel with the surface of the record.
 2. Unlock capscrew 'B'.
 3. With the arm in the arm rest, rotate the control bracket, viewed from above, clockwise to decrease the height raised above the record and anti-clockwise to increase it. The adjustment should be made a little at a time and the normal relationship between the arm and the turntable should be restored by unlocking setscrew 'A' and turning the bracket complete with the pillar a corresponding amount in the opposite direction to the adjustment.
 4. Lock setscrew 'A' and capscrew 'B'.

Do not use worn Allen keys, they can permanently damage the screw sockets.

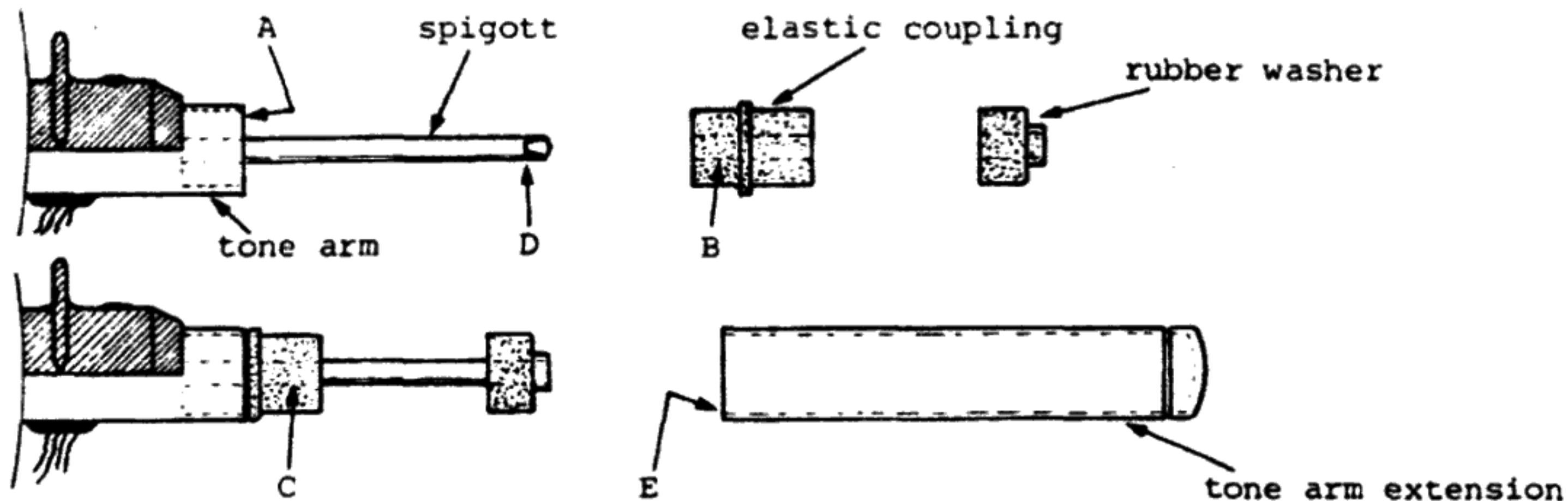
Key sizes:-

Setscrew 'A', 1/16" across flats as supplied with SME pick-up arms.

