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ANNEX

Annex		
A	Main undercarriage types 11883P and SA01) 11883P and SB01)	

Introduction

1. The main undercarriage is a retractable telescopic unit, fitted with a cantilever axle and incorporating a liquid spring shock absorber assembly. The operation of a micro-switch mounted on the leg, provides a safety cut-out for the armament control and for the undercarriage retraction when the aircraft is on the ground. A basic type is described and illustrated in the general text and variations are covered in the annex.

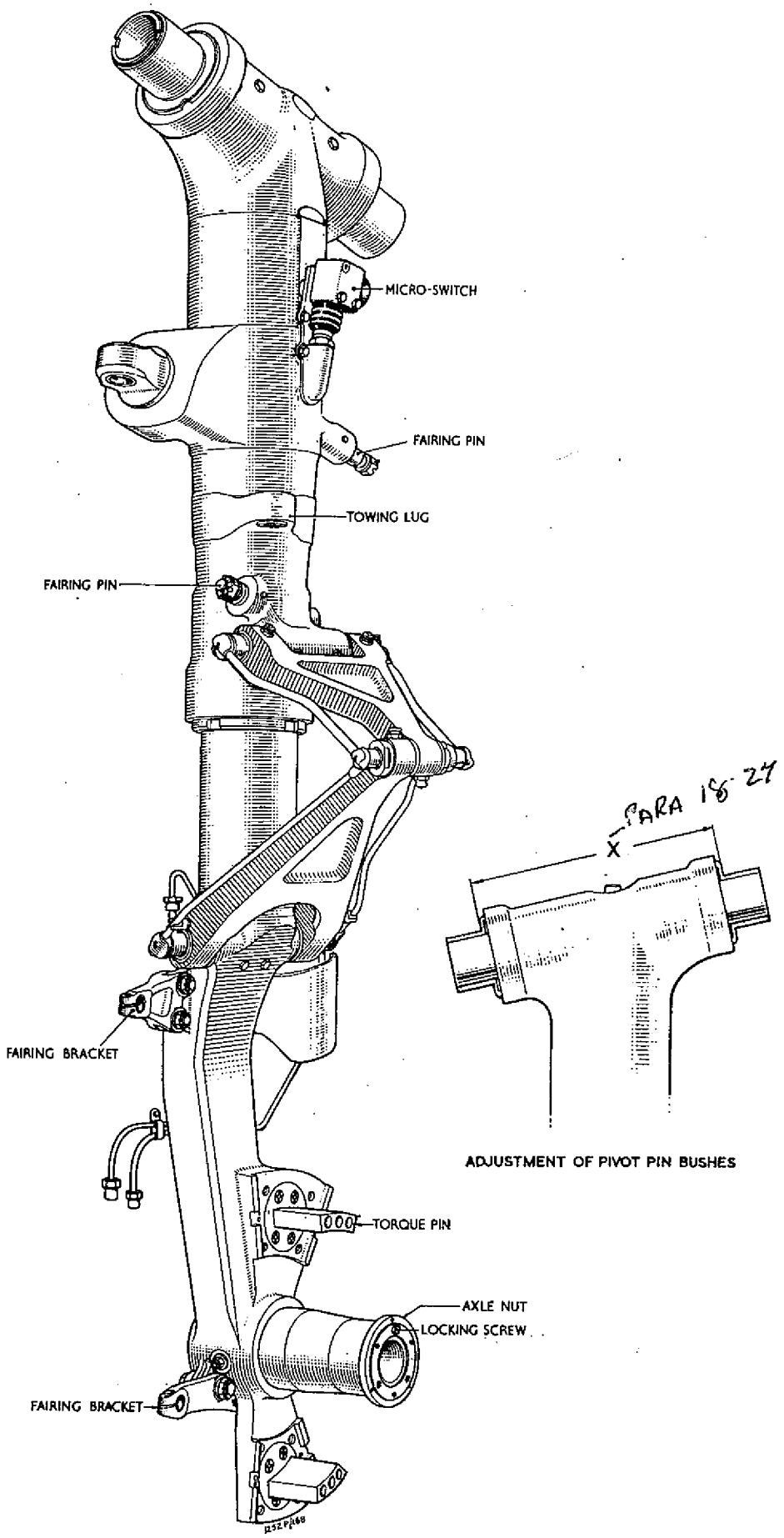

Fig.1 Main undercarriage

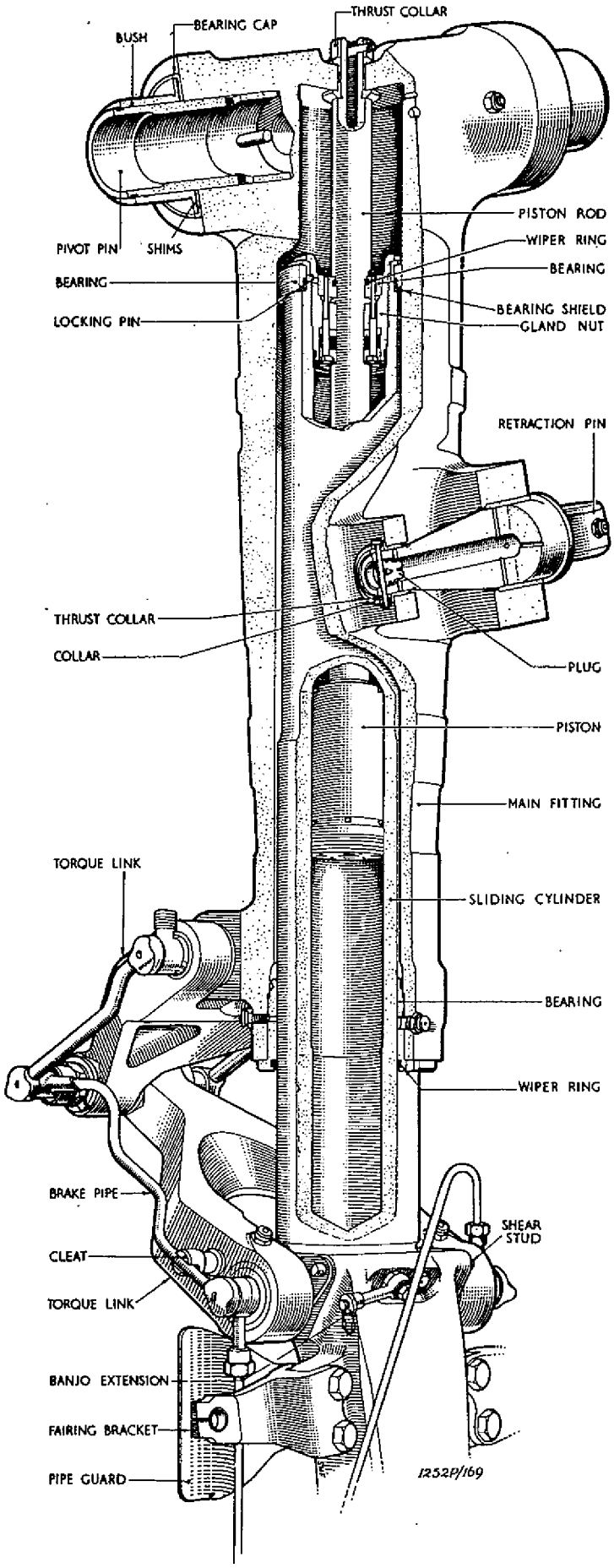

Fig.2 Main undercarriage assembly

Description

2. The upper end of the main fitting is bossed for two pivot pins and bushed for the attachment of a piston rod. The pivot pins are fitted with bearing caps and bushes and each is secured in its boss by a bolt, washer and stiff nut; shims are fitted between the caps and bushes on one side for adjustment purposes. Bushed lugs provide for the attachment of a retraction pin, a torque link pin, and for a towing attachment point; a side drilling accommodates a micro-switch bracket. A lug at the upper end is for the attachment of an external pipe assembly, not required for this type of undercarriage. The tapered retraction pin is bored axially and formed with an eye-end which is bushed and lubricated by a greaser. The bore of the pin is closed by a sealed plug and the pin is secured by a thrust collar, shims and a collar locked by a pin and a split pin.

