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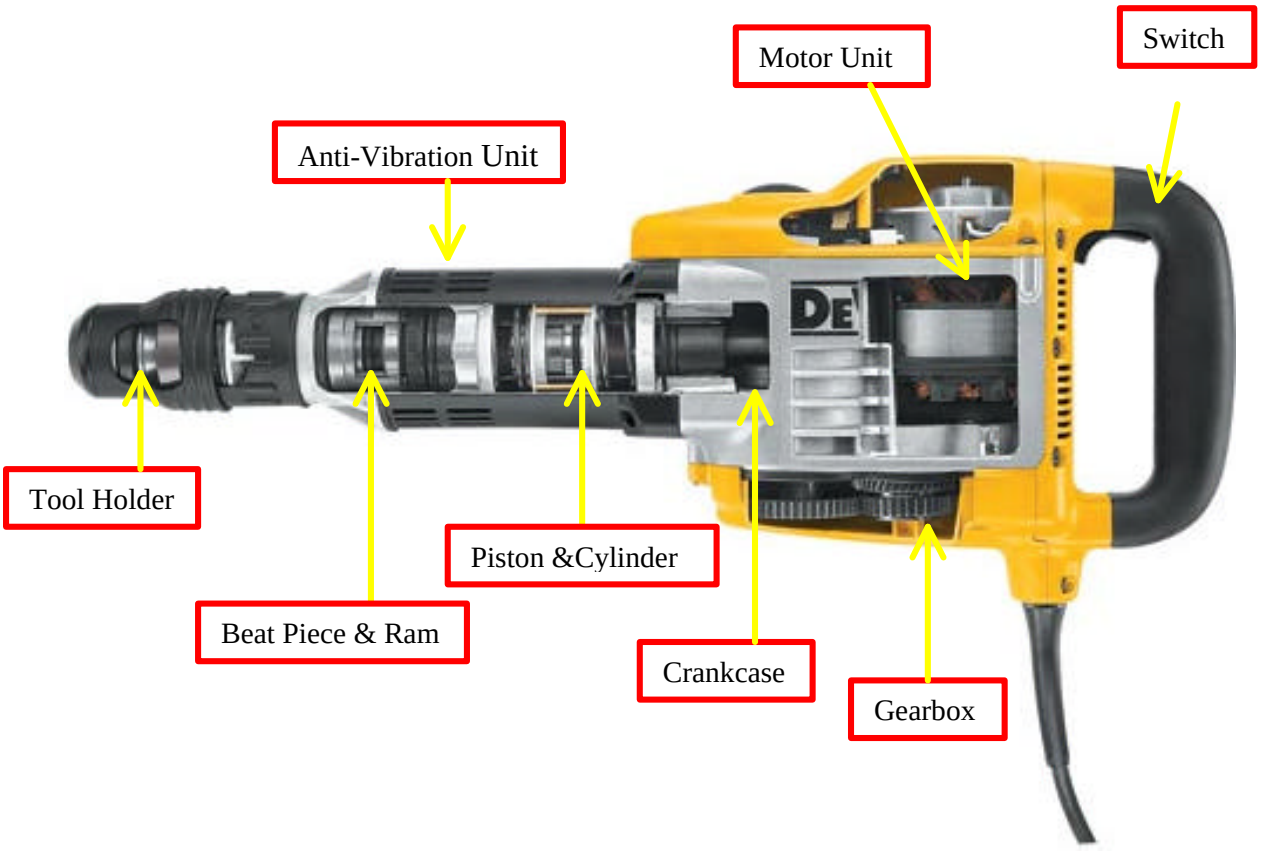
Technical Information & Parts Supply

Full Strip down and Re-assembly procedure for the 12KG Demolition Hammer D25940K.

This procedure is in Four main sections.

1. **General Information / Tooling**
2. **Total Strip Down.**
3. **Re-assembly.**
4. **Routine Servicing.**



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SECTION ONE.

General Information.

- **ONLY THE CORRECT GREASE MUST BE USED**

- **When repairing this product it is very important to keep the working area clean and free from any dust or debris.**
- **If any contamination is allowed within the Tool holder, Anti-vibration unit or Gear Box this will cause premature failure of the Product.**

- **If ANY of the O Rings or Seals are disturbed when dismantling, they must be replaced.**

- **If only the Motor/Switch needs attention, it is not necessary to remove the Anti-Vibration & Tool Holder units, although it can make the operation difficult if left attached, because of the size and weight of the product. If they are removed then the following should be noted**

- **Only undo the 4 Screws (65) from the Anti-Vibration Unit and remove the complete front assembly including the Tool Holder Unit from the Motor Housing.**
- **The Piston, CrankCase, Cylinder & Anti-Vibration Unit will be exposed and should be kept covered to prevent any ingress of dust or debris.**
- **The O Ring's (49) Piston and (79) Housing must be replaced on re-assembly.**

Serial Number / Date Code.

A serial number and the Date code will be printed on the Main Metal Housing on the right hand side next to the Anti-Vibration Unit. .
The Serial Number must be quoted on all repair documentation.
After repair, mark the housing next to the serial number with the letter 'R'.

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Service Kits.

Four Service kits will be available that contain all the O Rings, Grease, Brushes, Snap Rings, Seals that are required when Servicing.
The first service kit is used when the unit comes in for its first brush change after 250 hours.
The Major Kit is used when the unit requires a complete strip down and rebuild.

First Service Kit . 230 Volt.

Item	Desc	Part number	Qty.
8	Brushes	487340-00	2
71	O Ring	487298-00	1
77	O Ring	487287-00	3
78	O Ring	323711-45	1
79	O Ring	323711-44	1
92	Seal	487315-00	1
93	Support	487319-00	1
109	Washer	487301-00	1
110	Snap Ring	579399-00	1
111	Seal	487375-00	1
800	Grease Tube	578970-03	1

First Service Kit . 115 Volt.

Item	Desc	Part Number	Qty
8	Brushes	487340-01	2
71	O Ring	487298-00	1
77	O Ring	487287-00	3
78	O Ring	323711-45	1
79	O Ring	323711-44	1
92	Seal	487315-00	1
93	Support	487319-00	1
109	Washer	487301-00	1
110	Snap Ring	579399-00	1
111	Seal	487375-00	1
800	Grease Tube	578970-03	1

Major Service Kit . 230 Volt.

Item	Desc	Part number	Qty.
8	Brushes	487340-00	2
32	Seal	487224-00	1
36	Seal	487209-00	1
52	O Ring	323711-47	1
58	Screws	324007-11	4
69	Damper	487321-00	1
71	O Ring	487298-00	2
74	O Ring	323711-46	1
77	O Ring	487287-00	3
78	O Ring	323711-45	1
79	O Ring	323711-44	1
92	Seal	487315-00	1
93	Support	487319-00	1
95	O Ring	323711-41	1
96	Damper	487302-00	1
108	Damper	487373-00	1
109	Washer	487301-00	1
110	Snap Ring	579399-00	1
111	Seal	487375-00	1
800	Grease Tube	578970-03	1

Major Service Kit . 115 Volt.

Item	Desc	Part Number	Qty
8	Brushes	487340-01	2
32	Seal	487224-00	1
36	Seal	487209-00	1
52	O Ring	323711-47	1
58	Screws	324007-11	4
69	Damper	487321-00	1
71	O Ring	487298-00	2
74	O Ring	323711-46	1
77	O Ring	487287-00	3
78	O Ring	323711-45	1
79	O Ring	323711-44	1
92	Seal	487315-00	1
93	Support	487319-00	1
95	O Ring	323711-41	1
96	Damper	487302-00	1
108	Damper	487373-00	1
109	Washer	487301-00	1
110	Snap Ring	579399-00	1
111	Seal	487375-00	1
800	Grease Tube	578970-03	1

Hand Tools required.

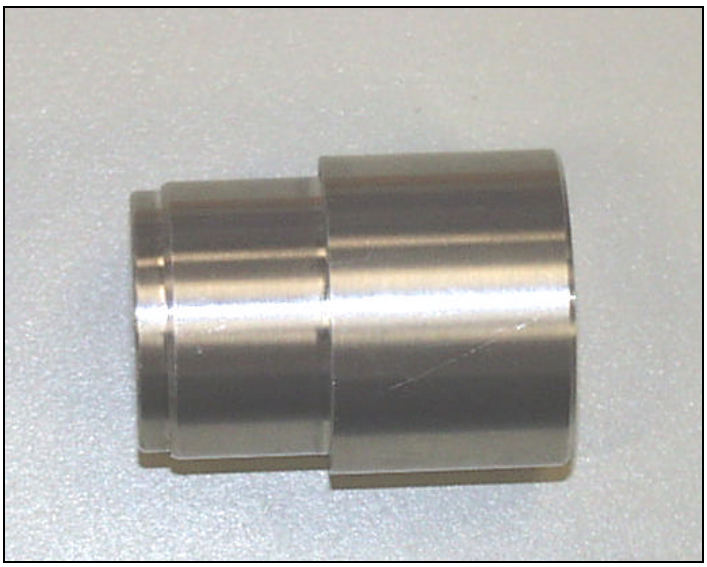
Soft faced mallet.
T Handled Torx Screw Drivers. TX10. TX15. TX20.
Long Nose pliers.
Torque wrench. ½ in Drive.
Torque Screwdriver.
T Handled Allen Keys. Size various
Circlip Pliers. Internal, External.
Press.
Vice.
Two legged puller.

Service tooling

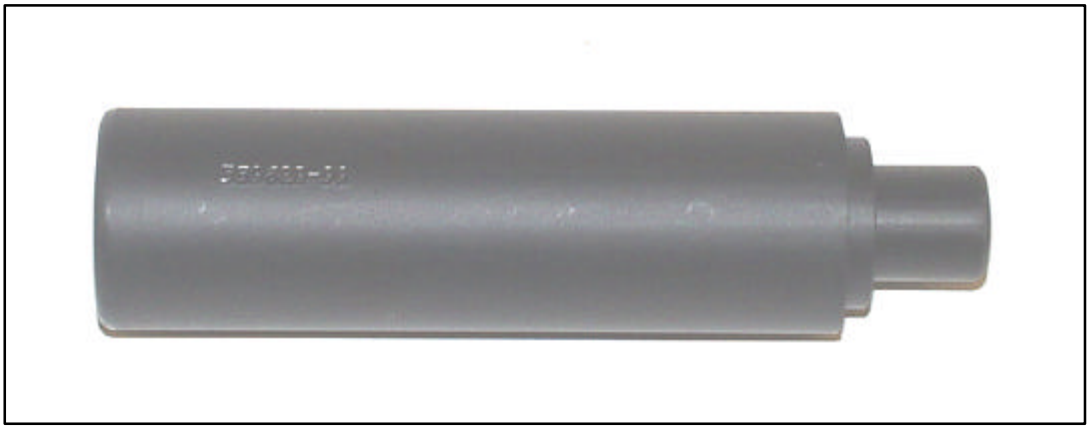
559617-99 **Crank Gear Removal & Assembly Tool.**
Used to fit Double Gear (42) in conjunction with a Press.
Will remove and replace the crank gear (43) in conjunction with a Torque Wrench
Used to fit Armature Seal (36) & Bearing (35) in conjunction with Service Tool **559621-99.**

559618-99 **Motor assembly Tool.**
Used to fit Motor Pot (2) & Armature (1)

559621-99 **Armature Seal & Bearing assembly Tool.**
Used to fit Seal (36) & Bearing (35)

