AP 105B-06187-13

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of AP 4515B Vol 3 Pt 1 Sect 2 Chap 15)

SELECTOR VALVE
DOWTY AEROSPACE HYDRAULICS
Part No 08816YA03

GENERAL AND TECHNICAL INFORMATION (-1)
PARTS CATALOGUE AND RELATED INFORMATION (-3)

BY COMMAND OF THE DEFENCE COUNCIL

Ministry of Defence

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the channel prescribed for the purpose in:

AP100B-01, Order 0504 (RAF)

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(1) WHITE SPIRIT. THIS PUBLICATION CONTAINS PROCEDURES WHICH USE WHITE SPIRIT. REFER TO AP100B-10, DATA SHEET S2803.

(2) LOTOXANE. THIS PUBLICATION CONTAINS PROCEDURES WHICH USE LOTOXANE. REFER TO AP100B-10, DATA SHEET S2802.

(3) PREVENTATIVE PX1. THIS PUBLICATION CONTAINS PROCEDURES WHICH USE PREVENTATIVE PX1. REFER TO AP100B-10, DATA SHEET S3301.

GENERAL

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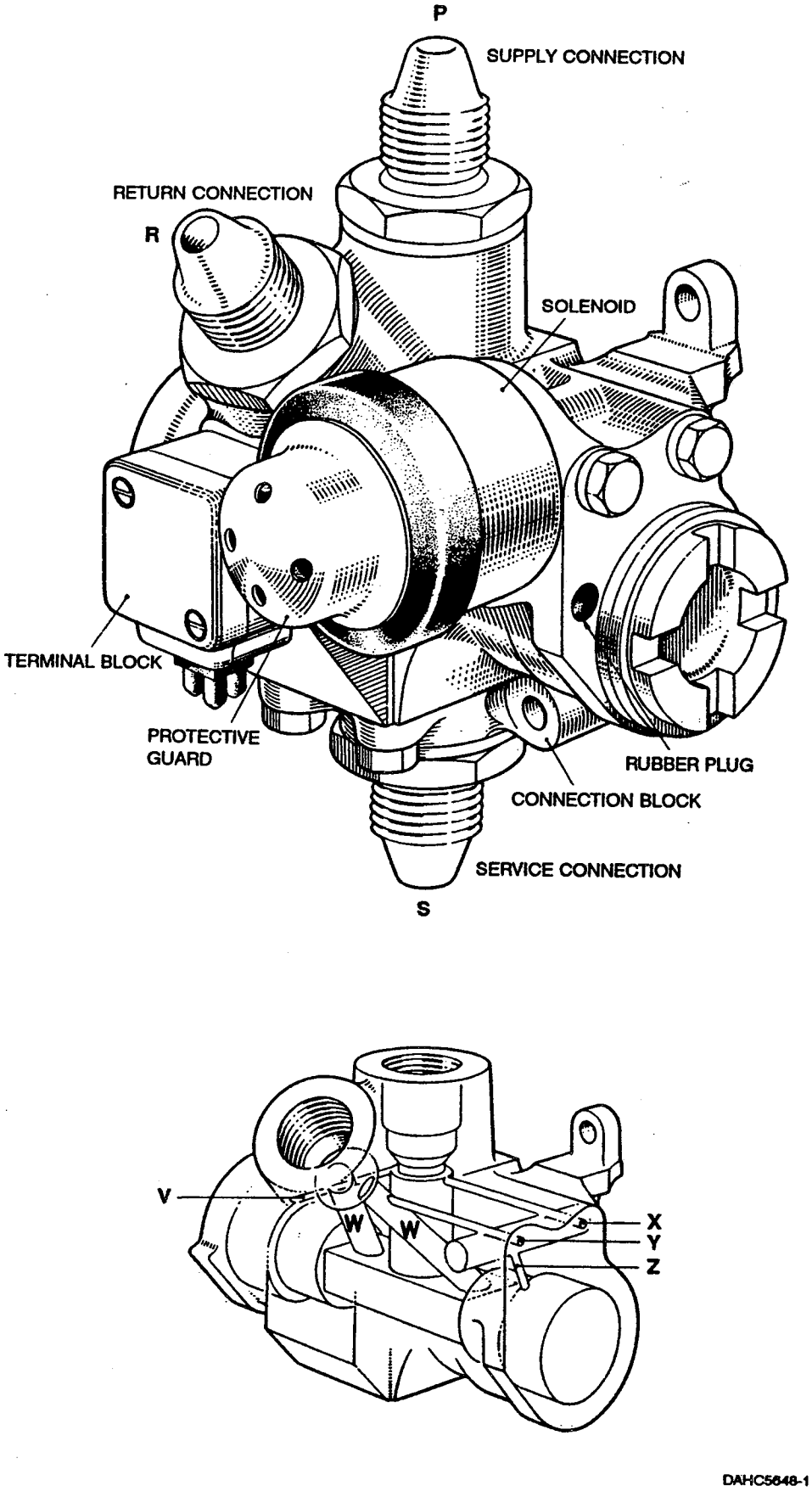


Fig 1 Selector valve

Leading particulars

1 Leading particulars for this unit are as follows:

1.1	System fluid	Oil OM15 (DTD585)
1.2	Operating pressure	5200 lbf/in^2
1.3	Connections:	
	Supply and service	0.500 in BSP
	Return	0.375 in BSP

Modification state

2 The information in this topic includes all appropriate modifications up to and including issue 25.

Introduction

3 This unit is an electrically operated solenoid valve which, when energised, directs fluid from supply to a service. De-energising the solenoid directs fluid to return from the service.

Constructional description (Fig 1 and 2)

4 The valve body houses a pilot valve, a slide and two pistons, all interconnected by drillings for the flow of fluid. Two integral bosses locate the connections for the supply P and return R lines. A connection block fitted with an O-ring seal is bolted to the valve body opposite to the supply connection P. The connection block receives an adapter which forms service connection S. A thimble, housed in the bore of connection P, is spring-loaded against the slide, holding it in contact with the connection block. The thimble spring is seated within a filter sub-assembly, which in turn seats against an integral flange in the supply connection P.

5 The slide is slotted and operates across the main fluid supply; it is actuated by two opposing pistons. The large piston is fitted with an O-ring seal. The smaller piston is retained in a sleeve where it is sealed by an O-ring seal backed by an anti-extrusion ring. Two end plugs, each fitted with an O-ring seal, close the bores in which the two pistons operate.

6 The pilot valve is located above the large piston and consists of a spring-loaded spindle, one end of which operates against a ball located between a pressure seat and a return seat. The pilot valve is retained in the housing by a plug sealed with an O-ring seal. Holes in the plug connect with drillings in the valve body. The opposite end of the spindle protrudes through a washer and seal housing to make contact with the plunger of the solenoid.