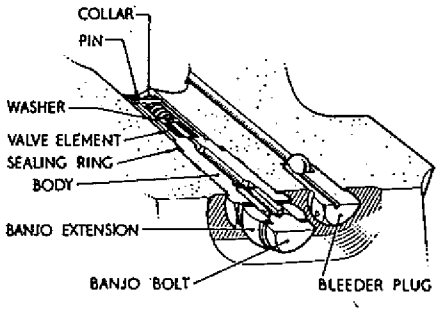

Fig.3 Charging valve and bleeder plug

3. The lower end of the main fitting accommodates a bearing which screws in and is fitted with a wiper ring and lubricated by a greaser. The bearing is locked in position by a set-bolt screwed into an insert. A boss on each side of the main fitting, adjacent to the torque link, accommodates a fairing pin, which is secured by a pin and split pin and fitted with a washer, slotted nut and split pin. Another fairing pin is secured likewise in a boss near the micro-switch.

4. The sliding cylinder operates in the main fitting and houses a piston and a gland assembly. The upper end of the cylinder carries a bearing and a split bearing shield and at its lower end is a charging valve and a bleeder plug which communicate with the bore of the cylinder. The cylinder is formed with a wheel fork arm and drilled for a stub axle and the lower torque link pin. The fork arm is also flanged, drilled and tapped for the attachment of the brake gear and carries lugs for fairing attachment brackets. A pipe guard is secured to one of the brackets adjacent to the lower link, to prevent fracture of the pipes in the event of a tyre burst.

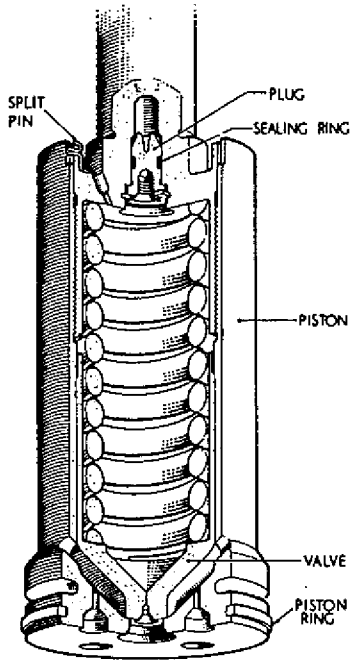

Fig.4 Piston

5. The charging valve consists of a body fitted with a bonded rubber and steel valve element, a washer, a spring and a collar. The collar is secured by a pin which is locked by peening. A banjo extension fitted with bonded seals is secured to the valve body by a banjo bolt.

