

# Work Order Detail

Repair Station: FAA CRS GR4R216M

500 Gulfstream Rd. - Savannah, Georgia 31407

Work Order; SC238654		Title: NET	JETS AVIATION		Department: SC Maintenance	
Squawk: 8.13	Discrepancy:	CMP G200 324203 Wheel, Main Landing Gear (Right Inboard, No. 3) (Ref item 8.5)				
•		******	*******	***DUAT.************	******	
Status: Completed	Resolution:	COMPLIED WITH CMP G200 324203 Wheel, Main Landing Gear (Right Inboard, No. 3)				
		**************************************				
	Signed Off:		8:16:53PM	By: HARGROVE, TIMOTH		
	Inspected;	5/22/2011	8:18:47PM	By: TRIMBLE, STEVEN L.	Secretary State of Secretary Secreta	
	Double Inspected:	5/22/2011	9:55:27PM	By: MITCHELL, TIMOTHY	( W-	
	Functional Test:	5/22/2011	8:18:49PM	By: TRIMBLE, STEVEN L.	- ::	
4	Completed:	5/22/2011	9:55:27PM	By: MITCHELL, TIMOTHY	w-	
Squawk: 8,14	Discrepancy:	While complying with Netjets: G200 Maintenance checklist found Both L/H and R/H				
		horizontal cast fairngs to be tern and worn.				
Status; Completed	Resolution:	Removed worn cast fairings P/N 4A84506384-503 and 4AS4506304-504. Installed new cast				
		fairings 4AS4500304-503 and 4AS4500304-504. All work performed in reference to Service  Bulletin No. 200-55-309 instructions. Service Bulletin No. 200-55-309 referenced for				
£		installation only.				
	Signed Off:	5/23/2011	6:11:42AM	By: HARGROVE, TIMOTH	TY SCOTT-	
	Inspected:	5/23/2011	6:14:37AM	By: MITCHELL, TIMOTH	Y W-	
	Completed:	5/23/2011	6:14:37AM	By: MITCHELL, TIMOTH	Y W-	
Squawk: 8.15	Discrepancy:	CMP G20	00 324207 Main Tire	(Right Inboard, No. 3) - Remo	val / Installation (Ref. item 8.5)	
		***DUAI	***			
Status: Completed	Resolution:	COMPLIED WITH CMP G200 324207 Main Tire (Right Inboard, No. 3) - Removal /				
		Instaliation				
	100		8:17:53PM	By: HARGROVE, TIMOTE		
	Del Company		8:18:52PM	By: TRIMBLE, STEVEN L.		
	Double Inspected:			By: MITCHELL, TIMOTH		
	Functional Test			By: TRIMBLE, STEVEN L.		
	Completed	5/22/2011	9:53:26PM	By: MITCHELL, TIMOTH	YW-	
Squawk: 8.16	Discrepancy	While complying with Netjets G209 Maintenance checklist found hardware on dump valve in NLG wheel well to be corroded.				
Status: Completed	Resolution:	Removed and installed mounting bolts one at a time and cleaned all light surface corresion by				
		hand. Installed the bolts with new washers and applied a light cost of ACF50.  All work was accopinished in accordance with G-200 maint, manual ch. 51-70-05				
	Signed Off		9:13:54AM	By: ADAMS, DOUGLAS W		
			9:17:28AM	By: STAUFFER, CORY R-		
			9:17:28AM	By: STAUFFER, CORY R-		
Squawk; 8.17	Discrepancy	y ***DUAL INSP***While complying with Netjetz G200 Maintenance checklist found Rod				
Status: Completed	D ludi	end on Landing gear selector valve to be corroded				
	Resolution:	Removed corroded Rodend, Installed new Rodend, Torqued and safetied per G290 MM  32-30-10				
		Performed Landing gear cycle check. Cycled gear 20 times. Ops check good.  All work performed per G200 M.M., 32-30-00 B step 14,15 page 502.				
		Refer to steps for work details.				