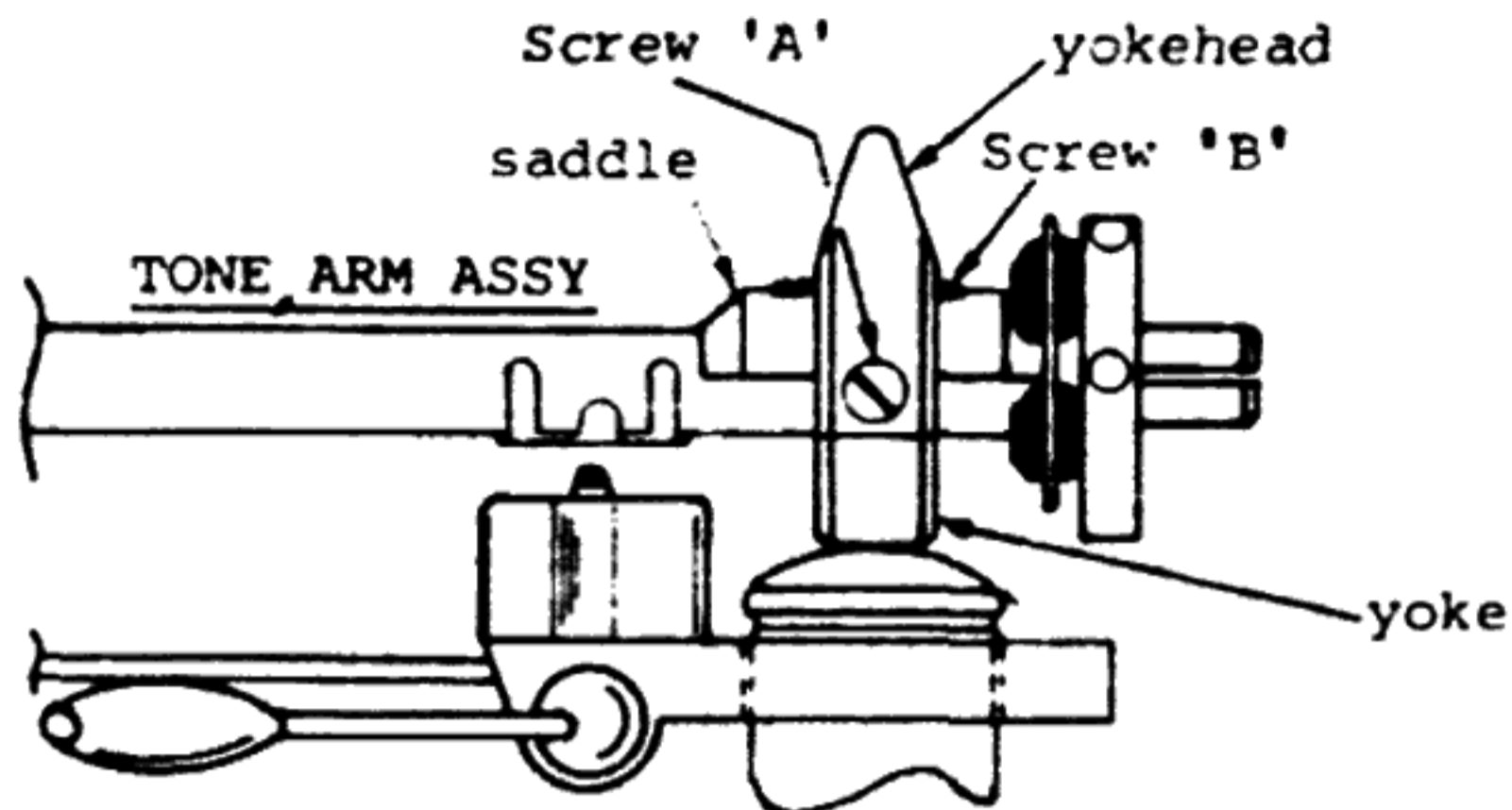
Capscrew 'B', 5/64" across flats - Spare part No. 1606.

