

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

MAIN LANDING GEAR TIRE AND WHEEL ASSEMBLY REMOVAL/INSTALLATION

1. Remove the Main Landing Gear Tire and Wheel Assembly

32-41-11-000-801

A. General

This task gives you the procedure to remove and install the main landing gear (MLG) tire and wheel assembly. This task is applicable to the left and the right MLG tire and wheel assemblies.

B. Special Tools and Materials

Special Tools	Item No.	Materials/ Consumables	Item No.
Torque wrench, 10-50 in-lb.		Grease	2-103
Torque wrench, 40-200 in-lb.		Lockwire	3-105
Torque wrench, 200-1000 in-lb.			

C. References

- (1) 07-11-10-500-801, Lift the Airplane with Three Jacks.
- (2) 07-11-10-500-802, Lift the Airplane with One Jack.
- (3) 12-11-14-600-801, Do the Servicing of the Airplane Tires.
- (4) 20-00-01-910-801, Make the Airplane Safe for Maintenance.
- (5) 20-11-10-910-801, Standard Torque Procedures.
- (6) 20-11-14-910-801, Install the Safety Devices.

D. Job Set-Up

- (1) Make the airplane safe for maintenance (Ref. 20-00-01-910-801).

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (2) Open, tag and safety the circuit breakers that follow:

Table 401
Circuit Breakers

Name	Panel	Number
LDG GEAR CTRL	Cockpit, left side	B7

- (3) Lift the airplane with one jack (Ref. [07-11-10-500-802](#)).
(4) If applicable, lift the airplane with three jacks (Ref. [07-11-10-500-801](#)).

E. Removal Procedure

- (1) Remove the MLG tire and wheel assembly (Ref. [Figure 401](#)).

WARNING: USE EYE PROTECTION WHEN YOU CUT THE LOCKWIRE. IF YOU DO NOT USE EYE PROTECTION, PIECES OF THE LOCKWIRE CAN BREAK AWAY AND HIT YOUR EYES AND CAUSE INJURY.

- (a) Remove and discard the lockwire from the three screws (4).
(b) Remove the three screws (4) that attach the hubcap assembly (3) to the MLG tire and wheel assembly (2).
(c) Remove and discard the lockwire from the three screws (5).
(d) Remove the three screws (5) that attach the lock tab (6) to the axle nut (7).
(e) Remove the axle nut (7) and the axle washer (8) that attach the MLG tire and wheel assembly (2) to the MLG axle (1).
(f) Remove the MLG tire and wheel assembly (2) from the MLG axle (1).

2. Install the Main Landing Gear Tire and Wheel Assembly

A. Installation Procedure

32-41-11-400-801

- (1) Make the airplane safe for maintenance (Ref. [20-00-01-910-801](#)).
(2) Make sure that the applicable circuit breakers are open, tagged and safetied (Ref. [Table 401](#)).

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (3) Install the MLG tire and wheel assembly (Ref. [Figure 401](#)).

WARNING: DO NOT GET GREASE ON YOUR SKIN OR IN YOUR EYES. WEAR GLOVES AND SAFETY GLASSES. OBEY ALL HEALTH AND SAFETY INSTRUCTIONS. IF YOU GET GREASE IN YOUR EYES, GET MEDICAL AID IMMEDIATELY.

CAUTION: DO NOT APPLY GREASE TO THE SURFACES OF THE WHEEL BEARINGS, SPACER, OR AXLE NUT. GREASE APPLICATION ON THESE AREAS CAN MAKE THE WHEEL ASSEMBLY INSTALL INCORRECTLY.

- (a) Apply grease ([2-103](#)) to the threads of the axle nut (7).
(b) Install the MLG tire and wheel assembly (2) on the MLG axle (1).

CAUTION: WHILE YOU TORQUE THE AXLE NUT, MAKE SURE THAT YOU TURN THE TIRE AND WHEEL ASSEMBLY.

- (c) Install the axle nut (7) together with the axle washer (8) to attach the MLG tire and wheel assembly (2) to the MLG axle (1). Use a torque wrench to torque the axle nut to 360 in-lb. (Ref. [20-11-10-910-801](#)).
(d) Loosen the axle nut (7). The torque must be less than 80 in-lb.
(e) Use a torque wrench to torque the axle nut (7) to 120-160 in-lb. (Ref. [20-11-10-910-801](#)). Make sure that the lock tab (6) can engage the slots in the MLG axle (1).
(f) Install the three screws (5) together with the lock tab (6) on the axle nut (7). Make sure the lock tab (6) is fully engaged in the slots on the MLG axle (1).
(g) Use a torque wrench to torque the three screws (5) to 25-30 in-lb. (Ref. [20-11-10-910-801](#)).

CAUTION: DO NOT INSTALL THE LOCKWIRE INCORRECTLY. INCORRECT LOCKWIRE INSTALLATION CAN CAUSE INCORRECT WHEEL SPIN DATA.

- (h) Use lockwire ([3-105](#)) to safety the three screws (5) (Ref. [20-11-14-910-801](#)). Make sure to put the end of the lockwire under the lock tab (6).
(i) Apply grease ([2-103](#)) to the threads of the three screws (4) of the hubcap assembly (3).
(j) Install the three screws (4) to attach the hubcap assembly (3) to the MLG tire and wheel assembly (2). Use a torque wrench to torque the three screws to 25-30 in-lb. (Ref. [20-11-10-910-801](#)).
(k) Use lockwire ([3-105](#)) to safety the three screws (4) (Ref. [20-11-14-910-801](#)).

B. Follow-On Maintenance

- (1) Service the airplane tire (Ref. [12-11-14-600-801](#)).

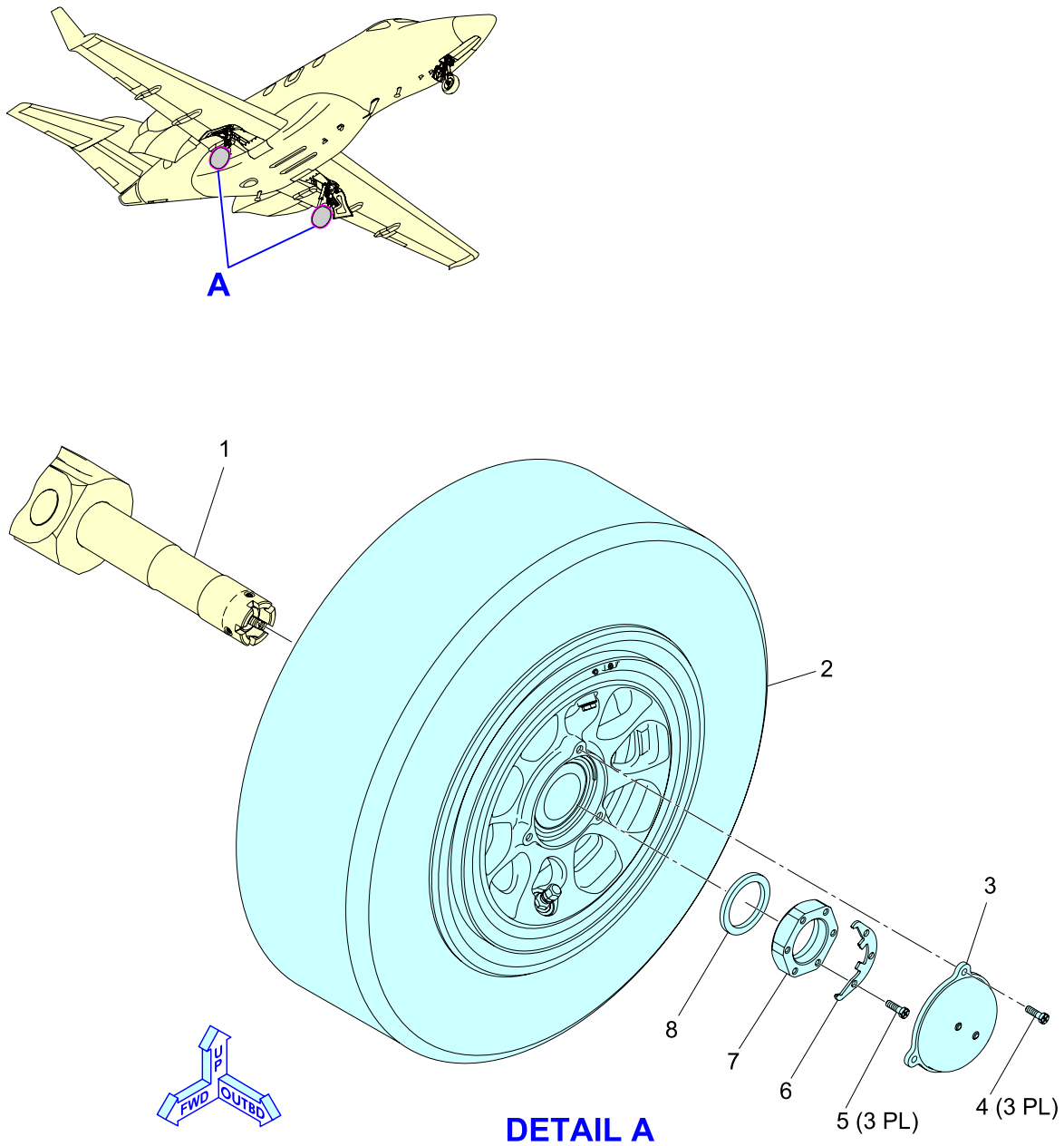
Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- I (2) Lower the airplane with one jack (Ref. [07-11-10-500-802](#)).
- I (3) If applicable, lower the airplane with three jacks (Ref. [07-11-10-500-801](#)).
- (4) Close access to the component.
 - (a) Examine the area for foreign objects.
 - (b) Close the applicable circuit breakers (Ref. [Table 401](#)).
 - (c) Remove the applicable warning signs.
 - (d) Remove the tools and equipment from the work area.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual



