

GULFSTREAM IV

MAINTENANCE MANUAL

TOOLS AND EQUIPMENT — SYSTEM DESCRIPTION

1. Description

A. General

(1) Tools and Special Support Equipment

The following table lists tools and special support equipment used on the aircraft:

PART NO.	NOMENCLATURE	APPLICATION	
02-7825-0100 (Aircraft 1000 - 1213 excluding 1183 having ASC 190 or ASC 266 and 1183, 1214 and subsequent)	Axle Jack (20 Ton)	Special jack to fit between wheels of nose and main landing gears (Tronair).	
2928 (Aircraft 1000 - 1213 excluding 1183 not having ASC 190 or ASC 266)	Axle Jack (17 Ton)	Special jack to fit between wheels of nose and main landing gears (Regent Jack Manufacturing Company, Inc.). Jack P/N 2928 may be replaced by P/N 02-7825-0100 for Aircraft 1000 - 1213 excluding 1183.	
159SEM30015	Windshield Sling Assembly	Used for removal and installation of front windshields.	
115940000-1 DOL	Engine Dressing / Parking Stand	Used to support engine after removal.	
115940000-1/2-01	Engine Dressing / Parking Stand Extender	Used to lift engine off dressing stand.	
115940000-1/P-03			
115940010-1IF	Leading Edge Template (Left Inboard)	Used to ensure proper alignment of new leading edge.	
115940010-1IF	Leading Edge Template (Left Outboard)		
115940010-2IF	Leading Edge Template (Right Outboard)		
115940010-2IF	Leading Edge Template (Right Inboard)		
115940020-1IF	Leading Edge Template (Left Middle)		
115940020-2IF	Leading Edge Template (Right Middle)		
1159C40103-01-02-BSP	Torque Adapter Spanner Wrench		Used to install control column wheel to control column.
1159CS20004-TEC	Rudder / Elevator Balance Fixture		Use to check balance and set balance of rudder and elevator.
1159CS20006-01-02 ICF	Aileron Balance Fixture	Used to check and set aileron balance.	

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
1159CS20005-01-21 CT2	Shoe Clearance Tool C Track	Used to check and install flap track shoe clearance on C track.
1159CS20005-01-21 CT18	Shoe Clearance Tool B Track	Used to check and install flap track shoe clearance on B track.
1159FTESK0004	Air Pressure Regulator Box	Used to provide controlled air source for Bleed Air System - Functional Check.
1159GSE111-1	Thrust Reverser Ground Lock	Used to lock T/Rev in stow position on ground.
1159GSE111-31 1159GSE40219-1	Thrust Reverser Ground Lock	Used to lock T/Rev in deploy position on ground.
1159GSE113-11	Throttle Retarder Cable Rigging Gage	Used in rigging thrust reverser interlock feedback control system.
1159GSE118-1	Nose Cowl Sling	Used to remove nose cowl from engine.
1159GSE40114-5	Nose Cowl Inlet Plug Assembly	Used to prevent intrusion of dust and moisture into nose cowl / thrust reverser outlet during storage and ground handling.
1159GSE40115-11	Thrust Reverser Outlet Plug Assembly	
1159GSE40125-7	Fuel Panel Attachment Point	Stabilizing line for lifting aircraft.
1159P41210-1 / -2 HOE	Upper Cowl Sling	Used to remove upper cowl.
1159P41460-1 / 2 HOE	Aft Cowl / Thrust Reverser Sling	Used to lift and remove aft cowl / thrust reverser off aircraft.
1159SB43310-1 (Aircraft having ASC 213, 354)	Cargo Door Jury Strut	Used to maintain cargo door in open position.
GSE3200837	Main Gear Nutcracker Switch Test Box	Used to stimulate on ground condition with aircraft on jacks.
1159SEAV20100-1-3	Fuel Quantity Test Cable	Used with GTF-1 or TF-20 Quantester for testing liquid quantity gaging systems.
1159SEAV20277-5 1159SEAV20876-905	Probe Selector Box	Used to check fuel probes and harness.
GSE2700481	Flap Asymmetry Test Box	Used to check flap asymmetry.
1159SEAV30099-101	Fuel Adapter Harness Tester	Used to check fuel quantity gaging system. To be used with GTF-1 or TF-20.
GSE2900401	Hydraulic Test Stand	Used to provide additional control during rigging of thrust reverser door.