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Printed: 5/26/2011 7:07:21AM



# Work Order Detail

Repair Station: FAA CRS CR4R216M

500 Gulfstream Rd. - Savannah, Georgia 31407 Work Order: SC238654 Title: NETJETS AVIATION Department: SC Maintenance 5/24/2011 11:12:42AM By: KRALL, NATHAN-Double Inspected: 5/24/2011 11:12:56AM By: STAUFFER, CORY R Completed: 5/24/2011 11:12:56AM By: STAUFFER, CORY R Description: Removed corroded Rodend, Installed new Rodend, Torqued and safetied, all work was accomplished per G200 MM 32-36-10 REV. 3/31/06 Torque Wrench Number Status: Completed Comments/notes: Signed Off: 5/23/2011 10:43:47AM By: QUIGLEY, JAMES P. Inspected: 5/23/2011 10:44:00AM By: RINKEMA, DAVID E Double Inspected: 5/24/2011 11:09:43AM By: STAUFFER, CORY R Completed: 5/24/2011 11:09:43AM By: STAUFFER, CORY R Description: Perform Normal Landing gear cycling check for proper operation of Landing gear Status: Completed omments/notes: \*\*\*\*\*DUAL\*\*\*\*Performed Landing gear cycle check. Cycled gear 20 times. Ops All work performed per G200 M.M. 32-30-00 B step 14,15 page 502. Signed Off: 5/24/2011 10:28:05AM By: GOUDY, TRAVIS-Inspected: 5/24/2011 10:54:25AM By: KRALL, NATHAN-Double Inspected: 5/24/2011 11:09:37AM By: STAUFFER, CORY R-Completed: 5/24/2011 11:09:37AM By: STAUFFER, CORY R-Discrepancy: \*\*DUAL\*\*CMP G200 561005 Copilot Windshield - Removal / Installation Squawk: 8.18 Ref Item 8.1 \*\*\*\*\*DUAL INSP\*\*\*\*\* Status: Completed COMPLIED WITH CMP G200 561005 Copilot Windshield - Removal / Installation Signed Off: 5/26/2011 12:31:36AM By: OSBORNE, PATRICK Inspected: 5/26/2011 12:40:45AM By: MERCER, MARK-Double Inspected: 5/26/2011 12:47:56AM By: CREE, MICHAEL P. Completed: 5/26/2011 12:47:57AM By: CREE, MICHAEL P-Discrepancy: CMP G200 532052 Posts / Sills (Copilot Windshield) - General Visual Inspection Status: Completed Resolution: COMPLIED WITH CMP G200 532051 Posts / Sills (Pilot Windshield) - General Visual Inspection Signed Off: 5/24/2011 12:09:07AM By: OSBORNE, PATRICK-Inspected: 5/24/2011 12:11:04AM By: MERCER, MARK Completed: 5/24/2011 12:11:04AM By: MERCER, MARK-Squawk: 8.20 Discrepancy: During preparations for landing genr swings, noted that there was no "HYD TANK PRESS LOW" EICAS message present when the hydraulic reservoirs were relieved of air pressure. Status: Completed Resolution: Reference step 8.20.1 for troubleshooting performed. Removed & replaced the left hand hydraulic resevoir relief valve P/N 562A6D35 with a new unit Ref. G200 M.M. 29-10-10. Performed operational checks with no descrepencies noted, Ref. G200 M.M. 29-10-00. Signed Off: 5/25/2011 2:14:49AM By: FULLER, DONALD-

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Printed: 5/26/2011 7:07:21AM

By: CRYER, DAVID W-

By: CRYER, DAVID W-

Inspected: 5/25/2011 4:33:46AM

Completed: 5/25/2011 4:33:46AM

# GULFSTREAM G200 MAINTENANCE MANUAL

### **EXTENSION AND RETRACTION — ADJUSTMENT / TEST**

# 1. Landing Gear Extension and Retraction — Normal Functional Test

# A. Preparation

# SPECIAL TOOLS AND TEST EQUIPMENT

Circuit breaker safety clip Standard
Main landing gear actuator safety lock GSE3220047 (ACG-4AS2530000-430)
Pressure gage, 0 - 3000 psi Standard
Torque wrench, 0 - 150 inch-pounds GSE5101146 (1502LDIN) or equivalent