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Figure 401
Main Landing Gear Tire and Wheel Assembly

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

AIRCRAFT JACKING MAINTENANCE PRACTICES

1. Lift the Airplane with Three Jacks

07-11-10-500-801

A. General

This task gives you the procedures to lift the airplane with three jacks.

B. Special Tools and Materials

Special Tools	Item No.	Materials/ Consumables	Item No.
Torque wrench, 10-50 in-lb.			
Aircraft jack (MLG)	07-10-01		
Aircraft jack (NLG)	07-10-02		
Jack pad adapter kit	07-10-03		
Tail stand	07-10-04		

C. References

- (1) 06-40-00-910-801, Access Panels, Doors, and Removable Fairings.
- (2) 08-21-10-910-801, Aircraft Leveling.
- (3) 20-00-01-910-801, Make the Airplane Safe for Maintenance.
- (4) 20-11-10-910-801, Standard Torque Procedures.

D. Job Set-Up

- (1) Make the airplane safe for maintenance (Ref. [20-00-01-910-801](#)).
- (2) Open, tag and safety the circuit breakers that follow:

Table 201
Circuit Breakers

Name	Panel Location	Number
L PROBE HEAT	Cockpit, left side	D11
WX RADAR	Cockpit, left side	D13
R PROBE HEAT	Cockpit, right side	E11

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (3) Remove or open the applicable access panels, doors or fairings that follow (Ref. [06-40-00-910-801](#)):

Table 202
Access Panels, Doors and Fairings

Name	Number
Mid forward flap fairing	561EB
Mid forward flap fairing	661EB

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

E. Procedure

WARNING: OBEY THIS WARNING IF YOU JACK THE AIRPLANE OUTSIDE. MAKE SURE THAT THE WIND CONDITION IS CALM. MAKE SURE THAT YOU JACK THE AIRPLANE ON A LEVEL SURFACE WITH THE AIRCRAFT FACING IN THE DIRECTION OF THE WIND. HIGH WINDS CAN CAUSE THE AIRPLANE TO MOVE OFF OF THE JACKS FOR WHICH DEATH OR INJURY CAN OCCUR.

WARNING: DO NOT TRY TO JACK THE AIRPLANE IF THE WEIGHT OF THE AIRPLANE IS MORE THAN 10,680 LBS. MAXIMUM LIMIT FOR AIRPLANE JACKING IS 10,680 LBS. DAMAGE TO THE AIRPLANE, DEATH OR INJURY CAN OCCUR.

CAUTION: DO NOT TRY TO JACK THE AIRPLANE WITH THE PARKING BRAKE ON. THE AIRPLANE CAN MOVE FROM THE JACKS WITH THE PARKING BRAKE ON. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT TRY TO OPERATE THE LANDING GEAR WITH THE LANDING GEAR SAFETY LOCKS INSTALLED. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT WALK ON THE OUTBOARD SECTION OF THE WING WHEN THE AIRPLANE IS ON JACKS. IF YOU WALK ON THE OUTBOARD SECTION OF THE WING, THE AIRPLANE CAN MOVE FROM THE JACKS. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT TRY TO JACK THE AIRPLANE WITH WEIGHT ON WHEELS WEDGES INSTALLED. IF YOU JACK THE AIRPLANE WITH THE WEIGHT ON WHEELS WEDGES INSTALLED, YOU CAN BEND OR BREAK THE WEIGHT ON WHEELS SWITCH.

(1) Lift the airplane with three jacks.

- (a) If applicable, move the airplane into a hangar or onto an apron. Make sure the area is as level as possible and the airplane will not move when the parking brake is released.

CAUTION: DO NOT LET THE AIRPLANE BECOME TILTED. THE AIRPLANE CAN MOVE FROM THE JACKS. THE AIRPLANE MUST STAY LEVEL OR DAMAGE TO THE AIRPLANE CAN OCCUR.

- (b) If necessary, add ballast to get the airplane in the correct center-of-gravity range.

NOTE: If you do not know where to put the ballast, then speak with the HACI Customer Service Department.

CAUTION: DO NOT USE THE TAIL STAND TO LIFT THE AIRPLANE. THE TAILSTAND IS ONLY USED TO MAKE THE AIRPLANE MORE STABLE. DAMAGE TO THE AIRPLANE CAN OCCUR.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (c) Put a tail stand (07-10-04) (8) below the aft fuselage at FS 360.91 (Ref. [Figure 203](#) and [Figure 206](#)).
- (d) Remove the four screws (1) from the jack pad fitting location on the fuselage (Ref. [Figure 201](#)).
- (e) Put the jack pad fitting (2) into position for installation to the fuselage.
- (f) Install the four bolts (4) together with the four washers (3) that attach the jack pad fitting (2) to the fuselage. Use a torque wrench to torque the four bolts to 25-30 in-lb. (Ref. [20-11-10-910-801](#)).
- (g) Put the nose landing gear (NLG) jack (07-10-02) (6) in the correct position below the jack pad fitting. Make sure that the ram extension (2) has the concave cup (1) installed (Ref. [Figure 203](#)).
- (h) Remove the lock pin (3).
- (i) Adjust the ram extension (2) until the concave cup (1) is near the jack pad fitting.
- (j) Install the lock pin (3) in the ram extension (2).

WARNING: DO NOT LET YOUR HANDS GET CAUGHT BETWEEN THE NOSE JACK AND THE NOSE JACK PAD FITTING. INJURY TO HAND CAN OCCUR.

- (k) Slowly extend the NLG jack (07-10-02) (6) until it touches the jack pad fitting.
- (l) Put the two main landing gear (MLG) jacks (07-10-01) (7) in the correct position below each wing jack pad fitting. Make sure that the ram extension (2) has the concave cup (1) installed.
- (m) Remove the lock pin (3) and adjust the ram extension (2) until the concave cup (1) is near the wing bracket (1) (Ref. [Figure 202](#)).
- (n) Install the lock pin (3) in the ram extension (2) (Ref. [Figure 203](#)).
- (o) Install the wing jack pad fitting (2) in the wing bracket (1) (Ref. [Figure 202](#)).
- (p) Slowly extend the three jacks (07-10-01 and 07-10-02) (6 and 7) until they touch the three jack pad fittings (Ref. [Figure 203](#)).

CAUTION: DO NOT LET THE AIRPLANE BECOME TILTED. THE AIRPLANE CAN MOVE FROM THE JACKS. THE AIRPLANE MUST STAY LEVEL OR DAMAGE TO THE AIRPLANE CAN OCCUR.