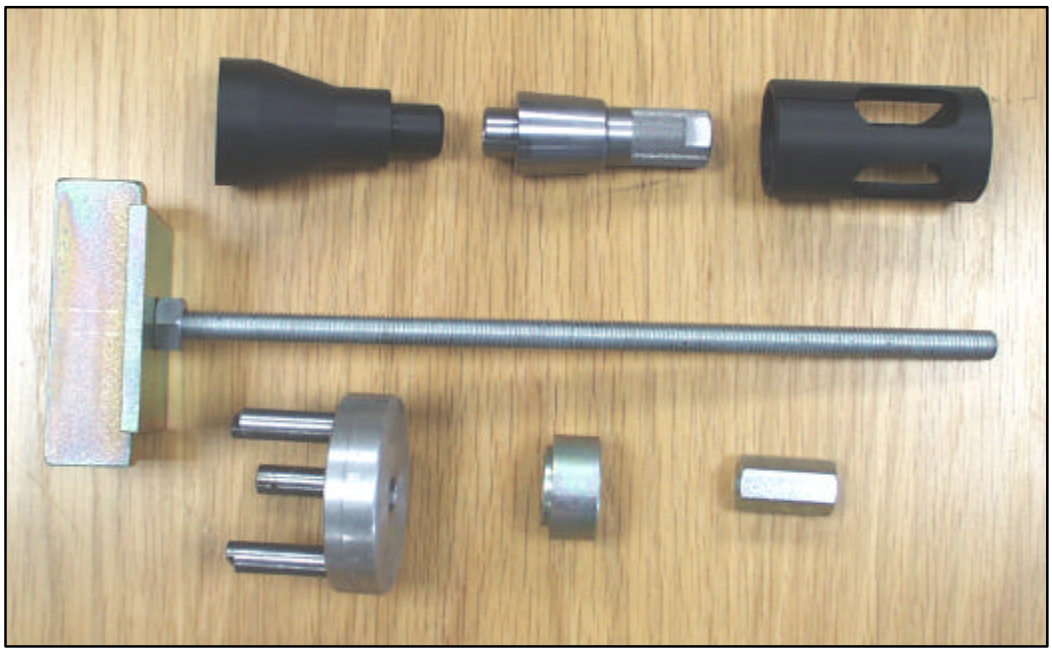


559628-99 **Spindle Seal & Tool Holder assembly Tool.**
Used to fit Seal (93) and Seal Support (92)

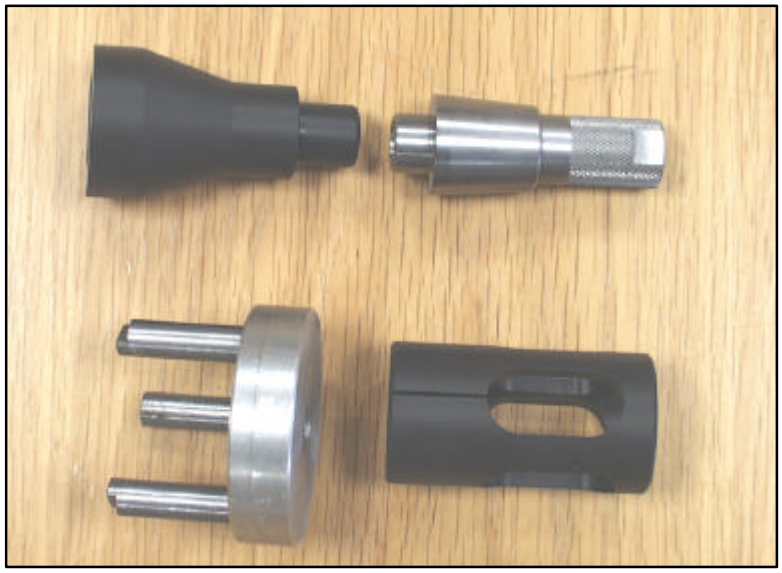


559629-99 **Snap Ring assembly Tool.**
Used to remove and fit Snap Ring (88).

FULL KIT NOT REQUIRED IF THE 10KG KIT IS ALREADY AVAILABLE.



559630-99. **Supplementary kit. To be used in conjunction with the 10 KG Kit.**

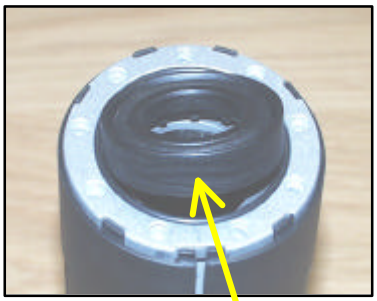


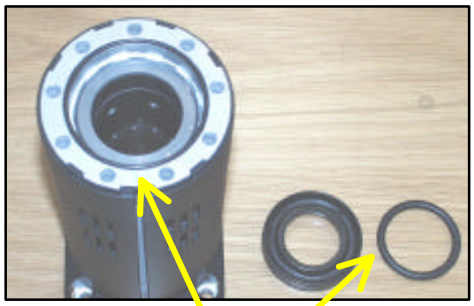
SECTION TWO

Tool Holder and Beat Piece.

- Remove Side handle (59) if fitted.

- Undo Nine screws (102), remove Tool Holder Assembly from the Anti-vibration unit.
- Beware that the internal components will fall out from the Tool Holder





- Remove item (72) from inside the Housing . Remove the O Ring's and discard from the housing and plastic bush

- Remove items (67,68,69,70). From inside the Tool Holder Unit,

- Remove Beat Piece Bearing item (90) from Spindle (94) (this may be tight),
- Remove O Ring (77) and discard.

- Pull off Rubber Seal item (111). From end of Tool Holder Unit and discard.

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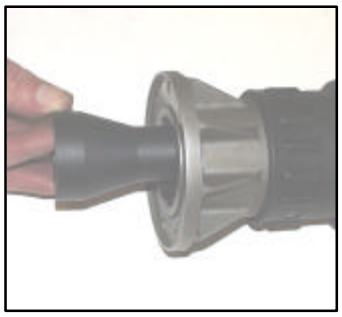
Dismantle Tool Holder Assembly.
Service Tooling 559629-99 Snap Ring Assembly tool.
Or 559630-99 Supplementary kit.
ALL 'O RINGS & SEALS MUST BE REPLACED.

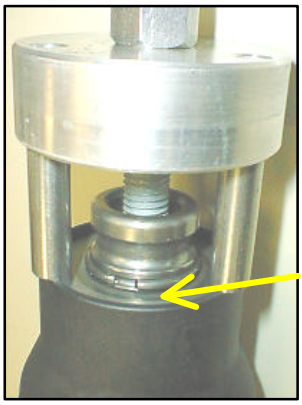
- **Clamp Service tool 559629-99 into a vice.**



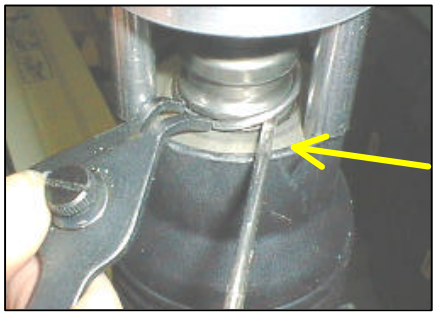
- **Important Note, Fit insert from Service Jig into the Tool Holder spindle, be careful not to damage the Seal.**

- Make sure that the insert stays in position otherwise the Seal inside the Spindle could be damaged, then lower the Tool Holder onto the Jig..

- Place the 'Three legged 'part of the service tool over the threaded rod so that the legs rest on the edge of the Black Sliding Sleeve (107).

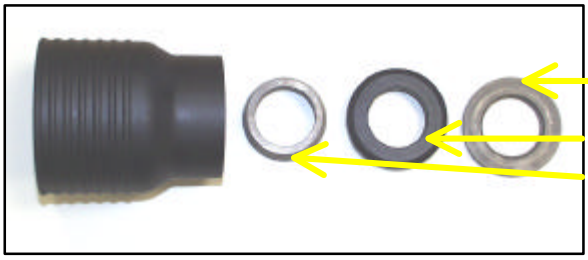


- Fit nut to threaded rod and tighten until the washer (109) is just clear of the Snap Ring (110). **Be careful not to over tighten.**



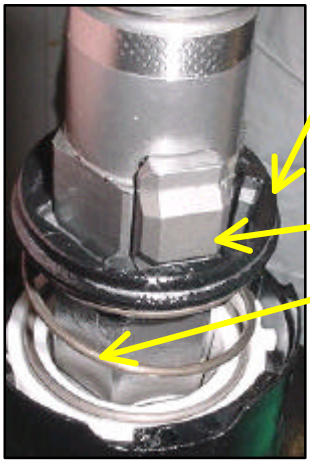
- Using CirClip pliers and a small flat bladed screwdriver prise the Snap Ring from the groove then maneuver it past the large groove to clear the Spindle
- Remove the nut and the Three Legged part from the Jig.
- Remove the Snap Ring. (**Do Not re-use**).

- Lift off the Sliding Sleeve.



- Remove the Washer (109) (**Do Not re-use**), Remove Rubber Bumper (108) and Locking Ring (105).

- Remove Spring (101)



- Depress bush (102) remove Locking Piece (103)
- Remove Bush (102)
- Remove Spring (101)

- Remove the Tool Holder Assembly from the Service Jig. Make sure the insert remains in place until the Tool Holder Unit is clear of the Spindle.
- Remove Jig Insert from The Tool Holder.

- Remove the Sleeve SA (100) from inside the Turning Sleeve (99)

- Rest exposed, narrow end of spindle on the bench and push Housing down.
- Remove Spindle.

If Spindle is to be re-used then you MUST replace the following.

- O-Ring (95).
- Seal (92) from inside the Spindle
- Seal Support (93) from inside the Spindle

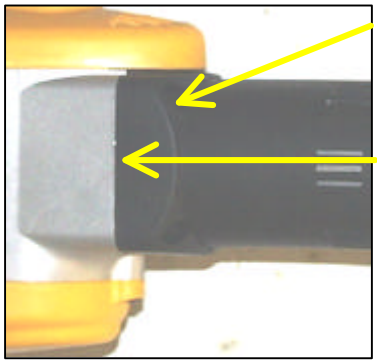
- Remove O Ring (96) from inside the Housing and discard.

- Remove the Turning Sleeve (99), this could be very difficult and may become damaged in the process.

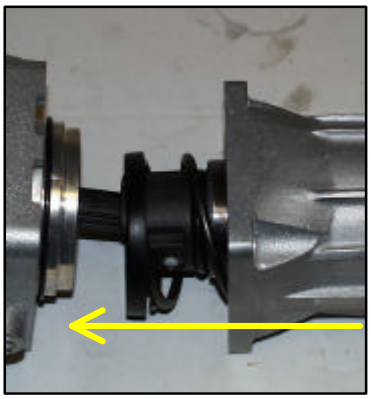
<u>This completes the strip down of the Tool Holder Unit.</u>

Anti-vibration unit.

IMPORTANT NOTE ALL O RINGS MUST BE REPLACED AFTER DISMANTLING.

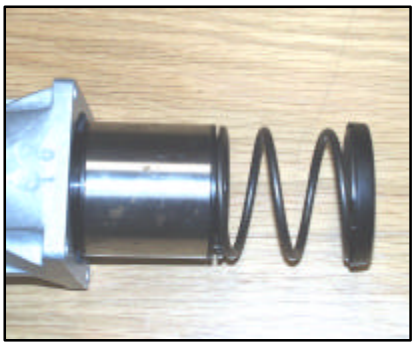


- Undo the 4 Screws (65) Holding the Anti-Vibration unit to the Motor Housing.
- Use a broad flat bladed screwdriver to **carefully** lever the Anti-Vibration unit from the Motor Housing.
- **Beware** there will be pressure from springs inside the Anti-vibration unit. This could cause the housing to be forced from the Motor Housing and some of the components to fall out.