### (1) References

- Aircraft Jacking Procedure, 07-10-00, Maintenance Practices
- External Electrical Power Connection to Aircraft, 12-00-01, Maintenance Practices
- External Electrical Power Disconnection from Aircraft, 12-00-01, Maintenance Practices
- External Hydraulic Power Connection to Aircraft, 12-15-00, Maintenance Practices
- External Hydraulic Power Disconnection From Aircraft, 12-15-00, Maintenance Practices
- Safe Ground Maintenance Procedure, 20-00-10, Maintenance Practices
- EICAS Activation, 31-50-00, Maintenance Practices
- EICAS Deactivation, 31-50-00, Maintenance Practices
- Main Landing Gear Hydraulic Actuator Bleeding, 32-10-20, Servicing

# (2) Aircraft Preparation

- (a) Prepare aircraft for safe ground maintenance. See Safe Ground Maintenance Procedure, 20-00-10, Maintenance Practices.
- (b) Ensure work area is clean and clear of tools and miscellaneous items of equipment.
- (c) Jack aircraft. See Aircraft Jacking Procedure, 07-10-00, Maintenance Practices.
- (d) Apply electrical power to aircraft. See External Electrical Power Connection to Aircraft, 12-00-01, Maintenance Practices.
- (e) Activate EICAS. See EICAS Activation, 31-50-00, Maintenance Practices.
- (f) Pull, tag and install safety clip on the following Circuit Breaker (CB):

CB NAME	CB PANEL	CB LOCATION
GEAR OVRRD	Cockpit overhead	GROUND CONTROL

# (g) Ensure the following circuit breakers are depressed:

CB NAME	CB PANEL	CB LOCATION
GEAR NOSE	Cockpit overhead	GROUND CONTROL
GEAR L	Cockpit overhead	GROUND CONTROL
GEAR R	Cockpit overhead	GROUND CONTROL

# **B.** Procedure

- (1) Disconnect actuating lever of left landing gear WOW switch and turn it up around switch axis.
- (2) Ensure landing gear control handle cannot be placed to UP position.

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## **MAINTENANCE MANUAL**

- (3) Press and hold DOWNLOCK OVERRIDE pushbutton on landing gear control panel.
- (4) Ensure landing gear control handle cannot be placed to UP position.
- (5) Release DOWNLOCK OVERRIDE pushbutton.
- (6) Remove safety clip, tag and depress circuit breaker pulled in Step 1.A.(2)(f).

**CAUTION:** BEFORE THE NEXT TEST, ENSURE THERE IS NO PRESSURE IN THE SYSTEM, OTHERWISE THE LANDING GEAR WILL RETRACT.

- (7) Ensure landing gear control handle cannot be placed to UP position.
- (8) Press and hold DOWNLOCK OVERRIDE pushbutton.
- (9) Ensure landing gear control handle can be placed to UP position.
- (10) Place landing gear control handle to DOWN position.
- (11) Release DOWNLOCK OVERRIDE pushbutton.
- (12) Connect actuating lever of left main landing gear WOW switch and secure with cotter pin.
- (13) Apply hydraulic power to aircraft. See External Hydraulic Power Connection to Aircraft, 12-15-00, Maintenance Practices.
- (14) Increase external hydraulic pressure to 2000 psi.
  - WARNING: BEFORE CYCLING LANDING GEAR, ENSURE ALL TOOLS AND EQUIPMENT ARE REMOVED FROM WORK AREA AND ALL PERSONNEL ARE CLEAR OF AIRCRAFT. FAILURE TO COMPLY MAY RESULT IN INJURY TO PERSONNEL AND / OR DAMAGE TO EQUIPMENT.
  - CAUTION: WHEN OPERATING EXTERNAL HYDRAULIC POWER UNIT DURING LANDING GEAR CYCLING, KEEP POWER UNIT OPERATING PARAMETERS (DELIVERY PRESSURE, VOLUME, RPM) TO THE MINIMUM REQUIRED TO CYCLING LANDING GEAR. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO EQUIPMENT.
- (15) Cycle landing gear three times and verify proper and smooth operation.
- (16) If unsmooth landing gear operation is observed, perform Main Landing Gear Hydraulic Actuator
   Bleeding, 32-10-20, Servicing.
- (17) Ensure all landing gear indicators show DN on EICAS, with landing gear at DOWN position.
- (18) Place landing gear control handle to UP position.
- (19) Ensure all landing gear indicator colors change to amber (with landing gear in transit) and then to white UP with landing gear up and locked.
- (20) Place landing gear control handle to DOWN position.
- (21) Ensure all landing gear indicator colors change to amber (with landing gear in transit) and then to green DN with landing gear down and locked.
- (22) Reduce external hydraulic pressure to 500 psi.
- (23) Place landing gear control handle to UP and slowly increase external hydraulic pressure until all landing gear unlock.
- (24) Record hydraulic pressure as indicated on EICAS when nose landing gear and main landing gear unlock.