- (q) Slowly extend the three jacks (07-10-01 and 07-10-02) (6 and 7) together to lift the airplane at the same time. Keep the airplane as level as possible.
- (r) Turn the locking collars (5) on the three jacks (07-10-01 and 07-10-02) (6 and 7) as the airplane lifts.
- (s) Examine the jack rams (4). Make sure the locking collars (5) stay a minimum of 2 threads above the jack cylinders (6) as the airplane lifts.
- (t) Adjust the tail stand (07-10-04) (8) as the airplane lifts to keep the airplane as level as possible.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (u) Lift the airplane until all three tires are clear of the ground.
- (v) Level the airplane (Ref. [08-21-10-910-801](#)).
- (w) When all three tires clear the ground and the lifting stops, turn the locking collars (5) to lock the three jacks ([07-10-01](#) and [07-10-02](#)) (6 and 7).
- (x) Make sure that the tail stand ([07-10-04](#)) (8) is against the fuselage, then lock in position.

(2) Lower the airplane.

- (a) Before you lower the airplane, do the steps that follow.
 - 1. Make sure that all workstands and personnel are away from the airplane.
 - 2. Make sure that the landing gear is in the down and locked position.
- (b) Extend the three jacks ([07-10-01](#) and [07-10-02](#)) (6 and 7) to release the locking collars (5) (Ref. [Figure 203](#)).
- (c) Turn the locking collars (9) to let the ram (4) retract into the cylinder as you lower the airplane.
- (d) Examine the jack ram (4). Make sure the locking collar (5) stays a minimum of 2 threads above the nose jack cylinder (6) as the airplane lowers.

CAUTION: DO NOT LOWER THE AIRPLANE WITH THE TAILSTAND AGAINST THE FUSELAGE. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT LOWER THE AIRPLANE WITH THE PARKING BRAKE ON. THE AIRPLANE CAN MOVE FROM THE JACKS WITH THE PARKING BRAKE ON. DAMAGE TO THE AIRPLANE CAN OCCUR.

- (e) Loosen the tail stand ([07-10-04](#)) (8).
- (f) Slowly lower the airplane and adjust the tail stand ([07-10-04](#)) (8) until the three tires touch the ground. Make sure that the airplane stays level as you lower it.

WARNING: DO NOT PUT ANY PARTS OF YOUR BODY BETWEEN THE TIRE AND THE GROUND WHEN YOU LOWER THE AIRPLANE. INJURY OR DEATH CAN OCCUR.

CAUTION: DO NOT LET THE AIRPLANE BECOME TILTED. THE AIRPLANE CAN MOVE FROM THE JACKS. THE AIRPLANE MUST STAY LEVEL OR DAMAGE TO THE AIRPLANE CAN OCCUR.

- (g) Let the full weight of the airplane set on the three tires.
- (h) Let the ram (4) retract into the cylinder to get the correct clearance between the ram (4) and the wing jack pad fittings (Ref. [Figure 203](#)).
- (i) Remove the wing jack pad fittings (2) (Ref. [Figure 202](#)).
- (j) If necessary, adjust the tail stand ([07-10-04](#)) (8) so the fuselage stays stable (Ref. [Figure 203](#)).

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (k) If necessary, remove the tail stand (07-10-04) (8) from the fuselage.
- (l) Remove the four bolts (4) and the four washers (3) that attach the jack pad fitting (2) to the fuselage (Ref. Figure 201).
- (m) Remove the jack pad fitting (2) from the fuselage.
- (n) Install the four screws (1) in the jack pad fitting location on the fuselage. Use a torque wrench to torque the four screws to 25-30 in-lb. (Ref. 20-11-10-910-801).
- (o) Remove the three jacks (07-10-01 and 07-10-02) (6 and 7) away from the airplane.

F. Follow-On Maintenance

- (1) Close access to the airplane.
 - (a) Close the access panels, doors or fairings (Ref. Table 202).
 - (b) Close the applicable circuit breakers (Ref. Table 201).
 - (c) Remove the applicable warning signs.
 - (d) Remove the tools and equipment from the work area.

2. Lift the Airplane with One Jack

07-11-10-500-802

A. General

This task gives you the procedure to lift the airplane with one jack. This procedure is applicable to the left, the right, and the nose landing gear strut for maintenance on the applicable wheel or brake assembly.

B. Special Tools and Materials

Special Tools	Item No.	Materials/Consumables	Item No.
Aircraft jack (NLG)	07-10-02		
Axle jack (MLG)	07-10-06		
NLG strut restraint support tool	07-10-10		
Tail stand	07-10-04		

C. References

- (1) 20-00-01-910-801, Make the Airplane Safe for Maintenance.

D. Job Set-Up

- (1) Make the airplane safe for maintenance (Ref. 20-00-01-910-801).

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

E. Procedure

WARNING: OBEY THIS WARNING IF YOU JACK THE AIRPLANE OUTSIDE. MAKE SURE THAT THE WIND CONDITION IS CALM. MAKE SURE THAT YOU JACK THE AIRPLANE ON A LEVEL SURFACE WITH THE AIRCRAFT FACING IN THE DIRECTION OF THE WIND. HIGH WINDS CAN CAUSE THE AIRPLANE TO MOVE OFF OF THE JACKS FOR WHICH DEATH OR INJURY CAN OCCUR.

WARNING: DO NOT TRY TO JACK THE AIRPLANE IF THE WEIGHT OF THE AIRPLANE IS MORE THAN 10,680 LBS. MAXIMUM LIMIT FOR AIRPLANE JACKING IS 10,680 LBS. DEATH OR INJURY CAN OCCUR.

CAUTION: DO NOT TRY TO JACK THE AIRPLANE WITH THE PARKING BRAKE ON. THE AIRPLANE CAN MOVE FROM THE JACKS WITH THE PARKING BRAKE ON. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT LET PERSONNEL GO IN THE FUSELAGE WHEN THE AIRPLANE IS LIFTED WITH THIS PROCEDURE. MOVEMENT OF THE FUSELAGE CAN MAKE THE AIRPLANE MOVE FROM THE JACK. DAMAGE TO THE AIRPLANE CAN OCCUR.

(1) Do the main landing gear (MLG) single point jacking.

(a) Lift the airplane MLG with one jack (Ref. [Figure 204](#)).

1. Release the airplane parking brake.
2. Put chocks against the opposite MLG tire.
3. Connect the hydraulic hose (2) to the MLG jack ([07-10-06](#)) (1) and the hydraulic hand pump (3).
4. Put the MLG jack ([07-10-06](#)) below the jack pad (4) on the trailing arm (5).
5. Make sure to turn the pump release valve tri-handle to supply pressure to the MLG jack ([07-10-06](#)) (1).

WARNING: DO NOT LET YOUR HANDS GET CAUGHT BETWEEN THE NOSE JACK AND THE NOSE JACK PAD FITTING. INJURY TO HAND CAN OCCUR.

6. Slowly extend the MLG jack ([07-10-06](#)) (1) until it touches the jack pad (4).
7. Slowly extend the MLG jack ([07-10-06](#)) (1) to lift the MLG until the tire is off the ground.

(b) Lower the airplane (Ref. [Figure 204](#)).

1. Make sure that all workstands and personnel are away from the airplane.

WARNING: DO NOT PUT ANY PARTS OF YOUR BODY BETWEEN THE TIRE AND THE GROUND WHEN YOU LOWER THE AIRPLANE. INJURY OR DEATH CAN OCCUR.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

2. Slowly turn the pump release valve tri-handle to release the pressure on the MLG jack (07-10-06) (1).
3. Slowly lower the airplane until the MLG tire touches the ground.
4. Let the full weight of the airplane set on the main tire.
5. Remove the MLG jack (07-10-06) (1) from the jack pad (4) on the trailing arm (5).
6. If necessary, move the chocks slightly away from the MLG tires.

(2) Do the nose landing gear (NLG) single point jacking.

(a) Lift the airplane NLG with one jack (Ref. Figure 205).

1. Put chocks against the MLG tires.

CAUTION: DO NOT LIFT THE AIRPLANE WITH THE TAILSTAND AGAINST THE FUSELAGE. DAMAGE TO THE AIRPLANE CAN OCCUR.