INSTRUCTIONS FOR REPLACING THE ELASTIC COUPLING
RUBBERS OF THE MODEL 3009 & 3012 SERIES II
PRECISION PICK-UP ARMS

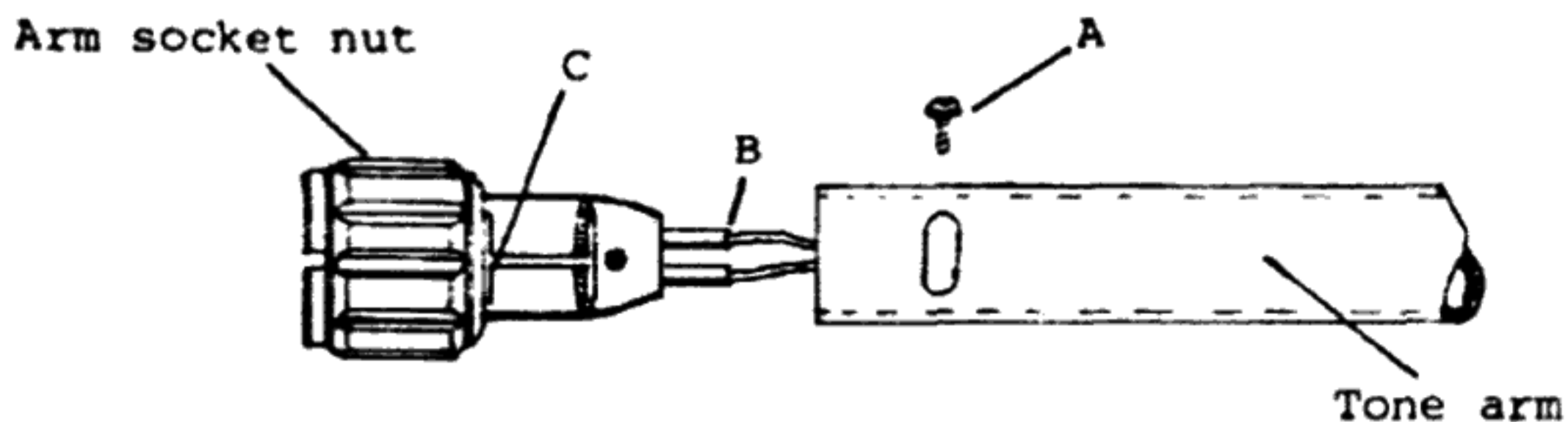
SERVICE SHEET 25



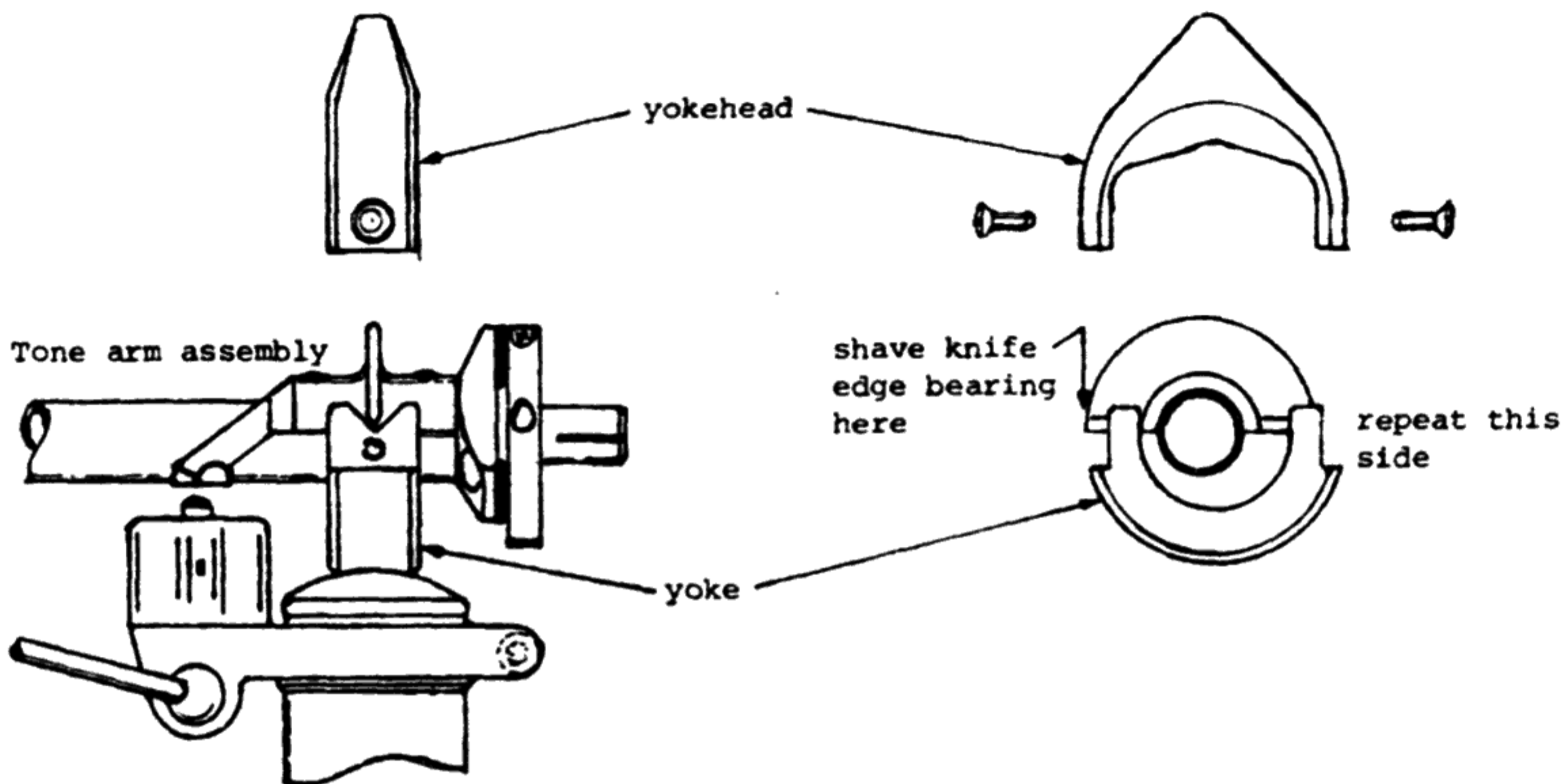
- (a) Remove the balance weight and pull off tone arm extension.
- (b) All remaining rubber left in the tone arm at 'A', on the spigott at 'D' and in the tone arm extension at 'E' must be totally removed using a narrow blade, then degreased with benzene or carbontetrachloride.
- (c) Degrease the elastic coupling and rubber washer by immersing them briefly in benzene or carbontetrachloride and allowing them to dry.
- (d) The elastic coupling is shorter one end to the flange and it is this end that is cemented into the tone arm at 'A'. Any type of adhesive suitable for bonding rubber to metal may be used, but we recommend the use of a Cyanoacrylate adhesive such as manufactured under the trade names of 'Loctite' and Avdel.
Apply the adhesive to the outside diameter only of the elastic coupling at 'B'. Pass the coupling over the spigott and into the tone arm up to the flange and allow to set.
- (e) Apply the adhesive to the end of the spigott at 'D'. Position the rubber washer so as the small diameter of the washer lines up with the end of the spigott.
- (f) Apply the adhesive to the elastic coupling at 'C'. Pass the tone arm extension over the rubber washer and up to the flange of the coupling and allow to set.
- (g) Re-assemble the balance weight.



