



SECURITY CLASSIFICATION - CONFIDENTIAL

ARROW I

MAINTENANCE INSTRUCTIONS

MAIN LANDING GEAR

71/MAINT 92/1

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For Maintenance and Reliability
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1. DESCRIPTION

1.1 General

The aircraft is equipped with a tricycle landing gear which is hydraulically retracted and is extended by free fall, assisted by airflow forces when in flight. The main gear is fitted with twin wheels in tandem. These have hydraulic disc-type brakes with provision for anti-skid devices. The main landing gear is housed in the inner wing. Retraction is inwards and forwards. When fully retracted it is faired in by a leg fairing, a pivot door and a landing gear door.

1.2 Main Landing Gear Attachment (See Figure 1)

The main leg and back-stay are attached to the aircraft by a cross-shaft which is supported in two self-aligning bearings, one in the main spar and the other in the front spar. A shear pin locates the leg to the cross-shaft. To facilitate removal and replacement of the main landing gear, the cross-shaft is manufactured in two sections with a spacer fitted between them. Removal of the spacer allows sufficient movement for the rear section and main leg to be withdrawn from the bearings. The retraction jack attachment is on the upper part of the back-stay.

1.3 Leg Fairing

The leg fairing is attached to the leg and back-stay by nine spring loaded housings. The two lower housings each incorporate a cam-operated locking device. In the landing gear down position, these two housings are locked to prevent the air flow from forcing the fairing away from the leg. In the landing gear up position, the cams are actuated by strikers in the wheel bay. The spring housings are then free to take up any movement of the leg due to flexing of the wing in flight, and keep the fairing sealed at all times.

1.4 Main Landing Gear Door (See Figure 2)

The landing gear door is hinged to the fuselage side of the wheel bay by a piano type hinge. When retracted it is locked in the up position by five up-locks which are locked mechanically and are released by three hydraulic jacks. The door has two rubber blocks which support the landing gear when flight stresses flex the wing and force the gear out of the up-lock. The door is operated by a hydraulic jack fitted with a multi-stage lock to prevent blow back.

1.5 Pivot Door (See Figure 3)

The pivot door closes the gap between the leg fairing and the wing skin when the landing gear is retracted. It is hinged to the structure by two arms. The operating linkage is connected to the



1.5 Pivot Door (continued)

cross-shaft by two adjustable links.

1.6 Main Gear Up-Lock (See Figure 4)

The main landing gear up-lock is fitted on the wheel bay diaphragm and engages with an adjustable roller on the leg. When the leg retracts, the up-lock engages mechanically and also operates a sequence valve which allows hydraulic pressure to be fed to the gear door jack.

The up-lock is released by hydraulic pressure when the gear door jack reaches its first blow-back lock position.

1.7 Main Leg

Owing to the limited size of the wheel bay, the leg must be reduced in length to accommodate it in the wheel bay. This is accomplished by a shortening device fitted to the top of the leg and connected to the structure by a turnbuckle. This shortening device consists of a chain and sprocket which is geometrically arranged to telescope the lower leg and shock absorber into the upper main casing, without compressing the shock absorber. The landing gear retracts at an angle of forty five degrees to the centre line of the aircraft and, with normal retraction, this would bring the forward wheel into a higher position than the rear wheel. To maintain both wheels parallel to the wing chord, the lower leg is rotated about the centre line of the leg.

1.8 Back Stay

The back stay braces the leg for fore and aft loads. One end is attached to the main casing with a pivot pin, the other being integral with the cross-shaft rear section.

1.9 Side Stay

A telescopic side stay is fitted between the main spar and main casing to brace the leg against side loads. It is attached to the main spar with a swivel bearing and to the leg with a universal ball joint. In the fully extended position an internal lock is engaged and forms the main landing gear down lock. The lock is disengaged by hydraulic pressure when the landing gear is selected up.

1.10 Shock Absorber

The liquid spring type shock absorber is housed within the leg. The upper end is secured with a transverse pin which is accessible after removal of a rubber plug from the main fitting. The piston rod



1.10 Shock Absorber (continued)

end is secured to the lower leg.

1.11 Torque Links

The torque links are fitted between the torque fitting and the sliding member to prevent rotation of the lower leg.

1.12 Bogie Beam

A bogie beam pivots on the lower end of the leg. Integral with each end of the beam are the two main wheel axles. Above the beam are two brake torque links, which form the anchor for the wheel brake torque arms.

1.13 Recuperator

A recuperator, which maintains the shock absorber at the correct charging pressure, is attached to the forward brake link. One end of the recuperator is charged with oil and the other end is charged with nitrogen. A valve, operated by the torque links, opens the oil end of the recuperator to the shock absorber each time the shock absorber is full extended. An oil content indicator and a nitrogen charging valve are fitted at the forward end of the recuperator, and a minimum safe nitrogen working pressure indicator and an oil charging point are fitted at the rear end.

1.14 Telescopic Tie-Rod

A spring loaded telescopic tie-rod is fitted between the bogie beam and outer casing. The tie-rod extends and tilts the bogie beam forward when the landing gear is retracted. This locates the wheels in the correct position for retraction into the wheel bay. The tie-rod also dampens oscillation of the bogie beam on initial landing.

1.15 Main Wheels

The main wheels are of the split hub type with the two halves sealed to enable the wheel to be fitted with either tubeless or conventional tires. The wheel revolves on two tapered roller bearings fitted in the wheel hub. A dust excluder is fitted to the inner bearing and a hub cap is fitted over the outer bearing and wheel nut.

1.16 Wheel Brakes

Each brake unit consists of two friction plates and a triple friction pad assembly operated hydraulically. The friction plates are keyed to the wheel by ten driving blocks and rotate with the wheel to provide a braking surface for the friction pads. The stationary friction pads



1.16 Wheel Brakes (Continued)

are mounted on a torque arm on the wheel axle which is secured to the brake torque link. The pads are arranged to sandwich the friction plates when a hydraulic piston exerts pressure on the inner pad. Pressure is supplied to the brakes by a solenoid operated selector. After the initial setting of the brakes by the manufacturer, no further adjustment is necessary, as the brakes are self adjusting.

2. FUNCTION TESTS

2.1 Preliminary Details

- 2.1.1 Since the hydraulic aspect of the landing gear operation is dealt with in Maintenance Instructions Report 71/MAINT 19/4, no details of the hydraulic operation will be included in this report.
- 2.1.2 It is assumed that the Hydraulic Test Machine Trailer is connected to the aircraft, that all hydraulically operated units are installed, that a Mode 2 selection is made, and that the pressure and flow rates are varied in accordance with the requirements of each component, as described in Maintenance Instructions Report 71/MAINT 19/4.
- 2.1.3 Additionally, in order to avoid constant repetition, it is assumed that all fairings, doors, etc., are removed prior to commencement of rigging, and that all adjustable rod-ends, lock-nuts and other parts disturbed during the rigging operation are tightened and locked, and adhesive tape removed, after the completion of adjustments.
- 2.1.4 Where necessary, it is assumed that all bolts are torque loaded to the correct figure after adjustments are completed.
- 2.1.5 In all sections of this report, the description will cover one side of the landing gear only. The same operation will have to be carried out on the other side as well.

2.2 Ground Equipment

2.2.1 Hydraulic Test Machine Trailer

This machine is connected to the utility system external charging couplings to provide hydraulic power for the operation of the landing gear.

2.2.2 High Pressure Hydraulic Charging Unit

This unit, charged with Silicone oil to Spec. DOWCAN 200, is used to pressurize the main leg shock absorber.



2.2.3 Aircraft Jacks

Three 20 ton jacks are positioned, one under each wing and one at the nose of the aircraft, in order to raise the landing gear, clear of the ground.

2.2.4 Aircraft Alignment Fixture

This fixture is positioned in the wheel well, supported at two points on the "Y" shaped upper member of the nose leg, and at one point on the upper end of the drag strut. The aircraft lateral and fore and aft levels are checked by an inclinometer placed on this fixture.

2.2.5 Inclinometer

This instrument is used for checking levels and travels of various aircraft components during rigging operations.

2.2.6 High Pressure Air/Nitrogen Charging Trailer

This unit is used for nitrogen charging of the tires and the recuperators.

2.3 Main Landing Gear Rigging (See Figure 1)

2.3.1 Main Landing Gear Leg

2.3.1.1 The main legs are inclined inward from the pivot points at an angle of $4^{\circ}15'10.47''$. This is measured as a linear measurement of $156.45'' \pm .25''$ from the centre line of the aircraft to the outer face of the landing gear leg sliding member at its lowest point.

This measurement is taken with the aircraft jacked up with the wheels clear of the ground, and positioned level laterally by means of an inclinometer placed on the alignment fixture in the nose wheel well.

2.3.1.2 Drop plumb lines to the hangar floor from two conveniently located points on the aircraft centre line, one forward and one aft of the main landing gear, and project the centre line to the hangar floor by marking a chalk line joining the two plumb points.

2.3.1.3 Drop another plumb line from the lowest point of the leg sliding member on its outer face, immediately below the bogie pivot pin, and mark the intersection of this line and the floor with a chalk cross.



- 2.3.1.4 With a steel tape, measure the distance from the cross to the aircraft centre line. To ensure that this measurement is taken at 90° to the aircraft centre line, place a large square on the centre line, and line up the steel tape parallel to the outward pointing arm of the square. The measurement should equal $156.45" \pm .25"$. Any deviation can be corrected by adjusting the length of the telescopic side stay by means of its adjustable lower end fitting.
- 2.3.1.5 Check, and adjust if necessary, the length of the telescopic tie rod. This should be $41.47" \pm .25"$, to maintain the bogie beam in its correct position for landing and stowage in the wheel well.

2.3.2 Main Gear Shortening Mechanism

- 2.3.2.1 Jack the aircraft up with the landing gear clear of the ground.
- 2.3.2.2 Disconnect the door jack from the door and secure it so that it cannot damage the aircraft structure on extension.
- 2.3.2.3 Slowly retract the leg and ensure that it is fully shortened before the wheels enter the wheel well.
- 2.3.2.4 Wrap a length of adhesive tape around the leg main fitting, level with the upper end of the torque fitting.
- 2.3.2.5 Fully extend the leg, and check the distance from the lower edge of the tape to the upper end of the torque fitting. This dimension should be $8.50" \pm 1/16"$.
- 2.3.2.6 If the dimension is incorrect, it can be adjusted by means of the turnbuckle connecting the two barrel nuts at the upper end of the leg.
- 2.3.2.7 To tension the shortening chain, turn the adjusting stem of the spring tensioner clockwise until all slop is removed from the chain, and then a further 180° .

NOTE

Slop in the chain can be detected by the ready separation of the stem from the spherical seating.

2.3.3 Main Gear Jack

- 2.3.3.1 Prior to installation, check the retracted and extended length of the jack between attachment pin centres. Correct lengths are:- retracted = $12.81"$ extended = $19.60"$.



- 2.3.3.2 To adjust the rod length, hold the jack rod with the special jack length adjustment tool and screw the fork end in or out as required.
- 2.3.3.3 When the jack is installed to these settings, the piston should not bottom at either end of its travel. To prevent a bottoming condition, the jack length may be adjusted $\pm 1/16$ " from the figures given.

2.3.4 Main Gear Uplock

- 2.3.4.1 With the landing gear extended, check the clearance between the up-lock release jack and the up-lock latch spring-loaded rod through the 3/8" hole provided in the up-lock casing.
- 2.3.4.2 Check that the main wheel tires are inflated to 255 psi.
- 2.3.4.3 Retract the landing gear slowly and check the position of the up-lock roller in the latch when fully retracted. The up-lock latch hook and the cam lever should be centrally positioned on the up-lock roller. This position may be adjusted by fitting packings, up to a maximum of .120", behind the up-lock casing.
- 2.3.4.4 With the weight of the gear on the hook and zero pressure in the main jack "UP" line check the clearance between the gear and the aircraft structure at all points. Clearances can be adjusted by means of the up-lock roller eccentric bolts. To adjust, loosen the nuts on the four recessed head bolts and turn all four bolts simultaneously to move the leg relative to the airframe structure. The rubber bumpers in the wheel well should just contact the tires. This contact may be adjusted by shimming with the special packings which are provided.

2.3.5 Main Gear Door and Door Jack

NOTE

The jack is supplied already fitted to its mounting bracket.

- 2.3.5.1 With the jack fully extended, adjust the distance between pin centres to 26.25", by means of the adjustable fork end. To adjust the jack length, remove the circlip, fit a strap wrench to the rod and unscrew the rod from the fork end.



- 2.3.5.2 Wrap a piece of adhesive tape around the jack rod to indicate the fully retracted position.
- 2.3.5.3 Check the clearance between the jaws of the jack pick-up fitting on the door end and the inner race of the jack eye-end bearing.
- 2.3.5.4 Fit the jack to the door fitting, using shims to take up the clearance found in Para 2.3.5.3.
- 2.3.5.5 Slowly retract the door. Check the alignment of the door and fuselage skins.
- 2.3.5.6 Adjust the jack rod length until the door is fitting flush with the wing skin.
- 2.3.5.7 Check that the door bumpers contact the tires, or that not more than .125" gap exists.
- 2.3.5.8 Check that there is at least 0.12" over-travel on the jack.

This measurement is taken from the adhesive tape to end of the jack body.

- 2.3.5.9 Check the engagement of the door up-lock pins in their latches. This can be checked by putting plasticene inside the hook and noticing the marking obtained. If necessary, adjust these pins by means of their serrated plates which give an up or down adjustment of 0.050" per serration.

2.3.6 Main Gear Pivot Door

To install the pivot door proceed as follows:

- 2.3.6.1 Bolt the two curved arms to the door with the nuts tightened only sufficiently to hold the arms in place.
- 2.3.6.2 Assemble the two main links to the door.
- 2.3.6.3 Bolt the adjustable links and outer links to the main links.
- 2.3.6.4 Attach the main hinge arm and stabilizer arm to the structure.
- 2.3.6.5 Assemble the curved links to the two mounting brackets. With the nut lightly nipped on the shoulder bolts, adjust the laminated washers to maintain a gap of 0.008" - 0.016" between the washers and the mounting bracket.



- 2.3.6.6 Extend the adjustable links to their full extend and connect the links to the trunnion lever arm.
- 2.3.6.7 Slowly retract the leg and check for door fit.
- 2.3.6.8 To bring the inner edge of the door flush with the wing skin, shorten the two adjustable rods. To eliminate any improper sealing of the door, slacken the bolts securing the two curved arms to the door. Reposition the four bolts in the over-size holes by means of the serrated grips, so that the door fits flush all round.

2.3.7 Main Gear Fairing

- 2.3.7.1 With the aircraft on jacks, attach the fairing to the leg by means of the nine spring loaded housings. The two cam-operated housings are fitted at the two lowest attachment points.
- 2.3.7.2 Measure and record the dimensions from the inside skin of the fairing to the leg at the upper and lower end of the fairing.
- 2.3.7.3 Disconnect the main door jack from the door to allow access to the fairing spring housings when the landing gear is retracted. Secure the jack so that it cannot damage any part of the aircraft structure during extension.
- 2.3.7.4 Disconnect the pivot door at the pivot shaft pick-up.
- 2.3.7.5 Retract the landing gear and check for full disengagement of the locking cams on the two lower housings when the gear is retracted.
- 2.3.7.6 Measure the dimension from each end of the fairing to the leg in the retracted position. This should be 0.25" more than in the free-in-air condition.
- 2.3.7.7 Adjust the extension of the eye ends if necessary by screwing them in or out of the rods.
- 2.3.7.8 Check the two lower housings for correct locking of the cam mechanism when released from the ~~striker~~ pin during the retraction cycle.
- 2.3.7.9 Lower the landing gear.
- 2.3.7.10 Reconnect the main gear door and the pivot door.
- 2.3.7.11 Retract the landing gear.