7 A terminal block is connected to the solenoid assembly by a wiring sub-assembly. The leads from the terminal block pass through an insulating tube inserted in a plugged drilling in the valve body. The leads are attached to spring-loaded ferrules which are located in a plunger block to make contact with the solenoid assembly.

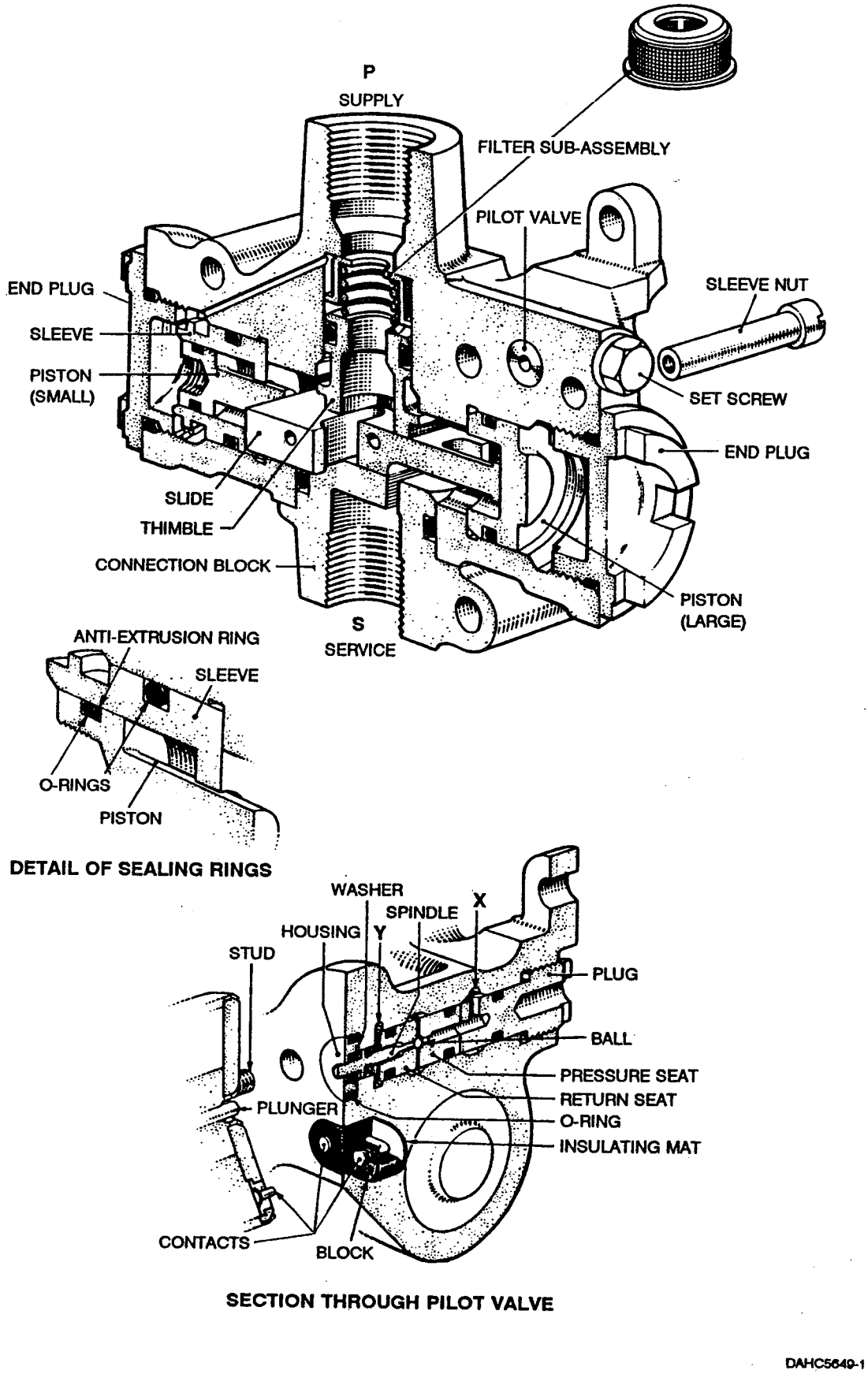


Fig 2 Selector valve assembly - sectional view

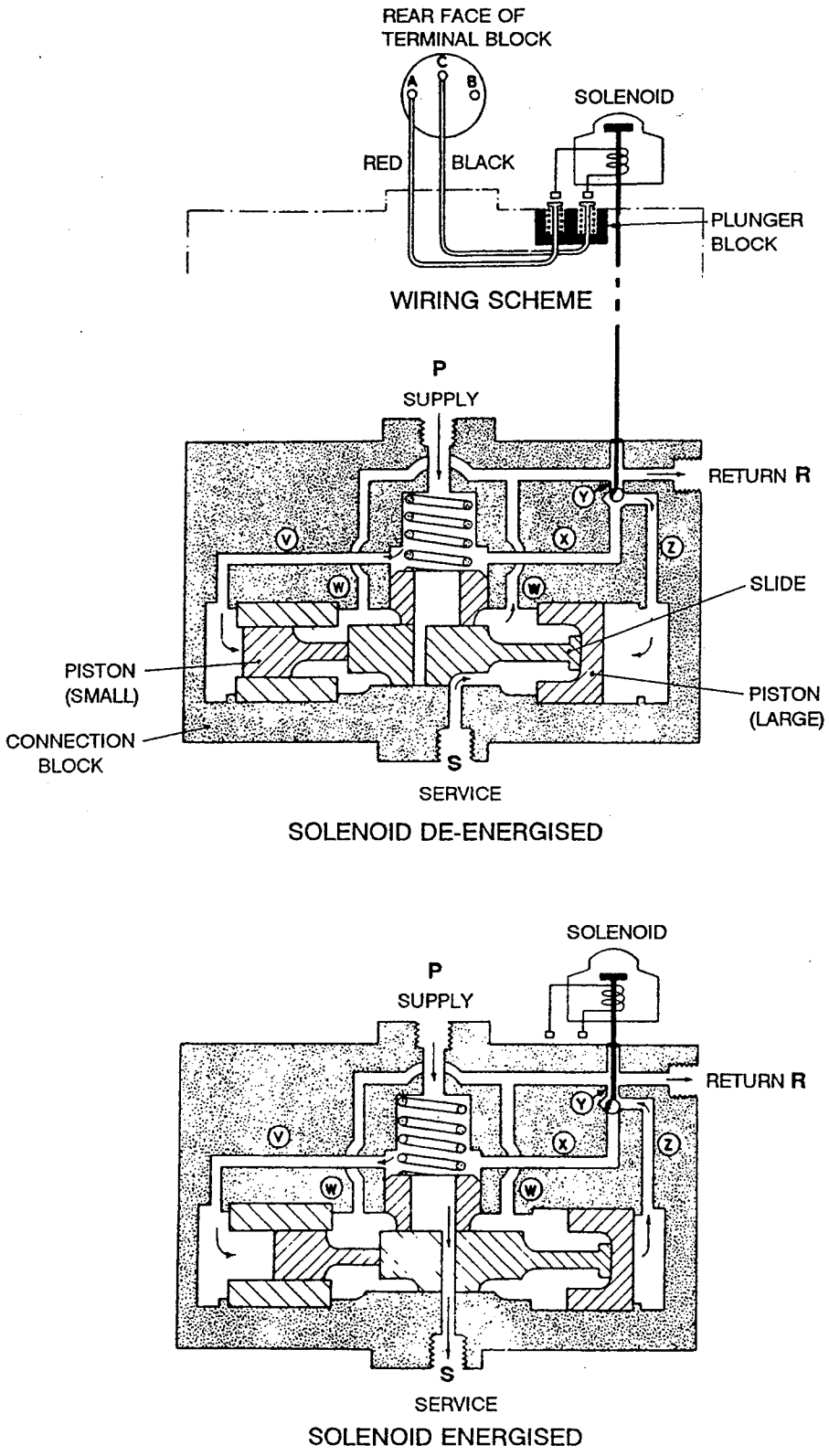


Fig 3 Functional diagram

8 The drillings X, Y and Z (Fig 1) connect the pilot valve with connection P and the outer end of the large piston. Drilling V joins connection P to the outer end of the small piston. The filter sub-assembly at the intersection of drilling X and the orifice of connection P ensures that only clean fluid can pass to the pilot valve.

Functional description (Fig 3)

9 When the solenoid is de-energised, the spindle of the pilot valve is held away from the ball by its spring. Supply fluid entering the unit at connection P flows through drilling X to the pilot valve and through drilling Z to the large piston. Simultaneously, supply fluid passes through drilling V to the small piston. Due to the difference in surface areas, a greater force is applied to the larger piston and the slide is moved until its slot is out of alignment with the slot in the connection block. The flow of pressure fluid through the unit is cut off and the return fluid at connection S passes around the end of the slide, through drilling W to return connection R.

10 When the solenoid is energised, its plunger moves the spindle of the pilot valve to thrust the ball against the pressure seat. Fluid from connection P is cut off from the large piston and pressure on this piston is relieved through the open return seat. When the pressure is relieved from the large piston, the pressure acting on the small piston moves the slide until the slots in the slide and the connection block are in alignment. Supply fluid can then flow to the service connection S.

MAINTENANCE

Special tools and equipment

11 The following special tools, equipment and materials are required to carry out the maintenance procedures detailed.

Part No	Description	Application
ST1923	Assembly post	Assembling
ST1952	Assembly post	Assembling
ST1964	Assembly post	Assembling
ST1966	Spring compressor	Assembling
ST2081	Assembly post	Assembling
ST2757	Adapter	Assembling
–	Torque spanner	Assembling
▶ –	Lotoxane (MIL-T-81533A)	Cleaning ◀
–	White spirit (BS245)	Cleaning
–	Oil OM15 (DTD585)	Assembling
–	Grease MS4	Assembling

Part No	Description	Application
-	Corrosion preventative PX1	Preservation
-	Locking wire (DTD189A)	Locking parts

Safety and maintenance notes