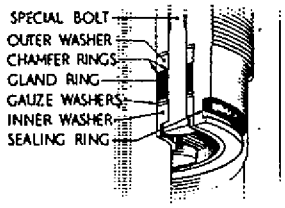

Fig.5 Gland assembly

6. The hollow piston rod is drilled at its upper end where it is fitted with a thrust collar and secured through the main fitting by a pin and split pins. The lower end which passes through a gland assembly into the sliding cylinder, is formed as a head which screws into a piston; a plug, fitted with a sealing ring, is secured in the lower end by a circlip. The piston is fitted with a piston ring and houses a conical valve which is loaded by a spring to cover a central orifice.

7. The gland assembly consists of a gland nut, recessed at one end for a bearing with a wiper ring and at the other end for an outer washer, a gland ring fitted with one large and four small chamfer rings, two gauze washers and an inner washer. The gland nut has a sealing ring and the assembly, which is located on four special bolts secured with spring washers and nuts, is screwed into the sliding cylinder and locked by a locking pin, fitted under the upper bearing and through the sliding cylinder wall.

8. The inner end of the tubular axle is pressed in, and located to the wheel fork arm by two ferrules, secured by a bolt and a stiff nut. The outer end is internally threaded for an axle nut, locked by a set screw.

9. The upper and lower torque links are bushed and connected to the main fitting and the sliding cylinder by hollow pins secured by set bolts; the lower link pin also carries flanged sleeves secured to the sliding cylinder by shear studs wire-locked together. The interconnecting ends of the torque links are bushed, fitted with a thrust washer and a shim between the mating faces and joined together by a centre joint pin. The pin is keyed for a tongued washer and secured with a nut locked by a tab-washer.

10. Brake pipe connection assemblies are housed in the ends of the upper and lower torque link pins and in the ends of the centre joint pin. The assemblies in the upper and lower pins each consist of a swivel pin, which passes through one end of a swivel cap and is attached to a coupling by a dowel. A banjo pin with a spigoted pipe connection sealed to the pin by leather washers and rubber sealing rings, is also secured by a dowel to the swivel cap. The assembly is located in the end of the torque link pin, with the coupling innermost and with the spigots of the connection engaged in slots in the link pins. The set-bolts securing the link pins also retain the couplings and so secure the connection assemblies; the set bolts are wire-locked together. The lower pipe assemblies are supported in cleats of the lower torque link.

11. The centre connections of the brake pipe assemblies consist of a pipe connection, sealed by leather washers and rubber sealing rings and secured over a banjo pin by a collar and a dowel. An additional collar is secured by a dowel to the banjo pin of the connection assembly which is located in the larger bore of the pin. The connections are only supported in the centre joint pin and no separate locking device is employed.

12. The micro switch is mounted on a serrated bracket secured by three set-bolts and opposes a plunger assembly which is housed in the lower end of the bracket. The plunger is spring-loaded away from the switch and retained in the bracket by a plug locked with a tab-washer and fitted with a dust excluder. The plunger head is in contact with one end of a striker, which is secured in the bracket by a pin and protrudes into the bore of the main fitting to contact the upper bearing shield of the sliding cylinder. On the extension of the undercarriage, the bearing shield trips the striker to depress the plunger and operate the switch.