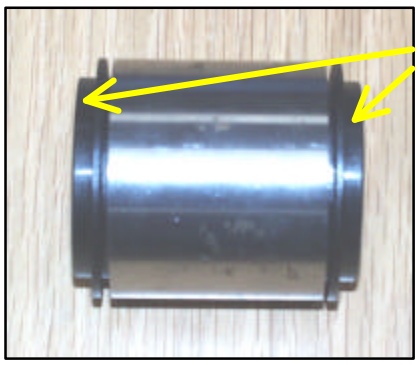


- **Beware also that the Piston, Cylinder and Crankcase will now be exposed . Protect from any dust or damage.**
- Remove O Ring (79).

- Remove Cover (66) Pull the split apart and slide off Housing (80)



- Remove Anti-vibration components (81, 82, 83, 84). From inside the housing.

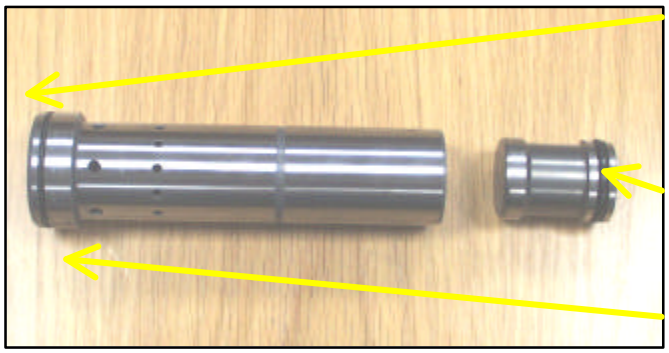


- Remove item 82 x 2 from Counterweight.

- Remove Cylinder (75).

  Place Narrow end of Housing on the bench ,Push down on exposed part of Cylinder at the wide end of Housing by the 4 bolt holes.

  This will release the Cylinder from the housing, it can now be removed through the narrow end.



- Push Ram (76) through from the wider end of Cylinder using a **non-metallic** object, to avoid any damage.
- Remove O Ring (77) from Ram.
- Remove inner and outer O Ring (71), (74) from the Cylinder .

<u>This completes the strip down of the Anti-Vibration unit.</u>

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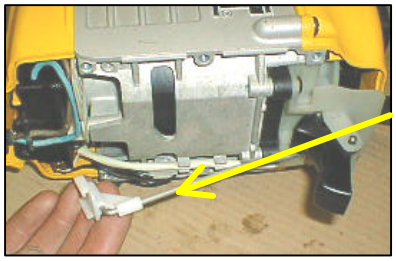
Dismantle Motor and Gearbox

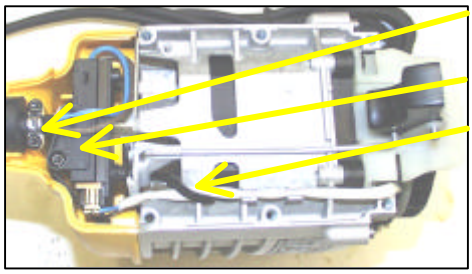
ALL 'O RINGS & SEALS MUST BE REPLACED.

Remove Handle / Switch

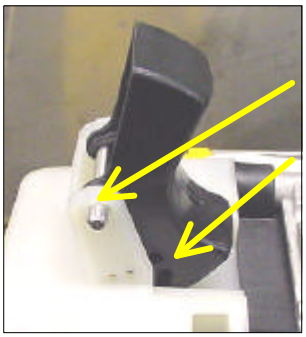
- Remove Switch handle Cover (19) 8 Screws



- Remove Adapter (15) from Switch and remove Actuator Rod (14) from Trigger (12).

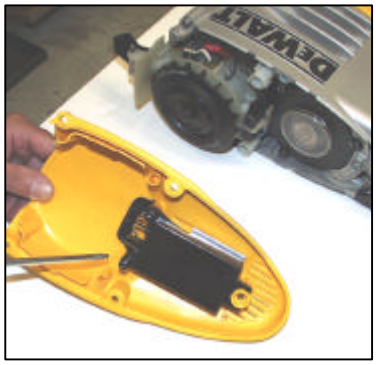


- Remove cord clamp (25) 2 Screws
- Remove Switch Clamp (24) 1 Screw.
- Cut and Remove the Cable Tie (23) from switch lead.
- Remove Switch (22) disconnect the Motor Lead (18) and Power cord (29).



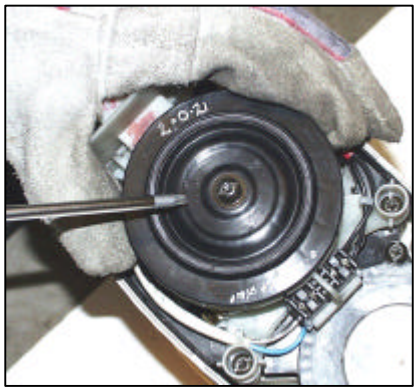
- Pull out Pin (12) Remove Trigger (13)
- **Beware** the two locating pins (17) will spring out when the Trigger is removed.

Armature & Field.

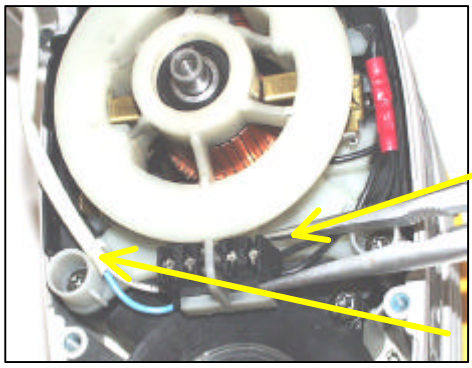


- Remove top Motor Cover (57) 5 Screws.

- Remove Electronic (54) 2 Screws, from inside Cover.



- Undo fan Screw (11). Grip outside edge of Fan; **Use protective gloves**, the edge is very sharp. Lift off fan (10).

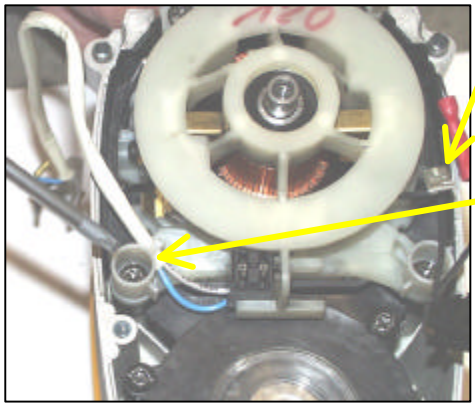


- Remove both the Terminals from the Brush Assembly. Use long nose pliers to release the retaining clips.

- Remove the Switch lead SA (18).

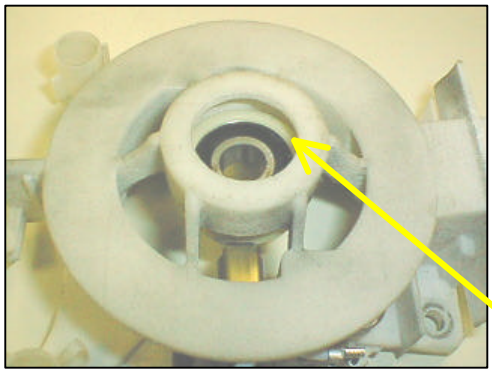
- Remove Brushes (8) Use a small Allen key to pull the spring clear of the Brush.

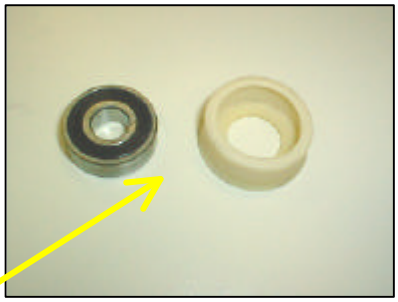
- Remove the brush and disconnect from Brush Holder.
- Fit new Brushes and leave spring resting on the side ready to reassemble.
- Keeping the spring in this position will allow new brushes to be fitted waiting for re-assembly.



- Disconnect the two short black leads from the Brush Assembly.

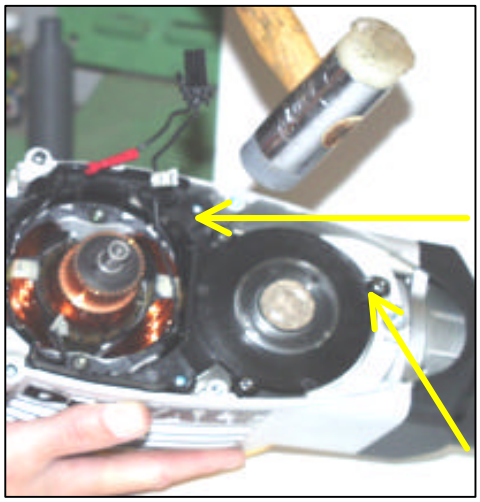
- Remove the 4 Screws (58) Must be replaced.
- Holding the Brush Assembly (3) lift clear of Armature shaft.





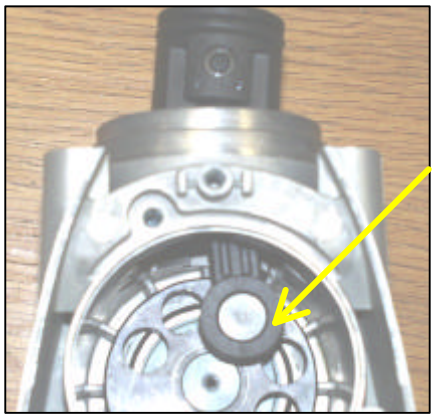
- Push out Bearing (5) and insulator (4) from Brush assembly.

The Brush Holders are not available as separate parts.



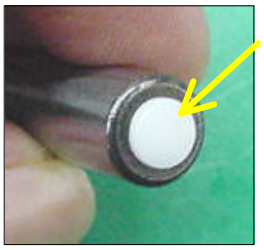
- Drift out Field and housing (2) by lightly tapping on opposite sides of Main Casting (44).
  Remove seal (33)

- Remove SA Cover (53) 3x Screws,
- Remove O ring (52) **This must be replaced.**



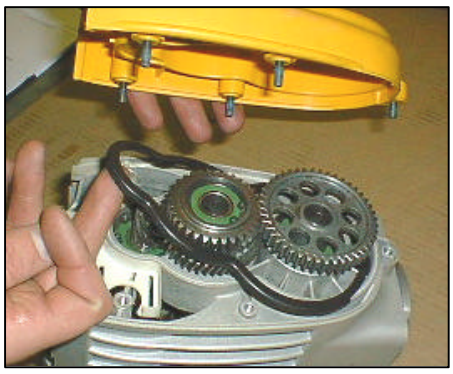
- Remove Piston SA (51).**This is only possible if the Anti-vibration unit has been removed.** Position the CrankShaft Pin so the Con Rod can be lifted off and removed through the front of Main Housing.