2. Put a tail stand (07-10-04) (8) below the aft fuselage at FS 360.91 (Ref. Figure 203 and Figure 206).
3. Remove the four screws (1) from the jack pad fitting location on the fuselage (Ref. Figure 201).
4. Put the jack pad fitting (2) into position for installation to the fuselage.
5. Install the four bolts (4) together with the four washers (3) that attach the jack pad fitting (2) to the fuselage. Use a torque wrench to torque the four bolts to 25-30 in-lb. (Ref. 20-11-10-910-801).
6. Put the NLG jack (07-10-02) (6) in the correct position below the jack pad fitting. Make sure that the ram extension (2) has the concave cup (1) installed (Ref. Figure 205).
7. Remove the lock pin (3).
8. Adjust the ram extension (2) until the concave cup (1) is near the jack pad fitting.
9. Install the lock pin (3) in the ram extension (2).

WARNING: DO NOT LET YOUR HANDS GET CAUGHT BETWEEN THE NOSE JACK AND THE NOSE JACK PAD FITTING. INJURY TO HAND CAN OCCUR.

10. Slowly extend the NLG jack (07-10-02) (6) until it touches the nose jack pad fitting.
11. Install the NLG strut restraint support tool (07-10-10) (7) to the NLG strut (8).
12. Slowly extend the NLG jack (07-10-02) (6) to lift the airplane.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

13. Examine the nose jack ram (4). Make sure the locking collar (5) stays a minimum of 2 threads above the nose jack cylinder (6) as the airplane lifts.

14. Turn the locking collar (5) on the NLG jack (07-10-02) (6) as the airplane lifts.

CAUTION: DO NOT LIFT THE AIRPLANE WITH THE TAILSTAND AGAINST THE FUSELAGE. DAMAGE TO THE AIRPLANE CAN OCCUR.

15. Adjust the tail stand (07-10-04) (8) as the airplane lifts. Make sure to keep the airplane as level as possible (Ref. Figure 203).

16. Lift the airplane until the NLG tire clears the ground (Ref. Figure 205).

17. When the NLG tire clears the ground and the lifting stops, turn the locking collar (5) to lock the NLG jack (07-10-02) (6).

18. Make sure that the tail stand (07-10-04) (8) is against the fuselage (Ref. Figure 203).

19. Turn the locking collar (5) to lock the tail stand in position (07-10-04).

(b) Lower the airplane (Ref. Figure 205).

1. Before you lower the airplane, do the steps that follow.

a. Make sure that all workstands and personnel are away from the airplane.

b. Make sure that the NLG is in the down and locked position.

2. Extend the NLG jack (07-10-02) (6) to release the locking collar (5).

3. Examine the nose jack ram (4). Make sure the locking collar (5) stays a minimum of 2 threads above the nose jack cylinder (6) as the airplane lowers.

4. Turn the locking collar (5) to let the ram (4) retract into the cylinder as you lower the airplane.

WARNING: DO NOT PUT ANY PARTS OF YOUR BODY BETWEEN THE TIRE AND THE GROUND WHEN YOU LOWER THE AIRPLANE. INJURY OR DEATH CAN OCCUR.

CAUTION: DO NOT LOWER THE AIRPLANE WITH THE TAILSTAND AGAINST THE FUSELAGE. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT LOWER THE AIRPLANE WITH THE PARKING BRAKE ON. THE AIRPLANE CAN MOVE FROM THE JACKS WITH THE PARKING BRAKE ON. DAMAGE TO THE AIRPLANE CAN OCCUR.

5. Slowly lower the airplane and adjust the tail stand (07-10-04) (8) until the nose tire touches the ground. Make sure that the airplane stays level as you lower it.

6. Let the full weight of the airplane set on the nose tire.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

7. Let the ram (4) retract into the cylinder to get the correct clearance between the ram (4) and the jack pad fitting (Ref. [Figure 203](#)).
8. Remove the NLG strut restraint support tool ([07-10-10](#)) (7) from the NLG strut (8) (Ref. [Figure 205](#)).
9. If necessary, adjust the tail stand ([07-10-04](#)) (8) so the fuselage stays stable (Ref. [Figure 203](#)).
10. If necessary, remove the tail stand ([07-10-04](#)) (8) from the fuselage.
11. Remove the four bolts (4) and the four washers (3) that attach the jack pad fitting (2) to the fuselage (Ref. [Figure 201](#)).
12. Remove the jack pad fitting (2) from the fuselage.
13. Install the four screws (1) in the jack pad fitting location on the fuselage. Use a torque wrench to torque the four screws to 25-30 in-lb. (Ref. [20-11-10-910-801](#)).
14. Move the NLG jack ([07-10-02](#)) (6) away from the airplane.
15. Move the chocks slightly away from the MLG tires.

F. Follow-On Maintenance

- (1) Close access to the airplane.
 - (a) Remove the applicable warning signs.
 - (b) Remove the tools and equipment from the work area.

3. Lift the Airplane for Weighing

07-11-10-500-803

A. General

This task gives you the procedures to lift the airplane for weighing. The three jacks will have load cells installed.

B. Special Tools and Materials

Special Tools	Item No.	Materials/ Consumables	Item No.
Torque wrench, 10-50 in-lb.			
Aircraft jack (MLG)	07-10-01		
Aircraft jack (NLG)	07-10-02		

C. References

- (1) 06-40-00-910-801, Access Panels, Doors, and Removable Fairings.

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

- (2) 07-11-10-500-801, Lift the Airplane with Three Jacks
- (3) 08-11-10-910-801, Weigh the Airplane.
- (4) 08-21-10-910-801, Aircraft Leveling.
- (5) 20-00-01-910-801, Make the Airplane Safe for Maintenance.
- (6) 20-11-10-910-801, Standard Torque Procedures.

D. Job Set-Up

- (1) Make the airplane safe for maintenance (Ref. [20-00-01-910-801](#)).
- (2) Open, tag and safety the circuit breakers that follow:

Table 203
Circuit Breakers

Name	Panel Location	Number
L PROBE HEAT	Cockpit, left side	D11
WX RADAR	Cockpit, left side	D13
R PROBE HEAT	Cockpit, right side	E11

- (3) Remove or open the applicable access panels, doors or fairings that follow (Ref. [06-40-00-910-801](#)):

Table 204
Access Panels, Doors and Fairings

Name	Number
Mid forward flap fairing	561EB
Mid forward flap fairing	661EB

Honda Aircraft Company

HA-420 Aircraft Maintenance Manual

E. Procedure

WARNING: DO NOT JACK THE AIRPLANE OUTSIDE. WIND CAN CAUSE THE AIRPLANE TO MOVE OFF OF THE JACKS. JACK THE AIRPLANE WHEN IT IS IN A HANGAR ONLY. DEATH OR INJURY CAN OCCUR.

WARNING: DO NOT TRY TO JACK THE AIRPLANE IF THE WEIGHT OF THE AIRPLANE IS MORE THAN 10,680 LBS. MAXIMUM LIMIT FOR AIRPLANE JACKING IS 10,680 LBS. DEATH OR INJURY CAN OCCUR.

CAUTION: DO NOT TRY TO JACK THE AIRPLANE WITH THE PARKING BRAKE ON. THE AIRPLANE CAN MOVE FROM THE JACKS WITH THE PARKING BRAKE ON. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: MAXIMUM AIRPLANE WEIGHT FOR JACKING IS 10,680 LBS. IF THE AIRPLANE WEIGHT IS MORE THAN 10,680 LBS., DO NOT TRY TO LIFT THE AIRPLANE. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT WALK ON THE OUTBOARD SECTION OF THE WING WHEN THE AIRPLANE IS ON JACKS. IF YOU WALK ON THE OUTBOARD SECTION OF THE WING, THE AIRPLANE CAN MOVE FROM THE JACKS. DAMAGE TO THE AIRPLANE CAN OCCUR.

- (1) Do steps (1.E.1.a thru 1.E.1.o) to do the setup of the jacking equipment (Ref. 07-11-10-500-801).

NOTE: When you weigh the airplane, the load cells replace the ram extension.

- (a) Remove the three load cells from the load cell kit.
- (b) Install the load cells on the jacks.

NOTE: Refer to the load cell manufacturers instructions on how to install the load cells on the jacks.

- (c) Extend the NLG jack (07-10-02) (6) until the concave cup (1) on the load cell touches the jack pad fitting (2) (Ref. Figure 201 and Figure 203).
- (d) Extend the two MLG jacks (07-10-01) (7) until the two concave cups (1) on the two load cells touch the two wing jack pad fittings (2) (Ref. Figure 201 and Figure 203).