- (a) Remove the yokehead. 2 screws 'A'.
Ensure that the Tone arm assembly is not lifted out of the yoke.
- (b) Remove the existing wayrod housing assembly. Screw 'B'.
DO NOT REMOVE THE OTHER SCREW IN THE SADDLE.
- (c) Fit the new wayrod housing to the Tone arm and secure with screw 'B'.
- (d) Re-fit the yokehead. 2 screws 'A'.
- (e) Remove the rider weight from existing wayrod and re-fit to the new assembly as explained in Service Sheet No. 12.

ARM SOCKET PART No. 1802/9

- (a) Set the height of the pillar to its lowest position, i.e. when the control bracket is resting on the base.
- (b) Remove the 10 BA roundhead screw 'A' from the underside of the tone arm.
- (c) Gently ease out the arm socket from the tone arm avoiding pull on the wires soldered to the spring contacts at 'B'.
- (d) Place a small screwdriver in the slot at 'C' close to the arm socket nut and lever in both directions thereby opening the two lugs. This should be done a little at a time, fitting the arm socket at each setting, into the tone arm until the desired fit is achieved.
- (e) Replace the 10 BA roundhead screw 'A'.
- (f) Before re-setting the height of the pillar to suit the turntable being used, raise it to the maximum height to re-position the internal wires in the tone arm.



The knife edge bearing of the SME precision pick-up arm should be free with approx .010" end float in its seating.

If the bearing tightens up due to the effect of high humidity the correct adjustment can be restored as follows:-

- 1) Remove the cartridge and unscrew the balance weight.
- 2) Remove the yokehead - 2 screws.
Avoid lifting the tone arm assembly out of the yoke.
- 3) Move the tone arm assembly laterally in the yoke, first to one side and then the other, exposing the knife edge bearing. Shave each side of the bearing, removing approximately .004" (the thickness of this printed sheet) using a razor blade.
- 4) Re-assemble the yokehead. 2 screws.
Check that there is lateral movement of the bearing within the yoke/yokehead assembly.
- 5) Fit the balance weight and cartridge and re-set the pick-up arm according to the Instruction book.

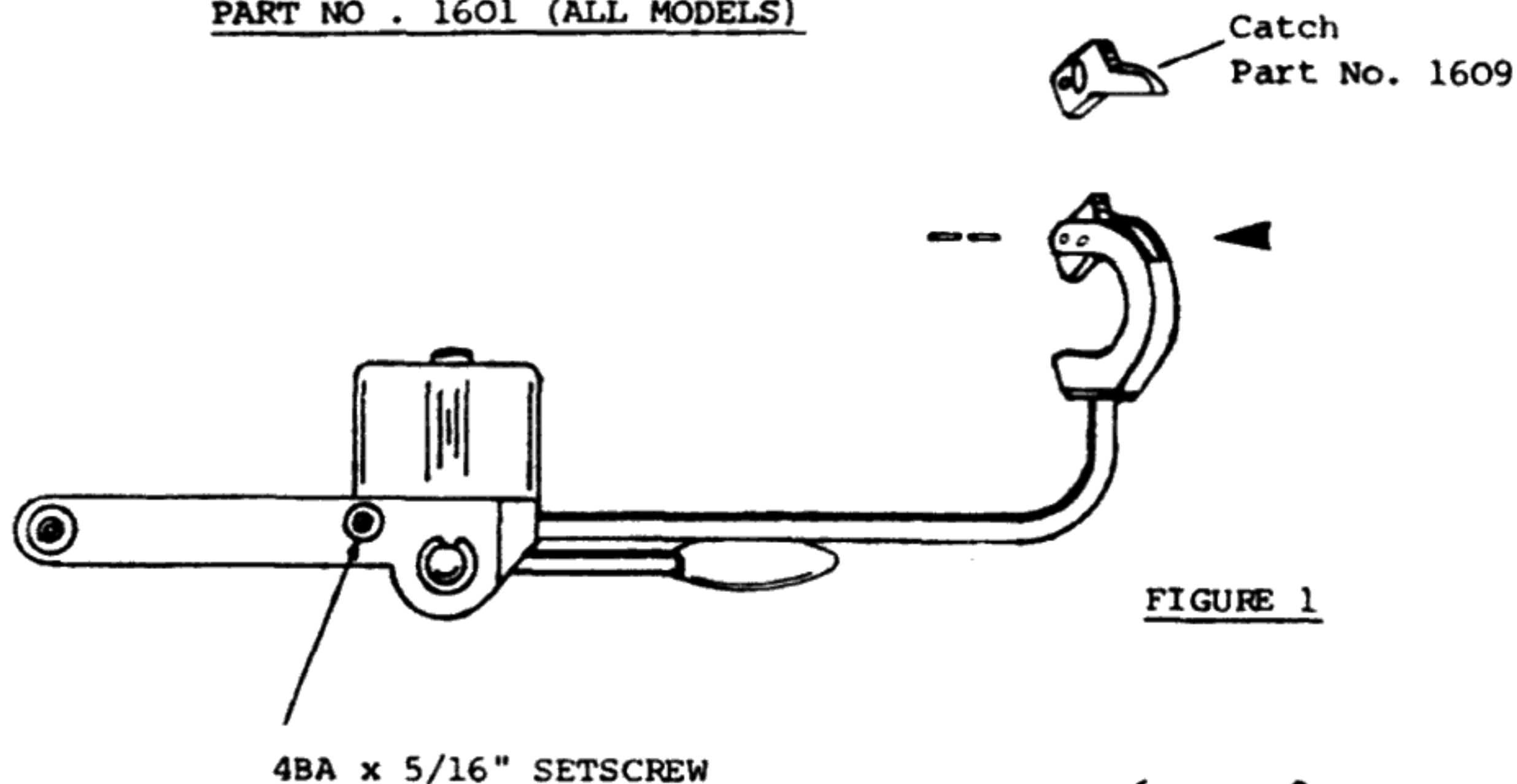
PART NO . 1601 (ALL MODELS)