- To dismantle Piston push Pin (47) through from either side and lift Piston off Con Rod (38)

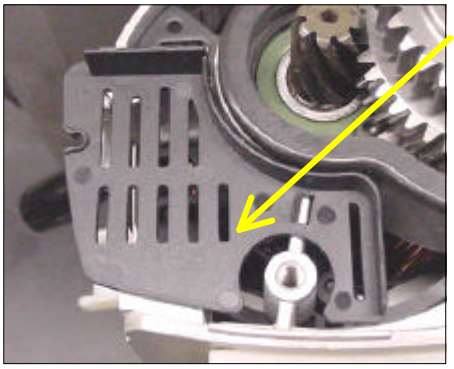


Lever out Knob (48) x 2

Remove O Ring (49)



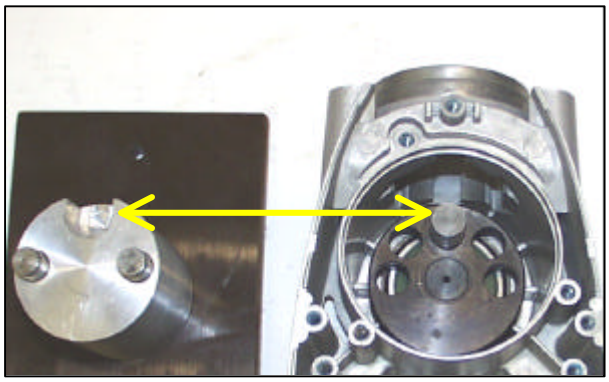
- Turn housing over
- Remove Gear Case Cover (30).
- Remove Seal (32).



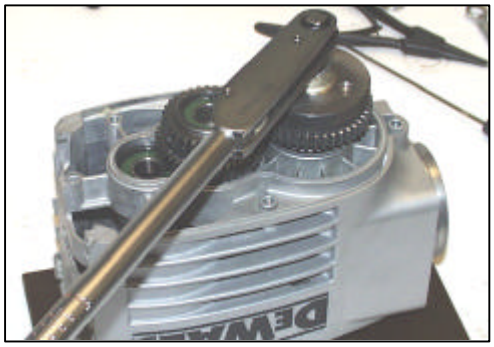
- Remove cover (21).

- Push Armature though bearing using a Press and tube.

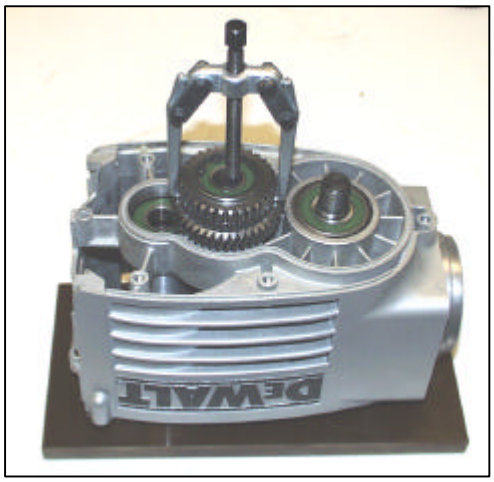
Make sure that the bar is fitted to the underside of the Service Jig then Clamp Service Jig (559617-99) in a Vice.



- Making sure the pin on the CrankShaft locates into the recess, position the Main casting on to the Jig 559617-99.



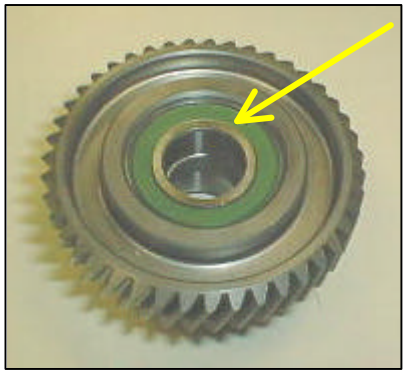
- Then locate the socket part of the Jig into the large Gear(43).
- Remove Gear Anti-clockwise

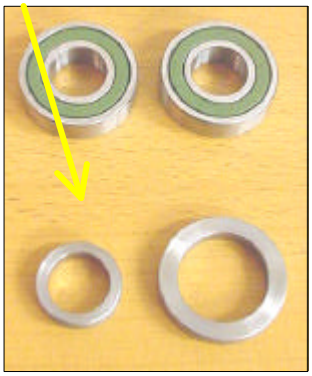


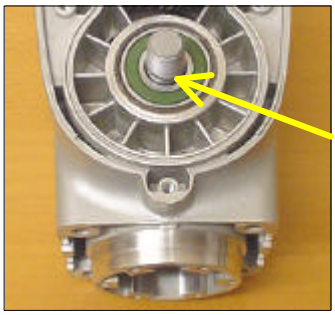
- Remove Double Gear (42) using a Puller.

- Remove CirClip (37)

- Push Bearings (41 x 2) and Spacers (39,40) through from the large gear side using a press and a suitable size drift.

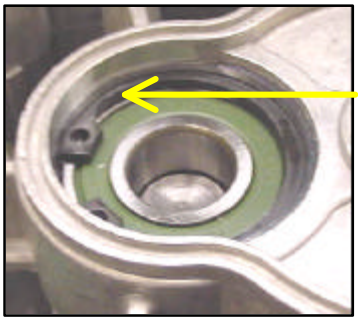




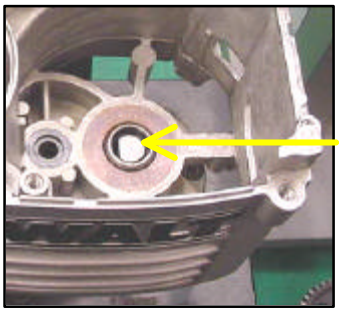


- Remove the Main casting from the service jig
- Remove the CrankShaft assembly using a press.
- Push through from the outside.

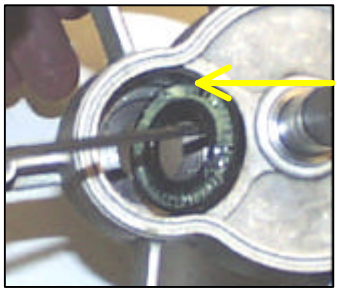
The CrankShaft bearings can not be replaced due to misalignment problems when refitting. If the Bearings are required, the complete housing will have to be replaced.



- Remove the Circlip (34) from the Armature Bearing.



- Press out the Armature Bearing. (35)



- Remove the seal (36) **This must be replaced.**

<u>This completes the Full Strip Down of the product.</u>

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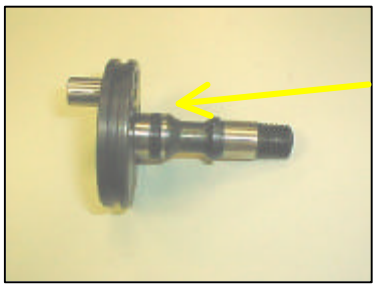
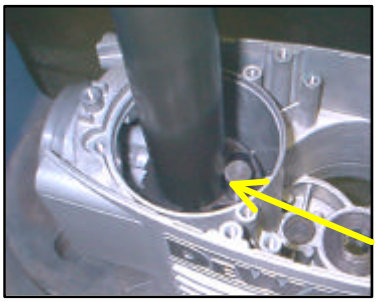
SECTION THREE.
Re-Assembly

ALL 'O RINGS & SEALS MUST BE REPLACED.

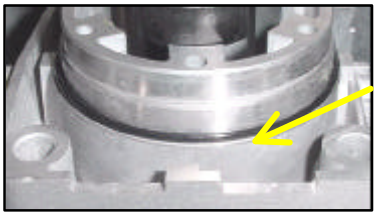
Gearbox & Crankshaft .
Service Tooling required 559618-99/ 559617-99 / 559621-99.



- Make sure the Ring Seal (46) is fitted to Crank Shaft SA (45)

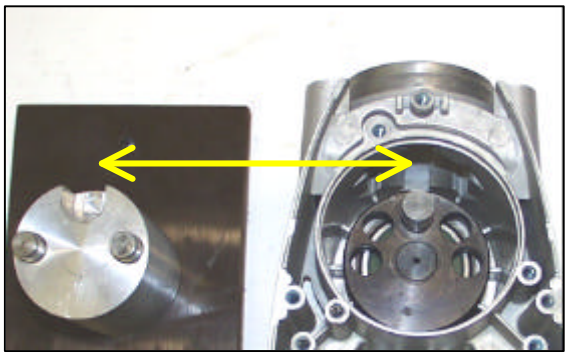


- Place Main Housing on Press base so the threaded part of the Crank Shaft has clearance and will not be damaged.
- Press Crankshaft into Main Housing to its limit. Check the shaft rotates freely in the bearings.

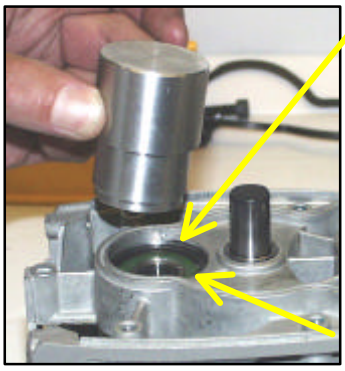


- Fit New O-Ring (79) to front of Main Housing.

REMOVE BAR FROM UNDERSIDE OF SERVICE JIG 559617-99



- Place Main Housing on to Service Jig 559617-99
  Make sure the pin on the CrankShaft (45) locates into the recess on the Jig.



- Fit new Armature seal to main housing using Service Tool 559621-99. Make sure the metal insert is facing up and fill the recess of the seal with Paragon grease (802).
- Fit Armature Bearing (35), again using Service tool 559621-99.
- Fit CirClip (34)

Leave Housing on Service Jig.

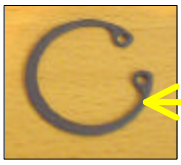
Double gear Assembly.

Gear (42)

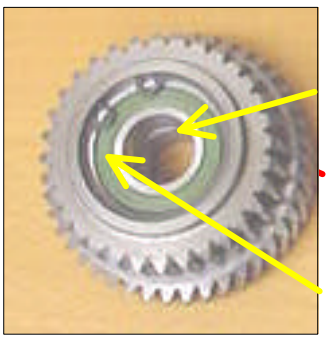
Bearings (41)

Small Spacer (40)

Large Spacer (39)

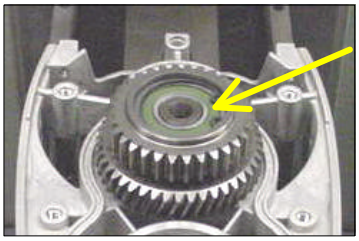


CirClip (37)



- Press one Bearing (41) into Double Gear, to its limit.
- Fit both Spacers into the Gear Assembly one resting on the inner and the other on the outer race of the Bearing.
- Fit the second Bearing; make sure to clear the groove for the Circlip.
- Fit Cirlip

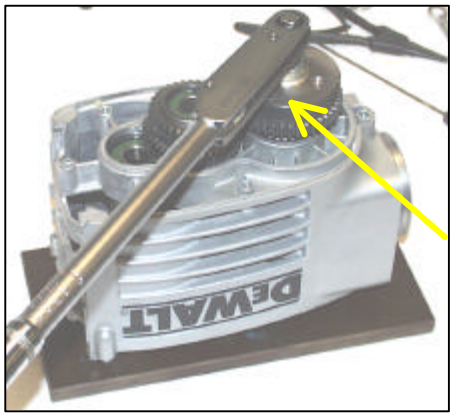
The Main housing should still be on the Service Jig 559617-99.



- Place the assembled Double Gear SA onto the spindle. Fit a suitably sized drift that will fit on the inner race of the Bearing.
- Using a Press push down fully.

Important note, it is better to clamp the Jig into a vice before tightening the Large Gear. To do this refit the bar to the underside of the Jig.

Crank Gear. (43)



- Fit the Large Gear onto the threaded part of the Crank Shaft making sure the teeth mesh correctly with the Double gear.
- Fit Socket part of Service Jig to the Gear and tighten clockwise to a torque of **18 Nm.**

Remove Housing from Service Jig.

This completes the Re-assembly of the Gearbox.