CAUTION: DO NOT LET THE AIRPLANE BECOME TILTED. THE AIRPLANE CAN MOVE FROM THE JACKS. THE AIRPLANE MUST STAY AS LEVEL AS POSSIBLE OR DAMAGE TO THE AIRPLANE CAN OCCUR.

- (e) Lift the airplane with three jacks (Ref. 07-11-10-500-801).
- (f) Weigh the airplane (Ref. 08-11-10-910-801).

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HA-420 Aircraft Maintenance Manual

(2) Lower the airplane.

(a) Before you lower the airplane, do the steps that follow.

1. Make sure that all workstands and personnel are away from the airplane.
2. Make sure that the landing gear is in the down and locked position.

(b) Do steps (1.E.2.a) thru (1.E.2.n) to lower the airplane (Ref. 07-11-10-500-801).

(c) Remove the load cell from the three jacks (07-10-01 and 07-10-02) (6 and 7) (Ref. Figure 203).

(d) Remove the three jacks (07-10-01 and 07-10-02) away from the airplane.

F. Follow-On Maintenance

(1) Close access to the airplane.

(a) Close the access panels, doors or fairings (Ref. Table 204).

(b) Close the applicable circuit breakers (Ref. Table 203).

(c) Remove the applicable warning signs.

(d) Remove the tools and equipment from the work area.

4. Lift the Airplane with Pneumatic Lifting Bags

07-11-10-500-804

A. General

This task gives you the procedure to lift the airplane with pneumatic lifting bags.

B. Special Tools and Materials

Special Tools	Item No.	Materials/ Consumables	Item No.
Lift bag	07-10-07		

C. References

(1) 20-00-01-910-801, Make the Airplane Safe for Maintenance.

D. Job Set-Up

(1) Make the airplane safe for maintenance (Ref. 20-00-01-910-801).

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HA-420 Aircraft Maintenance Manual

E. Procedure

WARNING: DO NOT FILL THE PNEUMATIC BAG MORE THAN THE SPECIFIED LIMIT. INJURY TO PERSONNEL OR DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT LET PERSONNEL GO IN THE FUSELAGE WHEN THE AIRPLANE IS LIFTED WITH THIS PROCEDURE. MOVEMENT OF THE FUSELAGE CAN MAKE THE AIRPLANE MOVE FROM THE PNEUMATIC LIFTING BAGS. DAMAGE TO THE AIRPLANE CAN OCCUR.

CAUTION: DO NOT LET PERSONNEL WALK ON THE EMPENNAGE OR OUTER WING OF THE AIRPLANE WHILE ON PNEUMATIC BAGS. DAMAGE TO THE AIRPLANE CAN OCCUR.

- (1) Lift the airplane with pneumatic lifting bags (07-10-07) (Ref. [Figure 206](#), [Figure 207](#), and [Figure 208](#)).
 - (a) Make sure there are no sharp or projecting objects in the area where the pneumatic lifting bags (1, 2, and 3) will be put in their correct position.
 - (b) Make sure to remove or cover all sharp edges and projections from the airplane structure where the pneumatic lifting bags (1, 2, and 3) will be put in their correct position.
 - (c) Make sure to remove grease or oil from the airplane where the pneumatic lifting bags (1, 2, and 3) will be put in their correct position.
 - (d) Make sure you close the pneumatic lifting bag outlets before inflating them.
 - (e) Put one pneumatic lifting bag (1) below fuselage at FS 140 (Ref. [Figure 206](#)).
 - (f) Put one pneumatic lifting bag (2 and 3) below each wing at approximately WS 74, inline with and outboard of airplane jack pad locations (Ref. [Figure 207](#), [Figure 208](#)).
 - (g) Make sure that you do not let the pneumatic lifting bag (2 and 3) cover the airplane jacking pad locations.
 - (h) Use the manufacturers instructions to inflate the pneumatic lifting bags (1, 2, and 3) slowly so the airplane stays as level as possible and the lifting pressure stays equal.
 - (i) Lift the airplane sufficiently to extend the landing gear or to install landing gear jacks (Ref. [07-11-10-500-801](#)).
 - (j) Use manufacturers instructions to deflate the pneumatic lifting bags (1, 2, and 3) slowly.
 - (k) When you fully deflate the pneumatic lifting bags, remove them away from the airplane.

F. Follow-On Maintenance

- (1) Close access to the airplane.
 - (a) Remove the applicable warning signs.
 - (b) Remove the tools and equipment from the work area.