12 Safety and maintenance notes or other general safety/maintenance requirements appropriate to the equipment, or to the main equipment, must be complied with where relevant throughout the work detailed in this publication.

BAY MAINTENANCE

Dismantling (Fig 1 and 2)

WARNING

SPECIFIC INTERNAL DETAILS OF THIS UNIT ARE SUBJECT TO SPRING PRESSURE AND CARE MUST BE EXERCISED WHEN DISMANTLING.

13 Discard all O-ring seals, bonded seals and the anti-extrusion ring on removal from the unit.

13.1 Remove the two solenoid sleeve nuts and withdraw the solenoid assembly from the valve body.

NOTE

The solenoid assembly must not be dismantled further.

13.2 Remove the adapters for connections P and S and the reducing union for connection R.

13.3 Remove the four bolts and withdraw the connection block.

13.4 Remove the two end plugs and withdraw the small piston, sleeve, slide and the large piston.

13.5 Remove the thimble, spring and filter sub-assembly.

13.6 Carefully remove the housing, washer, spindle and spring.

13.7 Remove the plug and withdraw the pressure seat, the ball and the return seat.

13.8 Remove all O-ring seals, bonded seals and the anti-extrusion ring.

NOTE

Do not disturb the plunger block, terminal block, blanking set screws and the rubber plug unnecessarily.

CLEANING

▶ WARNINGS

(1) LOTOXANE. LOTOXANE IS USED IN THE MAINTENANCE OF THIS EQUIPMENT. REFER TO THE WARNING IN THE PRELIMINARY PAGES OF THIS PUBLICATION.

(2) PREVENTATIVE PX-1. PREVENTATIVE PX-1 IS USED IN THE MAINTENANCE OF THIS EQUIPMENT. REFER TO THE WARNING IN THE PRELIMINARY PAGES OF THIS PUBLICATION.

(3) WHITE SPIRIT. WHITE SPIRIT IS USED IN THE MAINTENANCE OF THIS EQUIPMENT. REFER TO THE WARNING IN THE PRELIMINARY PAGES OF THIS PUBLICATION. ◀

14 To enable all items to be visually examined for damage and wear, each part must be thoroughly cleaned ▶ using lotoxane or white spirit. 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 PVC or polythene gloves. If delays occur before assembly, parts must be suitably protected against corrosion using temporary corrosion preventative PX1.

Examination and checking

15 Visually examine all parts for damage and corrosion. Check parts for permissible wear in accordance with fits and clearances, paragraph 19.

Superficial damage

16 Superficial damage in the form of external isolated scores, smooth dents and abrasions free from cracks are to be regarded as negligible provided that internal dimensions are not affected and the damage is within the following limits:

16.1 Not exceeding 0.500 in long.

16.2 Not exceeding 0.010 in deep.

16.3 Not less than 0.250 in from any hole or bearing surface.

NOTE

Burrs must be removed and sharp edges blended out. Minor scores and abrasions in non-sealing bores may be ignored provided that proud portions of the abrasion are removed.