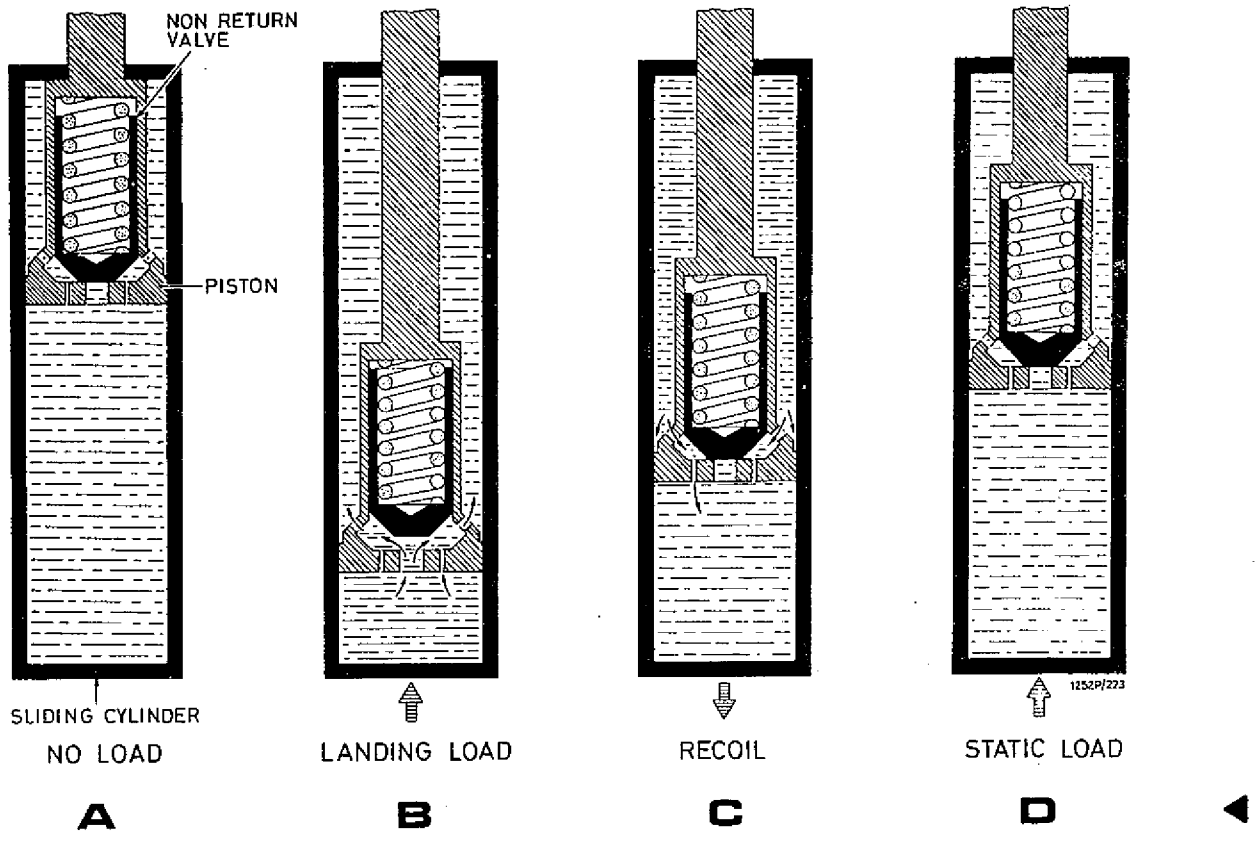

Fig.6 Principle of operation

Principle of operation (Ref.fig.6)

13. Diagram A shows the undercarriage under no load. The undercarriage is fully extended and the non-return valve is closed. Diagram B shows the undercarriage under the influence of landing load. The load forces the sliding cylinder over the piston, reducing the internal volume and compressing the fluid. Fluid below the piston is forced through the drillings to the other side. Further increase in the loading will open the non-return valve to permit the quick transfer of the fluid. Diagram C shows the undercarriage recoiling. At the end of the compression stroke, pressure is equal on both sides of the piston, but as the area below the piston is greater than the area above it, the forces on the piston are unbalanced and the greater force below the piston causes the undercarriage to extend. The non-return valve is closed and the flow of the fluid restricted to the drillings of the piston which regulates the speed of the recoil. Diagram D shows the undercarriage under a static load. The undercarriage is compressed under the aircraft load and the piston enters the cylinder, increasing the internal pressure until it equals the applied load.

SERVICING

TABLE 1, TOOLS AND EQUIPMENT

Ref.No.	Part No.	Description
1B/4428	ST947A	Circlip pliers (Type S.1.S.)
27Q/13577	ST.1089	'C' key spanner for screwed bearing
27Q/12289	ST.1214	Vice clamp for piston rod
27Q/13572	ST.1698	Extractor for ferrule (axle bolt)
27Q/13495	ST.1900 Mk1	Drift for torque link pins
27Q/13494	ST.1900 Mk4	Drift for bushes for torque links
27Q/13487	ST.1900 Mk5	Drift for flanged sleeve
27Q/13497	ST.1900 Mk6	Drift for bush of main fitting
27Q/13488	ST.1903 Mk2	Drift bar for use with ST.1900 Mksl, 4, 5 and 6 and ST.2028
27Q/13492	ST.1903 Mk5	Drift bar for use with ST.2040 Mks 46 and 73
27Q/13493	ST.1903 Mk8	Drift bar for use with ST.2040 Mk82.
27Q/13570	ST.1915	Extractor for pivot pin
27Q/13569	ST.1963	Extractor for bush of towing lug
27Q/13578	ST.1965	Tubular key spanner for axle nut
27Q/11093	ST.111 Mk31	Tommy bar for ST.1965
27Q/13571	ST.1977	Extractor for bushes of torque links
27Q/13567	ST.1978	Extractor of bush of main fitting
27Q/13575	ST.1979	'C' key spanner for gland nut
27Q/13574	ST.1980	Peg spanner for piston
27Q/13566	ST.1983	Extractor for fairing pins
27Q/13580	ST.1984	Alignment tool for fairing pins
27Q/13576	ST.1986	Tubular spanner for torque link pins
27Q/9426	ST.111 Mk3	Tommy bar for ST.1986

(continued)

TABLE 1, TOOLS AND EQUIPMENT (continued)

Ref.No.	Part No.	Description
27Q/13573	ST.1997	Sleeve for piston of shock absorber
27Q/13568	ST.2028	Assembly tool for bush of towing lug
27Q/14103	ST.2034	Flexible charging pipe
27Q/13565	ST.2040 Mk46	Drift for bush of lower torque link
27Q/13564	ST.2040 Mk73	Drift for pivot pin
27Q/13496	ST.2040 Mk82	Drift for bush of main fitting
27Q/14640	ST.2387	Drift for torque link pin of sliding pin of sliding cylinder
27Q/15543	ST.2427	Tool for removal and assembly of axle
27Q/	ST.2446	Test fixture for setting shock absorber relief pressure
1B/4467	-	Universal lubricating gun

Leakage

14. Fluid seepage past the charging valve sealing ring or the bleeder plug may be due to a defective sealing ring or badly seated ball valve. The sealing ring or the complete bleeder plug should be removed.

15. Internal leakage will be due to a defective sealing ring or gland ring and the appropriate item should be renewed.

Dismantling

16. All sealing rings to be discarded on dismantling.

16.1 Remove the set screw and axle nut and withdraw the wheel assembly.

16.2 Remove the fairing attachment brackets and the pipe guard. Remove the clip from the two lower brake pipes and remove the pipes from the lower link connections.

16.3 Remove the micro-switch from the bracket. Remove the dust excluder, unlock the tabwasher and remove the plug, tabwasher, spring and plunger from the micro-switch bracket. Remove the micro-switch bracket complete with striker from the main fitting.

16.4 Remove the set-bolts securing the upper and lower torque link pins and withdraw the brake pipe connection assemblies from the ends of the link pins and centre joint pin.