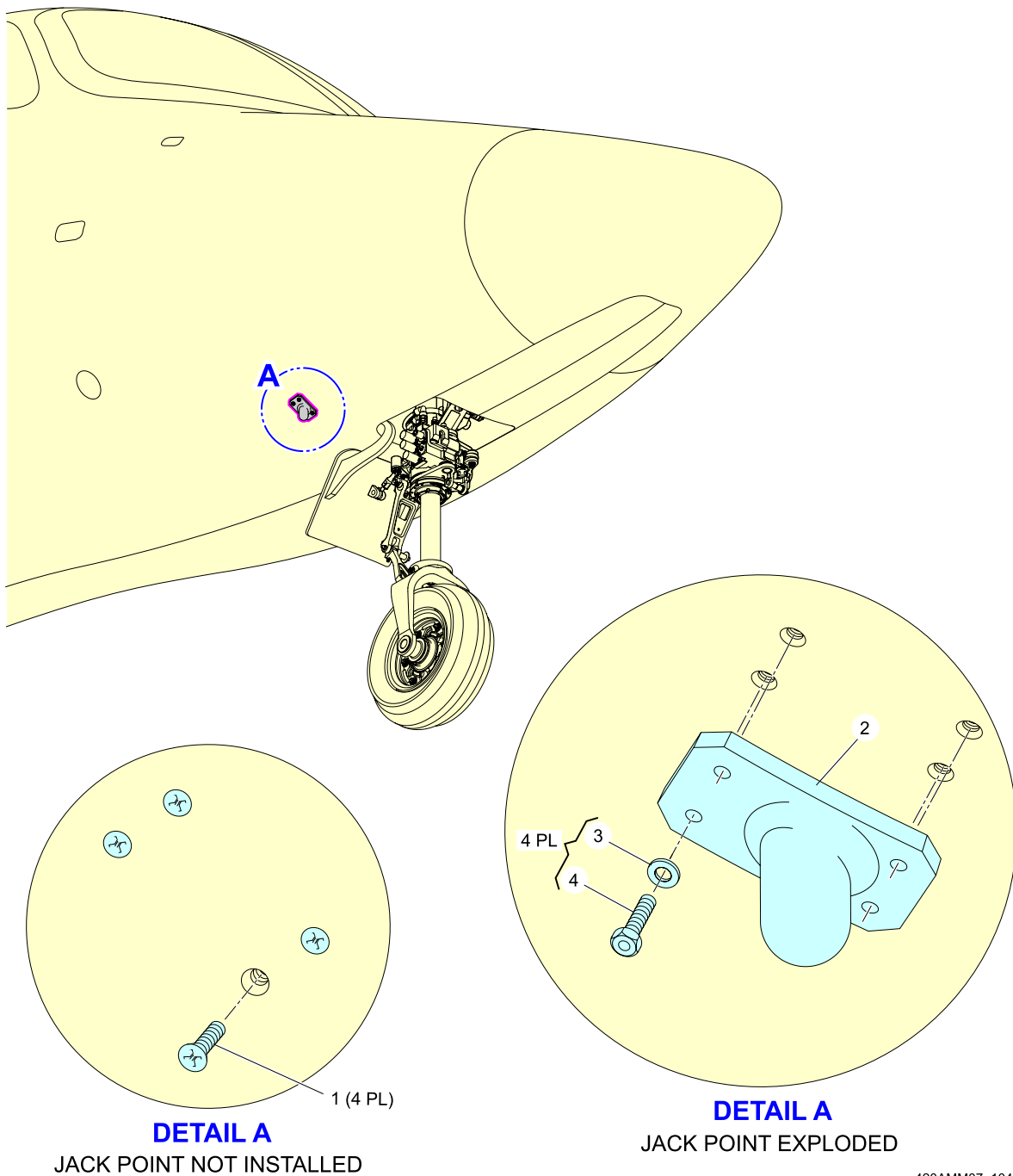
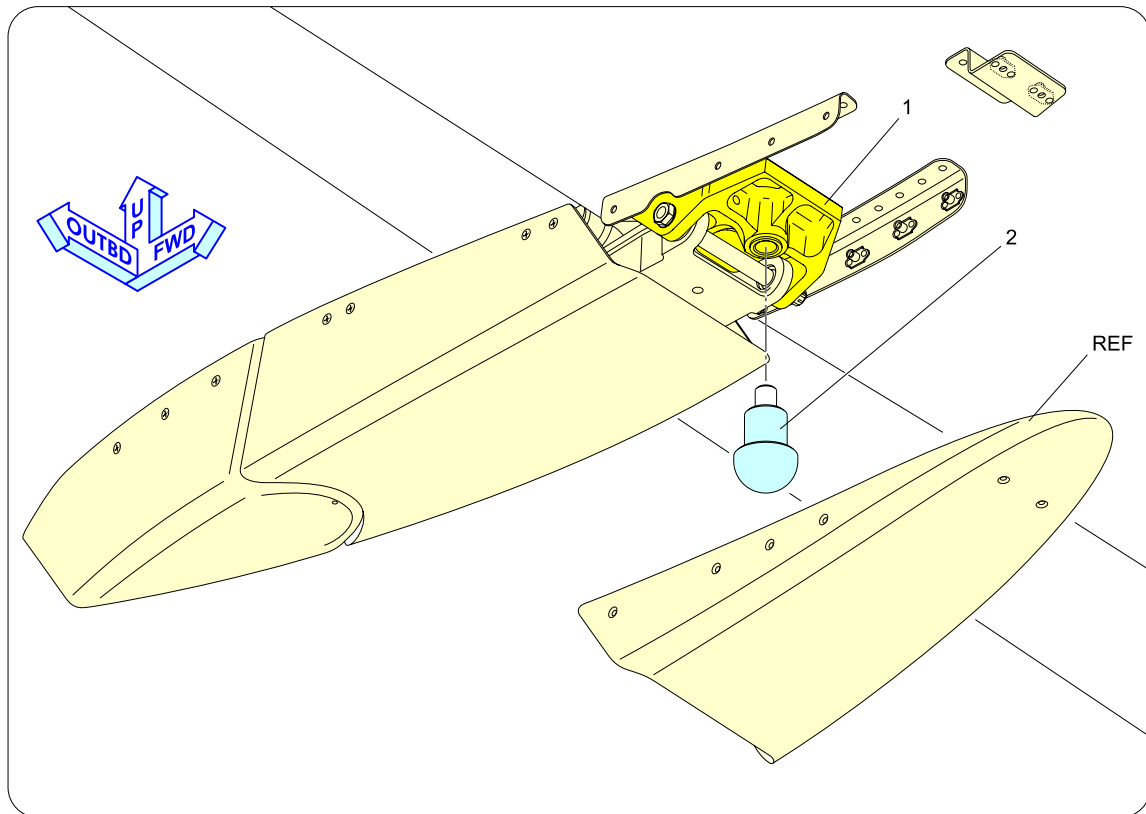
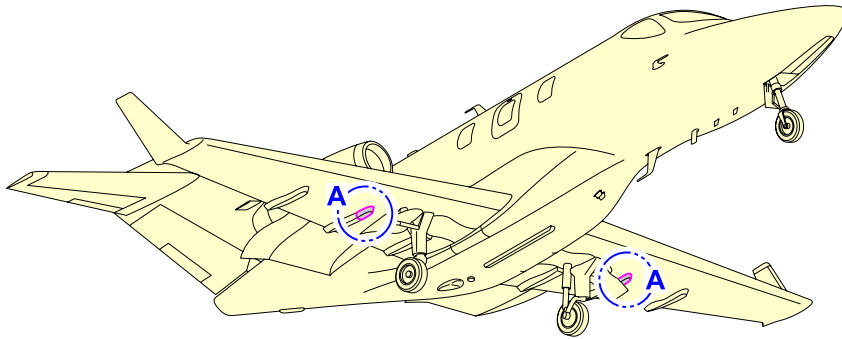


Figure 201
Nose Jack Pad Fitting

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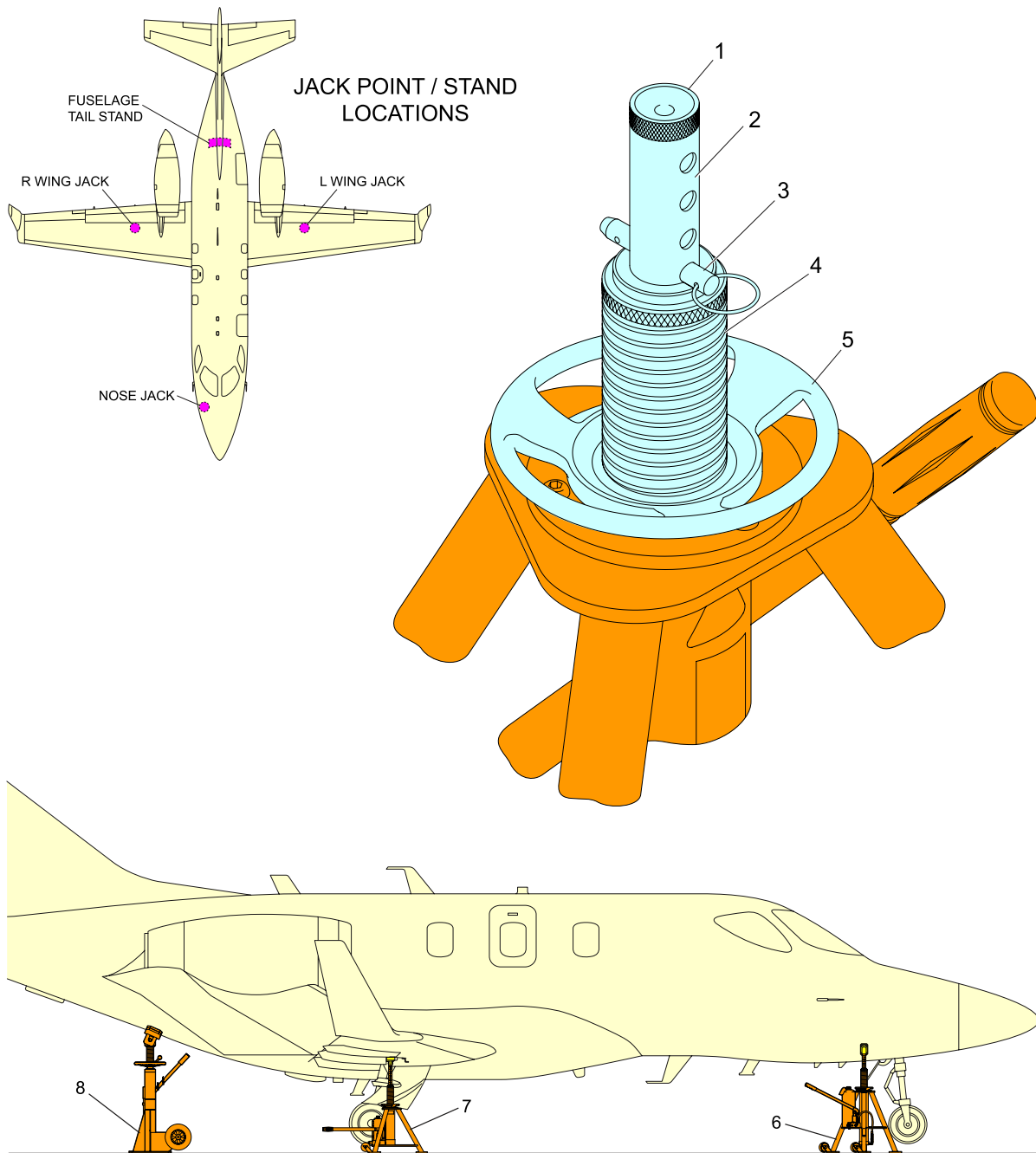
DETAIL A

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Figure 202
Wing Jack Pad Fitting