Checking data

17 Spring 500Y371

17.1 Number of working coils: 2.5

17.2 Wire size: 0.0156 in

17.3 Free length: 0.105 to 0.125 in

17.4 Check length: 0.070 in

17.5 Load at check length: 0.6 to 1.0 lbf.

18 Spring 500Y585

18.1 Number of working coils: 3

18.2 Wire size: 0.064 in (16 SWG)

18.3 Free length: 0.460 to 0.480 in

18.4 Check length: 0.330 in

18.5 Load at check length: 9 to 11 lbf.

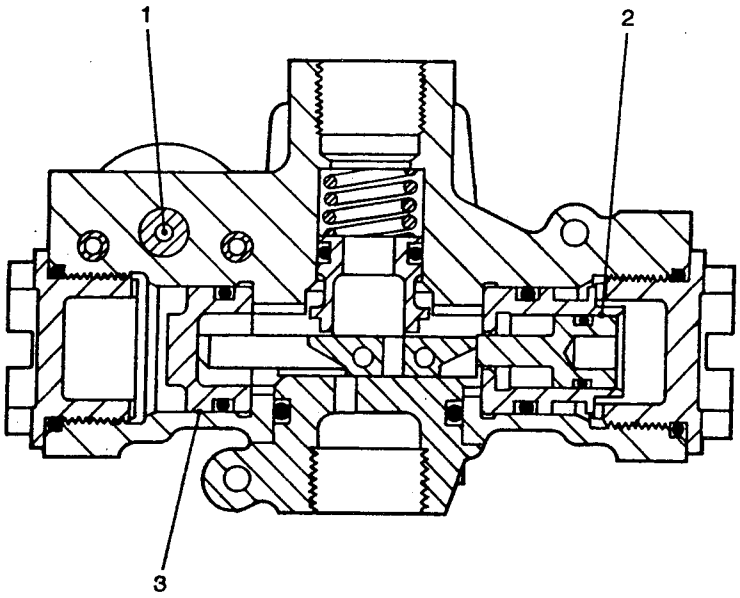
Fits and clearances (Fig 4)

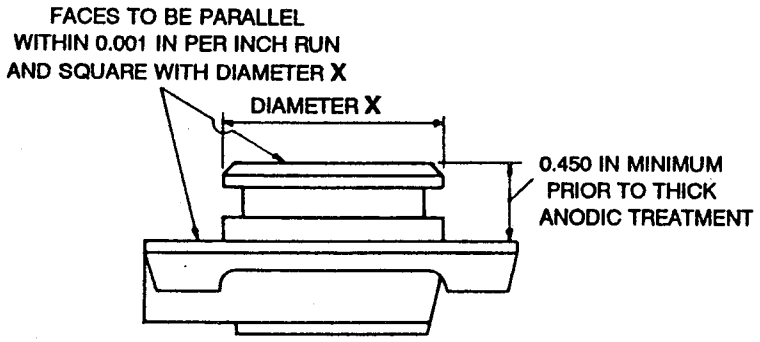
19 Check that dimensions are within the specified limits.

TABLE 1

FITS, CLEARANCES AND REPAIR TOLERANCES

Ref No on Fig 4	Parts and Description	Dimension New	Permissible Worn Dimension		Permissible Clearance		Remarks
			Interchangeable Assembly	Selective Assembly	New	Worn	
1	SPINDLE IN RETURN SEAT						
	Return seat i/d	0.09425 / 0.09325	0.09500	0.09575	0.00250 / 0.00050	0.00400	
	Spindle o/d	0.09275 / 0.09175	0.09100	0.09025			
2	PISTON IN SLEEVE						
	Sleeve i/d	0.5005 / 0.4995	0.5010	0.5015	0.0025 / 0.0005	0.0035	
	Piston o/d	0.4990 / 0.4980	0.4975	0.4970			
3	PISTON IN VALVE BODY						
	Valve body i/d	0.87575 / 0.87450	0.87630	0.87670	0.00350 / 0.00075	0.00450	
	Piston o/d	0.87375 / 0.87225	0.87180	0.87130			





CONNECTION BLOCK

DAHC5654-1

Fig 4 Fits and clearances

Assembling (Fig 1, 2 and 5)

20 Lightly lubricate all bonded seals, O-ring seals and the anti-extrusion ring with clean oil OM15, before assembling into the unit.

20.1 Using assembly post ST1952, assemble an O-ring seal to the pilot valve return seat.

20.2 Using assembly post ST1923, assemble an O-ring seal to the plug and to the pressure seat.

20.3 Insert the return seat, the ball and the pressure seat into the bore of the pilot valve. Secure by fitting the plug.

20.4 Assemble the small O-ring seal into the housing. Assemble the washer onto the spindle and carefully slide the spindle, flanged end leading, into the housing. Place the spring over the spindle in preparation for assembly into the pilot valve bore.

20.5 Place the large O-ring seal into the recess in the valve body and carefully slide the assembled spindle into the body.

20.6 Assemble the O-ring seal to the thimble. Insert the filter sub-assembly, spring and thimble into the valve body.

20.6.1 Hold the thimble in position through the connection block aperture.

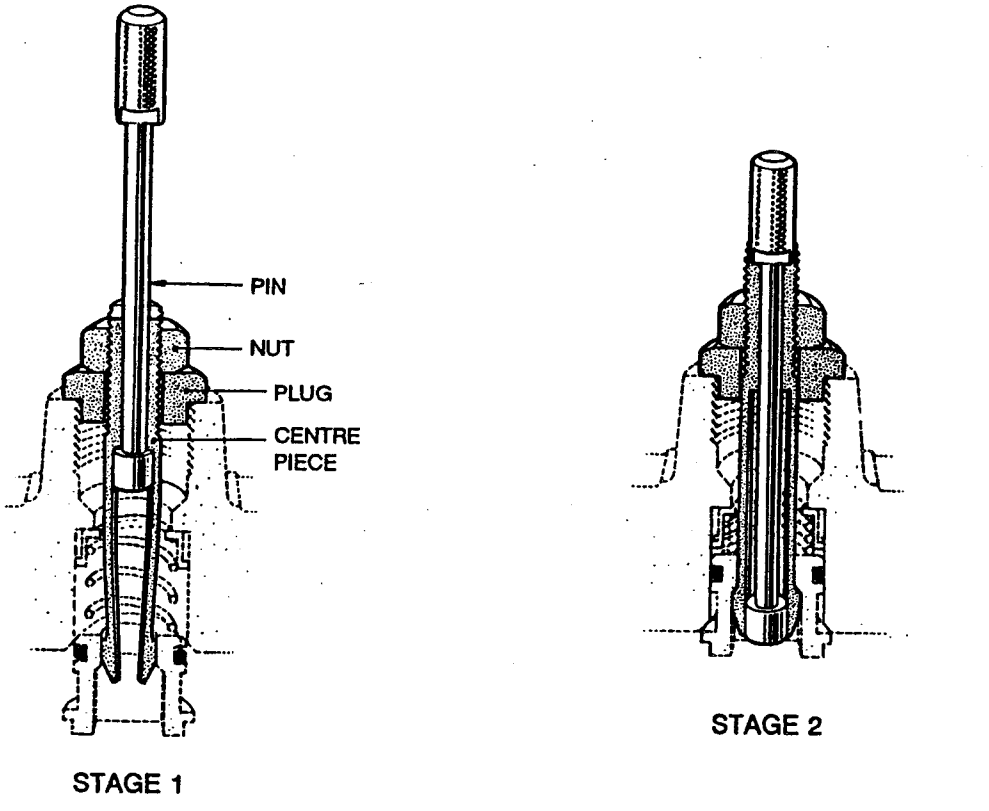


Fig 5 Use of spring compressor ST1966

20.6.2 Insert the spring compressor ST1966 through the orifice of connection P (Fig 5, Stage 1) and allow the prongs of the centre piece to engage with the internal shoulder in the thimble.