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### **MAINTENANCE MANUAL**

- (25) Ensure unlocking pressure recorded is less than 1100 200 psi for all landing gear.
- (26) Slowly increase external hydraulic pressure until all landing gear are up and locked.
- (27) Record hydraulic pressure when nose landing gear and main landing gear lock.
- (28) Ensure nose landing gear UP indication comes on EICAS before hydraulic pressure is 1700 psi for Aircraft 004 thru Aircraft 077.
- (29) Ensure main landing gear UP indications come on EICAS before hydraulic pressure is 1900 psi for Aircraft 078 and subsequent.
- (30) Reduce external hydraulic pressure to zero and verify landing gear is up and locked.
- (31) Place landing gear control handle to DOWN position.
- (32) Slowly increase external hydraulic pressure until all landing gear unlock.
- (33) Record hydraulic pressure required to unlock nose landing gear and main landing gear.
- (34) Ensure unlocking pressure is 500 900 psi for nose landing gear and 150 400 psi for main landing gear.
- (35) Ensure landing gear continues to extend until it is in down position.
- (36) Slowly increase hydraulic pressure until all landing gear lock down.
- (37) Record hydraulic pressure when nose landing gear and main landing gear lock down as indicated on EICAS.
- (38) Ensure downlock pressure is less than 1000 psi for all landing gear.
- (39) Slowly increase external hydraulic pressure to 3000 psi.
  - WARNING: BEFORE CYCLING LANDING GEAR, ENSURE ALL TOOLS AND EQUIPMENT ARE REMOVED FROM WORK AREA AND ALL PERSONNEL ARE CLEAR OF AIRCRAFT. FAILURE TO COMPLY MAY RESULT IN INJURY TO PERSONNEL AND / OR DAMAGE TO EQUIPMENT.
  - CAUTION: WHEN OPERATING EXTERNAL HYDRAULIC POWER UNIT DURING LANDING GEAR CYCLING, KEEP POWER UNIT OPERATING PARAMETERS (DELIVERY PRESSURE, VOLUME, RPM) TO THE MINIMUM REQUIRED TO CYCLING LANDING GEAR. FAILURE TO COMPLY MAY RESULT IN DAMAGE TO EQUIPMENT.
- (40) Cycle landing gear two times and measure time required to complete each cycle. Time shall be measured according to EICAS indications.
- (41) Ensure retraction / extension time does not exceed 7 10 seconds.
  - **NOTE:** Hydraulic cart needs to be set at 6.5 gal/min as a minimum.
- (42) Inspect all landing gear hydraulic lines, fittings and components for signs of leakage. No leakage is allowed.
- (43) Reduce external hydraulic pressure to zero and turn off.
- (44) Perform antispin check as follows:
  - (a) Ensure ANTI SKID switch on glareshield is in OFF position.
  - (b) Install retraction preventing sleeves on both main landing gear actuators.

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- (c) Remove bleeder screw (1) and washer (2) and install pressure gages on left and right brakes. See Figure 501.
- (d) Open bleed valves.
- (e) Slowly increase external hydraulic pressure to 3000 psi.
- (f) Press left and right pilot brake pedals to maximum to obtain pressure of 1400 1600 psi at brakes and release suddenly to pedals; repeat actuation twice.
- (g) Press and hold pilot right brake pedal to full travel.
- (h) Verify right outboard and inboard brakes are fully applied and pressure gages read 1400 1600 psi.
- (i) Verify left outboard and inboard brakes are not pressurized.
- (j) Release pilot right brake pedal.
- (k) Press and hold pilot left brake pedal to full travel.
- (I) Verify left outboard and inboard brakes are fully applied and pressure gages read 1400 1600 psi.
- (m) Verify right outboard and inboard brakes are not pressurized.
- (n) Release pilot left brake pedal.
- (o) Retract nose landing gear. During retraction, measure pressure in brakes and verify wheels are positively locked (cannot be rotated by hand).