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Figure 203
Airplane Jack

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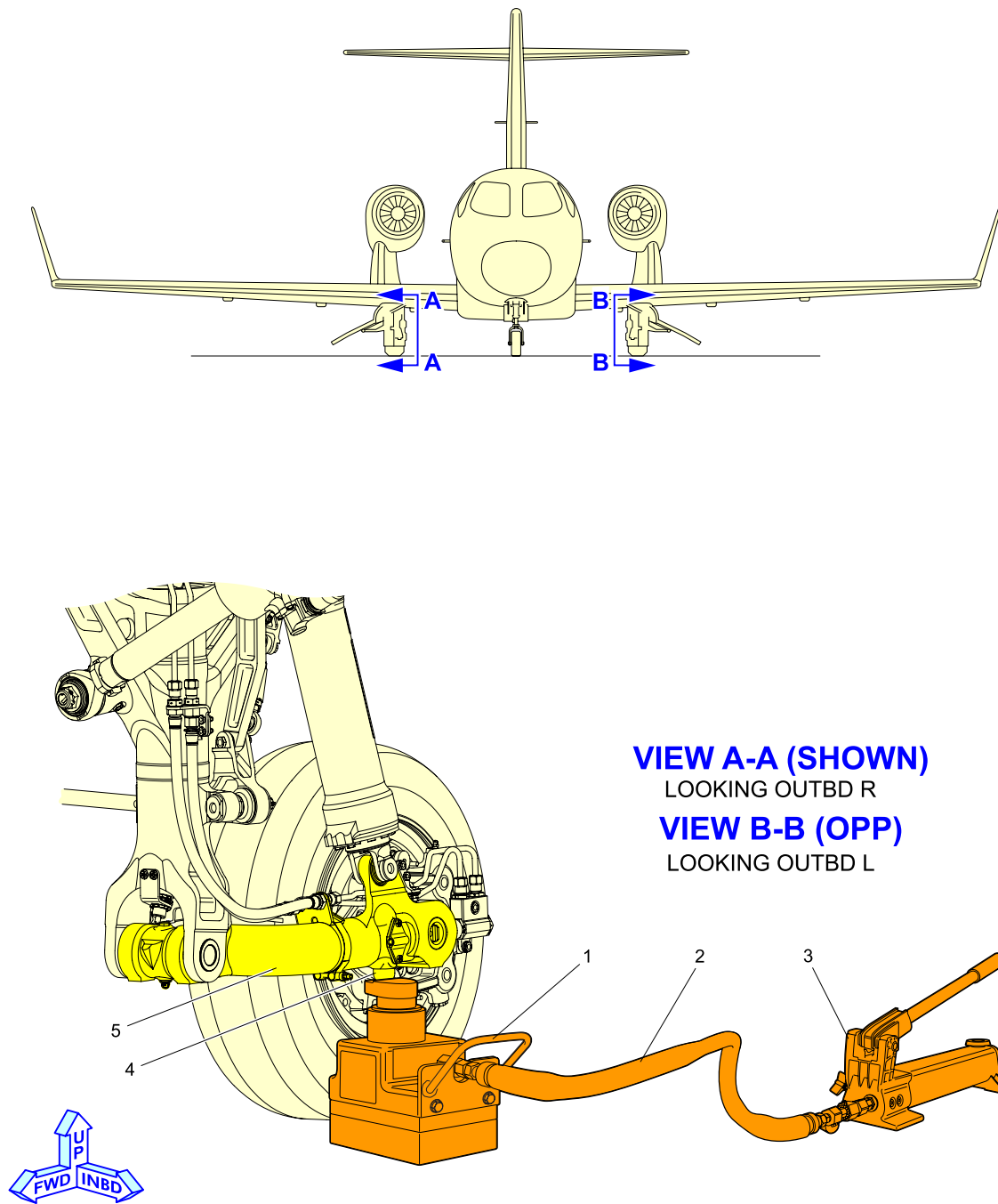
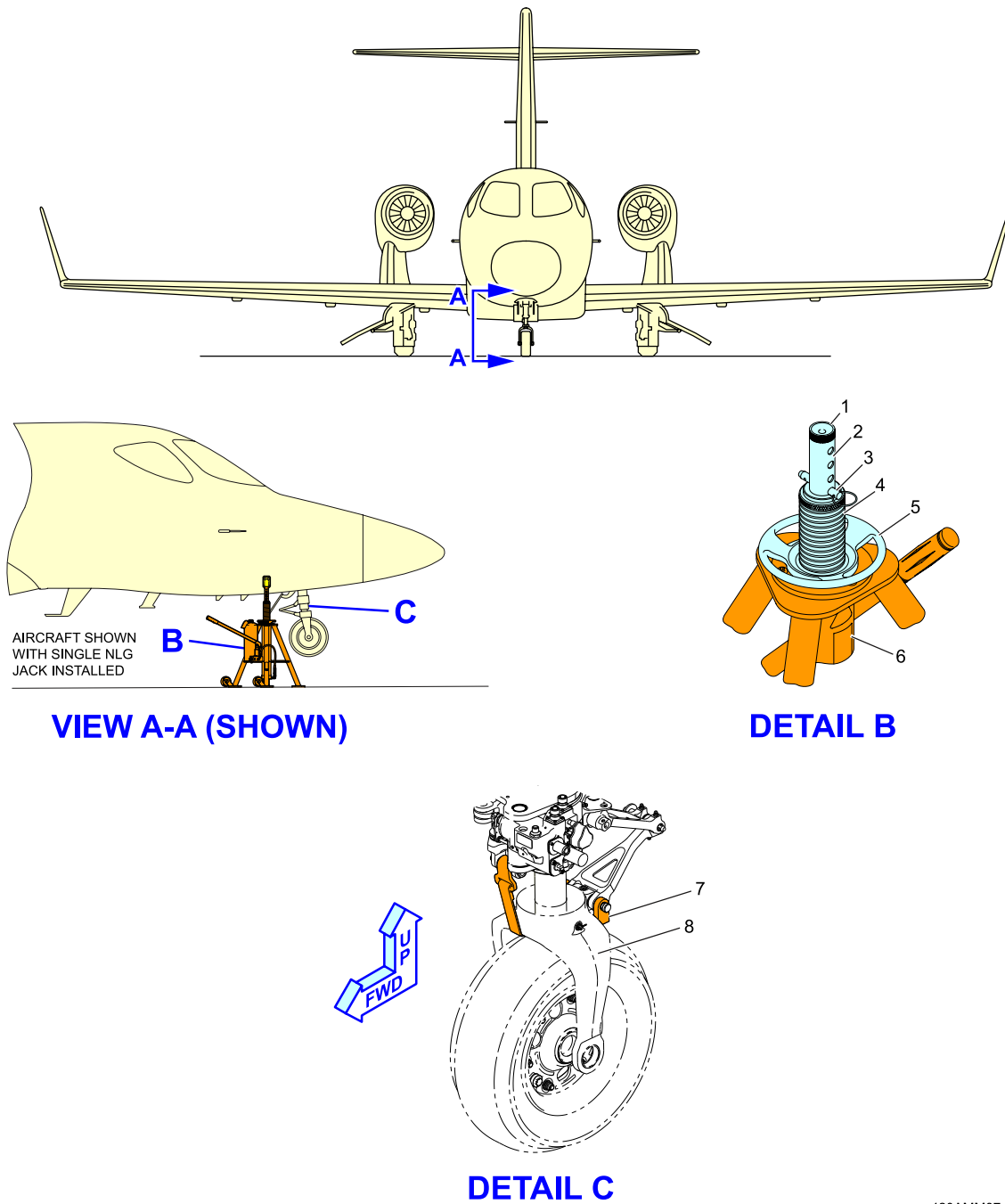