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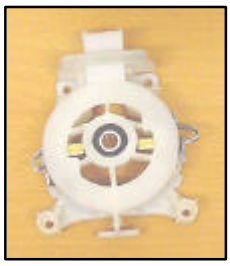
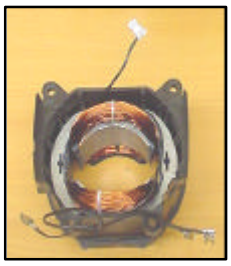
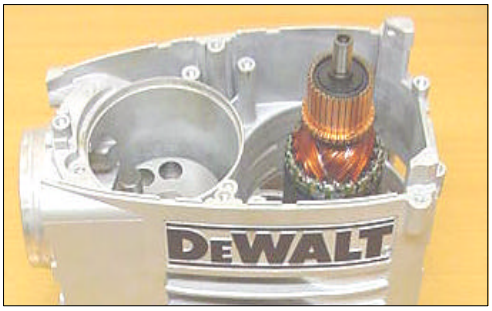
Re-assembly of Motor Unit.
Service Tooling required 559618-99.

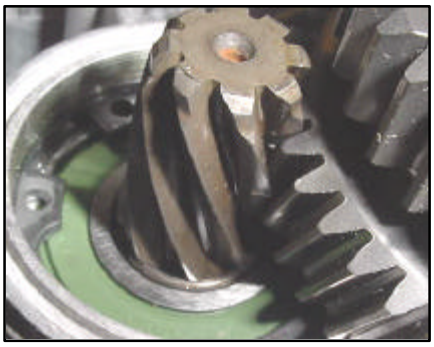
ALL 'O RINGS & SEALS MUST BE REPLACED.

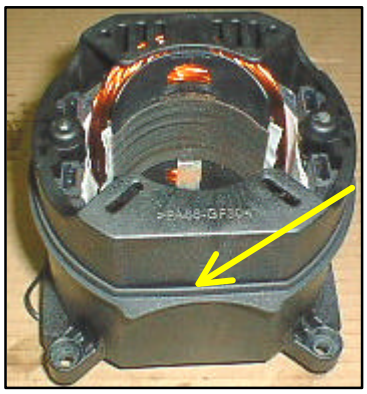

- **Place main Housing onto Service Jig 55918-99.**



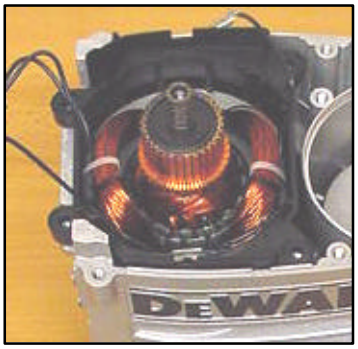
- Place Armature into Main Housing through the Bearing making sure the splines mesh with the Double Gear. Using a press Push the Armature through the Bearing to its limit



- Check to make sure the Splines mesh correctly and the Armature turns freely.

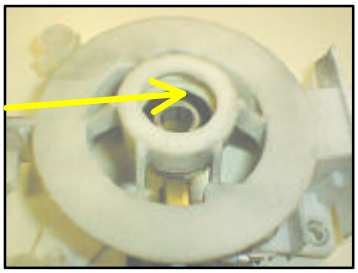


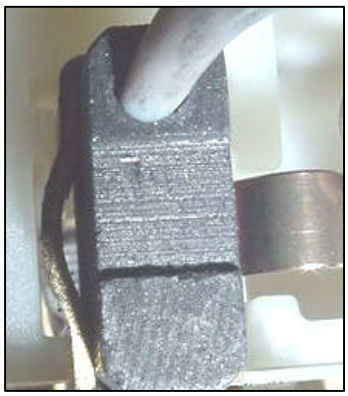
- Fit the Seal (33) to the Field Housing (2).



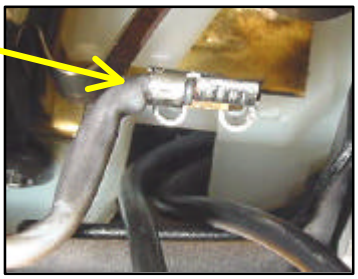
- Fit the Motor pot over the Armature and into the Main Housing making sure the Seal (33) remains in place
- Push down until seated correctly.

- Fit the Bearing (5) into the Insulator (4)
- Then Fit into the Brush Assembly





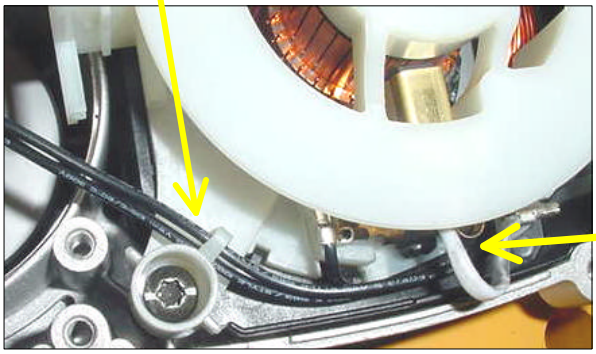
- If not already done fit new Brushes to the Brush Assembly and leave in this position.
- Connect the Brush Lead to the tag on the Brush Holder.

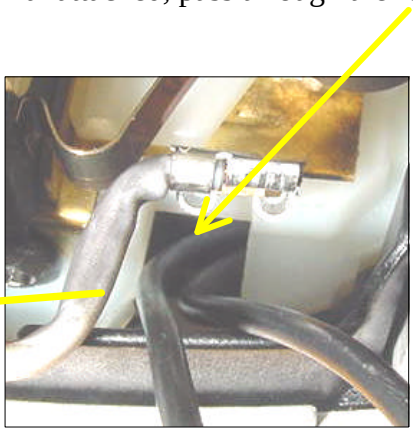


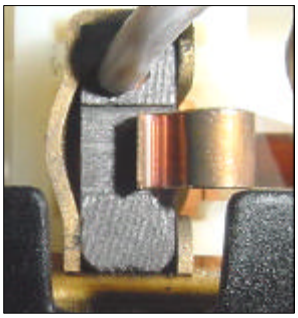
- Place the Brush Assembly (3) in position over the Armature Shaft and push down. Do not fix into place until the wires have been positioned correctly.

- Ensure the two short black wires are positioned one either side of the Brush Assembly through the recess as shown.
- Then connect to the terminal on the Brush holder

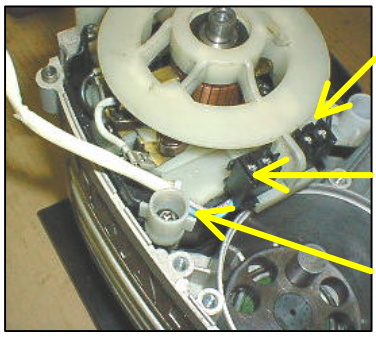
- The remaining two long wires with the black terminal attached, pass through the recess and under the wire trap as shown.







- Release the brushes onto the Armature, make sure the Brushes move freely in the Holders and the spring is behind the Brush.



- Reconnect the Terminal from the Field to the Brush Assembly
- Reconnect the Switch Lead (18) to the brush assembly and pass the wire under the wire trap.
- Fit four new Screws (58) and tighten to **3 Nm**

- Fit the fan (10) to the Armature shaft and tighten the Screw to **5 Nm**.

Grip outside edge of Fan; Use protective gloves the edge of the Fan is very sharp

IMPORTANT NOTE, MAKE SURE THE FAN IS TIGHT ON THE ARMATURE SHAFT .

This compleates the Motor unit assembly.

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Re-assembly of Crank Case , Piston and Gear case.
Jigs required 559618-99.

ALL 'O RINGS & SEALS MUST BE REPLACED.

Total amount of Grease (800) 123 Grams
5 Grams on the Piston 39Grams in Gearbox and 79Grams in Crankcase.

The piston is also available as a SA

- Fit the two white knobs (48) into the ends of the pin (47).

5 Grams of Grease to be distributed between Piston and Con Rod.

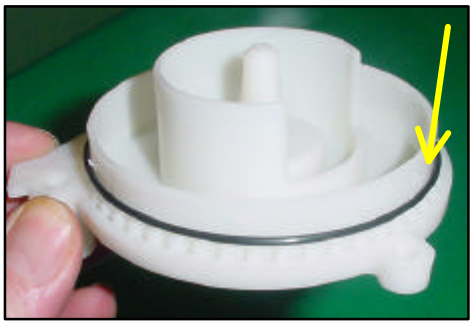
- Grease all around the piston inside and out
- Place the smaller diameter of the Con Rod into the piston and push the Pin through until it is centered.
- Grease the larger diameter hole in the Con Rod.
- Fit new O Ring (49) to the Piston

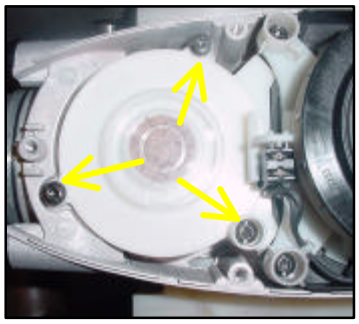
- Refit Piston SA into Crank Case. To do this Position the Crank Shaft Pin so the Con Rod can be fitted through the front of Main Housing.
  Leave the piston in this position ready to fit the Anti-Vibration unit.

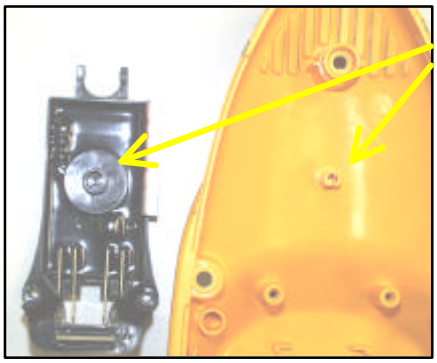
Important note. Do not allow the Piston to becoming contaminated while exposed.

- **<u>Distribute 79 Grams of Item (800) Grease into Crank Case</u>**.

- Make sure a new O Ring (52) is fitted then Refit the Cover (53). Tighten Screws to **3 Nm**.

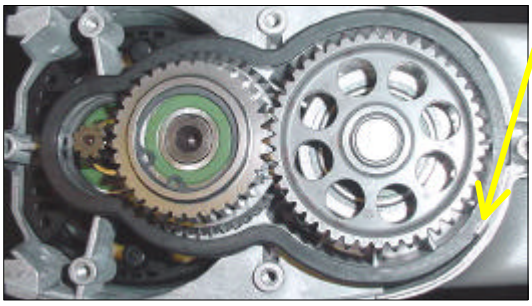




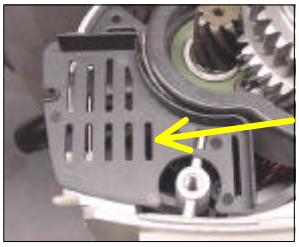


- Fit Electronics into the motor cover, line up the 'D' in the Module spindle with the 'D' in the Cover.
- Fit the cover to the Main Housing
- Tighten the 5 Screws to **<u>3 Nm</u>**

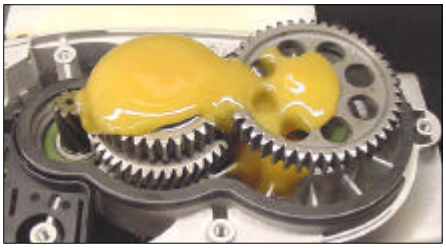
- <u>Remove Housing from Service Jig and turn over.</u>



- Fit a new Seal (32) to the Main Housing make sure the seal fits into the groove in the housing.



- Fit cover (21).