2.3.7.12 Check the alignment of the door and fairing skins with the wing skin for flush fitting.

2.3.8 Main Gear Up-Lock Sequence Valve

Pending

2.3.9 Main Gear Door Sequence Valve

Pending

2.4 Recuperator and Shock Absorber Servicing

2.4.1 Checking Oil Content and Nitrogen Pressure

The following extracts are taken from the instruction plate prepared by Dowty Equipment of Canada Limited.

2.4.1.1 Whenever the landing gear is unloaded, the recuperator automatically compensates for the effects of temperature change upon the liquid spring. Re-charging is required only after leakage or dismantling.

NOTE

The Oil content indicator is at the nitrogen end of the compensator and the Nitrogen pressure indicator is at the oil end.

2.4.1.2 To Check the Oil Content :- Compare the temperature reading at the indicator with the ambient air temperature. Adjust the oil content to correct any discrepancy greater than 20°F.

2.4.1.3 To Check the Nitrogen Pressure:- The system is based on a nominal pressure of 1500 p.s.i. A minimum nitrogen pressure, essential for satisfactory stowage of the gear, is indicated by the extremity of the cranked pointer resting on the cylinder. This should be checked before each flight.

For accurate setting of the nitrogen pressure, which should also follow any adjustment of the oil content, allowance must be made for ambient temperature.

2.4.2 Initial Oil and Nitrogen Charging

NOTE

The shock absorber will be supplied already charged with DOWCAN 200 fluid, the fluid specified by the makers. The



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procedure for installation of the shock absorber in the leg is outlined in M.D.R. 92-4.

- 2.4.2.1 Before connecting the landing gear scissors, jack the aircraft high enough to support its weight on the jacks, at the same time leaving the shock absorber partially compressed ($1\frac{3}{4}$ " minimum compression). In this way the conical valve, which connects the shock absorber and the recuperator, is kept closed.
- 2.4.2.2 Charge the nitrogen section of the recuperator to approximately 100 p.s.i.
- 2.4.2.3 Slacken the bleed screw in the recuperator valve housing. Charge the fluid section until bubble-free fluid is flowing from the bleed valve. Tighten the bleed screw.
- 2.4.2.4 Continue fluid charging until the fluid content indicator reading coincides with the ambient temperature.
- 2.4.2.5 Charge the nitrogen section of the recuperator to 1500 p.s.i.
- 2.4.2.6 Jack the landing gear clear of the ground so that the recuperator and shock absorber are connected by the control valve, which opens during the last $1\frac{3}{4}$ " of leg extension.
- 2.4.2.7 Check the oil content indicator and re-charge if necessary.