16.5 Dismantle the upper and lower connection assemblies by sliding the spigoted pipe connections over the swivel caps and couplings. Remove the dowels from the caps and the couplings to free the banjo pins and the swivel pins. Remove the leather washers and the sealing rings from the banjo pins.

16.6 Dismantle the brake pipe centre connections by removing the dowels and the collars and withdrawing the lower brake pipe connections from the banjo pins. Remove the leather washers and the sealing rings from the banjo pins. The cleats should not be removed from the lower torque link.

16.7 Remove the nut, tabwasher, tongued washer and thrust washer and shim and withdraw the pin connecting the upper and lower torque links. The thickness of the shim should be noted as it is essential that a shim of equal thickness should be fitted on assembly.

16.8 Remove the two shear studs securing the flanged sleeves at the lower torque links, remove the upper and lower link pins and withdraw the torque links. Remove the flanged sleeves from the lower link.

16.9 Remove the pin, the collar, shims and thrust collar and withdraw the retraction pin. Remove the plug from the end of the retraction pin and remove the sealing ring from the plug.

16.10 Remove the split pins and the pins and extract the fairing pins from the side bosses.

16.11 Remove the bushes, shims and bearing caps from the pivot pins. The pivot pins are not to be removed during normal servicing operations. If removal of the pins is necessary, the main fitting is to be locally heated in oil or water to 50°C in the vicinity of the pivot pins to facilitate their extraction.

16.12 Remove the bleeder plug and the charging valve together with the sealing ring and drain the oil from the sliding cylinder. Remove the banjo bolt and the extension piece from the charging valve together with the bonded seals and dismantle the charging valve by removing the pin to free the component parts.

16.13 Remove the pin and thrust collar securing the piston rod to the main fitting.

16.14 Remove the set-bolt and unscrew the bearing from the lower end of the main fitting. Withdraw the sliding cylinder assembly from the main fitting.

16.15 Remove the bearing and the split bearing shield at the upper end of the sliding cylinder and slide the screwed bearing from the cylinder. Remove the wiper ring from the screwed bearing.

16.16 Remove the locking pin (which is tapped 6BA to assist removal), unscrew the gland nut and withdraw the piston and gland assembly from the sliding cylinder. Slide the gland assembly from the piston rod.

16.17 Dismantle the gland assembly by removing the special bolts.

16.18 Unscrew the piston from the piston head. Withdraw the spring and the valve from the piston. Remove the piston ring.

16.19 Remove the circlip and the plug from the piston rod.

Cleaning

17. To enable every item to be visually inspected for damage and wear, all parts must be thoroughly cleaned using the appropriate cleaning agents and methods. When cleaning is completed, parts must be dried using compressed air, clean lint-free cloth or tissues and all subsequent handling must be with clean P.V.C. or polythene gloves. If dealys occur before assembly, parts must be suitably protected against corrosion.

Assembling

18. All sealing rings and wiper rings to be lightly smeared with grease XG-315 on assembly.

18.1 Ensure that the bore of the piston rod is treated with protective PX-9. Fit the sealing ring to the plug and secure the plug in the end of the piston rod with the circlip.

18.2 Position the valve with the spring in the piston. With the components completely immersed in a bath of oil OM-15, screw the piston on to the piston rod. Remove the assembly from the oil bath, with the piston rod uppermost to prevent loss of oil from the inner chamber.

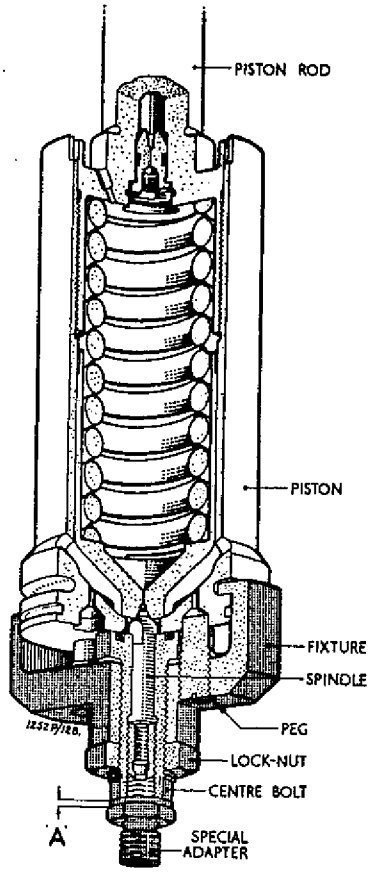

Fig.7 Use of special tool ST.2446

18.3 Adjust the spring load as follows, or, to the alternative method described in para.18.4.

18.3.1 Fit the test fixture ST.2446 as shown in fig.7 in the following order:-

18.3.1.1 Unscrew the special adapter from the centre bolt and remove the spindle from the special adapter. Fit a bonded seal to the adapter and screw it tightly into the centre bolt.

18.3.1.2 Slacken the locknut and tighten the centre bolt to ensure a seal against the piston. Tighten the locknut.

18.3.1.3 Connect the supply line of a hydraulic test rig to the adapter.

18.3.2 Apply a pressure and adjust the piston rod, by screwing it in or out of the piston until the valve lifts at a pressure between 2070 to 2180 lbf/in^2. Ensure that one slot of the piston is aligned with a split pin hole in the head of the piston rod between these pressure limits. Lock the piston with a split pin. The split pin should be reduced in length to 0.375 in and assembled as shown in fig.4. The head and the leg of the pin must not protrude beyond the diameter of the piston.