- **<u>Distribute 39 Grams of item (800) Grease over the Gears.</u>**

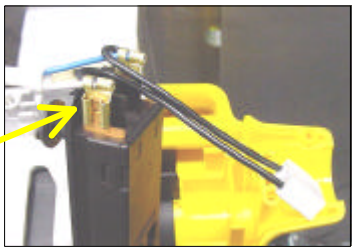
- Fit Gear Case Cover (30). Tighten screws to **<u>3 Nm</u>**.

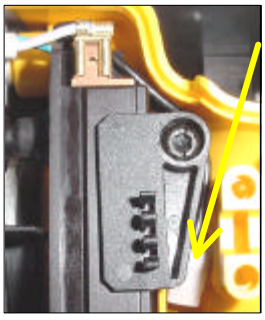
This completes the reassemble of the CrankCase, Piston and Gearcase.

Reassemble the Switch / Handle.

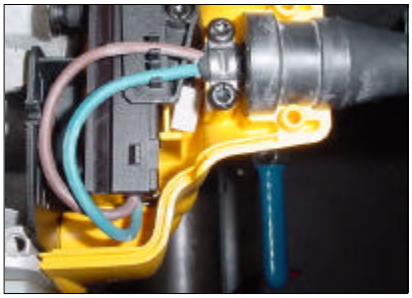



- Fit the Power Cord leads to the Switch
- Fit motor Leads to the switch

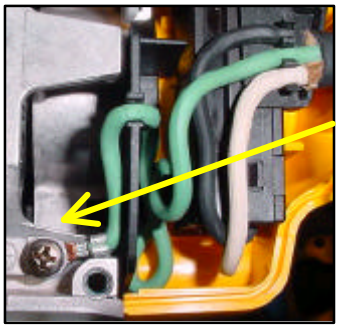




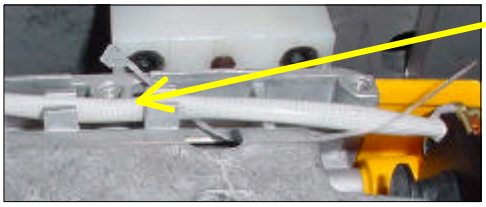
- Position suppressor as shown.
- Locate Switch into position.
- Fit Switch Clamp.



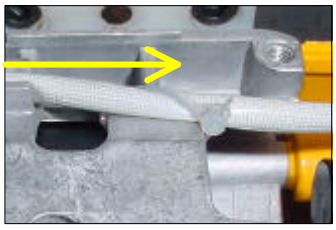
- Fit Power Cord and cord Clamp
  Tighten the screws to **1.8 Nm**



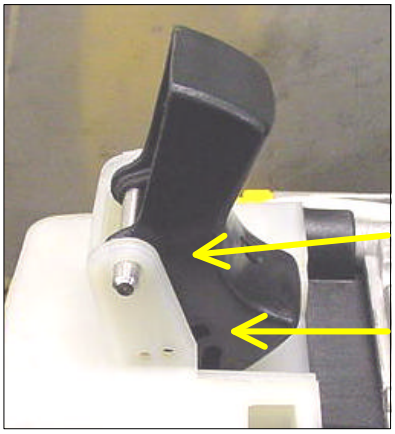
- For units that have a Earth, the Green Lead should be fixed here.



Locate the Motor Cable and Cable Tie as shown.

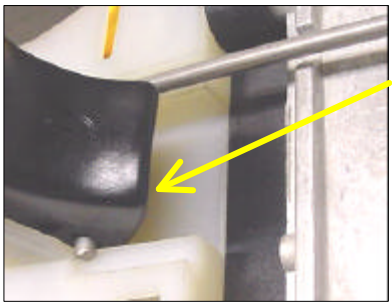


- Fit the two spring loaded pins (17) to the trigger (13).

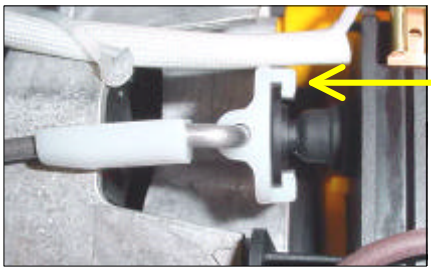


<u>Keep hold of the two spring loaded Pins during this operation</u>

- Position the Trigger into the housing in the Brush Assembly.
- Line up the holes and push the pin (12) through the Housing and into the Trigger, and centralize.
- Push the two springs in and press the trigger into the housing until it clicks twice.



- Locate the actuator rod (14) into the trigger.



- Position the Adapter (15) over the button on the Switch and slide over until it clicks into place.

- Fit Switch Handle Cover (19).
- Tighten the 6 Screws (58) to **<u>3Nm</u>**

- Tighten the 2 Screws (26) to **<u>1.8 Nm</u>**

<u>This completes the reassemble of the Switch Handle Assembly.</u>

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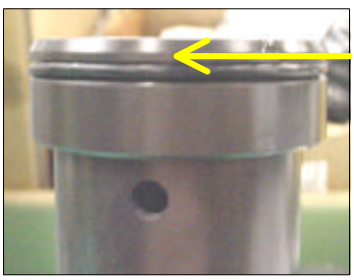
Reassemble Cylinder and Ram.

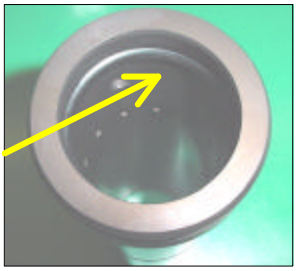
ALL 'O RINGS & SEALS MUST BE REPLACED.

Check that all componants are completely clean and free from any contamination

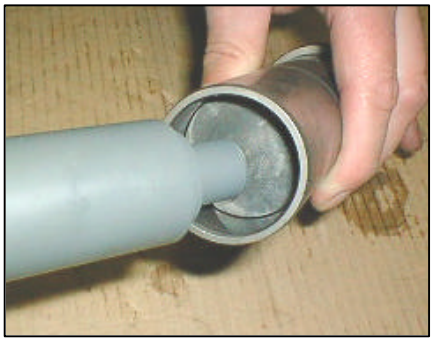
Total Amount of Grease 11 Grams to be distributed between Ram & Cylinder.



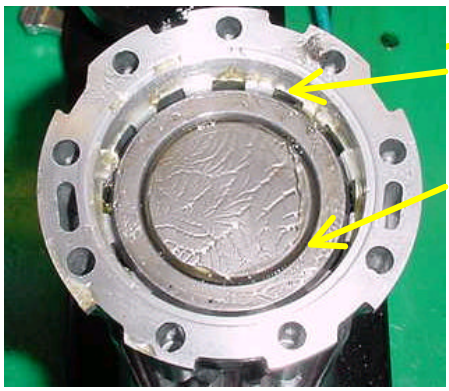
- Grease the groove at the wide end of Cylinder and fit a new O Ring (74).
- Grease the groove on the inside of the Cylinder and fit a new O Ring (73)



- Grease the groove in the Ram (76) and fit a new O-Ring (77).
- Grease the outside of the Ram



- Grease the inside of the Cylinder with item (800).
- Fit the Ram (76) into the Cylinder (75) with the O-Ring entering last. Use the Service Tool 559628-99 to push the Ram down until it reaches the bottom.
  Beware grease will come out of the holes in the Cylinder.
- Make sure the inside of the Cylinder is still coated with Grease.
- Grease the inside of the Front Housing and the outside of the Cylinder with item (800).



- Grease the inside of the Housing around the teeth.
- Fit the Cylinder into the Housing (78) with the thinner diameter first. Push down until the larger diameter sits in the teeth.

This completes the reassemble of the Cylinder and Ram .

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Reassemble Anti-Vibration Unit.
Total amount of Grease (800) 39 Grams

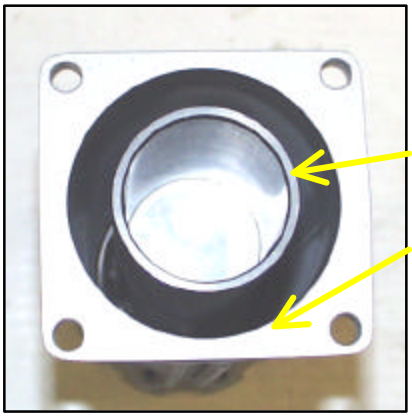
Spring x 2 (81)

Guide x 2 (82)

Counterweight (83)

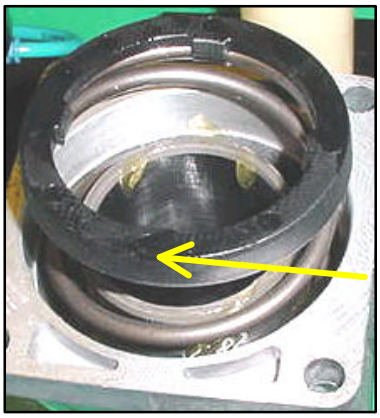
Spring Guide x 2 (80)

- Fit the 2 Guides (82) to the Counterweight (83)



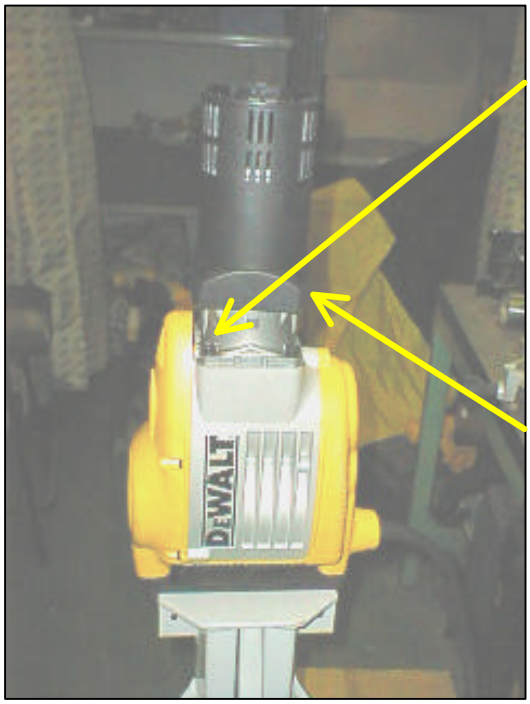
- Fit one of the Spring Guides into the housing over the Cylinder with the recess facing up.
- Lightly grease both ends of one Spring (81) place the spring over the Cylinder and into the Housing.

- Grease around the Counterweight SA, with both guides fitted place over the cylinder and onto the Spring.



- Lightly grease both ends of the remaining Spring (81) place over Cylinder onto the Counterweight.
- Place the remaining Spring Guide (84) onto the Spring with the recess facing down.

- Make sure O Ring (79) is in place.
- Refit the Anti-Vibration Unit to the Main housing, this can be made easier if the Switch Handle is clamped into a vice. Protect the Handle from damage by using soft jaws or rag.
- Make sure the narrow rib on the Front Housing is facing the Gearbox and holding the internal parts in position. Maneuver the Piston into the Cylinder and lower onto the Main Housing.



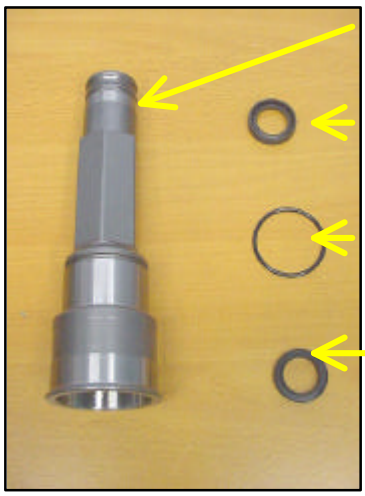
- Fit the 4 Screws (65) and tighten to **17 Nm**.
- The correct sequence is to tighten the screws in opposite corners in turn
- Pick up the black plastic Housing (66). Pull the split apart and line it up with the narrow groove facing the Gearbox, slide over the housing until it clicks into place.