2.5 Wheel and Brake Servicing

Pending

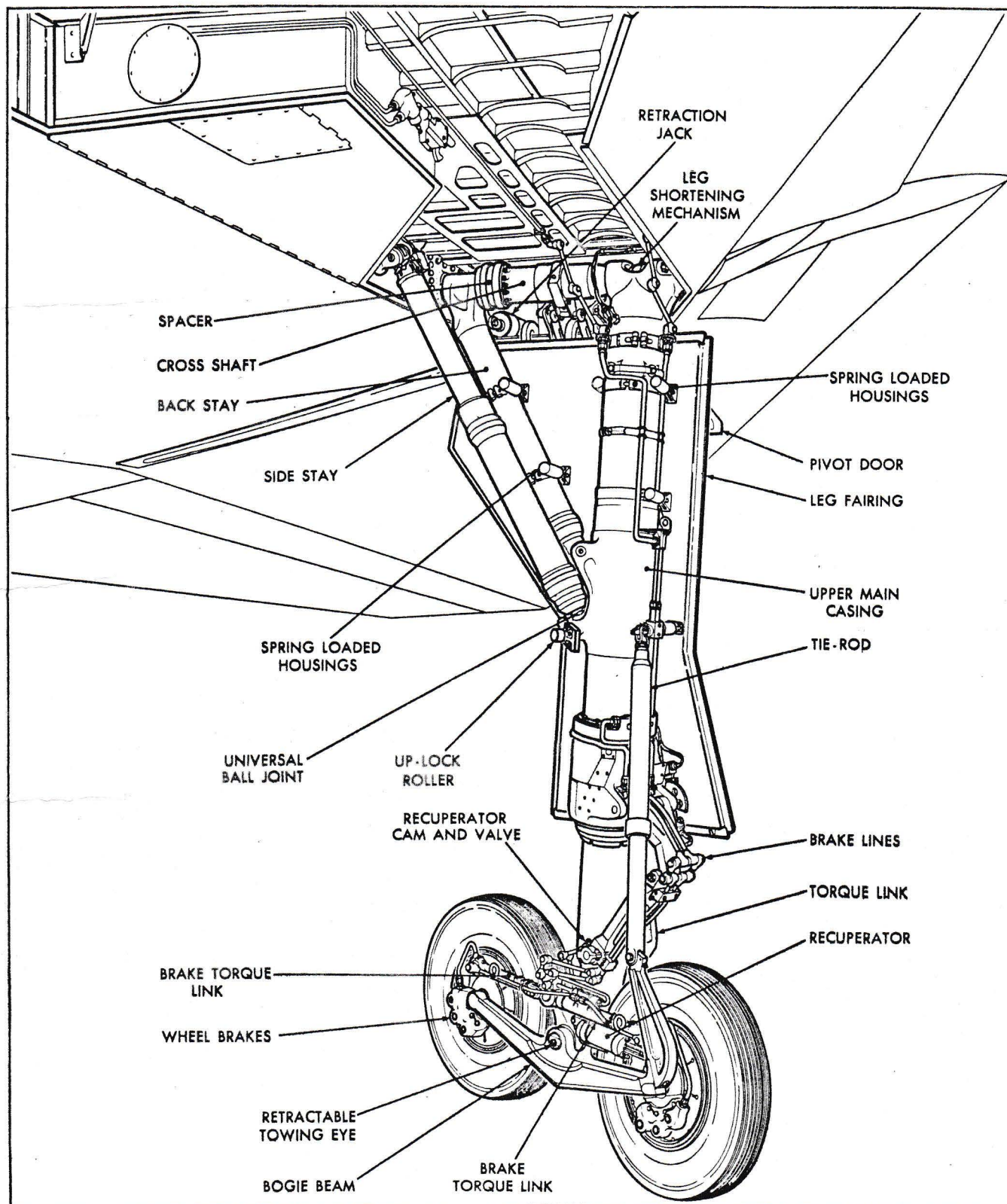


FIGURE I

MAIN LANDING GEAR

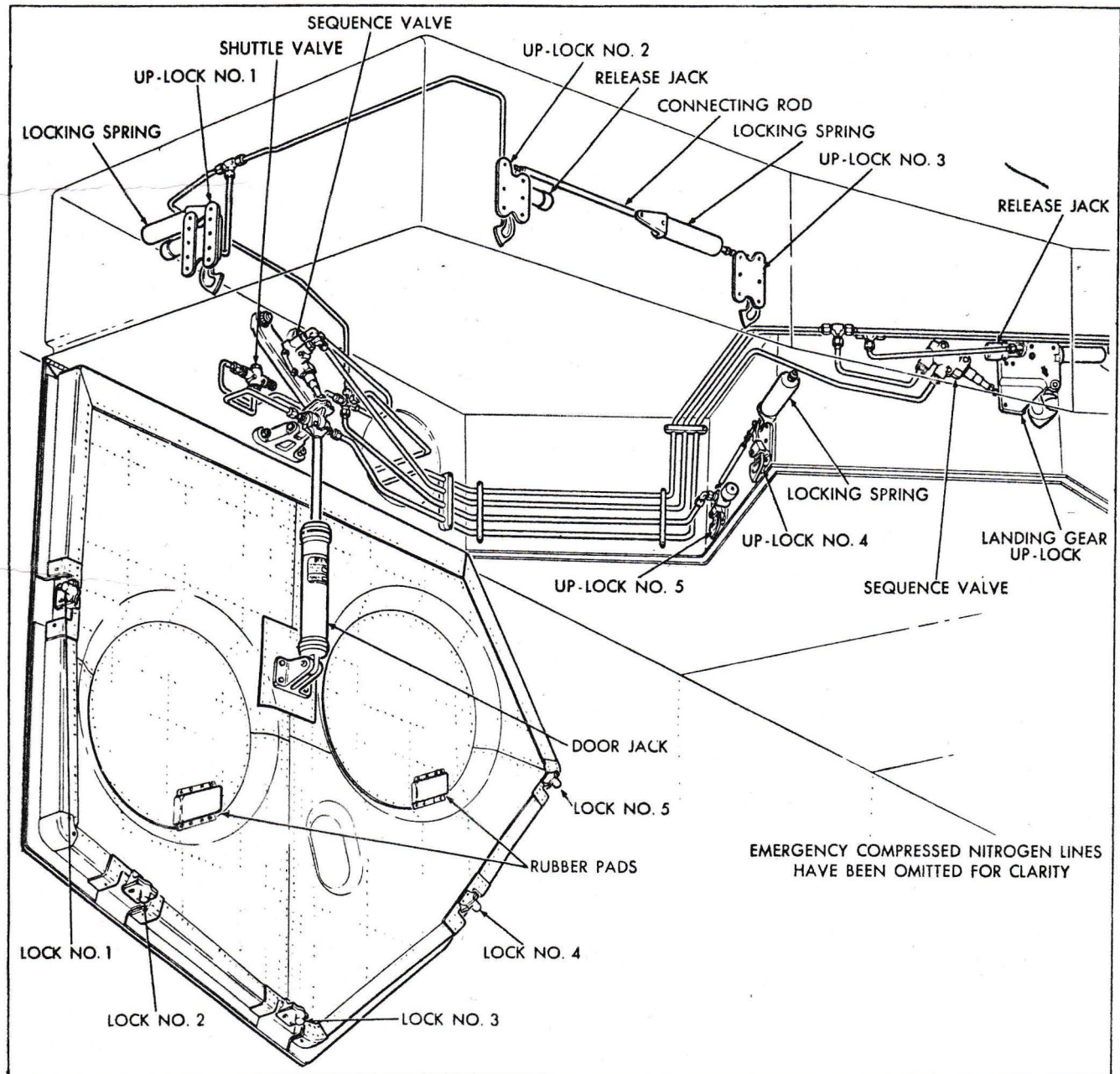


FIGURE 2
MAIN LANDING GEAR DOOR

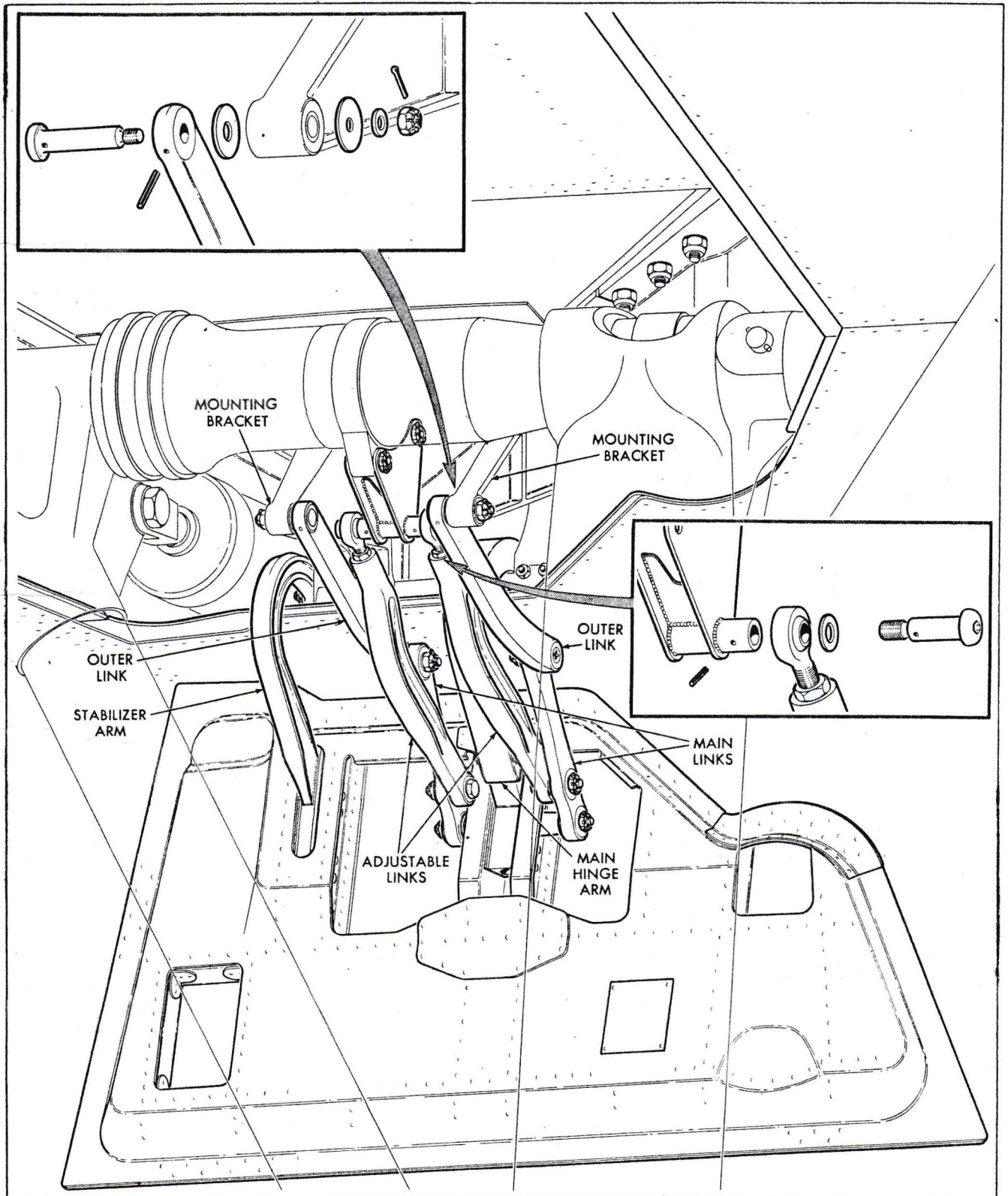


FIGURE 3

MAIN LANDING GEAR PIVOT DOOR

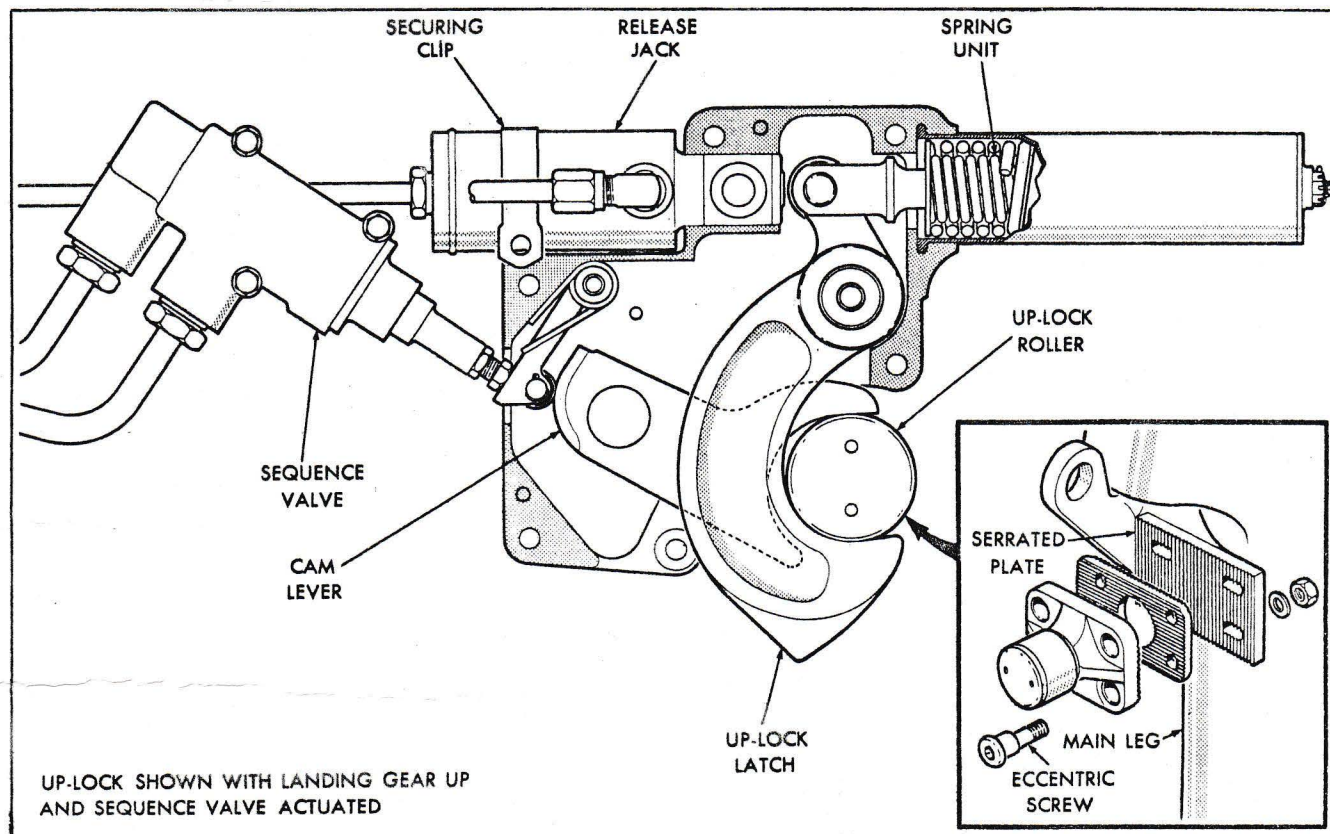


FIGURE 4
MAIN LANDING GEAR UP-LOCK

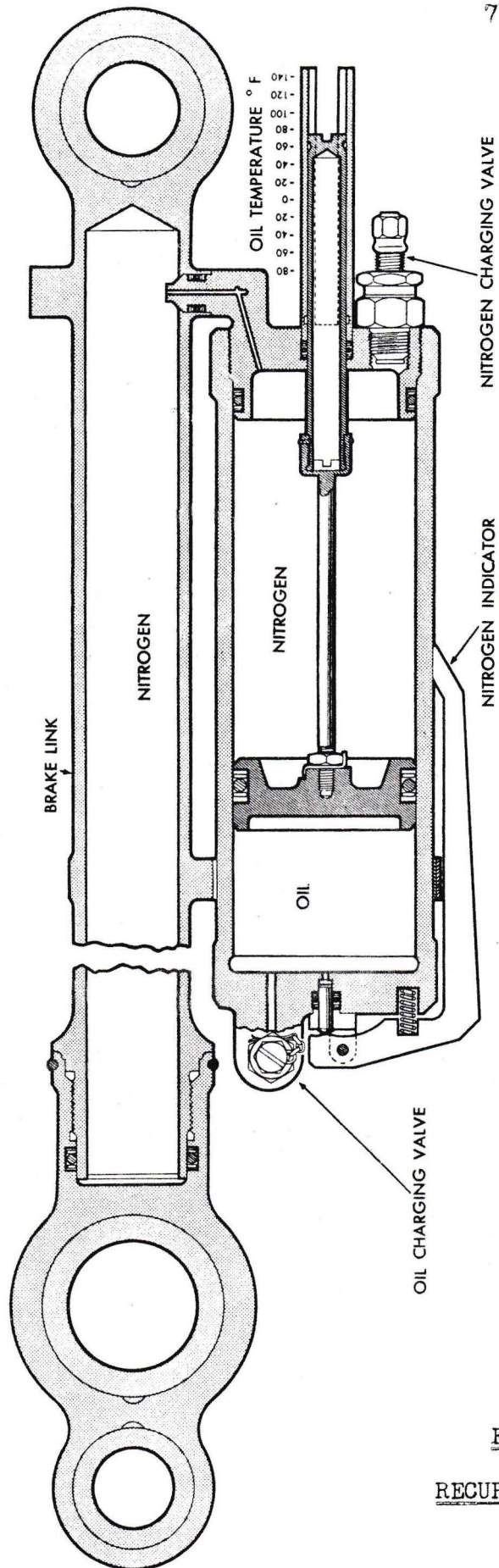


FIGURE 5
RECUPERATOR ASSY



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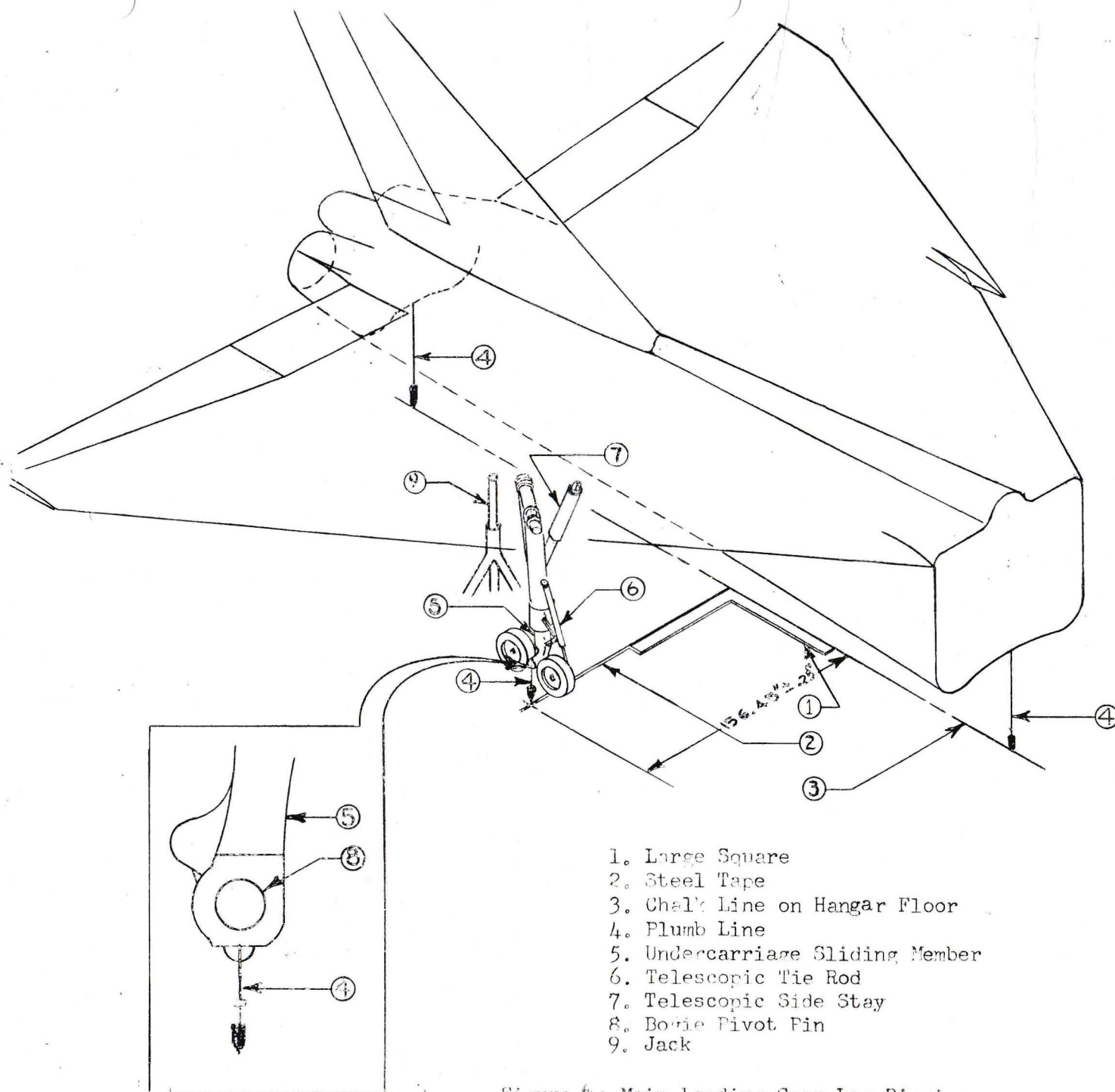