20.6.3 Push the pin into the centre piece to ensure that the prongs are held in contact with the internal shoulder in the thimble (Stage 2).

20.6.4 Turn the nut and withdraw the thimble against the spring to allow for the insertion of the slide.

20.6.5 Locate the slide centrally under the thimble with the stemmed end of the slide adjacent to the assembled pilot valve. Withdraw the pin to its fullest extent and remove the spring compressor completely by giving it a sharp pull.

20.7 Assemble the O-ring seal to the connection block. Locate the connection block in the valve body with the attachment lug adjacent to the pilot valve. Secure the connection block in the valve body with the four bolts.

20.8 Use the assembly post ST1964 to assemble the O-ring seal to the large piston and to the sleeve. Assemble the O-ring seal and anti-extrusion ring to the small piston. When the new anti-extrusion ring is fitted, the feeder on the side of the ring is to be cut off flush with the surface and fitted on the side of the O-ring seal nearest to the centre line of the valve. To facilitate assembly, carefully cut the anti-extrusion ring diagonally (scarf cut).

20.9 Locate the large piston to abut the stemmed end of the slide. Fit the O-ring seal to the end plug and screw the end plug into the valve body.

20.10 Position the small piston in the sleeve and locate the sleeve in the valve body to abut the end of the slide. Fit the O-ring seal to the end plug. Screw the end plug into the valve body.

20.11 Use the adapter ST2757 and a torque spanner to torque tighten the two end plugs to between 50 and 55 lbf ft.

20.12 Put a bonded seal onto each adapter and screw them into the valve body and connection block, connections P and S respectively and tighten them.

20.13 Put the bonded seals onto the reducing union; screw it into the valve body connection R and tighten.

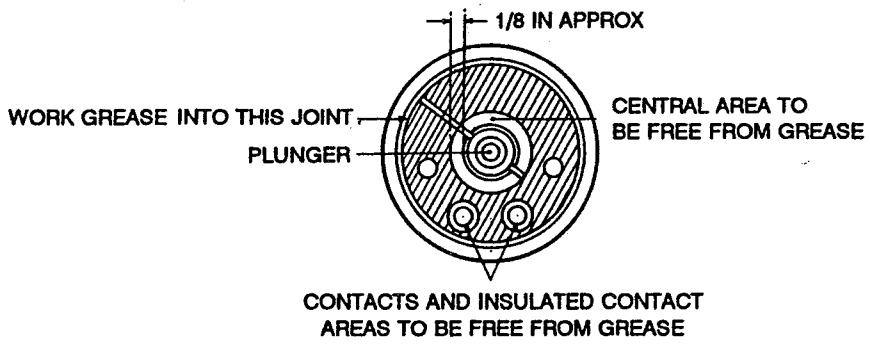


Fig 6 Solenoid greasing details

20.14 Ensure that the mating faces of the solenoid assembly and valve body are clean and that there is true engagement between the two details to allow correct heat transfer from the solenoid assembly to the valve body. Apply a thin film of grease MS4 to the mating face of the solenoid assembly excluding the area within 0.125 in of the aperture for the plunger housing, the contacts and the insulated contact area. Work the grease into the joint and the groove around the outer periphery.

20.15 Position the solenoid assembly so that the contacts are in alignment with the plunger block contacts. Insert the solenoid studs into the valve body. Screw in the two sleeve nuts from the opposite side of the valve body and tighten them securely.

20.16 When all tests have been satisfactorily completed, re-tighten the two end plugs to a torque of between 50 and 55 lbf ft. Check for tightness of all external retaining nuts, bolts and the pilot valve retaining plug. Wirelock the unit.

TESTING

Special tools and test equipment

21 The following special tools and test equipment are required to carry out the test procedures detailed.

Part No	Description	Application
-	Static hydraulic test rig with two hand pumps and a power pump	Testing
-	Electrical power supply 16 to 28 Vdc	Testing

Part No	Description	Application
-	500 Vdc insulation tester	Testing
-	Blanking adapter with a bleed plug	Testing
-	Slave jack	Testing
-	Two electro-magnetic counters	Slave jack and selector valve operations recording

Testing the unit (Fig 1 and 3)

WARNING

VOLTAGES IN EXCESS OF 30 VOLTS (RMS) AC OR 50 VOLTS DC CAN, IN CERTAIN CIRCUMSTANCES, BE LETHAL. WHEN WORKING ON SUCH SYSTEMS REQUIRING EXPOSURE TO LIVE UNPROTECTED CONDUCTORS, A SECOND PERSON MUST ALWAYS BE IN ATTENDANCE.

22 Ensure the selector valve is hydraulically full and bled free of air. All tests must be carried out using clean oil OM15. During any testing, if internal leakage occurs, note the slide position and calibrate the leakage as detailed in paragraph 26. Using the equipment specified in paragraph 21, carry out the following test procedure:

22.1 Before and on completion of all tests, an insulation test must be carried out. Connect the 500 Vdc insulation tester between the valve body and each pin of the plug in turn. The insulation resistance must be greater than 20 megohms.

23 Adjustment and pressure tests

23.1 Connect the test rig supply line to the connection P and fit the blanking adapter to connection S. Close the bleed plug of the blanking adapter.

23.2 Connect the electrical power supply +ve to terminal A and -ve to terminal C. Adjust the electrical power supply to 16 Vdc.

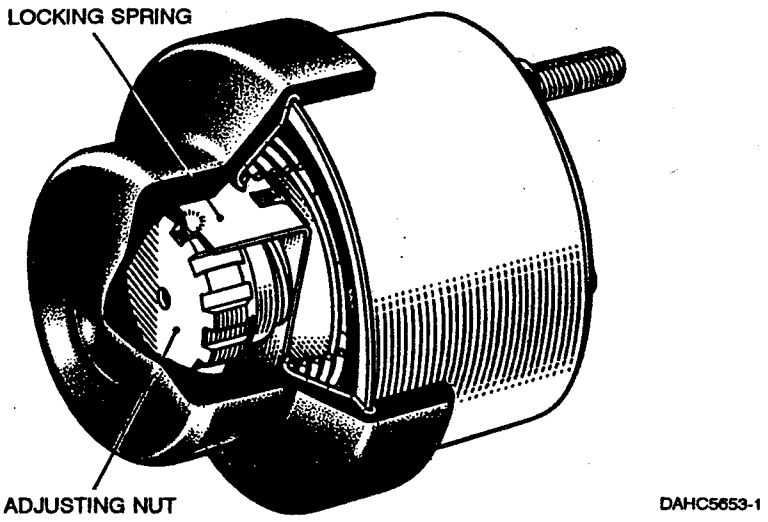


Fig 7 Location of solenoid plunger adjusting nut

23.3 Remove the shroud from the solenoid. Energise the solenoid, unscrew the solenoid adjusting nut several turns. Apply a pressure of 1000 lbf/in^2 to connection P.