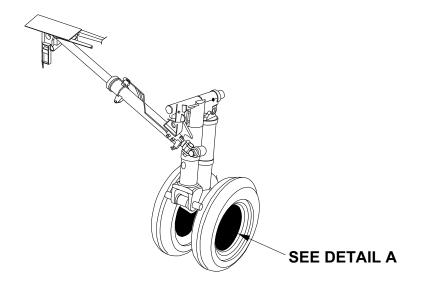
NOTE: The measured pressure shall be 200 psi minimum.

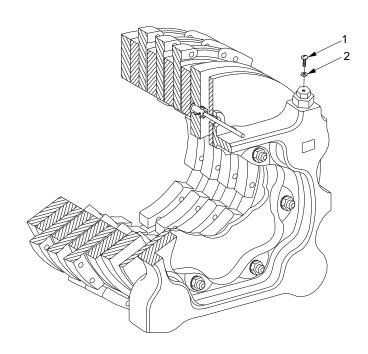
- (p) Extend nose landing gear.
- (q) Reduce hydraulic pressure to zero.
- (r) Remove pressure gages and install bleeder screws (1) and washers (2). See Figure 501.
- (s) Torque bleed valves to 70 inch-pounds.

### C. Follow On

- Inspect for presence of foreign objects.
- (2) Deactivate EICAS. See EICAS Deactivation, 31-50-00, Maintenance Practices.
- (3) Remove hydraulic power from aircraft. See External Hydraulic Power Disconnection From Aircraft, 12-15-00, Maintenance Practices.
- (4) Remove electrical power from aircraft. See External Electrical Power Disconnection from Aircraft, 12-00-01, Maintenance Practices.
- (5) Remove aircraft from jacks. See Aircraft Jacking Procedure, 07-10-00, Maintenance Practices.
- (6) Record all maintenance actions in accordance with current governing authority.

# GULFSTREAM G200 MAINTENANCE MANUAL





# **DETAIL A**

77640J00

Brake System Pressure Check Figure 501

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### **MAINTENANCE MANUAL**

### LANDING GEAR CONTROL CABLE — REMOVAL / INSTALLATION

# 1. Landing Gear Control Cable — Removal / Installation

# A. Preparation

### SPECIAL TOOLS AND TEST EQUIPMENT

CONSUMABLES				

# (1) References

- Aircraft Jacking Procedure, 07-10-00, Maintenance Practices
- Safe Ground Maintenance Procedure, 20-00-10, Maintenance Practices
- Landing Gear Extension and Retraction Normal Functional Test, 32-30-00, Adjustment / Test or Code 323001

# (2) Aircraft Preparation

**NOTE:** The landing gear control cable connects the landing gear control handle to the landing gear selector valve.

- (a) Prepare aircraft for safe ground maintenance. See Safe Ground Maintenance Procedure, 20-00-10, Maintenance Practices.
- (b) Ensure work area is clean and clear of tools and miscellaneous items of equipment.
- (c) Jack aircraft. See Aircraft Jacking Procedure, 07-10-00, Maintenance Practices.
- (d) Remove left console side panels.

### B. Removal

**NOTE:** The following numbers in parentheses () are used in conjunction with Figure 401.

- (1) In nose landing gear wheel well, remove cotter pin (14), nut (13), washers (9), bolt (10) and disconnect rod end (12) from landing gear control handle. Discard cotter pin.
- (2) Loosen rod end jam nut (11) and remove rod end (12) from cable (2).
- (3) Remove cotter pin (14), nut (13), washers (9), bolt (10) and disconnect rod end (12) from lever of landing gear selector valve assembly (1). Discard cotter pin.
- (4) Loosen rod end jam nut (11) and remove rod end (12) from cable (2).
- (5) Cut and remove safety wire and loosen fixing nuts (6, 8) attaching cable (2) to brackets (3, 5).
- (6) Cut and remove safety wire and remove nut (4).
- (7) Pull cable (2) from aft end and remove cable from aircraft.

WARNING: ENSURE ALL CABLE MOUNTING HARDWARE IS ACCOUNTED FOR WHEN REMOVING CABLE. HARDWARE COULD BECOME LODGED IN FLIGHT CONTROL MECHANISM IF NOT REMOVED. FAILURE TO COMPLY MAY RESULT IN JAMMING OF FLIGHT CONTROLS AND INJURY TO PERSONNEL.