12-03-00

GULFSTREAM IV MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
1159SEAV30113-1	Hoist Assembly	Used to lift and lower electrical converters from tail compartment.
1159SEAV40100	324 / 325 Test Point Breakout Box	Check resistance of diodes and grounds in ground spoiler and nutcracker systems.
1159SEAV40121	Antiskid Check Box	Used to check control box voltage, wheel and valve continuity and operation.
1159SEAV40122	Pedestal Switch Adjustment Breakout Box	Used to verify adjustment of pedestal switches.
1159SEAV40138	Alternator / Converter Test Harness	Used to check alternator and converter by allowing an alternator to be connected to a known good converter or allowing a converter to be connected to a known good alternator.
1159SEAV40163V1	HMAB Breakout Box	Used to fault isolate antiskid system.
1159SEAV40236-1	G Meter Breakout / Test Box	Used to perform G Monitor System - Functional Test.
1159SEAV40238-1	ELWS Breakout Box	Used to perform Electrical Load Warning System - Functional Test.
1159SEFL20097-1	Fuel Vent Screen Assembly	Used to protect left and right fuel tank vents when aircraft is stored.
1159SEFL20278-1	Outboard Fuel Tank Vent Plug	Used to plug fuel tank vent when pressure checking or inerting fuel tanks. Must be used with 1159SEFL20284-1.
1159SEFL20282-1	Brake Bleed Adapter Assembly	Used to assist in brake bleeding.
1159SEFL20284-1	Wing Fuel Tank Pneumatic Adapter Assembly	Used to permit application of air or gas into wing tanks for pressure checking or inerting. Must be used with 1159SEFL20278-1.
1159SEFL20370-1	Engine Lubricating Oil Replenishing Pump Assembly (Portable Hand Pump)	Used to replenish engine lubricating oil if reservoir pump in tail has failed.
1159SEM20008-1	Wing Jack Pad Assembly (Left Hand)	Used with wing jacks to raise left wing.
1159SEM20008-2	Wing Jack Pad Assembly (Right Hand)	Used with wing jacks to raise right wing.
1159SEM20027	Rig Pin	Used to assist in rigging engine controls.

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
1159SEM20028	Push Pull Gage Assembly	Used to check cowl latch springs and power lever friction.
1159SEM20039-9	Auxiliary Power Unit (APU) Sling Assembly	Used to lift APU when outside aircraft.
1159SEM20045-1	Universal Throw Board Assembly	Used to check control surfaces.
1159SEM20047-1	Cable Disconnect 3/32 inch Tool Assembly	Used to assist in joining control cables.
1159SEM20048-1	Nose Wheel Door Ground Safety Strut Assembly	Used to maintain nose wheel door in open position when aircraft is on the ground and not in use.
1159SEM20052-1	Forward Fuselage Jack Pad Assembly	Used to raise aircraft at forward fuselage point.
1159SEM20091-1	Shot Pad Assembly	Used to assist in installing wing leading edge.
1159SEM20092-11	Socket Wrench	Used to remove main and nose wheel axle nut.
1159SEM20095-15	Nose Gear Manual Control Valve Lock Assembly	Used to maintain landing gear manual control valve in open position while aircraft is on ground.
1159SEM20095-21	Nose Gear Safety Lock Assembly	Used to lock nose gear in down position.
1159SEM20095-5	Main Gear Safety Lock Assembly	Used to lock main gear in down position.
1159SEM20095-9	Main Gear Manual Control Valve Pin Safety Lock Assembly	Used to open and maintain landing gear doors in open position while aircraft is on ground.
1159SEM20105-1	Door Retaining Cable Assembly	Used to prevent airstair door from dragging on ground when aircraft is being towed.
1159SEM20262-1	Fuselage Pitot Cover Assembly	Used to protect fuselage pitot tubes against foreign matter when aircraft is on ground.
1159SEM20264-1	Stabilizer Hoisting Sling Assembly	Used to assist in removing stabilizer.
1159SEM20268-1	Stabilizer Access Cover Lifting Bolt Wrench	Used to remove stabilizer access cover to enable attachment of 1159SEM20264-1 Sling Assembly.
1159SEM20269-1	Rudder Removal and Installation Hoist Assembly	Used to assist in rudder removal and installation.