23.4 Screw down the solenoid adjusting nut until the pilot valve ball is lifted off its seat. This will be indicated by a drop in pressure and a spurt of fluid from the connection R.

23.5 Gradually increase the pressure at connection P. Screw down the solenoid adjusting nut until a pressure of 5200 lbf/in^2 can be held without leakage. Ensure that the locking spring is engaged in one of the solenoid adjusting nut serrations and then screw the solenoid adjusting nut down a further three clicks of the locking spring.

23.6 De-energise the solenoid. Apply a pressure of 5200 lbf/in^2 at connection P.

23.7 Energise the solenoid and check that the pilot valve operates, indicated by a drop in pressure and a spurt of fluid from connection R. Release the pressure.

23.8 Apply a pressure of 5200 lbf/in^2. Further leakage from connection R must not occur.

23.9 De-energise the solenoid, adjust the pressure to 500 lbf/in^2 to position the slide. Release the pressure.

23.10 Open the bleed plug at connection S and slowly raise the pressure to 300 lbf/in^2, gradually increasing it to 6000 lbf/in^2. Leakage must not occur at connections R and S. Release the pressure.

23.11 Close the bleed plug at connection S. Energise the solenoid. Apply a pressure of 200 lbf/in^2. Open the bleed plug, the pressure should now be released and fluid should flow freely from connection P to connection S.

23.12 Close the bleed plug at connection S. Slowly increase the pressure to 300 lbf/in^2. Gradually increase the pressure to 6000 lbf/in^2. Leakage must not occur from connection R. Release the pressure.

NOTE

It should not be necessary to alter the solenoid adjustment to obtain a pressure of 6000 lbf/in^2. If the adjustment has been altered, it must be put back to the original setting, and if there is any doubt about the setting, re-check operations detailed in sub-paragraphs 23.3 to 23.8 releasing the pressure before de-energising the solenoid.

23.13 De-energise the solenoid. Apply a pressure of 150 lbf/in^2. Open the bleed plug at connection S. A decrease in pressure must not occur. Release the pressure.

23.14 Connect the supply line of the second hand pump to connection R. Apply and maintain a pressure between 1750 and 2000 lbf/in^2 at the connection P. Operate the second hand pump and check that fluid will pass freely from R to S.

23.15 Close the bleed plug. Slowly apply a pressure of 100 lbf/in^2 to connection R. Gradually increase the pressure to 1500 lbf/in^2. Leakage must not occur. Release the pressure at connection R and then at connection P. De-energise the supply lines, switch off and disconnect the electrical power supply and remove the blanking adapter.

Power test

24 During these tests the fluid temperature must not rise above 45°C.

24.1 Connect a branched supply line from the hydraulic test rig power pump to connection P and to the piston rod end of the slave jack. Connect connection S to the head of the slave jack and connection R to return.

24.2 Connect the electrical power supply and adjust to between 24 and 28 Vdc.

24.3 Operate the selector valve for 500 cycles. One cycle is the extension and retraction of the slave jack with the test rig pump operating at 4000 to 4300 lbf/in^2 at the end of each stroke.

24.4 Record the slave jack cycles and selector valve operations on separate electro-magnetic counters. On completion of the cycling test, compare the recordings to ascertain whether any malfunctioning of the unit has occurred.

24.5 On conclusion of the 500 cycles, apply the following check to ensure that the pilot valve is functioning satisfactorily.

24.5.1 Energise the solenoid to retract the slave jack and allow the pump pressure to build up to 4000 to 4300 lbf/in^2.

24.5.2 Disconnect the line at the connection R and measure the leakage. Leakage must not exceed 10 drops per minute.

24.5.3 Reconnect the line to connection R.

24.5.4 De-energise the solenoid to retract the slave jack and allow the pump pressure to build up to 4000 to 4300 lbf/in^2.

24.5.5 Disconnect the line connection R and measure the leakage. Leakage must not exceed 10 drops per minute.

24.5.6 Adjust the electrical power supply to 16 Vdc and check that the selector valve operates satisfactorily at the reduced voltage.

Static test

25 At the conclusion of the power test, carry out the following tests to check the operation of the pilot valve.

25.1 Connect the unit to the test rig as detailed in sub-paragraphs 23.1 and 23.2.

25.2 Screw back the solenoid adjusting nut sufficiently to drop the pressure below 5200 lbf/in^2 with the solenoid energised.

25.3 Repeat the tests detailed in sub-paragraphs 23.4 to 23.9.

25.4 Open the bleed plug at connection S and slowly raise the pressure to 300 lbf/in^2, gradually increasing it to 5200 lbf/in^2. Leakage must not occur at connections R and S. Release the pressure.

25.5 Close the bleed plug at the connection S. Energise the solenoid. Apply a pressure of 200 lbf/in^2. Open the bleed plug, the pressure should now be released and fluid should flow freely from connection P to connection S.

25.6 Close the bleed plug at connection S. Slowly increase the pressure to 300 lbf/in^2. Gradually increase the pressure to 5200 lbf/in^2. Leakage must not occur from connection R. Release the pressure.

25.7 Repeat the test procedures as detailed in sub-paragraphs 23.13 to 23.15.

25.8 Refit the shroud to the solenoid.

Internal leakage calibration

26 This test must only be carried out when internal leakage has occurred.

26.1 Connect the unit to the test rig as detailed in sub-paragraphs 23.1 and 23.2. Connect a short length of pipe to connection R.

26.2 Apply and maintain a pressure of between 300 to 500 lbf/in^2.

26.3 Operate the unit so that the slide is placed in the position at which the leakage occurred. When leakage from connection R has ceased or fallen below 15 drops per minute, increase the pressure to 1000 lbf/in^2 and measure and record the rate of leakage at connection R at this pressure.

26.4 Increase the pressure to 4000 lbf/in^2 and then to 6600 lbf/in^2 and measure the rate of leakage at each pressure increase. The leakage must not exceed 35 drops per minute at the pressures specified or at any intermediate pressure.