FIGURE 1

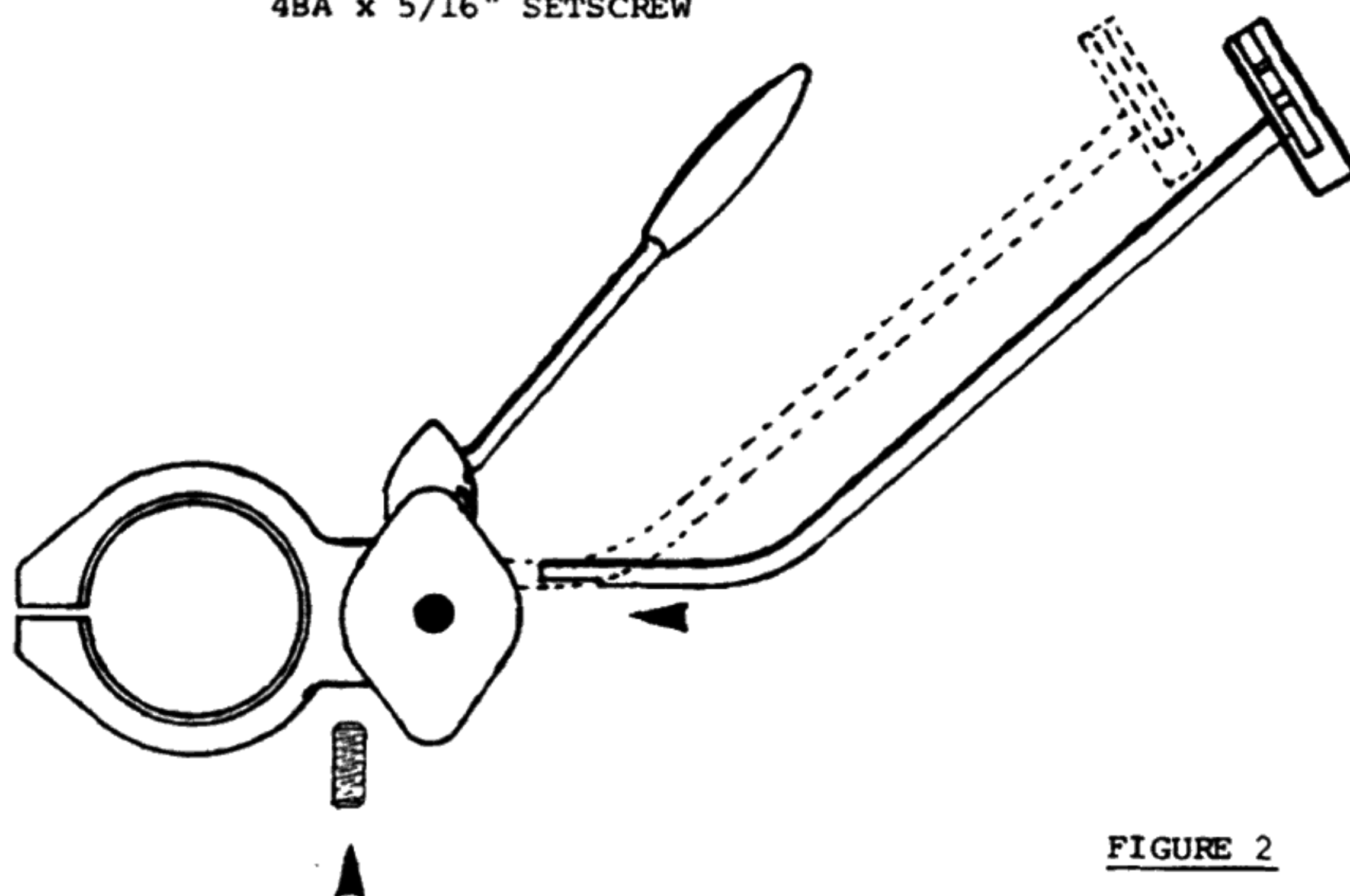


FIGURE 2

Removal.

