



737-300/400/500

AIRCRAFT MAINTENANCE MANUAL

TASK 32-41-41-404-019

2. Main Gear Brake Installation

A. Standard Tools and Equipment

- (1) No tool is required

B. Consumable Materials

- (1) D50013 Grease - Aeroshell 22
- (2) D50025 Grease - BATCO X8401-2
- (3) D00388 Grease - Aeroshell #5 (Optional)
- (4) D50005 Grease - Mobil Aviation Grease SHC 100
- (5) D00006 Ease - Off 990
- (6) A00164 Adhesive - BAC 5010
- (7) D00400 Fluid - Hydraulic, BMS 3-11

C. References

Reference	Title
07-11-11 P/B 201	JACK AIRPLANE - MAINTENANCE PRACTICES
12-12-00 P/B 301	HYDRAULIC RESERVOIR - SERVICING
12-15-51 P/B 301	LANDING GEAR TIRE - SERVICING
20-50-11	STANDARD TORQUE VALUES
29-15-00 P/B 201	HYDRAULIC SYSTEMS A, B, AND STANDBY - MAINTENANCE PRACTICES
32-41-00 P/B 201	HYDRAULIC BRAKE SYSTEM - MAINTENANCE PRACTICES
32-45-11 P/B 401	MAIN GEAR WHEEL AND TIRE - REMOVAL/INSTALLATION

D. Location Zones

Zone	Area
101	Control Cabin - Left
102	Control Cabin - Right
310	Left Main Landing Gear
410	Right Main Landing Gear

E. Prepare to Install the Brake

(Figure 402)

SUBTASK 32-41-41-874-072

- (1) Do the following steps to bleed the brake on the bench.

NOTE: These steps are optional that may reduce the time required to bleed the brake.

- (a) Set the brake on a bench in its usual, upright position as installed on the airplane (brake port on the top).
- (b) Apply a light coating of BATCO X8401-2 grease on the brake half of the brake disconnect, from the diametrical surface above the upper retaining ring to the top of the brake half.
- (c) Install the brake coupling half of the disconnect as follows:
 - 1) Lubricate the brake coupling half of the disconnect with hydraulic fluid.
 - 2) Turn the brake coupling half of the disconnect into the boss with your hand (in the brake housing) until its flange touches the face of the boss.

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- 3) Turn the flange counterclockwise to align the bolt holes.

NOTE: The flange must not touch the boss when the bolt holes are aligned.

- (d) Attach a hydraulic line with a mating hose disconnect between the brake assembly and a hydraulic pressure source that can supply a minimum of 250 psi of hydraulic fluid.
- (e) Carefully bleed the brake assembly as follows:
 - 1) Remove the bleeder screw and the washer from the bleeder valve.
 - 2) Connect a flexible hose to the bleed valve of the brake.
 - 3) Put the free end of the hose into a clean receptacle not fully filled with the same type of fluid used to bleed the brake.

CAUTION: MAKE SURE TO KEEP YOUR FINGERS AWAY FROM THE PARTS OF THE BRAKE THAT MOVE DURING THE BLEED OPERATION. INJURIES TO PERSONS CAN OCCUR.

- 4) Apply a fluid pressure of approximately 250 psi to the brake until the pistons are fully extended.
- 5) Stop the supply of the fluid pressure from the pump.
- 6) Open the bleed valve and allow the pistons to retract fully.
- 7) Monitor the quantity of air in the fluid that is in the receptacle.
- 8) Close the bleed valve.
- 9) Do the bleed procedure again until all the air in the fluid is gone.
- 10) Remove the bleed hose and install the bleed screw and the washer in the bleed valve.
- 11) Tighten the bleed valve screw to 40 +/- 10 pound-inches.
- 12) Safety the bleed valve screw with lockwire.

SUBTASK 32-41-41-424-077

- (2) If it is necessary to replace the brake mounting gasket, do the steps that follow:

SWA 054-150, 518-525; SWA 001-053, 201, 202, 301-309, 321-325, 327, 329, 331, 332, 347-358, 361-367, 375, 376, 380, 381, 501-517, 530-999 PRE SB 737-32-1253

NOTE: For airplanes that have the phenolic gasket configuration, it is recommended that the metallic gasket configuration be installed per SB 32-1253

- (a) Put the gasket through the studs against the brake flange.

NOTE: You can use BAC 5010 (Type 94) adhesive to hold the gasket to the brake flange. Apply the adhesive to 3 to 5 locations between the holes.

SWA 054-109, 518-525; SWA 001-053, 201, 202, 301-309, 321-325, 327, 329, 331, 332, 347-358, 361-367, 375, 376, 380, 381, 501-517, 530-999 POST SB 737-32-1253

- (b) Replace the gasket as follows:
 - 1) Put the gasket against the brake flange.