26.5 Release the pressure, disconnect the electrical supply and hydraulic supply lines and remove the blanking adapter.

PARTS CATALOGUE AND RELATED INFORMATION

FOR

SELECTOR VALVE

DOWTY AEROSPACE HYDRAULICS - CHELTENHAM

Part No 08816YA03

MODIFICATION RECORD

Mod No	AL No	Mod No	AL No	Mod No	AL No	Mod No	AL No	Mod No	AL No	Mod No	AL No
AC4090	*										
AC5592	*										

* Incorporated in initial issue of Catalogue
NA Mod not applicable to this Catalogue
C Mod cancelled
AS Amendment Sheet

PARTS CATALOGUE AND RELATED INFORMATION (TOPIC 3)

MEMORANDUM OF INSTRUCTIONS

Demands

1 Requirements for demands are:

1.1 The demand must quote the appropriate Reference Number for each item. Unreferenced parts are not normally provisioned as spares and demands for such items must quote the maker's Part Number and the name and type of the equipment. The location of each part within the equipment should be clearly indicated.

1.2 Demands are to be prepared in accordance with the procedure laid down in AP 830 Volume 1 or BR4.

Local manufacture

2 Parts annotated 'LM' are to be manufactured from local resources. If the manufacture of such items is beyond the capacity of the Unit, the demand is to be endorsed 'Unable to manufacture locally'.

Major repair

3 'MR' indicates that an item is required for major repair purposes only and will not normally be held in store by Units other than those authorised to undertake major repair of the equipment.

Units per assembly

4 The number quoted is the quantity required per next higher assembly in the position shown except 'attaching parts' which quote the quantity required to attach one item. The letters 'AR' in the 'Units per Assy' column indicate that the quantity is 'as required'. Where applicable the quantity normally fitted is shown as a nominal figure, eg (Nom 3). Where an item is listed only for reference purposes the letters 'RF' are quoted.

Classification of equipment

5 The Class of Store is indicated by a single letter as laid down in AP 830 Volume 1 or BR4.

Fitting code (FC)

6 The FC is indicated by one of the following letters and is only quoted against parts which are not directly interchangeable:

V Open up holes on assembly
W Partially assembled
X Ream or machine on assembly
Y Drill or drill and tap on assembly
Z Trim on assembly

Obsolescent stock

7 An asterisk in the 'Part No' column indicates that no further purchases of the item will be made but the part is to be used until stocks are exhausted.

Modifications

8 When items are affected by a modification the 'Mod No' is quoted in the description. Modifications incorporated in the catalogue are listed in the Modification Record.

Manufacturers NATO code

9 The NATO supply code for manufacturers is an alpha-numeric code for non-US based approved manufacturers and a numeric code for US based approved manufacturers. Manufacturers details related to a specific code are contained in the following publications available from DCA, Kentigern House, 65 Brown Street, Glasgow G2 8EX.

99-H4-1	Name to Code
99-H4-2	Code to Name

Usage code

10 The usage code column is normally left blank indicating full applicability of all items. Where a code letter is shown, it indicates that all items with that letter form part of the same assembly or sub-assembly.

INDEX OF PART NUMBERS

Part Number	DMC	Reference Number	Fig/Index	C of S or LM	FC
BALL, 1/16 IN. DIA.			1-38		
AGS1104D	28F	4730-99-8011808	1-1	C	
AGS1186B	28F	5330-99-9428453	1-41	C	
AGS1186D	28F	5330-99-2077439	1-2	C	
AGS1754-1A	5K	5305-99-1361876	1-50	C	
AGS596C	28N	5340-99-9143884	1-52	C	
AGS596D	28N	5340-99-8011909	1-53	C	
A43A24	28S	5305-99-9446553	1-51	C	
A5151YMK130			1-10		
C4600Y13			1-25		
C4600Y25	27Q	5330-99-5805351	1-42	C	
C4600Y32	27Q	4820-99-4117795	1-37	C	
C4600Y38	27Q	1620-99-4708782	1-19	C	
C4600Y6	27Q	4730-99-4143336	1-35	C	
C4600Y8			1-39		
C4747Y5	27Q	1650-99-5808691	1-13	C	
DN1334Z	10AP	5945-99-1955435	1-11	C	
D4595Y11	27Q	1650-99-5805435	1-22	C	
D4595Y5	27Q	1650-99-5805436	1-20	C	
D4595Y6	27Q	1650-99-5808389	1-17	C	
D4595Y7	27Q	1650-99-5808390	1-23	C	
D5149Y	27Q	4820-99-4117772	1-45	C	
D5149Y2	27Q	5940-99-5802915	1-48	C	
D5149Y3			1-46		
P400355		5305-99-1145912	1-5	C	
SP758D	27Q	4730-99-4117814	1-3	C	
SP826-1C	27Q	5305-99-1031567	1-12	C	
SP885C46	27Q	5305-99-5805348	1-40	C	
07471Y008			1-15		
08816YA03	27QM	4820-99-4117856	1	P	
08816YA05			1-4		
08816Y001			1-8		
08816Y023			1-43		
1220Y34	27QM	5325-99-5802912	1-49	C	
2000Y117			1-6		
20000Y244			1-7		
3300Y808A	27Q	1650-99-5805350	1-28	C	

INDEX OF PART NUMBERS

Part Number	DMC	Reference Number	Fig/Index	C of S or LM	FC
500Y371	27Q	5340-99-5808404	1-34	C	
500Y585			1-27		
5119Y50			1-44		
5149Y14			1-47		
5149Y7			1-47A		
7439Y4	27Q	1650-99-5808685	1-29	C	
7439Y5	27Q	5310-99-5805336	1-32	C	
7439Y6	27Q	1650-99-4143338	1-33	C	
7439Y7	27Q	5310-99-5805337	1-9	C	
7471Y4	27Q	5330-99-5802896	1-16	C	
750060103	27QA	5330-99-9440406	1-36	C	
750060107			1-18		
750060110			1-26		
750060113			1-21		
			1-24		
750060120			1-14		
750150105	6TN	5330-99-8021606	1-30	C	
751060606			1-31A		
751140606			1-31		