This completes the Re-assembly of the Anti-vibration unit.

SDS Spindle.

Service Tool 559628-99

If the Spindle is being replaced it will be supplied with the seal (92) and Support (93) already fitted.



Spindle (94).

Seal (92)

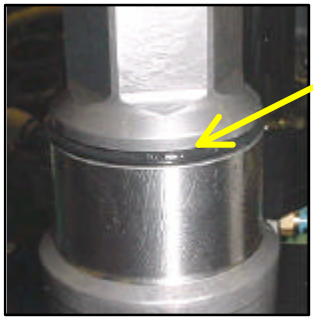
O Ring (95)

Seal Support (93) This support is not fitted to later units .

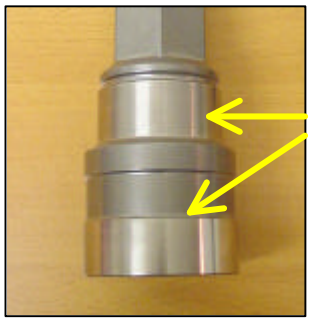
- Place Seal Support (93) into the Spindle. This is not required on later units

- Fit new seal (92) into Spindle (94) using the Service Tool 559628-99.
  - Make sure the Seal is fitted to the Service Tool in the correct position with the spring against the shoulder.
  - Lightly Grease the outside of the seal.

- Push Seal into spindle until seated correctly

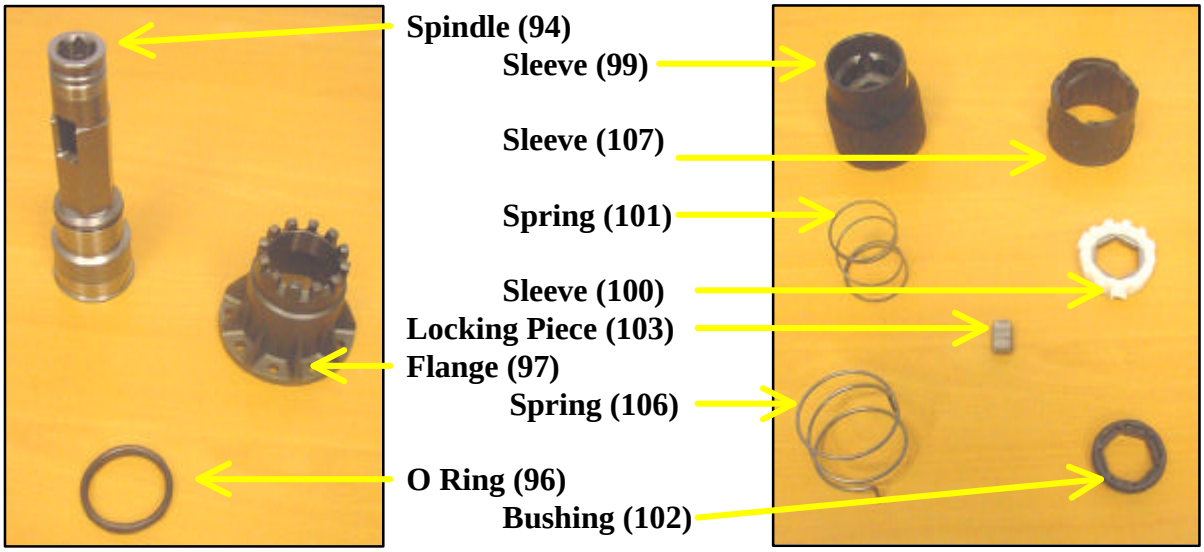


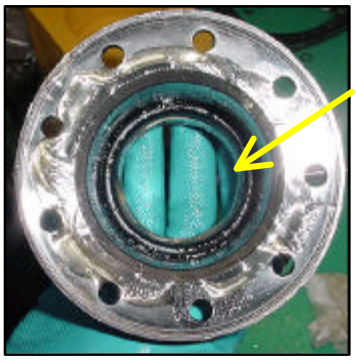
- Fit a new small O Ring (74) into the groove under the Hexagon on the outside of the Spindle.



- Smear a small quantity of grease item (800) around the wide end of the spindle and on the inside.

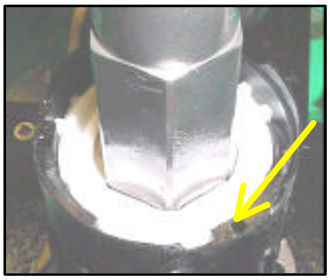
Spindle, Flange and Snap Ring Assembly.
USE SERVICE TOOLING 559629-99 OR 559630-99





- Smear a little grease item (800) into recess in the Flange (97), then fit a new O Ring (96) into recess.

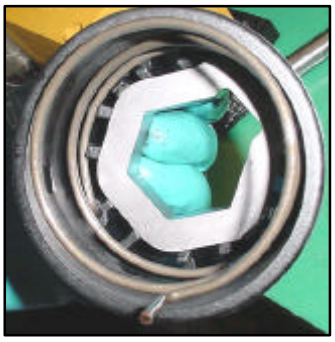
- Push Flange (97) into Sliding Sleeve (107) until fully home.



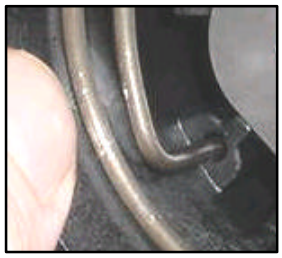
- Fit the Locking Sleeve (100) into Turning Sleeve. Turn to the right so that each of the three lugs sit to the right of a ridge with a hole.

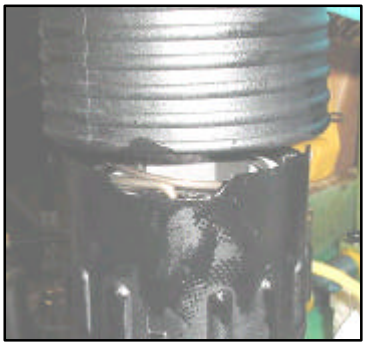
- Fit Spring (101) over Spindle.
- Fit Spring Washer (102) with teeth facing down over Spindle and resting on Spring.

- Push down Spring Washer (102) until slot in Spindle is fully showing.
- Lightly grease the slot with item (800).
- Place the Locking Piece (103) into the slot. Then release the Spring tension so the Spring Washer (102) sits on the Locking Piece.



- Fit Spring (106) into the largest diameter of the Sliding Sleeve (107), maneuver one the angled ends of the Spring into the blind hole in the Sliding Sleeve.

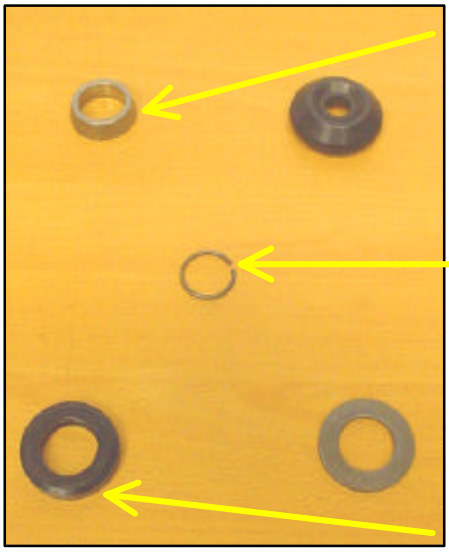




- Holding the spring in place lower the Sliding Sleeve over the spindle and onto the Turning Sleeve. Making sure the profile of the metal insert inside the Sleeve matches the Spindle and Locking Piece, push the Sleeve down until the Spring reaches the Turning sleeve.

- Guide the angled end of the Spring into the nearest hole in the Turning Sleeve, push the Sliding Sleeve down fully

SNAP RING ASSEMBLY.
USE SERVICE TOOLING 559629-99 OR 559630-99



Damper (105)

Lip Seal (111)

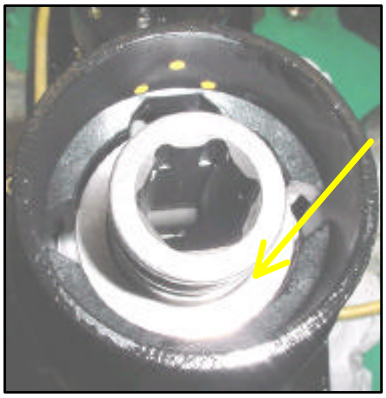
Snap Ring (110)

Washer (109)

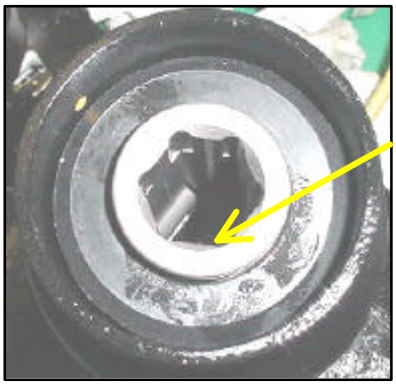
Damper (108)

- Clamp Service Tool in vice.

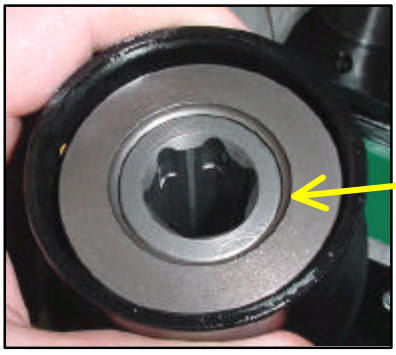
- Fit insert from Service Jig into the spindle be careful not to damage the Seal inside the flange .



- Place the Bush Damper (105) over the Spindle with the taper facing down. So it rests on the internal diameter of the Sliding Sleeve.

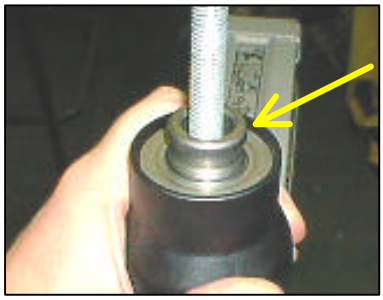


- Place the Rubber Damper (108) over Spindle and push down fully.



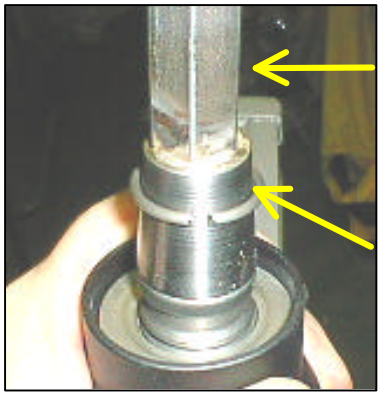
- Place Washer (109) into the Sliding Sleeve on top of the Damper, make sure the inner recess is facing upwards.

- Place Flange and Spindle SA on Service Jig,
- MAKE SURE THE PROTECTIVE INSERT STAYS INSIDE THE SPINDLE WHILE THE FLANGE IS LOWERED ONTO THE SERVICE TOOL. OTHERWISE THE SEAL WILL BE DAMAGED BY THE THREAD ON THE STUD

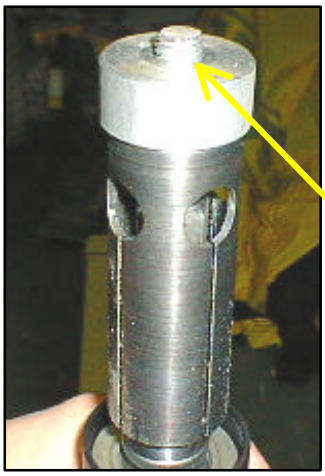


- Press the sliding sleeve down until Spindle shows through the center of the Washer, Make sure the Washer has the recess facing up.