Figure 6: Main Landing Gear Leg Rigging

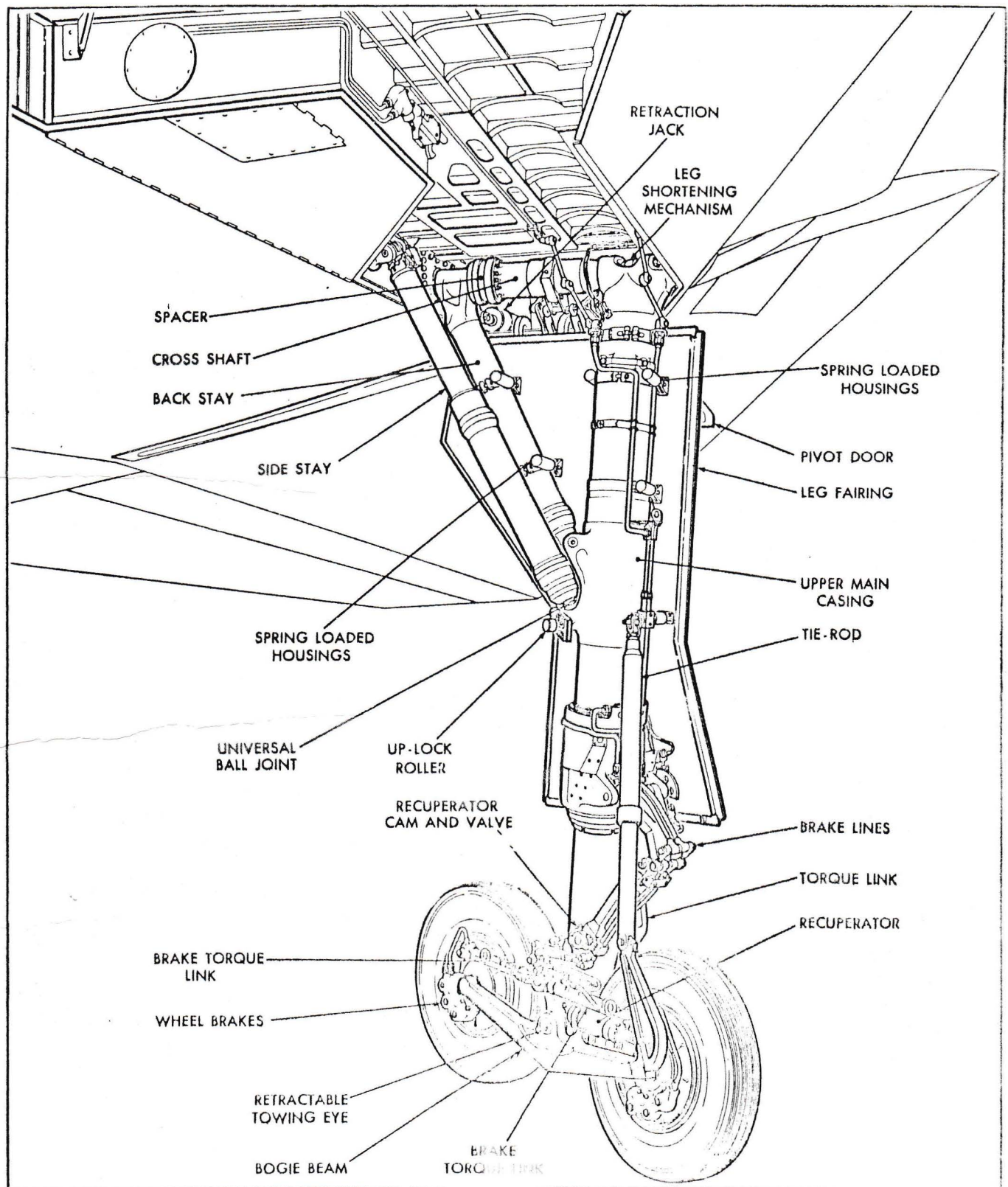


FIGURE I

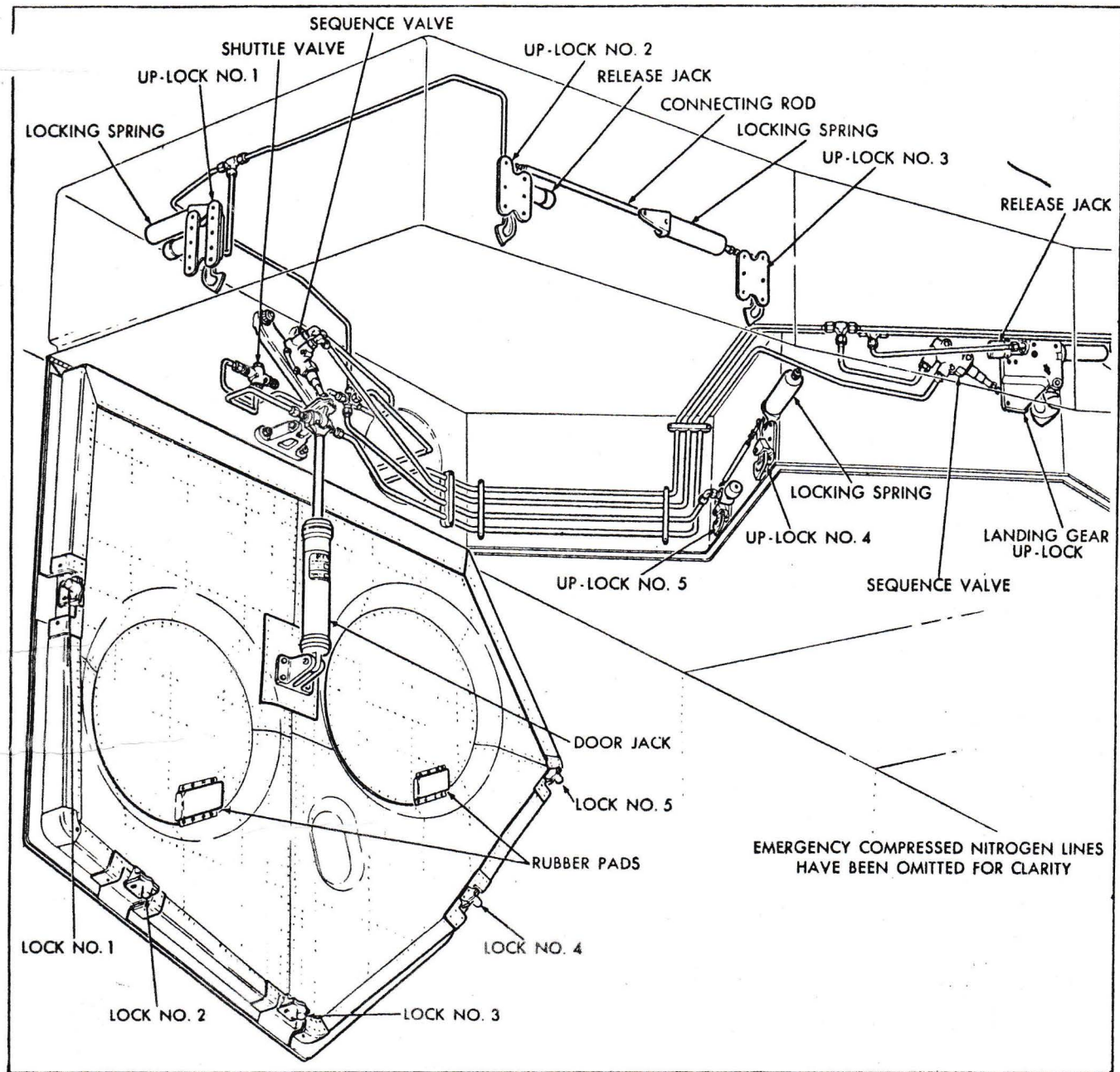
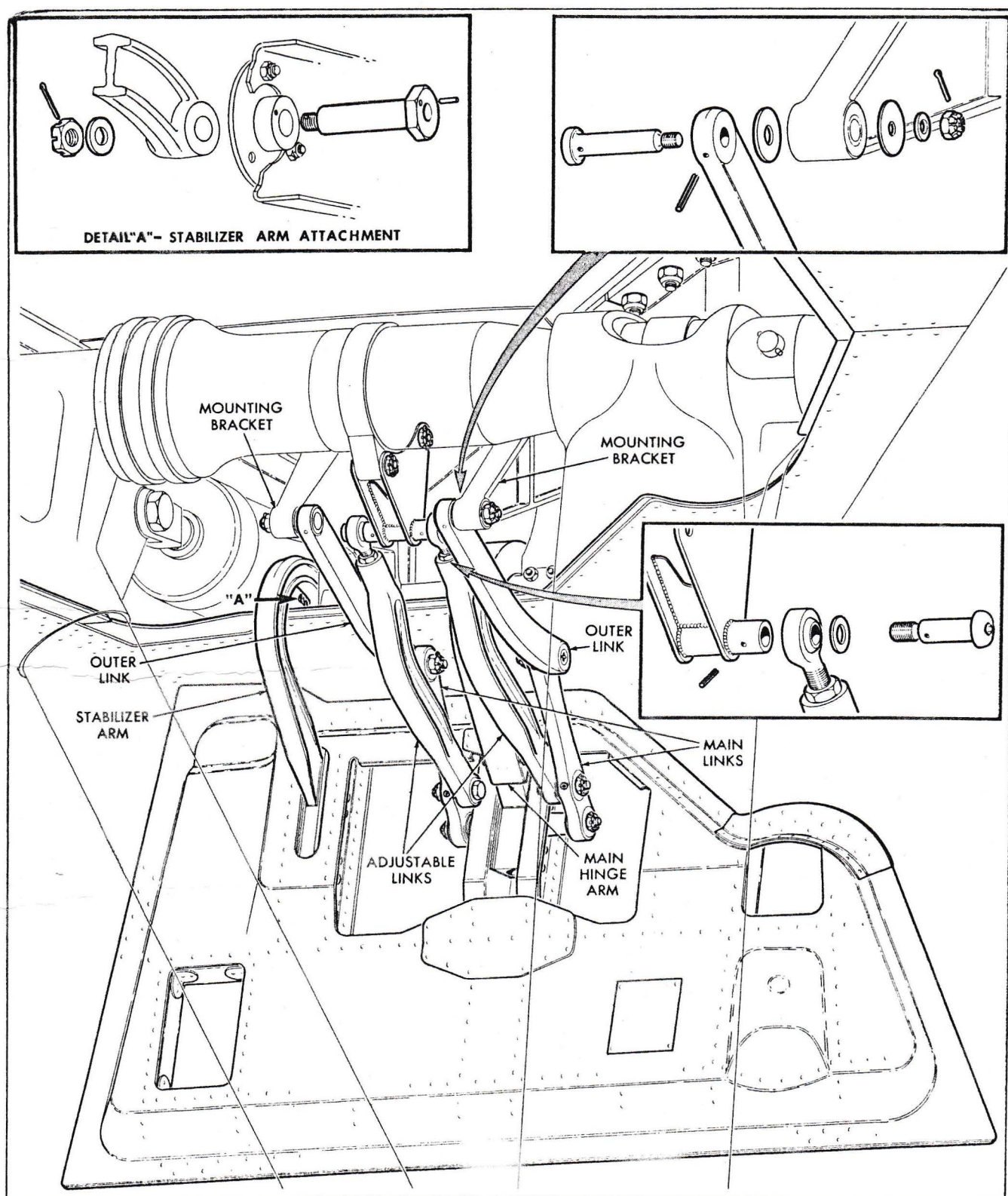


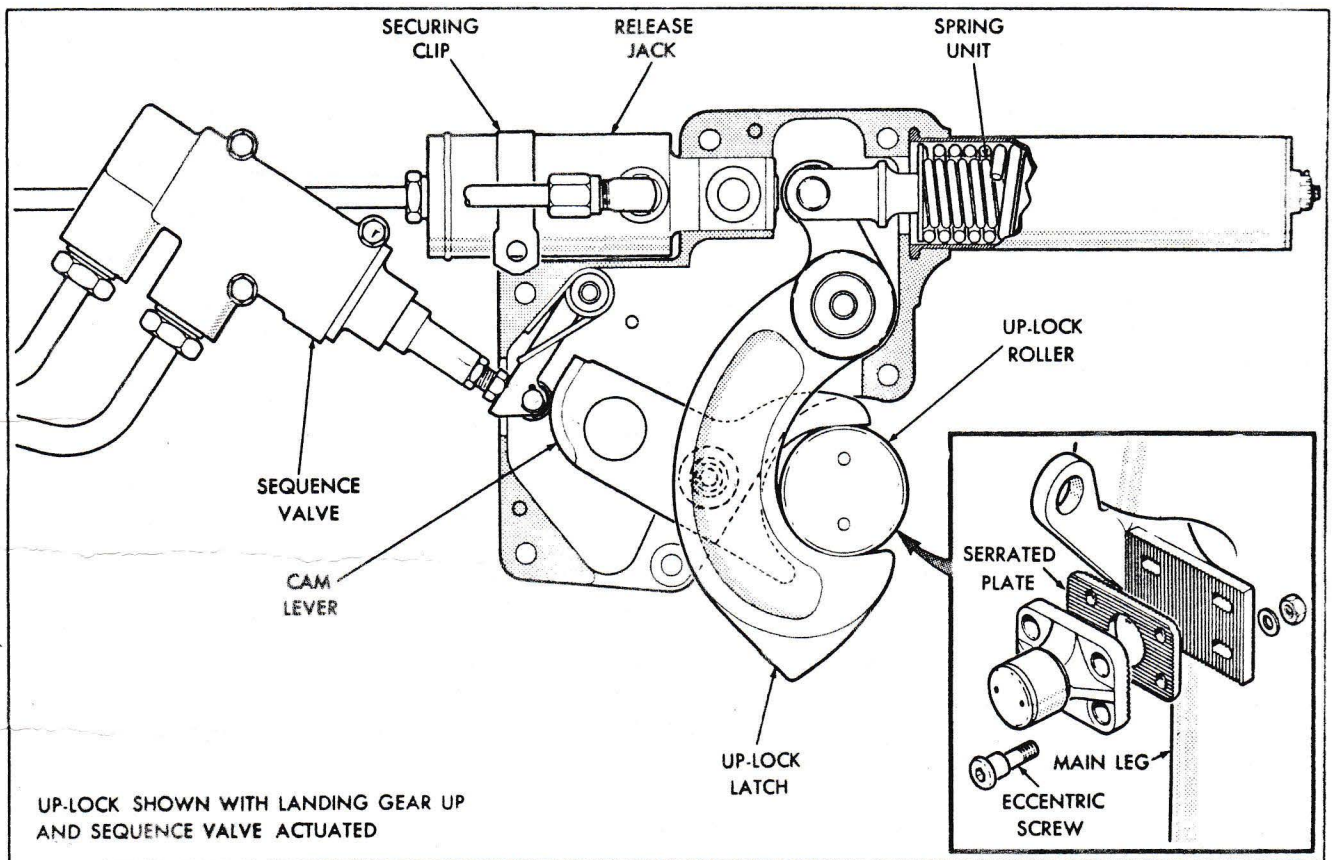
FIGURE 2
MAIN LANDING GEAR DOOR



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MAIN LANDING GEAR PIVOT DOOR