18.3.3 Disconnect the supply line and remove the special adapter and the bonded seal. Remove the seal from the adapter and screw the spindle into the adapter.

18.3.4 Check the minimum valve lift of the assembly as follows:-

18.3.4.1 Screw the adapter into the centre bolt until the spherical end of the spindle lightly abuts the valve. Measure the dimension of the gap A on fig.7.

18.3.4.2 Gradually screw the adapter into the centre bolt until the dimension of the gap has been decreased by 0.133 in. If this is not possible, the minimum lift cannot be obtained and the piston and piston rod must be readjusted as follows:-

18.3.4.2.1 Unscrew the piston from the piston rod to the next aligned position for the split pin, then test the assembly for the blow off pressure between 2070 to 2180 lbf/in^2.

18.3.4.2.2 Re-check the minimum valve lift. If this is satisfactory, lock the piston rod and piston with the split pin.

18.4 If the spring load is to be adjusted by the alternative method, proceed as follows:-

18.4.1 Position the piston assembly in a press and apply a load through the central orifice of the piston to the valve sufficient to lift the valve by a minimum of 0.133 in from its seat. The load must

be within 380 to 420 lbf/in^2 and if necessary, the piston is to be adjusted on the piston rod to obtain these conditions consistent with the alignment of the split pin hole in the piston rod with a slot in the piston. Fit the split pin as in para.18.3.2.

18.5 Fit the piston ring to the piston. If a new ring is fitted, it is to be gapped 0.012/0.015 in on assembly and the sharp edges of the gap, on the flat faces only, removed up to a maximum radius of 0.0156 in.

18.6 Assemble the charging valve by inserting the valve element in the body followed by the washer, spring and collar. Secure the collar with the pin and burr the ends ofthe pin to lock.

18.7 Fit a new sealing ring to the charging valve and screw the charging valve and the bleeder plug in the sliding cylinder. Fit the sealing rings to the extension piece and secure the extension piece to the charging valve body with the banjo bolt. Screw in the cap of the extension piece.

18.8 Assemble the components of the gland assembly over the special bolts, fitting the inner washer, the two gauze washers with the meshes at 45 degrees to each other, the gland ring, the large and small chamfer rings and the outer washer in that order.

18.9 Fit the wiper ring to the bearing and the sealing ring to the gland nut. Position the bearing in the gland nut, and pack the cavity between the nut and the bearing with grease XG-315. Slide the gland nut over the special bolts and ensure that the gland assembly is properly bedded in the recess of the gland nut. Fit the spring washer and screw on the nuts to draw the gland assembly tightly together.

18.10 Partially fill the sliding cylinder with oil OM-15 and insert the piston assembly. Slide the gland assembly over the piston rod and screw it tightly into the cylinder. Screw back sufficiently to fit the locking pin.

18.11 Carry out the filling, testing and charging procedure as detailed in para.19.

18.12 Fit the wiper ring to the lower bearing of the main fitting and slide the bearing over the cylinder.

18.13 Fit the split bearing shield to the lower shoulder of the groove for the upper bearing of the sliding cylinder and locate the bearing in the groove to retain the shield. It is important that the gaps in the shield are positioned at 90 degrees to the striker of the micro-switch assembly when the sliding cylinder is housed in the main fitting.

18.14 Insert the sliding cylinder assembly in the main fitting and secure the piston rod through the main fitting with the thrust collar, the pin and the split pins. The maximum permissible end play between the piston rod and the main fitting is 0.006in. The thrust collar may be reversed to obtain this condition.

18.15 Screw the bearing in the lower end of the main fitting and lock it in position with the set bolt through the torque link lug.