(8) Remove all washers and seals on cable being removed from aircraft.

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### **MAINTENANCE MANUAL**

## C. Installation

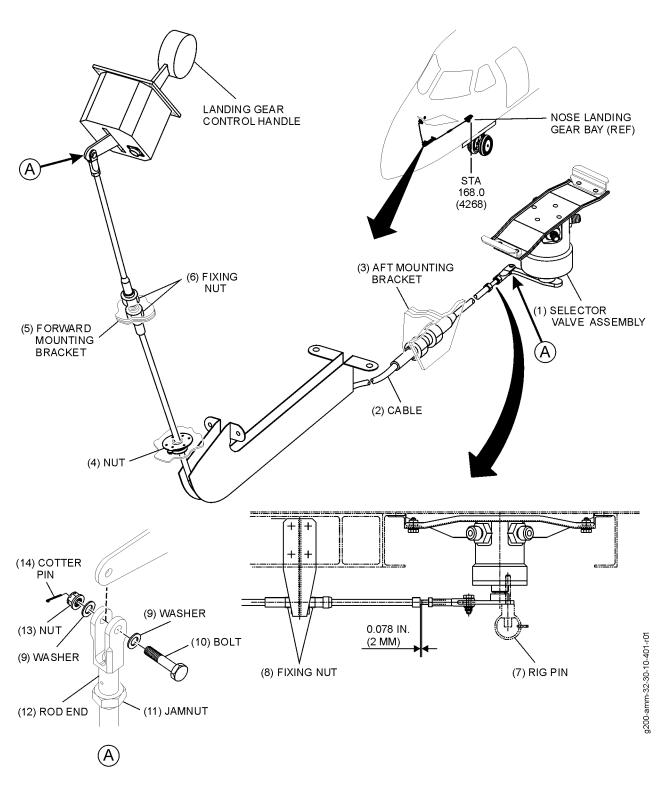
NOTE: The following numbers in parentheses () are used in conjunction with Figure 401.

- (1) Insert cable (2) through forward bracket (5).
  - **NOTE:** Lock washers, nuts, special washers and seal are supplied with cable assembly.
- (2) Install washer, seal and special washer (supplied with cable) into forward bracket (5). Inspect for proper fit.
- (3) Install nut (4). Do not tighten nut at this time.
- (4) Position control cable (2) on forward mounting bracket (5) and aft mounting bracket (3). Ensure middle point of threads are centered on brackets. Do not tighten fixing nuts (6, 8) at this time.
- (5) Select landing gear selector valve assembly (1) lever to DOWN.
- (6) Insert quick-release rig pin (7) through rigging hole in landing gear selector valve assembly (1) lever and valve housing to lock valve in DOWN position.
- (7) Install rod ends (12) to cable (2) and tighten jam nuts (11).
- (8) Connect rod ends (12) to landing gear control handle and landing gear selector valve assembly (1) lever by installing bolts (10), washers (9) and nuts (13). Do not tighten nuts (13) or install cotter pins (14) at this time.
- (9) Ensure inspection holes of rod ends (12) are covered.
- (10) Measure clearance between thread end and rubber seal face at selector valve assembly (1) connection. Minimum clearance should be 0.078 inch.
- (11) Torque nuts (13) to 12 15 inch-pounds and secure with cotter pins (14).
- (12) Remove cable backlash by tightening of rod end jam nuts (11) and fixing nuts (6, 8).
- (13) Remove rig pin (7) from landing gear selector assembly valve (1).
- (14) Operate LANDING GEAR CONTROL handle up and down and check for smooth movement without binding.
- (15) Hand tighten nut (4) to obtain seal between cable (2) and structure.
- (16) Secure fixing nuts (6, 8) and nut (4) with 0.041 inch safety wire.

# D. Follow On

- (1) Inspect for presence of foreign objects.
- (2) Install left console side panels.
- (3) Perform Landing Gear Extension and Retraction Normal Functional Test, 32-30-00, Adjustment / Test or Code 323001.
- (4) Remove aircraft from jacks. See Aircraft Jacking Procedure, 07-10-00, Maintenance Practices.
- (5) Record all maintenance actions in accordance with current governing authority.

# GULFSTREAM G200 MAINTENANCE MANUAL



Landing Gear Control Cable - Removal / Installation Figure 401

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