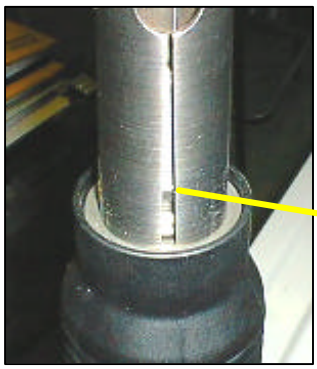
HOLD IN THIS POSITION THROUGHOUT THE FOLLOWING OPERATION.



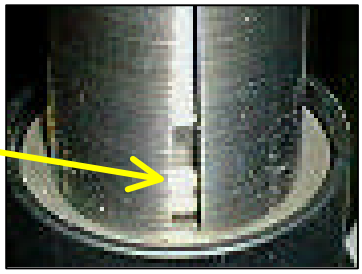
- Screw the Cone Shaped part of the Service jig down until it comes in contact with the Spindle and lock with a spanner (DO NOT OVER TIGHTEN).
- Fit New Snap Ring (110) over Cone of the Service Jig.



- Place Collet over Cone and position the spacer washer with the recess facing down.
- Push down until the threaded rod protrudes sufficiently to fit the nut.

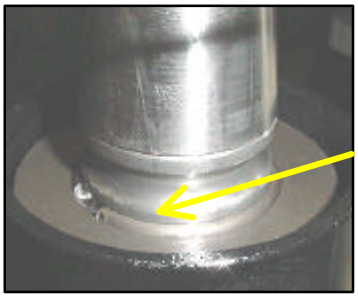


- Screw down the nut until the Snap Ring is in the Groove in the Spindle.



- The Top of the threaded bar and the top of the Nut should be flush when the Snap Ring is in the correct position.

- Remove the nut and spacer washer from Jig



- Check that the Snap Ring is correctly seated.

- Undo the cone and remove from Jig.

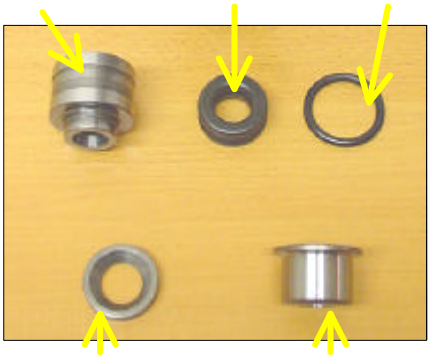
- Making sure the Insert stays inside the housing, Lift off the complete Assembly with the collet still attached to the Spindle. Now pull off collet from Spindle.

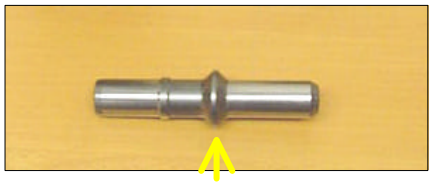
- Lightly grease the Lip seal (111), place on top of the tool holder. Press down until you feel it click into place
- Check that the Turning Sleeve and Sliding Sleeve both move correctly and return to correct position.

<u>This completes the Spindle, Flange and Snap Ring Assembly.</u>

Beat piece Assembly.
Total amount of Grease (800) 7 Grams.

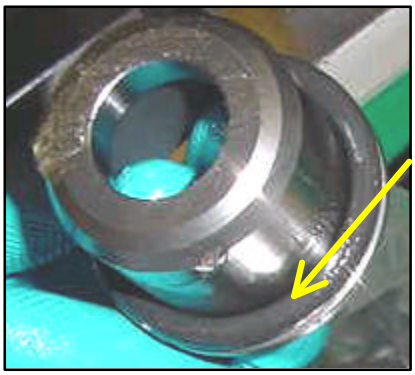
Bush (70) Damper (69) O Ring (77)



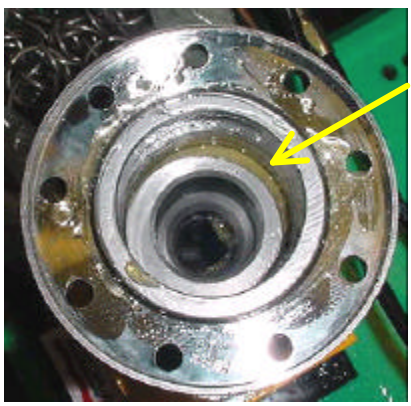


Beat piece

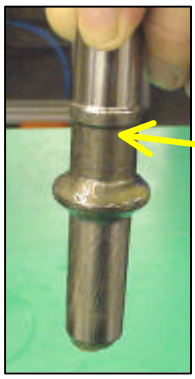
Bush (68) Bearing (90)



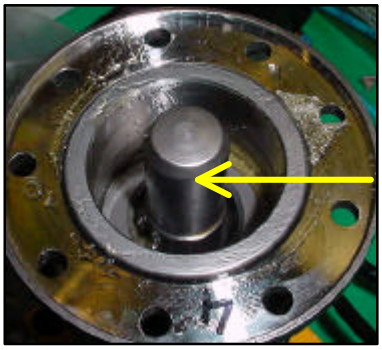
- Lightly coat the outside diameter of Bearing Bush (90) with Grease item (800).
- Fit O Ring (77).



- Push the Bearing (90) into the Tool Holder to its limit.

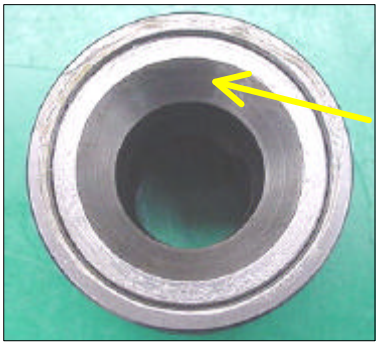


- Coat the Beatpiece with grease (800) up to the smallest ridge

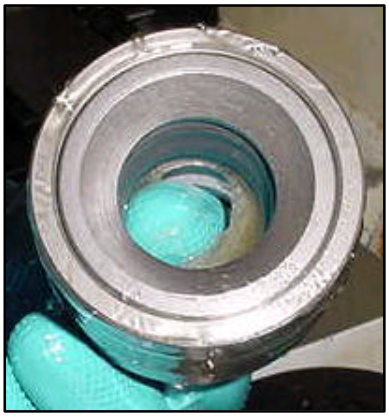


- Place the greased end of the Beatpiece into the Tool Holder. Then lightly grease the top end of the Beatpiece and inner boar of the Flange

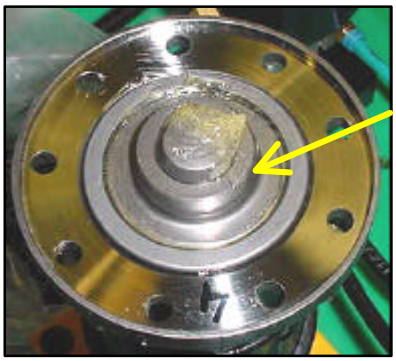
- Lightly coat the inside diameter of Bush (70) with grease(800) then push in the Damper (69) until it reaches its limit. Grease the inside of the Damper.



- Place the Washer (68) into the Bush (70) with the internal taper facing up and grease around the inside.

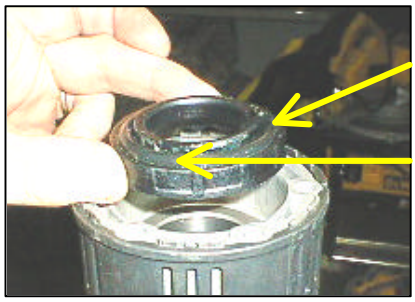


- Pick up the Bush Damper Assembly keeping the components held together



- Invert the Damper Assembly and fit into the Tool holder Flange with the small hole facing up.

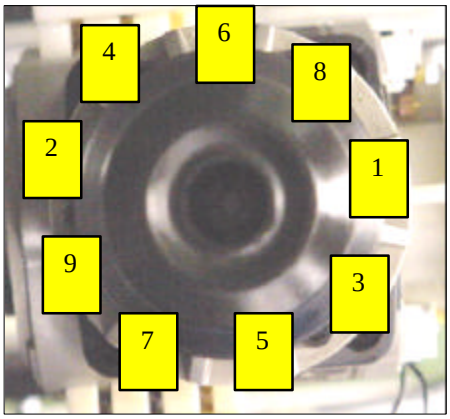
The Tool Holder Assembly is now ready to fit onto the Anti-Vibration Unit.

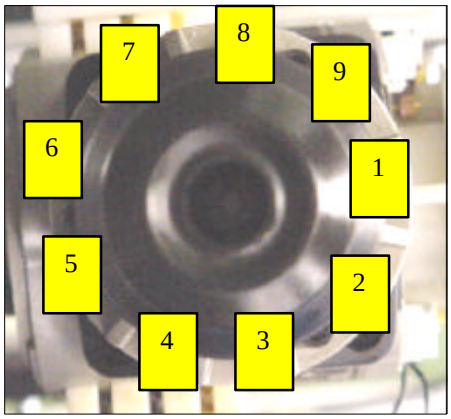


- Lightly Grease the Bush (72).
- Fit new O-Ring (71) to the Bush.
- Place the Bush into the Front housing with the O-Ring facing up.

Make sure the internal components of the Tool Holder do not fall out when fitting to the Front Housing

- Fit the Tool Holder Unit to the Front Housing lining up the nine screw holes





- first tighten the Nine screws in the above sequence to **9 Nm.**

Then re tighten in the above sequence

<u>This competes the Re-assembly of the D25940K Hammer.</u>

SECTION FOUR.

Routine Servicing

When the unit comes in to Service for changing the brushes, typically after 250 to 300 hrs.

The following items should be carried out as a minimum.

- **Replace O-Ring (77) on Piston.**
- **Replace O-Ring (79) on Main Housing.**
- **Replace O-Ring (77) on Ram.**
- **Replace O-Ring (71) inside Cylinder.**
- **Replace O-Ring (77) inside Spindle**
- **Replace Seal (92) inside Spindle.**
- **Lubricate all the above and replace the Grease (800) in the Gearbox and Crankcase.**
- **Replace Washer (109) & Snap Ring (110).**
- **Replace Lip Seal (111)**
- **Replace Brushes (8)**

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Fault finding.

Unit Lacks Power.	**Worn O-Rings on the Piston and Cylinder** **Low Motor Speed, check No Load Amps** **Worn Piston or Cylinder.** **Faulty Electronics.**
Motor Speed incorrect	**Armature / Field faulty. Check No Load Amps** **Faulty electronics** **Fan Loose on Armature Shaft (motor running to fast) .** **Magnetic ring missing from fan (motor running to fast).**
Unit will not run.	**Brushes worn.** **Electronics faulty.** **Switch actuator rod not connected.** **Switch actuator broken.**

RUN TEST DATA.

Run test after repair for 10 Minutes at no Load.

No Load amps.		**At Max Speed .**
Min	**Max**	**Volts.**
3.2	**5.2**	**230/240**
6.4	**9.1**	**115/120**

Flash Test with switch on. Minimum 6 Seconds between live and neutral to external metal.
4000v for 230/240v Double insulated units.
1500v for 120v unit with Earth.

Earth continuity check 120/115 volt units with earth only.
Between earth and external metal parts, maximum resistance = 0.1 Ohms