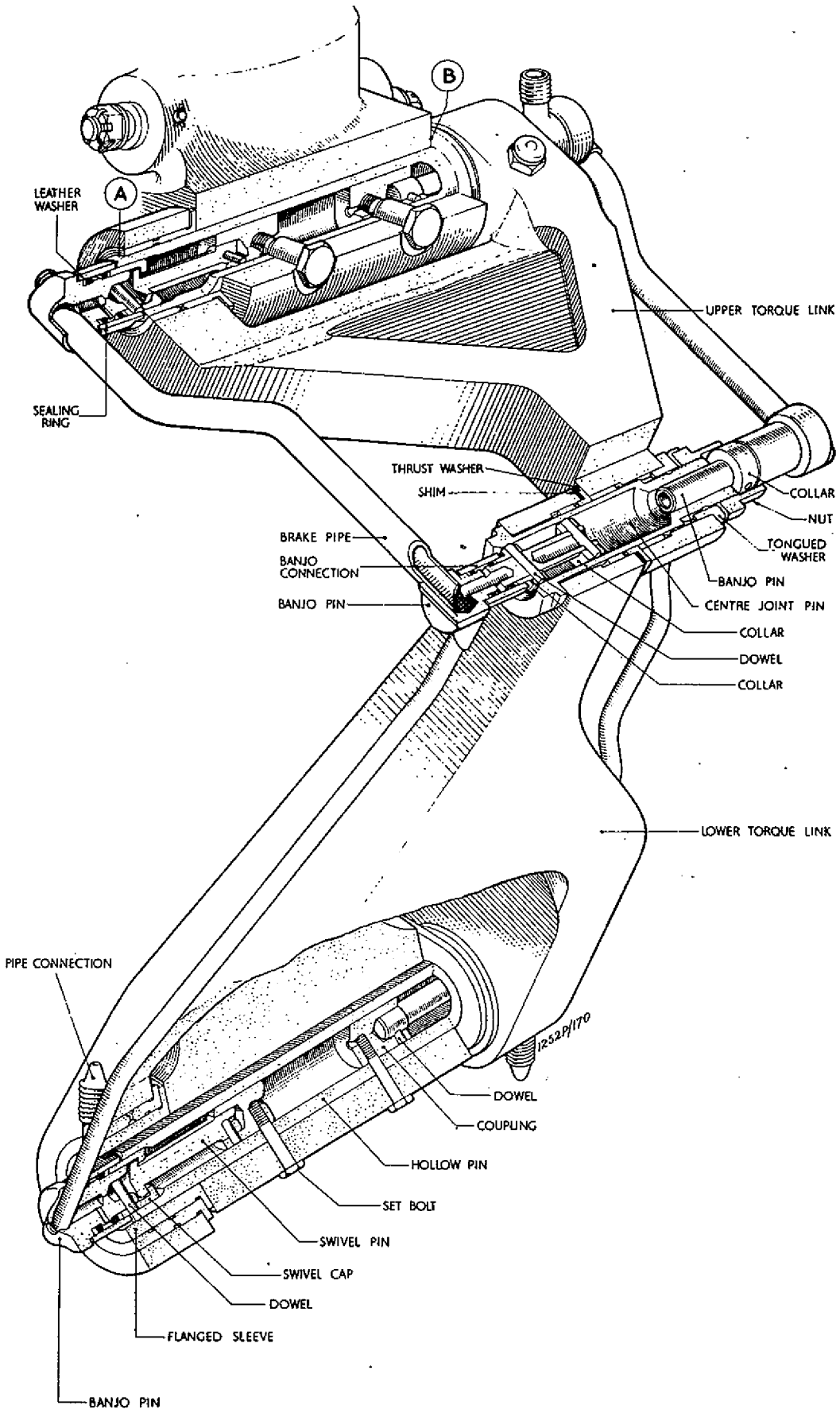

Fig.8 Torque links and brake pipes

18.16 Connect the upper torque link to the main fitting with the link pin and temporarily secure the pin with the two set-bolts.

18.17 Fit the flanged sleeves to the lower torque link, position the link to the sliding cylinder and secure the flanged sleeves with the shear pins. Wirelock the shear pins together. Insert the link pin and temporarily secure it with the two set-bolts.

18.18 Locate the free ends of the upper and lower torque links together. Fit the thrust washer and insert the centre joint pin. Measure the gap between the face of the thrust washer and the mating face of the lower torque link and shim as necessary to close the gap. Fit the tongued washer and the tabwasher and secure the pin with the nut. Apply a torque load of 70/80 lbf in to tighten the nut. Lock the nut with the tabwasher.

18.19 Assemble the front and rear brake pipe connection assemblies. Connect the upper and lower brake pipes together, fitting the leather washers and rubber sealing rings, slide the collar over the banjo pin and secure it with the dowel. Fit the additional collar secured by a dowel to the banjo pin of the rear centre connection.

18.20 Locate the swivel pins in the swivel caps, fit the leather washers and rubber sealing rings to the upper and lower banjo pins and secure the swivel caps to the pins with the dowels. Slide the pipe connection over the caps and the sealing rings, with the spigots of the connections adjacent to the swivel caps. Connect the couplings to the swivel pins with the dowels. Test the brake pipe assemblies as detailed in para.22.

18.21 Pack grease XG-275 around the upper and lower swivel pins sufficient to fill the cavity in the bore of each link pin when the brake pipe assemblies are located in the pins. Position the brake pipe connection assemblies in the ends of the upper, centre and lower torque link pins, locating the tongued connections of the upper and lower brake pipes to the slots of the link pins to obtain the correct position of the connections. Align the tappings in the couplings with the link pin set-bolts and screw in the set-bolts to secure each pipe assembly. Wirelock the set-bolts together.

18.22 Connect the appropriate brake pipe to each of the two connections at the lower link. Secure the two pipes together with the clip, the bolt, the washer and the self-locking nut. The nipple adapters for connecting the pipes to the brake units are to be placed in a bag and secured to the pipes for transit and storage.

18.23 Fit the sealing ring to the retraction pin plug and insert the plug in the drilling of the pin. Locate the retraction pin in the lugs of the main fitting, fit the thrust collar, laminated shim, and collar, and secure assembly with the pin and split pin. The laminations of the shim should be adjusted to allow free rotation of the retraction pin without end play.

18.24 Secure the striker pin in the micro-switch bracket with the pin. Peen the pin to retain. Insert the braket in the side drilling of the main fitting ensuring that the striker is located under the shield of

the sliding cylinder upper bearing. Secure the bracket with three set-bolts and wirelock the heads of the bolts together.

Note ...

For switch bracket Part No. C.3300Y.709, the bracket must be fitted at the highest point on the main fitting i.e. all movements allowed by the slots in the bracket should be fully taken up by moving the bracket towards the pivot pins to the fullest extent before tightening the set-bolts.

18.25 Insert the plunger and the spring in the bracket, fit the tabwasher to the plug and screw the plug tightly into the bracket and over the plunger. Bend the tabwasher to lock the plug and fit the dust excluder.