The arm rest bracket is secured in the control bracket casting by a 4BA x 5.1/16" Allen screw. When this is released about one turn the bracket can be withdrawn.

Re-fitting.

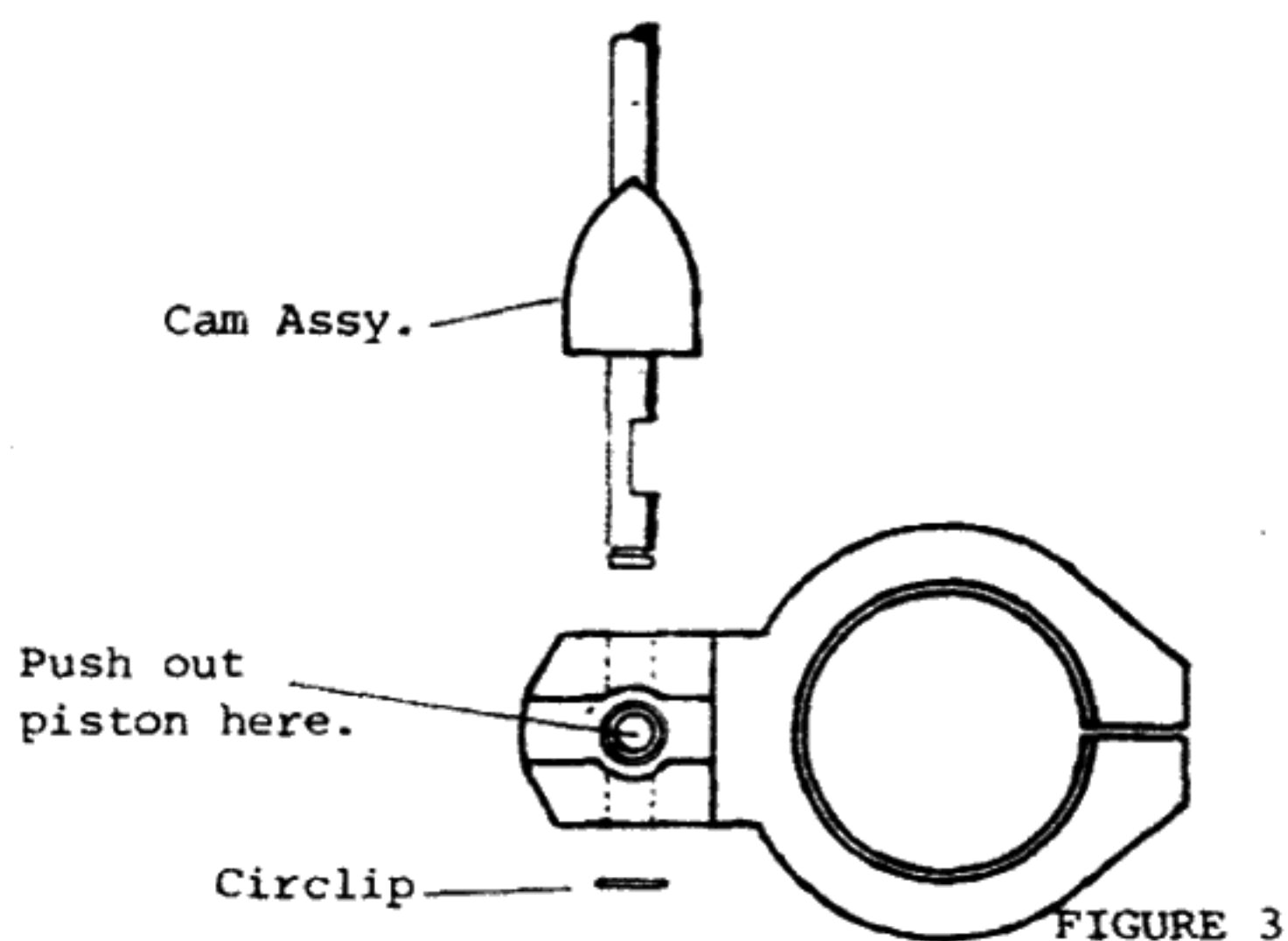
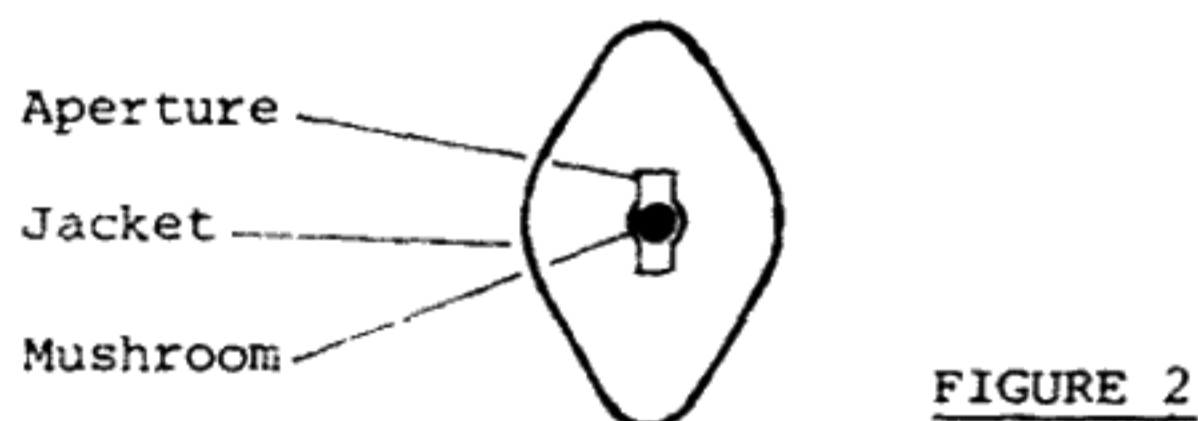
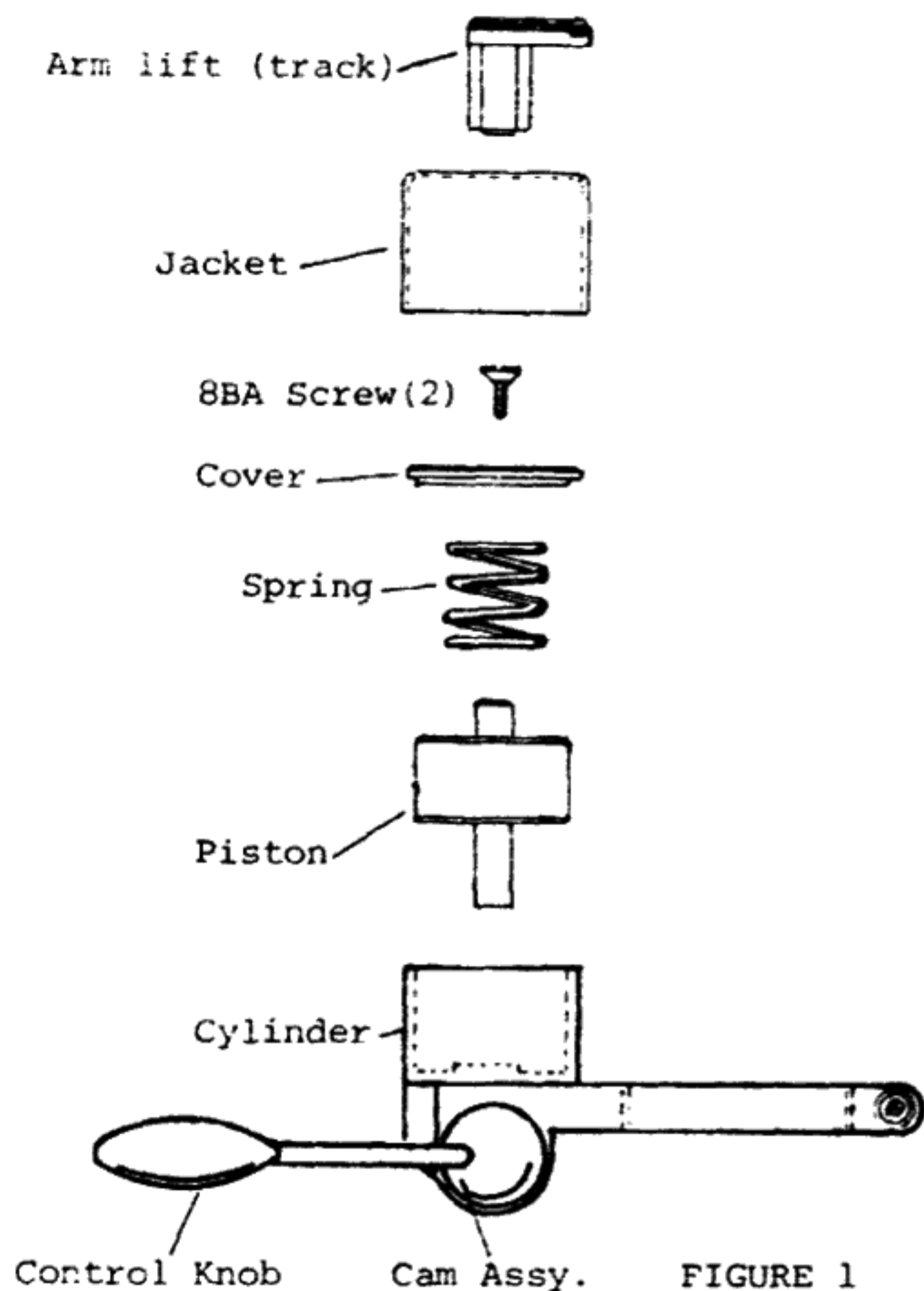
With the set screw in the released position insert the bracket in the hole in the front of the control bracket casting and push right home. Tighten the set screw securely. The Allen key must be in good condition and pushed home in the socket in the screw otherwise the latter may be damaged.