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MAIN LANDING GEAR UP-LOCK

FIGURE 4

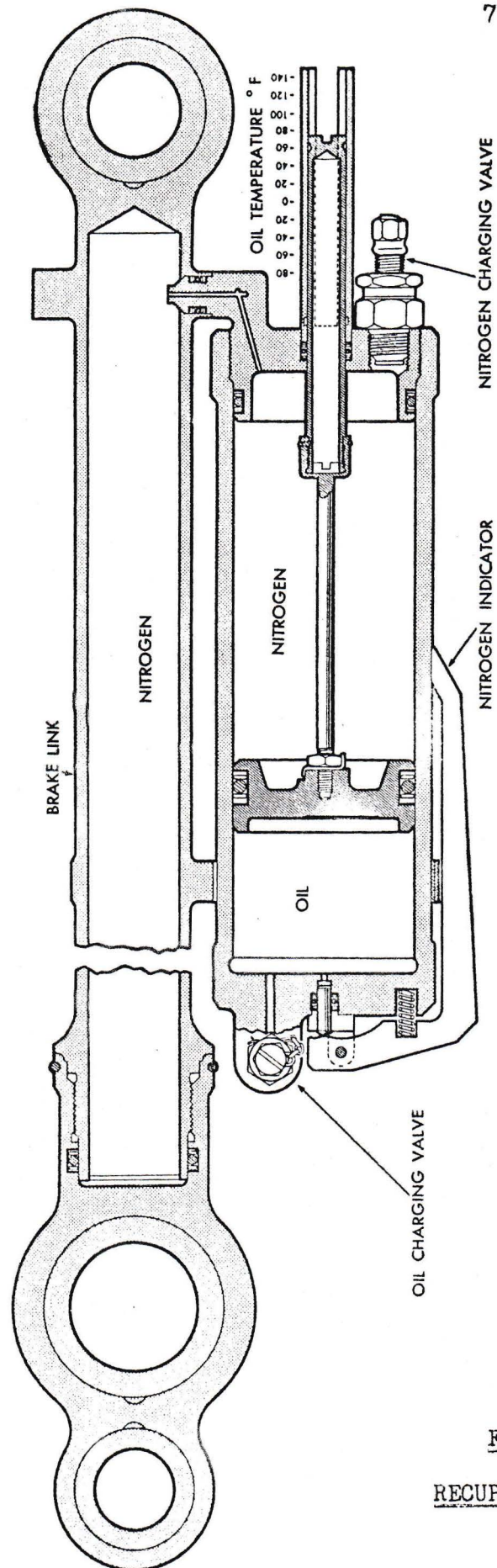


FIGURE 5
RECUPERATOR ASSY



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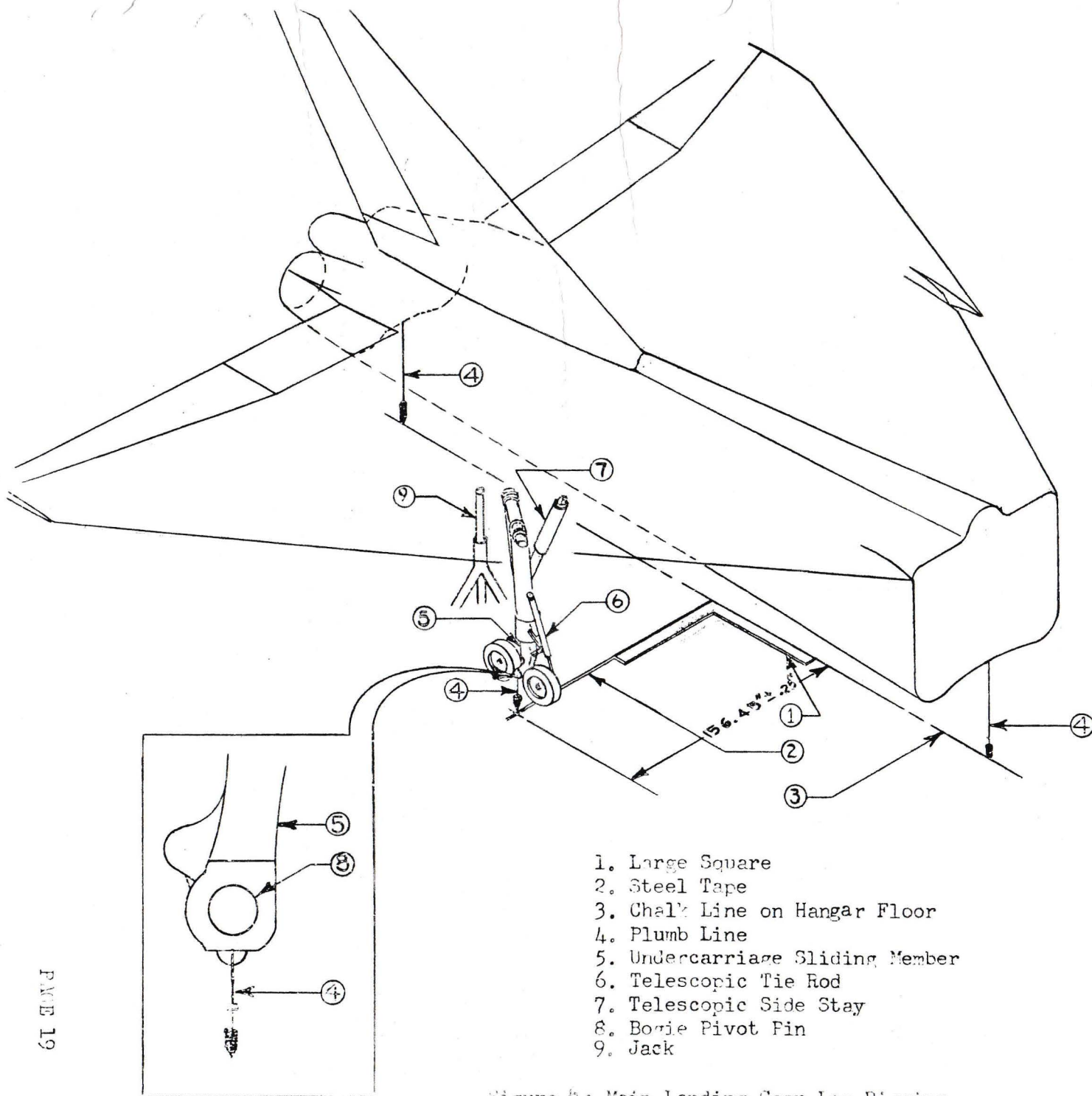
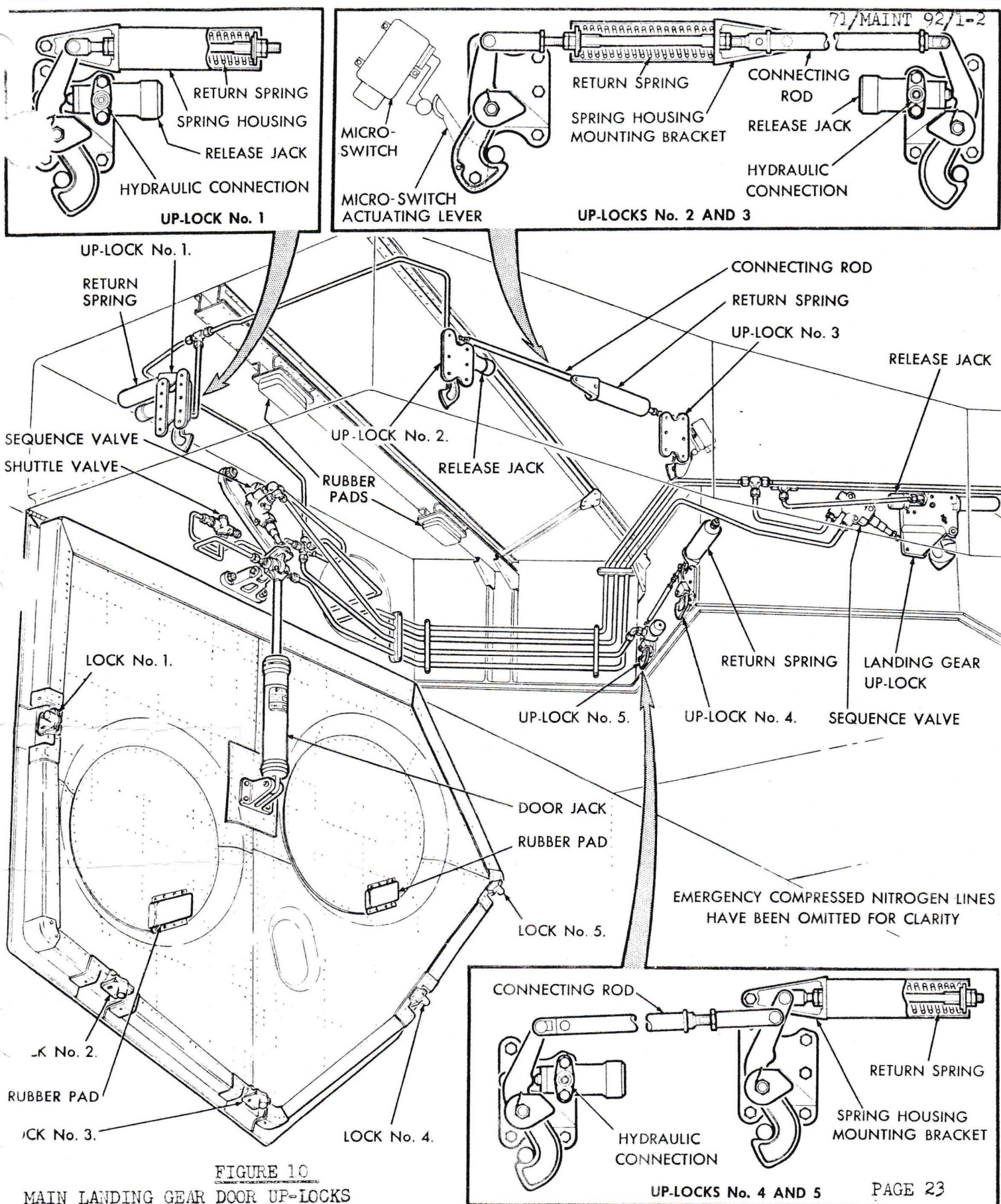


Figure 5: Main Landing Gear Leg Rigging



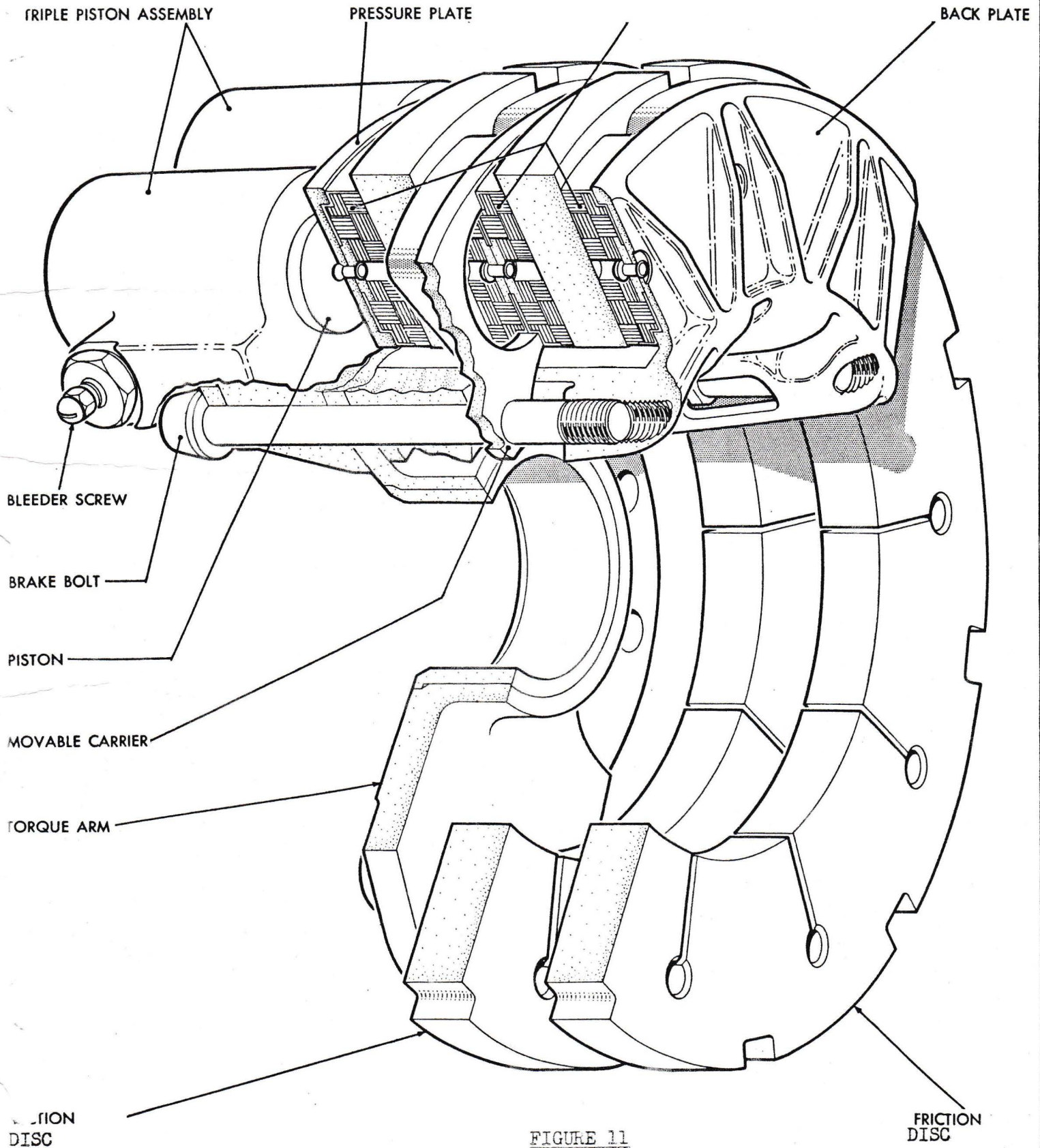


FIGURE 11
WHEEL BRAKES

MAINTENANCE DATA RECORD				SYSTEM	REF. NO.
AVRO AIRCRAFT LTD.		Engineering Div.		HYDRAULICS - UTILITY	19-8
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow I EFF. A/C - 25201		COMPONENT Main Gear Jack	
MANUFACTURER'S PART NO. P-199 MANUFACTURER'S NAME Jarry Hydraulics AVROCAN SPEC. E-367 E.O. NO. ENVELOPE SIZE 15" x 6" x 5" WEIGHT 15.77 LB. LOCATION Inner wing, main wheel wells FUNCTION To extend and retract main landing gear.				AVRO PART NO. 7-1962-17 L.H. 7-1962-18-R.H.	
				REF. DWGS. 7-1962-1	
				REF. M.D.R.	
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending	
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES	
				EST.	ACTUAL
Primary		Visual		1 x 1	
25 Hrs.		Check for security, damage, cracks, corrosion and leaks.		1 x 2	
50 Hrs.		Carry out functional check as per Maintenance Instruction Report 71/MAINT 19/4		1 x 5	
ACCESSIBILITY					
Through access panel in inner wing bottom skin - 22 screws Remove and replace				1 x 10	
and with pivot door removed - 6 hinge bolts. Remove and replace				2 x 15	
ISSUE	1	2	3	4	5
DATE	June 29/55	Nov 14/55	Mar 19/56	Jan 14/57	Aug 29/57
COMPILED	F. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland
CHECKED	G. Emmerson	G. Emmerson	G. Emmerson	Sgt Foster	Sgt Foster
APPROVED				R.F. Reid	R.F. Reid

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS = UTILITY		REF. NO. 19-14	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Uplock Release Jack			
MANUFACTURER'S PART NO. XP 3030 MANUFACTURER'S NAME Dowty AVROCAN SPEC. E 305 E.O. NO. ENVELOPE SIZE 5" x 3" x 3" WEIGHT 7 (est) LB. LOCATION Main wheel wells. FUNCTION To release uplock prior to extending main undercarriage. NOTE: This unit to be replaced by re-designed part # 7-1962-15023 when the latter part is qualified.				AVRO PART NO. 7-1962-11			
				REF. DWGS. 7-1062-3921, 2 (Up-Lock)			
				REF. M.D.R. 62-20			
				RELIABILITY OVERHAUL LIFE HRS. WASTAGE 100 Q.T.R. 7-1962-11			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x 1/2		
25 Hrs.		Check for security, damage, cracks, corrosion and leaks			1 x 2		
50 Hrs.		Carry out functional check as per Maintenance Instruction Report 71/MAINT 19/4			1 x 5		
100 Hrs.		Carry out functional check on emergency extension.			1 x 5		
ACCESSIBILITY							
Unobstructed in main wheel well.							
ISSUE	1	2	3	4	5		
DATE	30 Sept. 55	14 Nov. 55	26 June 56	Jan 14/57	Aug 29/57		
COMPILED	E. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster		
APPROVED	G. Emmerson	G. Emmerson	G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS - UTILITY		REF. NO. 19-15	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Door Uplock Release Jack			
MANUFACTURER'S PART NO. XQ 3018-3 MANUFACTURER'S NAME Dowty AVROCAN SPEC. E304 E.O. NO. ENVELOPE SIZE 5" x 2" x 2" WEIGHT .55 LB. LOCATION Main wheel wells. FUNCTION To release main door locks for gear extension Note: This unit to be replaced by re-designed part # 7-1962-15025 when the latch part is qualified.				AVRO PART NO. 7-1962-12 REF. DWGS. 7-1062-3611,2 (Door Uplock) REF. M.D.R. RELIABILITY OVERHAUL LIFE HRS. WASTAGE 100 : Q.T.R. 7-1962-12			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN x MINUTES			
				EST.		ACTUAL	
Primary		Visual		1 x 1/4			
25 Hrs.		Check for security, damage, cracks, corrosion and leaks		1 x 2			
50 Hrs.		Carry out functional check as per Maintenance Instruction Report 71/MAINT 19/4		1 x 5			
100 Hrs.		Carry out functional check on emergency extension.		1 x 5			
ACCESSIBILITY							
Unobstructed - in main wheel well							
ISSUE	1	2	3	4	5		
DATE	30 Sept. 55	14 Nov. 55	26 June 56	Jan 14/57	Aug 29/57		
COMPILED	F. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	G. Emmerson	W01 Rossell	Sgt Foster	Sgt Foster		
APPROVED	G. Emmerson	G. Emmerson	G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-29	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Sequence Valve			
MANUFACTURER'S PART NO. 51292 MANUFACTURER'S NAME ADEL AVROCAN SPEC. E308 E.O. NO. ENVELOPE SIZE 7" x 2½" x 2½" WEIGHT 1.3(est) LB. LOCATION Main wheel well FUNCTION To time door operation with leg operation				AVRO PART NO. 7-1900-11 REF. DWGS. 7-1962-3,6 REF. M.D.R. 19-3 RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Adel Report #VC-10			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x ½		
25 Hrs.		Check for security, damage, cracks, corrosion and leaks.			1 x 1		
50 Hrs.		Carry out functional check as per Maintenance Instruction Report 71/MAINT 19/4			1 x 5		
ACCESSIBILITY							
Unobstructed, in main wheel well							
ISSUE	1	2	3	4	5		
DATE	4 Nov. 55	14 Nov. 55	25 June 56	14 May 57	Aug 29/57		
COMPILED	E. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland		
CHECKED	C. Beanland	C. Beanland	Wol Rossell	Sgt Foster	Sgt Foster		
APPROVED	G. Emmerson	G. Emmerson	G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS = UTILITY		REF. NO. 19-32	
AVRO AIRCRAFT LTD.				Engineering Div.			
DISTRIBUTION: STANDARD + D. Royston			A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Jack = Main Gear Door		
MANUFACTURER'S PART NO. XT 3086 MANUFACTURER'S NAME Dowty Equipment Canada AVROCAN SPEC. E-320 E.O. NO. ENVELOPE SIZE 17" x 3" Dia. WEIGHT 12 est. LB. LOCATION Main wheel well Sta. 515 FUNCTION To operate main landing gear doors.					AVRO PART NO. 7-1962-23		
					REF. DWGS. 7-1962-3 7-1962-6		
					REF. M.D.R.		
					<div style="text-align: center;">RELIABILITY</div> OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending		
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x ½		
25 Hrs.		Check for security, damage, cracks, corrosion and leaks.			1 x 2		
50 Hrs.		Carry out functional check as per Maintenance Instruction Report 71/MAINT 19/4			1 x 5		
100 Hrs.		Carry out functional check on emergency extension.			1 x 5		
ACCESSIBILITY							
Unobstructed, in main wheel well.							
ISSUE	1	6					
DATE	October 28/55	Aug 29/57					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	C. Beanland					
APPROVED		R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS - UTILITY		REF. NO. 19-41	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Brake Unit			
MANUFACTURER'S PART NO. PD 732 MANUFACTURER'S NAME Goodyear AVROCAN SPEC. E228 E.O. NO. ENVELOPE SIZE 13" x 9" x 5" WEIGHT 62.9 LB. LOCATION On main landing gear leg. FUNCTION To reduce aircraft speed on the ground				AVRO PART NO. 7-1092-15 REF. DWGS. 7-1092-1,2 REF. M.D.R. 92-5 RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Liners 50 hrs. Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES			
				EST.		ACTUAL	
Primary		Check brakes for leaks, overheating and wear.		1 x 2			
25 Hrs.		As above.		1 x 2			
50 Hrs.		Check brake operation including anti-skid, anti-spin and emergency systems.		1 x 15			
ACCESSIBILITY							
Unobstructed, when wheels are removed.							
ISSUE	1	2	3				
DATE	April 19/56	January 22/57	Aug 30/57				
COMPILED	C. Beanland	C. Beanland	C. Beanland				
CHECKED	G. Emmerson	Wol Rossell	Sgt Foster				
APPROVED		R.F. Reid	R.F. Reid				