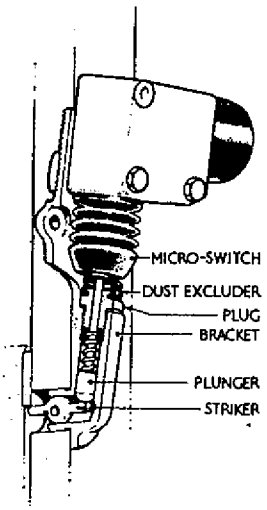

Fig.9 Micro-switch assembly

18.26 The micro-switch assembly should be fitted and adjusted on installation and the procedure is detailed in para.23. During storage and transit, the micro-switch parts should be secured in a bag to the undercarriage.

18.27 If the pivot pins have been removed, secure them in the main fitting with the bolts, washers and stiffnuts. Fit the bearing caps and the pivot bushes over the pivot pins. A laminated shim is to be fitted between the bush and the bearing cap of the forward pivot pin to obtain an overall dimension of 11.872/11.874 in. (Refer to dimension X on fig.1).

18.28 The bearing caps should be temporarily split-pinned to the pivot pins for storage and transit purposes. Secure the fairing attachment brackets to the lugs of the sliding cylinder with the special bolts, washers, slotted nuts and split pins. The pipe guard is to be secured to the appropriate fairing bracket.

18.29 Secure the fairing pins to the side bosses of the main fitting with the pins and split pins. Fit a washer, slotted nut and split pin to each fairing pin.

18.30 Fit the wheel assembly to the axle and screw the axle nut in the axle. The nut should be adjusted for wheel end play between the limits 0.005/0.010 in. Lock the nut with the setscrew.

18.31 Ensure that the lubrication passages of all greasers are free from obstruction.

Note ...

When lubricating the upper and lower torque link hinges, it is most important that sufficient grease is injected through the greasers to ensure that it exudes at the points A and B shown on fig. 8.

Filling and charging the shock absorber

19. A static hydraulic test rig and a $\frac{1}{4}$ in B.S.P. union, together with a universal lubricating gun and flexible charging pipe are required.

19.1 Remove the bleeder plug and the charging valve assembly.

19.2 Invert and fully extend the unit and screw the union into the charging valve tapping. Connect the test rig to the union and pump in oil OM-15 until it flows from the bleeder plug tapping. Screw in the bleeder plug.

19.3 Disconnect the test rig and remove the union. Fit a new sealing ring to the charging valve and screw in the valve. Secure the extension piece to the charging valve with the banjo bolt.

19.4 Incline the unit at an angle of 45 degrees to the vertical with the bleeder plug at the highest point.

19.5 Remove the cap from the extension piece of the charging valve and screw in the flexible charging pipe. Attach the universal lubricating gun and pump in fluid to pressurise the unit to 1000 lbf/in^2.

19.6 Slacken the bleeder plug to allow air and fluid to escape.

19.7 Repeat paras. 19.5 and 19.6 until fluid only, free from air, escapes when the bleeder plug is opened. Tighten the bleeder plug and test as detailed in para. 21.

Testing

20. A static hydraulic test rig will be required for testing. For the brake pipe assembly test, a fluid container, to supply a 29 to 31 inch static head of fluid to the pipe assembly is required during the flow test. The fluid temperature for the flow test must be 21 to 23°C. A charging pipe and universal lubricating gun will also be needed.

21. Shock absorber

21.1 Pressurise the unit to 3000 lbf/in^2. Allow the unit to remain in this condition for 30 minutes. Depressurise the unit and check tighten the four special nuts on the bolts of the gland pack assembly.

21.2 Repeat para. 21.1 twice more then tighten the bleeder plug.

21.3 Pressurise the unit to 2000 lbf/in^2.

21.4 Remove the charging pipe and the universal lubricating gun and screw in the charging valve cap.

21.5 Wirelock the charging valve and the bleeder plug.

22. Brake pipe assembly

22.1 Manually flex the upper and lower pipes to ensure that the centre joint will hinge freely and check that the end banjo connections will rotate on the banjo pins.

22.2 Connect the supply line of the static hydraulic test rig to one end connection and apply pressure to prime the pipe assembly with fluid. Blank off the opposite end connnection.

22.3 Gradually apply a pressure of 2200 lbf/in^2. Leakage must not occur.

22.4 Reduce the pressure to 1500 lbf/in^2 and flex the upper and lower pipes and rotate the end connections through the full limit of travel in each direction. Repeat this operation several times.

22.5 Release the pressure, remove the blanking cap and disconnect the supply line.

22.6 Check and record the time required to pass 50 in^3 of fluid from the container with the appropriate head of fluid applied at the correct temperature.

22.7 Connect the brake pipe assembly to the flow pipe of the container and place the pipe assembly in the horizontal position.

22.8 Check and record the time required to pass 50 in^3 of fluid through the pipe assembly under the same conditions as para. 22.6. The difference in the two recorded times should be 7·5 minutes.

22.9 Disconnect the pipe assembly from the fluid container.

23. Installation of micro-switch.

The micro-switch assembly is to be fitted as follows after installation of the undercarriage:-

23.1 Locate the micro-switch on the bracket in such a position that the switch is just operated when the leg is fully extended, i.e. the striker is just in contact with the spring-loaded plunger. Secure the micro-switch and the serrated plate to the bracket with the bolts and self-locking nuts.

Annex A

MAIN UNDERCARRIAGE DOWTY ROTOL TYPES 11883P AND SA01 AND 11883P AND SB01

Introduction

1. These undercarriages are identical to the type described in the chapter, but for the P and SA01 types, improved brake pipes adjacent to the upper torque link are not fitted. The PA01 and PB01 types are fitted as the port undercarriage and SA01 and SB01 are opposite hand and fitted as the starboard undercarriage.