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- (c) Install the two shear studs through the gasket and into the brake flange holes at the 3 o'clock and 9 o'clock positions (12 o'clock position is straight up with the gear down and locked):
 - 1) Apply a layer of BMS 5-95 sealant on the part of the stud shanks that is not threaded.

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- 2) Push the studs into the holes on the brake flange.

NOTE: A temperature differential fit (refer to BAC5435) can be used to make the installation easier and/or prevent damage to the studs.

- 3) Apply a layer of Ease-Off 990 or equivalent to the threads of the studs.
- 4) Install the washers and the nuts.
- 5) Turn the nuts with a dial or a needle type torque wrench to find the run-on torque.
- 6) Tighten the nuts to a torque of 200 - 300 pound-inches plus the run-on torque but do not tighten more than 700 pound-inches (total torque).

F. Install the Main Gear Brake

(Figure 401)

SUBTASK 32-41-41-644-026

- (1) Lubricate the threads of the brake mounting bolts with Ease-Off 990 or equivalent.

SUBTASK 32-41-41-424-027

- (2) Put the brake in its position on the axle with its bleed port at the top.

SUBTASK 32-41-41-424-028

- (3) Install the brake mounting bolts, the washers and the nuts with the bolt heads pointed to the outer end of the axle.

NOTE: Make sure you use the correct grip length bolts during installation. The correct bolt grip length is 15/16 inch.

NOTE: Make sure that the head of the bolt is pointing toward the outer end of the landing gear axle. Incorrect bolt orientation will result in interference between the bolt and the wheel grease seal.

SUBTASK 32-41-41-424-056

CAUTION: IF YOU INSTALL THE SAME LOCKNUTS THAT YOU REMOVED, YOU MUST DO A CHECK TO MAKE SURE THAT THE LOCKNUTS MEET THE MINIMUM BREAKAWAY TORQUE VALUES AS GIVEN IN (SUBJECT 20-50-11).

- (4) Tighten the brake mounting bolts as follow:

- (a) Tighten the bolts to the first torque of 60-70 pound-feet in a criss-cross pattern.

NOTE: Tighten the bolts, not the nuts.

- (b) Tighten the bolts to the last torque of 125-135 pound-feet in a circular pattern.

SUBTASK 32-41-41-434-037

- (5) Connect the hydraulic line to the brake pressure port:

- (a) Do the steps that follow:

- 1) Lubricate the new preformed seal and the two backup rings with clean hydraulic fluid.
- 2) Install the seal and the backup rings in the groove of the outer body of the brake disconnect valve.
- 3) Before installing the hose half of the brake disconnect, apply a light coating of BATCO X8401-2 grease on the underside of the mounting flange of the hose half.
- 4) Engage the outer body of the brake disconnect valve with the inner part installed in the pressure port of the brake carrier.
- 5) Put the outer body of the disconnect valve in its position with the three holes aligned and the hydraulic hose pointed forward.

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- 6) Apply a light coating of BATCO X8401-2 grease to the threads and shanks of the three mounting bolts.
- 7) Install the three bolts, P/N BACB30NM4HK3, and 3 washers, P/N BACW10BP4ACU.
- 8) Tighten the bolts to a torque of 72 - 82 pound-inches.
 - a) Install lockwire on the bolts.

SUBTASK 32-41-41-094-039

- (6) Remove the axle thread protector and the axle protection sleeve.

SUBTASK 32-41-41-494-040

- (7) Install the axle thread protector.

SUBTASK 32-41-41-644-041

- (8) Fully clean the axle and apply a light layer of the grease Aeroshell 22.

SUBTASK 32-41-41-414-042

- (9) Install the main gear wheel (PAGEBLOCK 32-45-11/401).

SUBTASK 32-41-41-844-043

- (10) Lower and remove the axle jack (PAGEBLOCK 07-11-11/201).

SUBTASK 32-41-41-844-044

- (11) Pressurize hydraulic Systems A and B (PAGEBLOCK 29-15-00/201).

SUBTASK 32-41-41-874-045

- (12) Bleed the brakes (PAGEBLOCK 32-41-00/201).

SUBTASK 32-41-41-614-046

- (13) Fill the hydraulic reservoir (PAGEBLOCK 12-12-00/301).

SUBTASK 32-41-41-844-047

- (14) Set the parking brakes.

SUBTASK 32-41-41-224-048

- (15) Do a check for correct tire pressure (PAGEBLOCK 12-15-51/301).

————— **END OF TASK** —————

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