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - INNER WING		REF. NO. 62-4	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT Main Gear Pivot Door			
EFF. A/C - 25201							
MANUFACTURER'S PART NO. N/A				AVRO PART NO.			
MANUFACTURER'S NAME Avro Aircraft Limited				7-1062-2721, 2			
AVROCAN SPEC. Nil E.O. NO.							
ENVELOPE SIZE 32" x 22" x 7"		WEIGHT 8 LB.		REF. DWGS.			
LOCATION At main gear pivot shaft				7-1062-4401, 2 (linkages)			
FUNCTION To enclose part of wheel well.				REF. M.D.R.			
				RELIABILITY			
				OVERHAUL LIFE 1500 HRS.			
				WASTAGE			
				Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED				MEN X MINUTES	
						EST.	ACTUAL
Primary		Visual				1 x 1/2	
25 Hrs.		Check linkage for wear at joints. Check for damage, distortion, cracks, corrosion and loose rivets in skin and formers.				1 x 5	
50 Hrs.		Check fit of door and freedom from fouling.				1 x 5	
ACCESSIBILITY							
Unobstructed							
ISSUE	1	6					
DATE	Mar 18/55	Aug 30/57					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED		R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE INNER WING		REF. NO. 62-5	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Door			
MANUFACTURER'S PART NO. N/A				AVRO PART NO. 7-1062-2291, 2			
MANUFACTURER'S NAME Avro Aircraft Limited							
AVROCAN SPEC. Nil E.O. NO.							
ENVELOPE SIZE 70" x 56" x 2 1/2" WEIGHT 75 LB.				REF. DWGS. 7-1062-5, 6			
LOCATION Lower Wing - fuselage joint Sta. 485-538							
FUNCTION To enclose wheel well				REF. M.D.R.			
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN x MINUTES			
				EST.	ACTUAL		
Primary		Visual		1 x 1			
25 Hrs.		Inspect hinges and attachments, check for damage, distortion, cracks, corrosion and loose rivets.		1 x 5			
50 Hrs.		Check fit of door and freedom from fouling		1 x 5			
ACCESSIBILITY							
Unobstructed							
ISSUE	1	2	3	4	5		
DATE	Mar 18/55	Nov. 23/55	October 17/56	May 23/57	Aug 30/57		
COMPILED	E. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster		
APPROVED			G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - INNER WING		REF. NO. 62-20	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Up=Lock			
MANUFACTURER'S PART NO. N/A MANUFACTURER'S NAME Avro Aircraft Limited AVROCAN SPEC. Nil E.O. NO. ENVELOPE SIZE 12" x 8" x 2 1/2" WEIGHT 6.59 LB. LOCATION Main wheel well FUNCTION To retain main landing gear in retracted position				AVRO PART NO. 7-1062-3921, 3922 REF. DWGS. 7-1062-5, 6 7-1962-11 (up=lock release) REF. M.D.R. 19-14 RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN x MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x 1/2		
25 Hrs.		Check for security, wear and damage.			1 x 2		
50 Hrs.		Check function on retraction test			1 x 15		
ACCESSIBILITY Unobstructed							
ISSUE	1	2	3				
DATE	July 24/56	Jan 16/57	Aug 30/57				
COMPILED	C. Beanland	C. Beanland	C. Beanland				
CHECKED	Wol Rossell	Sgt Foster	Sgt Foster				
APPROVED	G. Emmerson	R.F. Reid	R.F. Reid				

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE MAIN LANDING GEAR		REF. NO. 92-1	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Landing Gear Leg			
MANUFACTURER'S PART NO. XC1283-1A/B MANUFACTURER'S NAME Dowty Equipment AVROCAN SPEC. E211 E.O. NO. ENVELOPE SIZE 106" x 36" x 12" (without wheels) WEIGHT 673 (est) LB. LOCATION Main wheel well. FUNCTION Supports weight of aircraft on the ground				AVRO PART NO. 7-1092-3,4 REF. DWGS. 7-1092-1,2 7-4492-6 (structural clearances) 7-0162-258 (Instn fwd bearing) REF. M.D.R. 92-2 to 6 19-41 RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES			
				EST.		ACTUAL	
Primary		Visual		1 x 5			
25 Hours		Check leg and attachments for security, cleanliness damage, leaks and corrosion.		1 x 15			
50 Hours		Carry out retraction check as per Maintenance Instruction Report 71/MAINT 19/4. Utility Hydraulics=Landing Gear Check all pivot pins for wear. Lubricate according to lubrication chart.		1 x 20			
100 Hrs.		Carry out emergency extension (emergency nitrogen) as per Maintenance Instruction Report 71/MAINT 19/4		1 x 20			
ACCESSIBILITY							
Unobstructed							
ISSUE	1	2	3	4	5		
DATE	Feb. 7/55	June 8/56	December 3/56	August 1/57	Sept. 24/57		
COMPILED	E. Burn	C. Beanland	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	Wol Rossell	Wol Rossell	O.J. Lemyre	Sgt Foster		
APPROVED		G. Emmerson	R.F. Reid	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-2	
AVRO AIRCRAFT LTD.				Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Leg Fairing			
MANUFACTURER'S PART NO. N/A MANUFACTURER'S NAME Avro Aircraft Limited AVROCAN SPEC. Nil E.O. NO. ENVELOPE SIZE 35" x 28" x 2" WEIGHT 45 LB. LOCATION Attached to main gear leg. FUNCTION To enclose part of wheel well when landing gear is retracted.				AVRO PART NO. 7-1062-4393,4 REF. DWGS. 7-4392-1 7-4260-7,8 7-1092-85 (springs) 7-1092-17,18 (spring housings) REF. M.D.R. RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED				MEN X MINUTES	
						EST. ACTUAL	
Primary		Visual				1 x 1/2	
25 Hrs.		Check freedom of movement of fairing on spring posts; check for damage, distortion, cracks, corrosion and loose rivets in skin.				1 x 5	
50 Hrs.		Check fit of fairing and freedom from fouling on retraction.				1 x 5	
ACCESSIBILITY							
Unobstructed							
ISSUE	1	2	3	4	5		
DATE	18 Mar. 55	23 Mar. 55	21 Sept. 56	23 May 57	Aug 30/57		
COMPILED	E. Burn	E. Burn	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster		
APPROVED			G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-3	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main U/C Telescopic Side Stay			
MANUFACTURER'S PART NO. XV 1284-1 A/B				AVRO PART NO. 7-1092-11,12			
MANUFACTURER'S NAME Dowty							
AVROCAN SPEC. E382 E.O. NO.							
ENVELOPE SIZE 66"x 6" dia.				WEIGHT 57 1/4 LB.			
LOCATION Main landing gear				REF. DWGS. 7-4292-1,2			
FUNCTION Contains main U/C downlock, and downlock release mechanism, and indicating switch.				REF. M.D.R.			
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN x MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x 1/2		
25 Hrs.		Check for internal leakage of downlock release jack. Check for leaks, security, damage, and cleanliness.			1 x 5		
50 Hrs.		Disconnect top end of stay and check for wear in external ball joint and internal downlock. Lubricate Carry out functional check.			1 x 30		
ACCESSIBILITY Unobstructed							
ISSUE	1	2	3	4			
DATE	Dec. 8/55	Sept. 14/56	Jan. 31/57	Aug 30/57			
COMPILED	E. Burn	C. Beanland	C. Beanland	C. Beanland			
CHECKED	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster			
APPROVED		G. Emmerson	R.F.Reid	R.F. Reid			

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-8	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Jack			
MANUFACTURER'S PART NO. P-199 MANUFACTURER'S NAME Jarry Hydraulics AVROCAN SPEC. E-367 E.O. NO. ENVELOPE SIZE 15" x 6" x 5" WEIGHT 15.77 LB. LOCATION Inner wing, main wheel wells. FUNCTION To extend and retract main landing gear				AVRO PART NO. 7-1962-17 L.H. 7-1962-18 R.H.			
				REF. DWGS. 7-1962-1			
				REF. M.D.R.			
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST. ACTUAL		
Primary		Visual			1 x 1		
25 Hrs.		Check for security, damage, cracks, corrosion and leaks.			1 x 2		
50 Hrs.		Carry out functional check as per Maintenance Instructions Report 71/MAINT 19/4			1 x 5		
ACCESSIBILITY							
Through access panel in inner wing bottom skin - 22 screws					1 x 10		
Remove and replace and with pivot door removed - 6 hinge bolts.					2 x 15		
Remove and replace							
ISSUE	1	6					
DATE	29 June 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED		R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-14	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Uplock Release Jack			
MANUFACTURER'S PART NO. XP 3030 MANUFACTURER'S NAME Dowty AVROCAN SPEC. E 305 E.O. NO. ENVELOPE SIZE 5" x 3" x 3" WEIGHT .7 est LB. LOCATION Main wheel wells FUNCTION To release uplock prior to extending main undercarriage. NOTE: This unit to be replaced by re-designed part #7-1962-15023 when the latter part is qualified.				AVRO PART NO. 7-1962-11			
				REF. DWGS. 7-1062-3921,2 (Up=Lock)			
				REF. M.D.R. 62-20			
				RELIABILITY			
				OVERHAUL LIFE		HRS.	
				WASTAGE 100			
				Q.T.R. 7-1962-11			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES			
				EST.	ACTUAL		
Primary		Visual		1 x 1/2			
25 Hrs.		Check for security, damage, cracks, corrosion and leaks		1 x 2			
50 Hrs.		Carry out function check as per Maintenance Instructions Report 71/MAINT 19/4.		1 x 5			
100 Hrs.		Carry out functional check on emergency extension.		1 x 5			
ACCESSIBILITY							
Unobstructed							
ISSUE	1	6					
DATE	30 Sept. 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED	G. Emmerson	R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-15	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston			A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Door Uplock Release Jack		
MANUFACTURER'S PART NO. XQ 3018-3 MANUFACTURER'S NAME Dowty AVROCAN SPEC. E304 E.O. NO. ENVELOPE SIZE 5" x 2" x 2" WEIGHT .55 LB. LOCATION Main wheel wells FUNCTION To release main door locks for gear extension <u>NOTE:</u> This unit to be replaced by re-designed part #7-1962-15025 when the latter part is qualified.				AVRO PART NO. 7-1962-12			
				REF. DWGS. 7-1062-3611,2 (Door Uplock)			
				REF. M.D.R.			
				RELIABILITY			
				OVERHAUL LIFE HRS.			
				WASTAGE 100			
				O.T.R. 7-1962-12			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN x MINUTES			
				EST.	ACTUAL		
Primary		Visual		1 x 1/4			
25 Hrs.		Check for security, damage, cracks, corrosion and leaks		1 x 2			
50 Hrs.		Carry out functional check as Per Maintenance Instruction Reports 71/MAINT 19/4.		1 x 5			
100 Hrs.		Carry out functional check on emergency extension.		1 x 5			
ACCESSIBILITY							
Unobstructed - in main wheel well.							
ISSUE	1	6					
DATE	30 Sept. 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED	G. Emmerson	R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-29	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Sequence Valve			
MANUFACTURER'S PART NO. 51292 MANUFACTURER'S NAME Adel AVROCAN SPEC. E-308 E.O. NO. ENVELOPE SIZE 7" x 2 1/2" x 2 1/2" WEIGHT 1.3 (est) LB. LOCATION Main wheel well FUNCTION To time door operation with leg operation				AVRO PART NO. 7-1900-11 REF. DWGS. 7-1962-3,6 REF. M.D.R. 19-3 RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Adel Report #VC-10			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN x MINUTES			
				EST.		ACTUAL	
Primary		Visual		1 x 1/2			
25 Hrs.		Check for security, damage, cracks, corrosion and leaks		1 x 1			
50 Hrs.		Carry out functional check as per Maintenance Instructions Report 71/MAINT 19/4.		1 x 5			
ACCESSIBILITY							
Unobstructed, in main wheel well.							
ISSUE	1	6					
DATE	4 Nov. 55	28 May 1958					
COMPILED	E. Burn	C. Beanland					
CHECKED	C. Beanland	Sgt Foster					
APPROVED	R.F. Reid	R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM HYDRAULICS-UTILITY		REF. NO. 19-32	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD + D. Royston		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Jack - Main Gear Door			
MANUFACTURER'S PART NO. XT 3086 MANUFACTURER'S NAME Dowty Equipment Canada AVROCAN SPEC. E320 E.O. NO. ENVELOPE SIZE 17" x 3" Dia. WEIGHT 12 est LB. LOCATION Main wheel well Sta. 515 FUNCTION To operate main landing gear doors.				AVRO PART NO. 7-1962-23			
				REF. DWGS. 7-1962-3 7-1962-6			
				REF. M.D.R.			
				RELIABILITY			
				OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED				MEN X MINUTES	
						EST.	ACTUAL
Primary		Visual				1 x 1/2	
25 Hrs.		Check for security, damage, cracks, corrosion and leaks				1 x 2	
50 Hrs.		Carry out functional check as per Maintenance Instructions Report 71/MAINT 19/4.				1 x 5	
100 Hrs.		Carry out functional check on emergency extension.				1 x 5	
ACCESSIBILITY							
Unobstructed							
ISSUE	1	6	7				
DATE	Oct. 28/55	29 Aug. 57	28 May 1958				
COMPILED	E. Burn	C. Beanland	C. Beanland				
CHECKED	G. Emmerson	C. Beanland	Sgt Foster				
APPROVED		R.F. Reid	R.F. Reid				

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - INNER WING		REF. NO. 62-4	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Pivot Door			
MANUFACTURER'S PART NO. N/A				AVRO PART NO.			
MANUFACTURER'S NAME Avro Aircraft Limited				7-1062-2721,2			
AVROCAN SPEC. Nil E.O. NO.				REF. DWGS.			
ENVELOPE SIZE 32" x 22" x 7"		WEIGHT 8 LB.		7-1062-4401,2 (Linkages)			
LOCATION At main gear pivot shaft				REF. M.D.R.			
FUNCTION To enclose part of wheel well				RELIABILITY			
				OVERHAUL LIFE 1500 HRS.			
				WASTAGE			
				Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.		ACTUAL
Primary		Visual			1 x 1/2		
25 Hrs.		Check linkage for wear at joints. Check for damage, distortion, cracks, corrosion and loose rivets in skin and formers.			1 x 5		
50 Hrs.		Check fit of door and freedom from fouling.			1 x 5		
ACCESSIBILITY							
Unobstructed							
ISSUE	1	6	7				
DATE	Mar. 18/55	30 Aug. 57	28 May 1958				
COMPILED	E. Burn	C. Beanland	C. Beanland				
CHECKED	G. Emmerson	Sgt Foster	Sgt Foster				
APPROVED		R.F. Reid	R.F. Reid				