DETAILED PARTS LIST

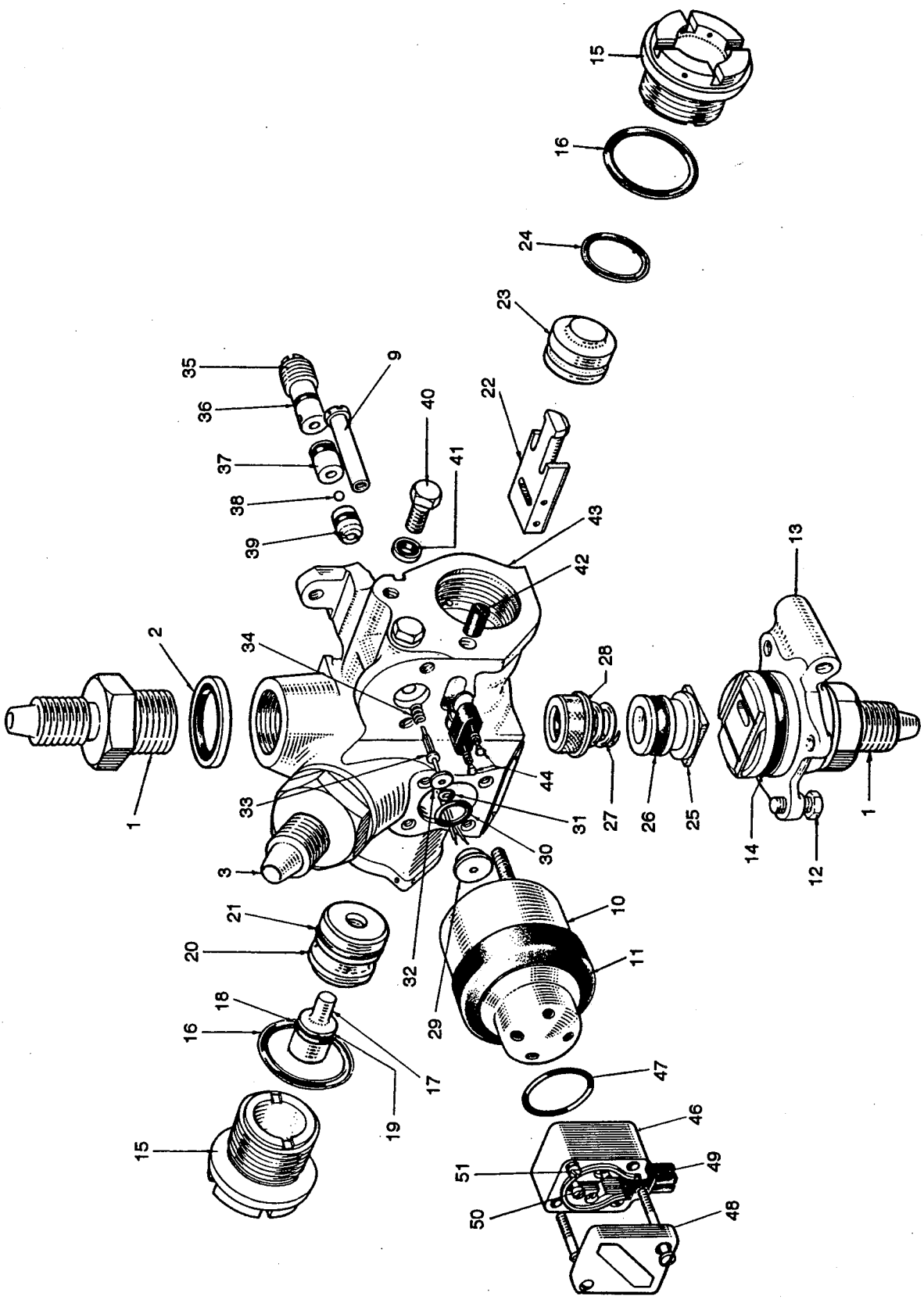


Fig 1 Selector valve

SELECTOR VALVE

Fig/ Index No	Part No	1 2 3 4 5 6 Nomenclature	Mnfrs NATO Code	Usage Code	Units per Assy
1	08816YA03	Valve, selector (Mod AC4090)			RF
-1	AGS1104D	. Adapter			2
-2	AGS1186D	. Seal, bonded			3
-3	SP758D	. Union, reducing			1
-4+	08816YA05	. Valve assembly, selector			1
-5+	P400355	. . Screw, drive			4
-6+	2000Y117	. . Nameplate			1
-7+	20000Y244	. . Plate, identification			1
-8+	08816Y001	. . Valve sub-assembly, selector			1
-9	7439Y7	. . . Nut, sleeve			2
-10	A5151YMK130	. . . Solenoid assembly (Mod AC5592)			1
		Spares for:-			
-11	DN1334Z	. . . . Shroud assembly			1
-12	SP826-1C	. . . Bolt			4
-13	C4747Y5	. . . Block, connection			1
-14	750060120	. . . O-ring			1
-15	07471Y008	. . . Plug, end			2
-16	7471Y4	. . . O-ring			2
-17	D4595Y6	. . . Piston			1
-18	750060107	. . . O-ring			1
-19	C4600Y38	. . . Ring, anti-extrusion			1
-20	D4595Y5	. . . Sleeve			1

+ Item not illustrated

SELECTOR VALVE

Fig/ Index No	Part No	1 2 3 4 5 6 Nomenclature	Mnfrs NATO Code	Usage Code	Units per Assy
1-21	750060113	. . . O-ring			1
-22	D4595Y11	. . . Slide			1
-23	D4595Y7	. . . Piston			1
-24	750060113	. . . O-ring			1
-25	C4600Y13	. . . Thimble			1
-26	750060110	. . . O-ring			1
-27	500Y585	. . . Spring			1
-28	3300Y808A	. . . Filter sub-assembly			1
-29	7439Y4	. . . Housing			1
-30	750150105	. . . O-ring			1
-31	751140606	. . . O-ring			1
	or				
-31A+	751060606	. . . O-ring			1
-32	7439Y5	. . . Washer			1
-33	7439Y6	. . . Spindle			1
-34	500Y371	. . . Spring			1
-35	C4600Y6	. . . Plug			1
-36	750060103	. . . O-ring			3
-37	C4600Y32	. . . Seat, pressure			1
-38	ND	. . . Ball, 1/16 in. dia.			1
-39	C4600Y8	. . . Seat, return			1
-40	SP885C46	. . . Screw, set			2
-41	AGS1186B	. . . Seal, bonded			2
-42	C4600Y25	. . . Plug, rubber			1
-43	08816Y023	. . . Body, valve			1

+ Item not illustrated

SELECTOR VALVE

Fig/ Index No	Part No	1 2 3 4 5 6 Nomenclature	Mnfrs NATO Code	Usage Code	Units per Assy
1-44	5119Y50	. . Block assembly, plunger			1
-45+	D5149Y	. . Block assembly, terminal			1
-46	D5149Y3	. . . Block assembly, terminal			1
-47	5149Y14	. . . . O-ring (for use with terminal block marked TX)			1
-47A+	5149Y7	. . . . O-ring (for use with terminal block marked T or without identification)			1
-48	D5149Y2	. . . Cover assembly			1
-49	1220Y34	. . . Grommet			1
-50	AGS1754-1A	. . . Screw and washer			3
-51	A43A24	. . . Screw, cheesehead			2
-52+	AGS596C	. Cap, dust (Storage and transit)			1
-53+	AGS596D	. Cap, dust (Storage and transit)			2

+ Item not illustrated