When correctly fitted the bracket should appear as shown in figure 1 and by the dotted line in figure 2. If it does not, adjust the bend slightly to achieve what is required.

Replacing the catch.

Push out the two dowels in the direction of the arrow, figure 1, with a small punch or pin. Locate the new catch in the arm rest and re-fit the dowels in the opposite direction. Ensure that the catch drops freely.

NOTE: Only those control brackets fitted with the integral arm lift (track) FIGURE 1 or the alternative version incorporating the mushroom and identified by the special aperture in the jacket FIGURE 2, can be serviced as instructed below. ALL OTHERS CAN ONLY BE SERVICED AT THE FACTORY.



To dismantle the cueing device.

- (a) With finger and thumb close to the centre pull off the arm lift, FIGURE 1.
- (b) Remove the jacket.
- (c) Using a screwdriver of the correct size, remove the two 8BA screws, FIGURE 1.
- (d) Remove the cover and spring.
- (e) Lift out the piston. If this cannot be done with the fingers proceed as follows:-
 - (1) Remove the circlip securing the cam assy. FIGURE 3.
 - (2) Move the control knob into the vertical position and withdraw the cam assy., FIGURE 3.
 - (3) Push out the piston from underneath with a small rod or knitting needle, FIGURE 3.

To rebuild the cueing device.

- (f) Thoroughly clean the piston and the bore of the cylinder with one of the electrical contact cleaners supplied in aerosol cans and obtainable in most electrical shops.
- (g) Inspect the surfaces of the piston and the bore of the cylinder for damage and then ensure that the piston can drop freely in and out of the cylinder.
- (h) Re-fit the cam assy. and replace the circlip.
- (i) Apply a thin coat of Silicone fluid to the outside diameter of the piston and to the bore of the cylinder, using a pipe cleaner or small wooden stick. Silicone fluid of 1,000,000 c/s viscosity can be obtained from SME Limited in 1.75 ml. vial part No. 1610.
- (j) Assemble the piston and spring and secure the cover (2 - 8BA screws) FIGURE 1.
- (k) Re-fit jacket and arm-lift.
- (l) Operate the cueing device 10-15 times lowering the arm lift by finger pressure if necessary.

This will 'run' the piston in after which the overall lowering movement should be smooth and between 3-5 seconds in duration.

CONVERSION OF SERIES II AND SERIES II IMPROVED PRECISION PICK-UP ARMS
TO PHONO OUTPUT SOCKETS

Instructions

Remove the existing screening can and unsolder the five harness wires. Unscrew the long 6BA screws which attach the output socket to the base of the pick-up arm. Discard all the parts which have been removed.

Reassembly

The replacement phono socket bracket and attachment screws are supplied ready assembled. Carefully remove the 6BA transit nuts from the long 6BA screws taking care not to disturb the relative positions of the various component parts. Assemble the phono socket bracket to the base of the pick-up arm by means of the 6BA screws, ensuring that the ground tag is fitted to the top of the phono bracket spacer beside the right channel phono socket (red). The red coded socket should be at the front of the pick-up arm, nearest to the headshell. Correct assembly can be checked by viewing the arm from the same side as the control lever when the phono sockets should point away from you. Securely tighten the two attachment screws.

Separate the free ends of the wires and solder as follows:-

- Left channel wire (white) to the centre terminal of the white coded phono socket.
- Right channel wire (red) to the centre terminal of the red coded phono socket.
- Left screen wire (blue) to the body terminal of the white coded phono socket.
- Right screen wire (green) to the body terminal of the red coded phono socket.

Attach the **eARTH**wire (black) to the end of the short black wire from the **earth**tag and solder both to the inside of the **earth** terminal on the phono bracket. Avoid solder on the outer face of the terminal.

Slide the screening can over the assembly and secure it with the ground terminal screw and washer.

Note: If the serial number of your pick-up arm is attached to one of the discarded parts it is advisable to keep this part so that the number may be quoted in later correspondence.