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - INNER WING		REF. NO. 62-5	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT			
		EFF. A/C - 25201		Main Gear Door			
MANUFACTURER'S PART NO. N/A				AVRO PART NO.			
MANUFACTURER'S NAME Avro Aircraft Limited				7-1062-2291,2			
AVROCAN SPEC. Nil E.O. NO.				REF. DWGS.			
ENVELOPE SIZE 70" x 56" x 2 1/2" WEIGHT 75 LB.				7-1062-5,6			
LOCATION Lower Wing - fuselage joint Sta. 485-538				REF. M.D.R.			
FUNCTION To enclose part of wheel well.				RELIABILITY			
				OVERHAUL LIFE 1500 HRS.			
				WASTAGE			
				Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES			
				EST.		ACTUAL	
Primary		Visual		1 x 1			
25 Hrs.		Inspect hinges and attachments, check for damage, distortion, cracks, corrosion and loose rivets.		1 x 5			
50 Hrs.		Check fit of door and freedom from fouling.		1 x 5			
ACCESSIBILITY							
Unobstructed.							
ISSUE	1	6					
DATE	18 Mar. 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED		R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE- INNER WING	REF. NO. 62-20
AVRO AIRCRAFT LTD.		Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT	
		EFF. A/C - 25201		Main Gear Up-Lock	
MANUFACTURER'S PART NO. N/A				AVRO PART NO.	
MANUFACTURER'S NAME Avro Aircraft Limited				7-1062-3921, 3922	
AVROCAN SPEC. Nil E.O. NO.					
ENVELOPE SIZE 12" x 8" x 2½"		WEIGHT 6.59 LB.		REF. DWGS.	
LOCATION Main wheel well				7-1062-5, 6 7-1962-11 (up-lock release jack)	
FUNCTION To retain main landing gear in retracted position.				REF. M.D.R.	
				19-14	
				RELIABILITY	
				OVERHAUL LIFE 1500 HRS.	
				WASTAGE	
				Q.T.R. Nil	
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES	
				EST.	ACTUAL
Primary	Visual			1 x ½	
25 Hrs.	Check for security, wear and damage.			1 x 2	
50 Hrs.	Check function on retraction test			1 x 15	
ACCESSIBILITY					
Unobstructed					
ISSUE	1	2	3	4	
DATE	July 24/56	16 Jan. 57	30 Aug. 57	28 May 1958	
COMPILED	C. Beanland	C. Beanland	C. Beanland	C. Beanland	
CHECKED	Wol Rossell	Sgt Foster	Sgt Foster	Sgt Foster	
APPROVED	G. Emmerson	R.F. Reid	R.F. Reid	R.F. Reid	

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE = MAIN LANDING GEAR		REF. NO. 92-1	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Landing Gear Leg			
MANUFACTURER'S PART NO. XC 1283-1A/B MANUFACTURER'S NAME Dowty Equipment AVROCAN SPEC. E211 E.O. NO. ENVELOPE SIZE 106" x 36" x 12" WEIGHT LB. LOCATION Main wheel well FUNCTION Supports weight of aircraft on the ground				AVRO PART NO. 7-1092-3,4			
				REF. DWGS. 7-1092-1,2 7-4492-6 (structural clearances) 7-4260-13/14 (Main LG to Wing Joint)			
				REF. M.D.R. 92-2 to 6 19-41			
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Visual			1 x 5		
25 Hours		Check leg and attachments for security, clearance damage, leaks and corrosion.			1 x 15		
50 Hours		Carry out retraction check as per Maintenance Instructions Report 71/MAINT 19/4. Utility Hydraulic-Landing Gear. Check all pivot pins for wear. Lubricate according to lubrication chart.			1 x 20		
100 Hrs.		Carry out emergency extension (emergency nitrogen) as per Maintenance Instructions Report 71/MAINT 19/4			1 x 10		
ACCESSIBILITY							
Unobstructed							
ISSUE	1	9					
DATE	7 Feb. 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED		R.F.Reid					

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-2	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main Gear Leg Fairing			
MANUFACTURER'S PART NO. N/A MANUFACTURER'S NAME Avro Aircraft Limited AVROCAN SPEC. Nil E.O. NO. ENVELOPE SIZE 35" x 28" x 2" WEIGHT 45 LB. LOCATION Attached to main gear leg. FUNCTION To enclose part of wheel well when landing gear is retracted.				AVRO PART NO. 7-1062-4393,4 REF. DWGS. 7-4392-1 7-4260-7,8 7-1092-85 (springs) 7-1092-17,18 (spring housing) REF. M.D.R. RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Nil			
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES			
				EST.		ACTUAL	
Primary		Visual. Check that the red marks on the operating cams of the two lower spring housings are correctly aligned.		1 x 1/2			
25 Hrs.		Check freedom of movement of fairing on spring posts; check for damage, distortion, cracks, corrosion and loose rivets in skin.		1 x 5			
50 Hrs.		Check fit of fairing and freedom from fouling on retraction.		1 x 5			
ACCESSIBILITY Unobstructed							
ISSUE	1	6					
DATE	18 Mar. 55	28 May 58					
COMPILED	E. Burn	C. Beanland					
CHECKED	G. Emmerson	Sgt Foster					
APPROVED		R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE- MAIN LANDING GEAR	REF. NO. 92-3
AVRO AIRCRAFT LTD.		Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Main U/C Telescopic Side Stay	
MANUFACTURER'S PART NO. XV 1284-1 A/B MANUFACTURER'S NAME Dowty AVROCAN SPEC. E382 E.O. NO. ENVELOPE SIZE 66" x 6" Dia. WEIGHT 57 1/4 LB. LOCATION Main landing gear FUNCTION Contains main U/C downlock, and downlock release mechanism and indicating switch.				AVRO PART NO. 7-1092-11,12 REF. DWGS. 7-4292-1,2 REF. M.D.R. <div style="text-align: center;">RELIABILITY</div> OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending	
INSPECTION PERIOD	OPERATION TO BE PERFORMED			MEN X MINUTES	
				EST.	ACTUAL
Primary	Visual			1 x 1/2	
25 Hrs.	Check for internal leakage of downlock release jack. Check for leaks, security, damage and cleanliness.			1 x 5	
50 Hrs.	Disconnect top end of stay and check for wear in external ball joint and internal downlock. Lubricate Carry out functional check.			1 x 30	
ACCESSIBILITY					
Unobstructed					
ISSUE	1	2	3	4	5
DATE	8 Dec. 55	14 Sept. 56	31 Jan. 57	30 Aug. 57	28 May 58
COMPILED	E. Burn	C. Beanland	C. Beanland	C. Beanland	C. Beanland
CHECKED	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster	Sgt Foster
APPROVED		G. Emmerson	R.F. Reid	R.F. Reid	R.F. Reid

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-4	
AVRO AIRCRAFT LTD.				Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT			
		EFF. A/C - 25201		Shock Absorber and Recuperator Main Gear			
MANUFACTURER'S PART NO. V1283-9 A/B				AVRO PART NO.			
MANUFACTURER'S NAME Dowty				N/A			
AVROCAN SPEC. E-211 E.O. NO.							
ENVELOPE SIZE 56" x 5½"				WEIGHT 56.5 est LB.			
LOCATION In main landing gear leg.				REF. DWGS. 7-1092-1,2			
FUNCTION Main landing gear shock absorber.				REF. M.D.R. 92-1			
				RELIABILITY			
				OVERHAUL LIFE 1500 HRS.			
				WASTAGE			
				Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Check oil content and nitrogen pressure indicators (visual)			1 x 1		
Turn Around		As above					
As required		Charge with Silicone oil to Spec. DOWCAN 34A/197			1 x 5		
ACCESSIBILITY							
Inside main landing gear leg. Bogie beam must be removed to gain access.							
ISSUE	1	2	3	4	5		
DATE	4 May 56	29 Nov. 56	31 Jan. 57	30 Aug. 57	28 May 58		
COMPILED	C. Beanland	C. Beanland	C. Beanland	C. Beanland	C. Beanland		
CHECKED	G. Emmerson	WOL Rossell	Sgt Foster	Sgt Foster	Sgt Foster		
APPROVED		R.F. Reid	R.F. Reid	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR	REF. NO. 92-5
AVRO AIRCRAFT LTD.		Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT	
		EFF. A/C - 25201		Main wheel assembly	
MANUFACTURER'S PART NO. 9541028 wheel 771322 tire, tubeless MANUFACTURER'S NAME Goodyear AVROCAN SPEC. E228 Wheel E.O. NO. E251 tire ENVELOPE SIZE 29" dia. x 7.7" WEIGHT 31 LB. LOCATION On main landing gear leg. FUNCTION Main support of aircraft when on ground.				AVRO PART NO.	
				7-1092-165 wheel 7-1092-167 tire	
				REF. DWGS.	
				7-4292-11	
				REF. M.D.R.	
				RELIABILITY	
				OVERHAUL LIFE 50 landings HRS.	
				WASTAGE	
				Q.T.R. D8-531-tires	
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES
					EST. ACTUAL
Turn Around		Visual			1 x ½
Primary		Check tires for condition, pressure (255 psi)			1 x 3
25 Hrs.		Check for security, damage and cracks, tire condition and pressure.			1 x 5
50 Hrs.		Remove wheels, clean and inspect for cracks, corrosion and general condition. Lubricate as required.			1 x 30
ACCESSIBILITY					
Unobstructed					
ISSUE	1	2	3	4	
DATE	20 Apr. 56	1 Feb. 57	30 Aug. 57	28 May 1958	
COMPILED	G. Beanland	C. Beanland	C. Beanland	C. Beanland	
CHECKED	G. Emmerson	Sgt Foster	Sgt Foster	Sgt Foster	
APPROVED		R.F. Reid	R.F. Reid	R.F. Reid	

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR	REF. NO. 92-6
AVRO AIRCRAFT LTD.		Engineering Div.			
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT	
		EFF. A/C - 25201		Telescopic Tie	
MANUFACTURER'S PART NO. V 1283-290 MANUFACTURER'S NAME Dowty Equipment AVROCAN SPEC. E211 E.O. NO. ENVELOPE SIZE 42" x 2½" WEIGHT LB. LOCATION On main landing gear leg. FUNCTION To position bogie-beam correctly for landing and retraction.				AVRO PART NO.	
				N/A	
				REF. DWGS.	
				7-1092-3,4	
				REF. M.D.R.	
				RELIABILITY	
				OVERHAUL LIFE 1500	HRS.
				WASTAGE	
				Q.T.R.	Pending
INSPECTION PERIOD		OPERATION TO BE PERFORMED		MEN X MINUTES	
				EST.	ACTUAL
Primary		Visual		1 x ½	
25 Hrs.		Check for security, damage and cleanliness.		1 x 1	
50 Hrs.		Lubricate as per chart.		1 x ½	
ACCESSIBILITY					
Unobstructed					
ISSUE	1	2	3		
DATE	8 Nov. 56	30 Aug. 57	28 May 1958		
COMPILED	C. Beanland	C. Beanland	C. Beanland		
CHECKED	WolRossell	Sgt Foster	Sgt Foster		
APPROVED	G. Emmerson	R.F. Reid	R.F. Reid		

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-7	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT			
		EFF. A/C - 25201		Brake Unit			
MANUFACTURER'S PART NO. 9541027				AVRO PART NO.			
MANUFACTURER'S NAME Goodyear				7-1092-169			
AVROCAN SPEC. E-228 E.O. NO.				REF. DWGS.			
ENVELOPE SIZE 13" x 9" x 5" WEIGHT 62.9 LB.				7-1092-1,2			
LOCATION On main landing gear leg.				REF. M.D.R.			
FUNCTION To reduce aircraft speed on the ground				92-5			
				RELIABILITY			
				OVERHAUL LIFE 1500 HRS.			
				WASTAGE Liners 50 hrs.			
				Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED				MEN X MINUTES	
						EST.	ACTUAL
Primary		Check brakes for leaks, overheating and wear as per Maintenance Instructions Report 71/MAINT 92/1 para 2.5.1.1 and 2.				1 x 2	
Periodic (25 Hrs.)		As above				1 x 2	
Periodic (50 Hrs.)		Check brake operation including anti-skid, anti-spin and emergency systems as per Maintenance Instructions Report 71/MAINT 19/1.				1 x 15	
ACCESSIBILITY							
Unobstructed, when wheels are removed.							
ISSUE	1	2					
DATE	20 Feb. 58	28 May 58					
COMPILED	C. Beanland	C. Beanland					
CHECKED	Sgt Foster	Sgt Foster					
APPROVED	R.F. Reid	R.F. Reid					

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92=4	
AVRO AIRCRAFT LTD.		Engineering Div.					
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Shock Absorber & Recuperator - Main Gear			
MANUFACTURER'S PART NO. V1283-9 A/B MANUFACTURER'S NAME Dowty AVROCAN SPEC. E-211 E.O. NO. ENVELOPE SIZE 56" x 5 1/2" WEIGHT 56.5 est LB. LOCATION In main landing gear leg. FUNCTION Main landing gear shock absorber.				AVRO PART NO. N/A			
				REF. DWGS. 7-1092-3,4			
				REF. M.D.R. 92-1			
				RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Primary		Check oil content and nitrogen pressure indicators (visual)			1 x 1		
Turn Around		As above.					
As required		Charge with Silicone oil to Spec. DOWNCAN 200. 34A/197			1 x 5		
ACCESSIBILITY Inside main landing gear leg. Bogie beam must be removed to gain access.							
ISSUE	1	2	3	4			
DATE	May 4/56	Nov. 29/56	Jan. 31/57	Aug 30/57			
COMPILED	C. Beanland	C. Beanland	C. Beanland	C. Beanland			
CHECKED	G. Emmerson	Wol Rossell	Sgt Foster	Sgt Foster			
APPROVED		R.F. Reid	R.F. Reid	R.F. Reid			

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE		REF. NO.	
AVRO AIRCRAFT LTD.				Engineering Div.		Main Landing Gear	
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1		COMPONENT			
		EFF. A/C - 25201		Mainwheel Assembly			
MANUFACTURER'S PART NO. 9541028				AVRO PART NO.			
MANUFACTURER'S NAME Goodyear				7-1092-13			
AVROCAN SPEC. E228 Wheel E.O. NO.							
E251 Main wheel tires.							
ENVELOPE SIZE 29 $\frac{1}{2}$ " dia. x 8"		WEIGHT 31 LB.		REF. DWGS.			
				7-4292-11			
LOCATION On main landing gear leg.				REF. M.D.R.			
FUNCTION Main support of aircraft when on ground.				RELIABILITY			
				OVERHAUL LIFE 150 landings HRS.			
				WASTAGE			
				Q.T.R. D8-531-tires			
INSPECTION PERIOD		OPERATION TO BE PERFORMED			MEN X MINUTES		
					EST.	ACTUAL	
Turn Around		Visual			1 x $\frac{1}{2}$		
Primary		Check tires for condition, pressure (255 psi)			1 x 3		
25 Hrs.		Check for security, damage and cracks, tire condition and pressure.			1 x 5		
50 Hrs.		Remove wheels, clean and inspect for cracks, corrosion and general condition. Lubricate as required.			1 x 30		
ACCESSIBILITY							
Unobstructed							
ISSUE	1	2	3				
DATE	April 20/56	Feb. 1/57	Aug 30/57				
COMPILED	C. Beanland	C. Beanland	C. Beanland				
CHECKED	G. Emmerson	Sgt Foster	Sgt Foster				
APPROVED		R.F. Reid	R.F. Reid				