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
1159SEM20271-11	Quadrant Positioner Protractor Assembly	Used to position microswitches on pedestal assembly.
1159SEM20271-13		
1159SEM20271-15		
1159SEM20281-1	Stabilizer Torque Wrench Assembly	Used to torque stabilizer swivel nut.
1159SEM20283-1	Fastener O-ring Insertion Tool Set	Used to assist in replacement of O-rings on rivets when repairing fuel leaks.
1159SEM20358-1	Protractor (Pendulum)	Used to check and set trim tab throw.
1159SEM20375-1	Pressure Gun with Nozzle	Used to provide lubrication of nose gear door and flap rollers.
159SEM30001-3 (Aircraft 1000 - 1080 not having ASC 190 or ASC 266) See Note in APPLICATION column.	Main Landing Gear Jack Pad Assembly	Used to raise aircraft by main landing gear for work on wheel and / or brake (-3 and -5 are replaced by -11 when used with jack P/N 02-7825-0100). NOTE 1159SEM30001-11 replaces jack adapters 1159SEM30001-7 and -9. NOTE The -7 and -9 jack adapters must not exceed 67,800 pounds jacking weight.
1159SEM30001-5 (Aircraft 1081 - 1213 excluding 1183 not having ASC 190 or ASC 266) See Note in APPLICATION column.		
1159SEM30001-11 (Aircraft 1000 - 1213 excluding 1183 having ASC 190 or ASC 266 & 1183, 1214 - 1424)		
1159GSE40214-1 (Aircraft 1425 and subsequent). See Note in APPLICATION column.		The 1159GSE40214-1 jack adapter comes with bushing required to install jack adapter in axle of aircraft. Aircraft 1425 and subsequent do not have bushings installed in axles. NOTE Damage to axle will occur if jack adapter is used without bushings on Aircraft 1425 and subsequent.
1159SEM30336-5	Fly Away Towbar Assembly (3 piece)	Used to tow aircraft. Designed to be stowed and carried in aircraft.
1159SEMP20296-3	Auxiliary Power Unit Exhaust Plug Assembly	Used to protect APU exhaust against intrusion of foreign matter.

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
1159SEMP20298-1	Air Conditioning Ram Air Exhaust Cover Assembly	Used to protect ram air outlet duct against intrusion of foreign matter.
1159SEMP20298-2	Air Conditioning Ram Air Scoop Inlet Plug Assembly (Left Hand)	Used to protect ram air scoop against intrusion of foreign matter.
1159SEMP20298-2	Air Conditioning Ram Air Scoop Inlet Plug Assembly (Right Hand)	
1159SEMP20299-1	Cabin Out Flow Valves Cover Assembly	Used to protect against intrusion of foreign matter into cabin out flow ducts.
1159GSE20006-5	Spline Adapter Installation Tool	Used to install engine alternator spline adapter.
1159GSE20006-7	Spline Adapter Installation Tool	Used to install APU alternator spline adapter.
1159SEP30100-5	Spline Adapter Installation Tool	Used to install engine and APU alternator spline adapters.
1159SEP30101-3	Spline Adapter Removal Tool	Used to remove engine and APU alternator spline adapters.
1159SEP30110-1	Spline Adapter Installation Tool	Used wih 1159SEP30100-5 to install APU alternator spline adapter.
1159SEP30110-3	Spline Adapter Installation Tool	Used wih 1159SEP30100-5 to install APU alternator spline adapter.
1159SEP30110-3	APU Alternator Adapter Mounting Tool	Used to install spline adapter into APU alternator drive shaft assembly.
1159SEP40000-1	Left Hopper Door Adapter	Used to form gasket / seal on hopper door.
1159SEP40000-2	Right Hopper Door Adapter	
1159SEP40001-1	Wing Access Cover Adapter (Inboard)	2 required.
1159SEP40002-1	Wing Access Cover Adapter (Outboard)	2 required.
1159TEM20506-1	Tail Attachment Point	Used to attach stabilizing line to aircraft tail for lifting aircraft with airbags.
GTF-1 / TF-20	Capacitance Measuring Equipment	Used to validate capacitance of fuel probes and compensator.
MS-17987C313	Thrust Reverser Control Valve Ground Safety Pin	Used to lock control valve in de-armed position on ground.
SD-20.510	Spanner Torque Wrench Adapter	Used for removal / installation of control column wheel assembly.
ST905-072	Special Wrench	Used to torque nose gear axle fitting.

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

PART NO.	NOMENCLATURE	APPLICATION
ST905-285	Special Wrench	Used to torque upper sheer bolts on fixed cowl.

12-03-00

GULFSTREAM IV

MAINTENANCE MANUAL

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12-03-00

Page 8
May 20/10