MAINTENANCE DATA RECORD				SYSTEM STRUCTURE - MAIN LANDING GEAR		REF. NO. 92-6	
AVRO AIRCRAFT LTD. Engineering Div.							
DISTRIBUTION: STANDARD +		A/C TYPE - Arrow 1 EFF. A/C - 25201		COMPONENT Telescopic Tie			
MANUFACTURER'S PART NO. V 1283-290 MANUFACTURER'S NAME Dowty Equipment AVROCAN SPEC. E211 E.O. NO. ENVELOPE SIZE 42" x 2 1/2" WEIGHT 6.45 LB. LOCATION On main u/c leg. FUNCTION To position bogie-beam correctly for landing and retraction.				AVRO PART NO. N/A REF. DWGS. 7-1092-3,4 REF. M.D.R. RELIABILITY OVERHAUL LIFE 1500 HRS. WASTAGE Q.T.R. Pending			
INSPECTION PERIOD		OPERATION TO BE PERFORMED				MEN X MINUTES	
						EST. ACTUAL	
Primary		Visual				1 x 1/2	
25 Hrs.		Check for security, damage and cleanliness.				1 x 1	
50 Hrs.		Lubricate as per chart.				1 x 1/2	
ACCESSIBILITY Unobstructed							
ISSUE	1	2					
DATE	November 8/56	Aug 30/57					
COMPILED	C. Beanland	C. Beanland					
CHECKED	Wol Rossell	Sgt Foster					
APPROVED	G. Emmerson	R.F. Reid					

LUBRICATION NIL

APPLICATION

MATERIAL

SPECIFICATION

FREQUENCY

ACCESS

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE

SPECIAL TOOLS FOR BENCH USE

Bleed Hose

NIL

GROUND TESTING EQUIPMENT

GROUND HANDLING EQUIPMENT

Air Conditioner and Generator A.C. and DC
Aircraft Hydraulic Test Stand

Aircraft Axle Jack
Strap, Retaining, Main Landing
Gear Bogie GSE No. 130

INTERCHANGEABLE

X

REMOVAL INSTRUCTIONS

MEN X MINUTES

PLACEABLE

EST.

ACTUAL

(With wheel removed)

1. Relieve utility system pressure.
2. Disconnect hydraulic line from brake unit.
3. Disconnect brake unit from torque arm (4 bolts)

Remove and replace

1 x 20

LUBRICATION					
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
Bolts securing wheel halves	Anti-sieze Compound	MIL-T-5544	At wheel break-down.	Unrestricted when wheel is removed from axle	
Wheel Bearings	Grease	MIL-L-3545	On assembly to axle		
DETAILS:					
GROUND SUPPORT EQUIPMENT					
SPECIAL TOOLS FOR AIRCRAFT USE		SPECIAL TOOLS FOR BENCH USE			
NIL		Tool for removing tubeless tires.			
GROUND TESTING EQUIPMENT		GROUND HANDLING EQUIPMENT			
Tie pressure gauge 0-300 psi Compressor, Reciprocating Air or Nitrogen		Aircraft axle jack Strap, Retaining, Main Landing Gear Bogie GSE no. 130			
INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS		MEN X MINUTES	
PLACEABLE				EST.	ACTUAL
1. Fit strap. 2. Jack wheel off ground. 3. Remove locking pin from axle nut. 4. Unscrew axle nut, remove washer. 5. Draw wheel off axle.		Remove and replace		1 x 15	

LUBRICATION NIL

APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE	SPECIAL TOOLS FOR BENCH USE
Strap Retaining Main Gear Leg GSE No. 231	Dowty Shock Absorber Tool Kit
GROUND TESTING EQUIPMENT	GROUND HANDLING EQUIPMENT
Aircraft Hydraulic Test Stand High Pressure Hydraulic Charging Unit Compressor, Reciprocating, Air/Nitrogen	Aircraft jacks $\frac{1}{2}$ " rope

INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS	MEN X MINUTES	
ACEABLE			EST.	ACTUAL
(Aircraft on Jacks)		<p><u>LIQUID SPRING SHOCK ABSORBER REMOVAL</u></p> <p>1. Jack A/C, remove wheels and brakes and release shock absorber nitrogen charge. 2. Remove compensator valve dirt excluder cam and short pipe assy. 3. Separate upper and lower torque link brake piping by removal of short swivel assemblies from centre joint. Remove centre torque-link pivot bolt. 4. Remove telescopic tie-rod and front brake torque rod complete with piping. 5. Remove pivot pin from bogie beam, lower bogie beam. 6. Remove clamp from lower end of operating sleeve, remove eccentric adjusters and fit special retaining tools in eccentric adjuster holes. 7. Rotate bronze bearing by "C" spanner to break joint; remove rubber plug from pip pin hole in leg; rotate sliding member to line up head of pip pin with hole. Withdraw pip pin with extractor, lower shock absorber, replace pip pin in operating sleeve and shortening mechanism. 8. Secure shock absorber to leg by a piece of rope. 9. Using hydraulic ground unit partially retract gear. Secure leg by retaining strap No. 231. Slide shock absorber out of leg. Remove recuperator valve from shock absorber. 10. Remove locking tube from lower locking nut, remove nut. Remove shock absorber from sliding member.</p> <p><u>Replacement Notes:-</u> Replacement is reverse of removal with the following additions:- 1. When shock absorber is assembled to sliding member invert unit and bleed. 2. Mark radial position of pip pin holes at lower end of sliding member. 3. With landing gear locked "DOWN" line up holes in leg and operating sleeve, pull pip pin, lift shock absorber till all holes aligned, fit pip pin. 4. Remove rubber plugs over rollers at top of couvic coupling, rotate all eccentric adjusters simultaneously until special tool slides freely over rollers. Fit locking plates and clamps over adjusters. 5. Service recuperator as per M.I.R. 71/MAINT 92/1-2 para 2.4</p> <p>Remove and replace</p>		
			3 x 240	

LUBRICATION

APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS
re Gun	Grease	MIL-G-3278	50 Hrs.	Unrestricted

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE	SPECIAL TOOLS FOR BENCH USE
NIL	NIL
GROUND TESTING EQUIPMENT	GROUND HANDLING EQUIPMENT
Aircraft Hydraulic Test Stand Air Conditioner and Generator A.C. & D.C.	Maintenance platform 4G/1596 Aircraft Jacks

INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS	MEN X MINUTES	
F	ACEABLE		EST.	ACTUAL
		<p>1. Jack up aircraft.</p> <p>2. Relieve pressure from utility system.</p> <p>3. Disconnect 1 hydraulic and 1 electric lines.</p> <p>4. Disconnect strut at both ends, one bolt, 1 ball joint.</p> <p>Remove and replace</p>	2 x 30	

LUBRICATION

APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS
Spring Housing - Hand	Grease	MIL-G-3278	50 Hrs.	Unobstructed with gear extended.

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE	SPECIAL TOOLS FOR BENCH USE
NIL	NIL
GROUND TESTING EQUIPMENT	GROUND HANDLING EQUIPMENT
Aircraft Hydraulic Test Stand AirConditioner and Generator AC and DC	Maintenance platform 4G/1596 Aircraft jacks

INTERCHANGEABLE	<input checked="" type="checkbox"/>	REMOVAL INSTRUCTIONS	MEN X MINUTES	
PLACEABLE			EST.	ACTUAL
To remove:- Remove 9 pins securing spring housings. 				

LUBRICATION

APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS
	Grease	MIL-G-3278 34A-192	50 Hours	Unobstructed

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE	SPECIAL TOOLS FOR BENCH USE
Pivot Shaft Extractor	NIL
GROUND TESTING EQUIPMENT	GROUND HANDLING EQUIPMENT
Aircraft Hydraulic Test Stand Hydraulic Charging & Bleed Trailer Air Conditioner and Generator AC and DC	Maintenance platform 4G/1596 Mobile Dolly Aircraft Jacks

INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS	MEN X MINUTES	
ACEABLE			EST.	ACTUAL
1.		Jack aircraft wheels off floor.		
2.		Release pressure from utility hydraulic system.		
3.		Connect hydraulic charging and bleed trailer to "Up" line. Build-up pressure (1500 psi approx) to unlock downlock and partially retract leg.		
4.		Unscrew side stay ball end from leg.		
5.		Remove leg fairing, pivot door, hydraulic lines and electric cables.		
6.		Disconnect main gear jack.		
7.		Remove threaded pin from lower barrel fitting of shortening adjuster.		
8.		Secure leg in mobile dolly.		
9.		Remove pin from lower end of back stay.		
10.		Remove bolts securing coupling to main pivot shaft, and remove coupling. Slide inner end of shaft outboard, and remove back stay, which is integral with inner shaft.		
11.		Remove nut from outer end of shaft.		
12.		Remove leg on mobile dolly.		
		Remove and replace	4 x 360	

LUBRICATION					NIL	
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS		
DETAILS:						
GROUND SUPPORT EQUIPMENT						
SPECIAL TOOLS FOR AIRCRAFT USE			SPECIAL TOOLS FOR BENCH USE			
NIL			NIL			
GROUND TESTING EQUIPMENT			GROUND HANDLING EQUIPMENT			
Aircraft Hydraulic Test Stand Air Conditioner and Generator AC & DC			Maintenance platform 4G/1596 Aircraft jacks			
INTERCHANGEABLE		REMOVAL INSTRUCTIONS			MEN X MINUTES	
LACEABLE					EST.	ACTUAL
	<input checked="" type="checkbox"/>	1. Relieve pressure from system. 2. Disconnect 1 hydraulic and 1 pneumatic line from release jack. 3. Remove 5 nuts on bolts attaching up-lock to structure. Slide up-lock complete with release jack off bolts. 4. Remove jack from up-lock casing (MDR 19-14) <div style="text-align: right;">Remove and replace</div>			1 x 30	

LUBRICATION					
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS	
Hinges	"Oildag" Type O.D. 200	MIL-L-3572 Grade B Medium	On assembly	Unobstructed	
DETAILS:					
GROUND SUPPORT EQUIPMENT					
SPECIAL TOOLS FOR AIRCRAFT USE		SPECIAL TOOLS FOR BENCH USE			
Strap, retaining main landing gear door		NIL			
GROUND TESTING EQUIPMENT		GROUND HANDLING EQUIPMENT			
Aircraft Hydraulic Test Stand Air Conditioner and Generator AC & DC		Aircraft jacks			
INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS		MEN X MINUTES	
LACEABLE				EST.	ACTUAL
1. Disconnect actuating jack from door. 2. Remove 51 bolts securing hinge to wing skin.		Remove and replace		2 x 30	

LUBRICATION					NIL	
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS		
DETAILS:						
GROUND SUPPORT EQUIPMENT						
SPECIAL TOOLS FOR AIRCRAFT USE			SPECIAL TOOLS FOR BENCH USE			
Strap Wrench			NIL			
GROUND TESTING EQUIPMENT			GROUND HANDLING EQUIPMENT			
Aircraft Hydraulic Test Stand Air Conditioner and Generator AC & DC			Maintenance platform 4G/1596 Aircraft Jacks			
INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS			MEN X MINUTES	
LACEABLE					EST.	ACTUAL
1. Relieve system pressure. 2. Disconnect 2 hydraulic lines and 2 hydraulic lines at sequence valve. 3. Remove nuts from 4 studs securing mounting brackets to structure. 4. Remove bolt from lower attachment.			Remove and replace		1 x 40	

LUBRICATION					NIL	
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS		
DETAILS:						
GROUND SUPPORT EQUIPMENT						
SPECIAL TOOLS FOR AIRCRAFT USE			SPECIAL TOOLS FOR BENCH USE			
NIL			NIL			
GROUND TESTING EQUIPMENT			GROUND HANDLING EQUIPMENT			
Air Conditioner and Generator AC & DC Aircraft Hydraulic Test Stand			Maintenance platform 4G/1596			
INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS		MEN X MINUTES		
PLACEABLE				EST.	ACTUAL	
1. Relieve pressure from system. 2. Disconnect 2 hydraulic lines. 3. Remove 3 attachment bolts.		Remove and replace		1 x 20		

LUBRICATION NIL

APPLICATION

MATERIAL

SPECIFICATION

FREQUENCY

ACCESS

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE

SPECIAL TOOLS FOR BENCH USE

NIL

NIL

GROUND TESTING EQUIPMENT

GROUND HANDLING EQUIPMENT

Aircraft Hydraulic Test Stand
Air Conditioner and Generator AC & DC

Aircraft Jack
Maintenance platform 4G/1596

INTERCHANGEABLE

X

REMOVAL INSTRUCTIONS

MEN × MINUTES

EST.

ACTUAL

1. Relieve pressure from system.
2. Disconnect 1 hydraulic line and 1 pneumatic line.
3. Remove 3 attachment bolts.

Remove and replace

1 x 15

LUBRICATION NIL

APPLICATION

MATERIAL

SPECIFICATION

FREQUENCY

ACCESS

DETAILS:

GROUND SUPPORT EQUIPMENT

SPECIAL TOOLS FOR AIRCRAFT USE

SPECIAL TOOLS FOR BENCH USE

NIL

NIL

GROUND TESTING EQUIPMENT

GROUND HANDLING EQUIPMENT

Aircraft Hydraulic Test Stand
Air Conditioner and Generator AC & DC

Maintenance platform 4G/1596
Aircraft Jacks

INTERCHANGEABLE

X

REMOVAL INSTRUCTIONS

MEN X MINUTES

ACEABLE

EST.

ACTUAL

1. Relieve pressure from system.
2. Disconnect 1 hydraulic and 1 pneumatic line.
3. Remove bolt securing clamp over jack.
4. Remove 6 nuts securing jack in uplock casing.
5. Remove casing from wheel well structure.
6. Free jack from casing by splitting 2 halves and removing bosses on jack from holes in casing halves.

Remove and replace

1 x 30

LUBRICATION					NIL	
APPLICATION	MATERIAL	SPECIFICATION	FREQUENCY	ACCESS		
DETAILS:						
GROUND SUPPORT EQUIPMENT						
SPECIAL TOOLS FOR AIRCRAFT USE			SPECIAL TOOLS FOR BENCH USE			
Strap - Retaining, Main L/G leg. Extractor - Main L/G jack pivot pin Tool - adjusting main gear jack			NIL			
GROUND TESTING EQUIPMENT			GROUND HANDLING EQUIPMENT			
Air Conditioner and Generator AC & DC Aircraft Hydraulic Test Stand			Aircraft Jacks Maintenance platform 4G/1596			
INTERCHANGEABLE	X	REMOVAL INSTRUCTIONS		MEN X MINUTES		
ACEABLE				EST.	ACTUAL	
1. Partially retract gear and support on strap. 2. Relieve hydraulic pressure. 3. Remove 2 hydraulic lines. 4. Remove 2 attachment bolts.		Remove and replace (Assuming A/C jacked)		1 x 60		