Figure 204
MLG Single Point Jacking

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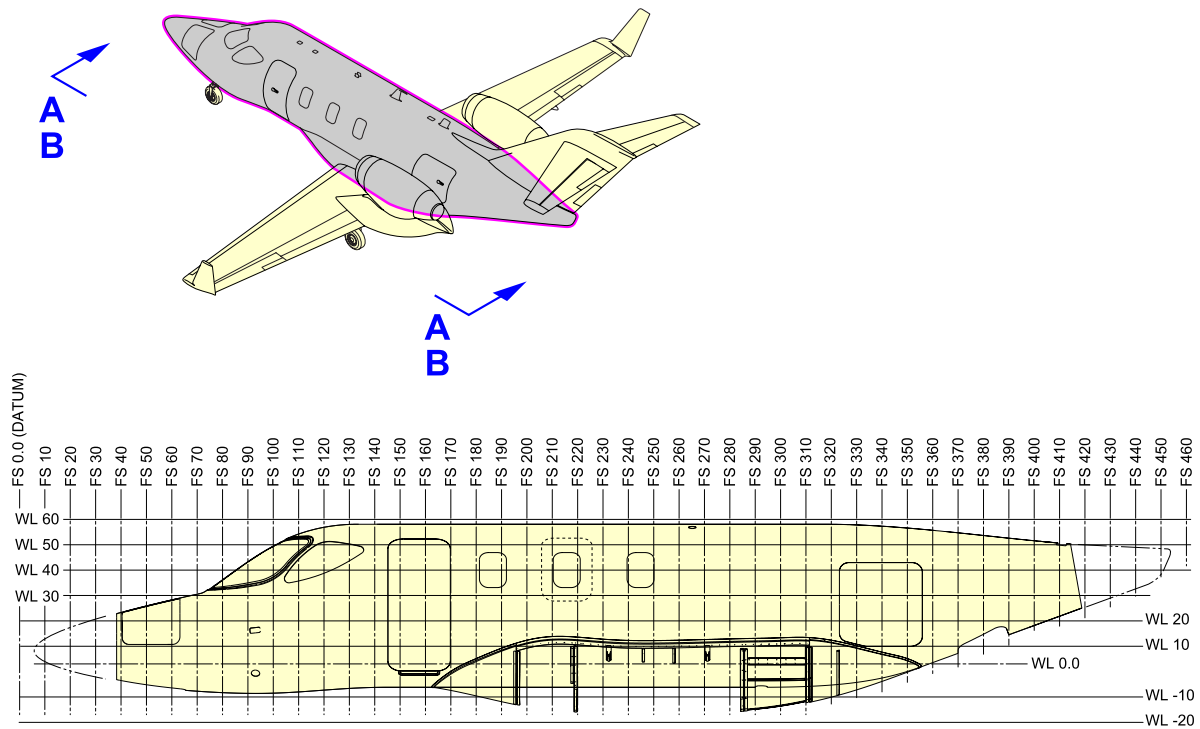


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Figure 205
NLG Single Point Jacking

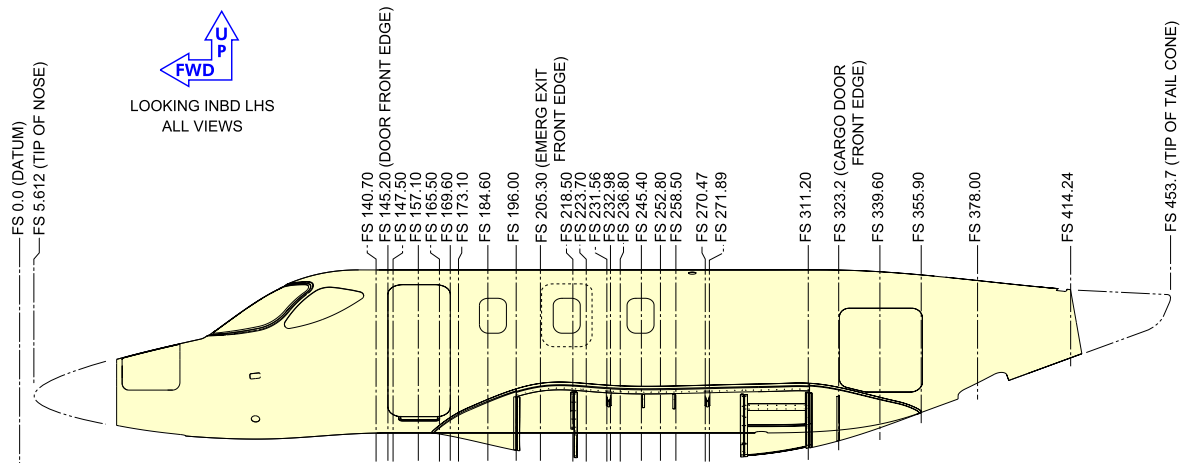
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VIEW A-A

FUSELAGE STATION MEASUREMENTS



VIEW B-B

FUSELAGE FRAME AND FEATURE LOCATIONS

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Figure 206
Fuselage Stations

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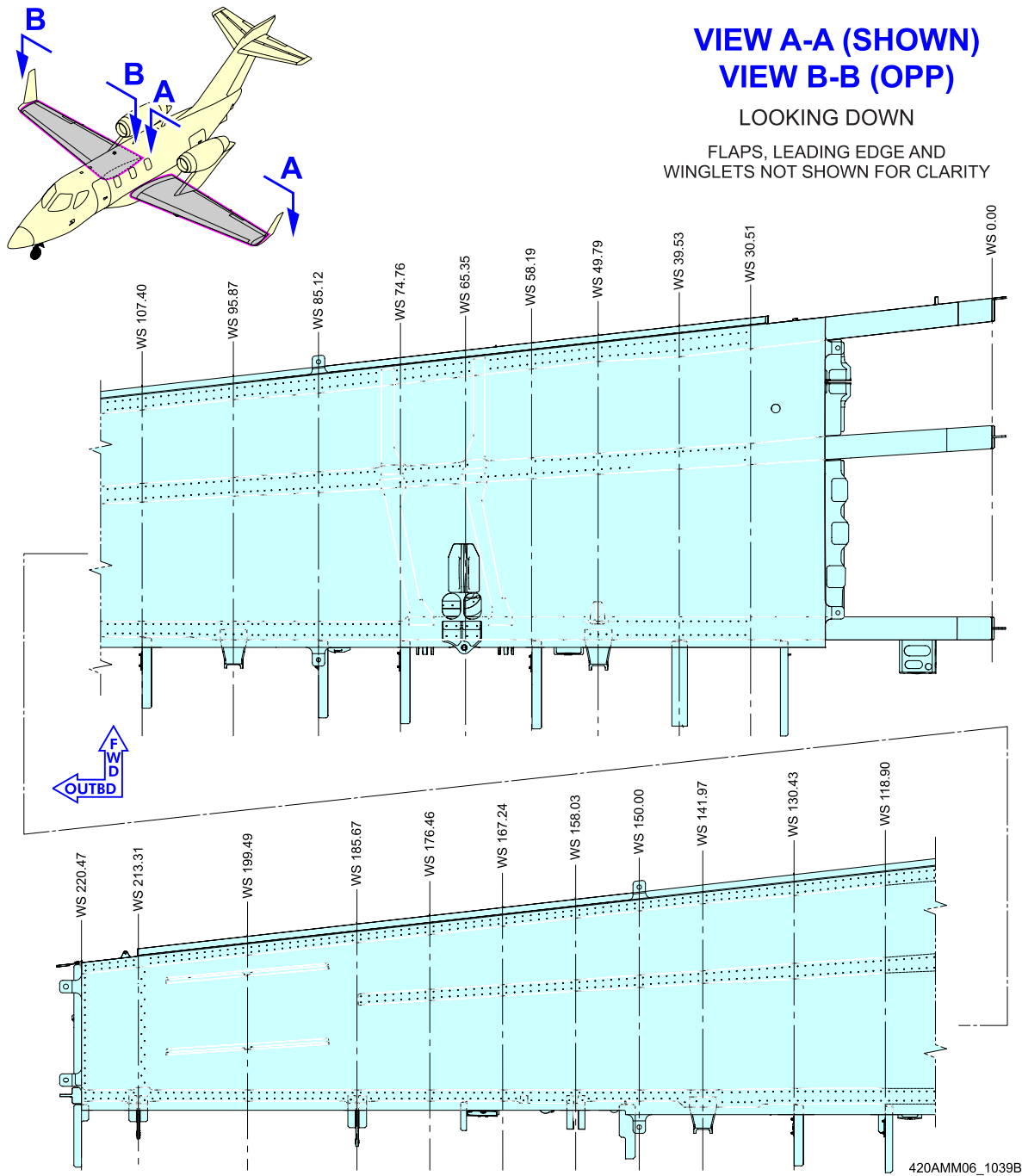
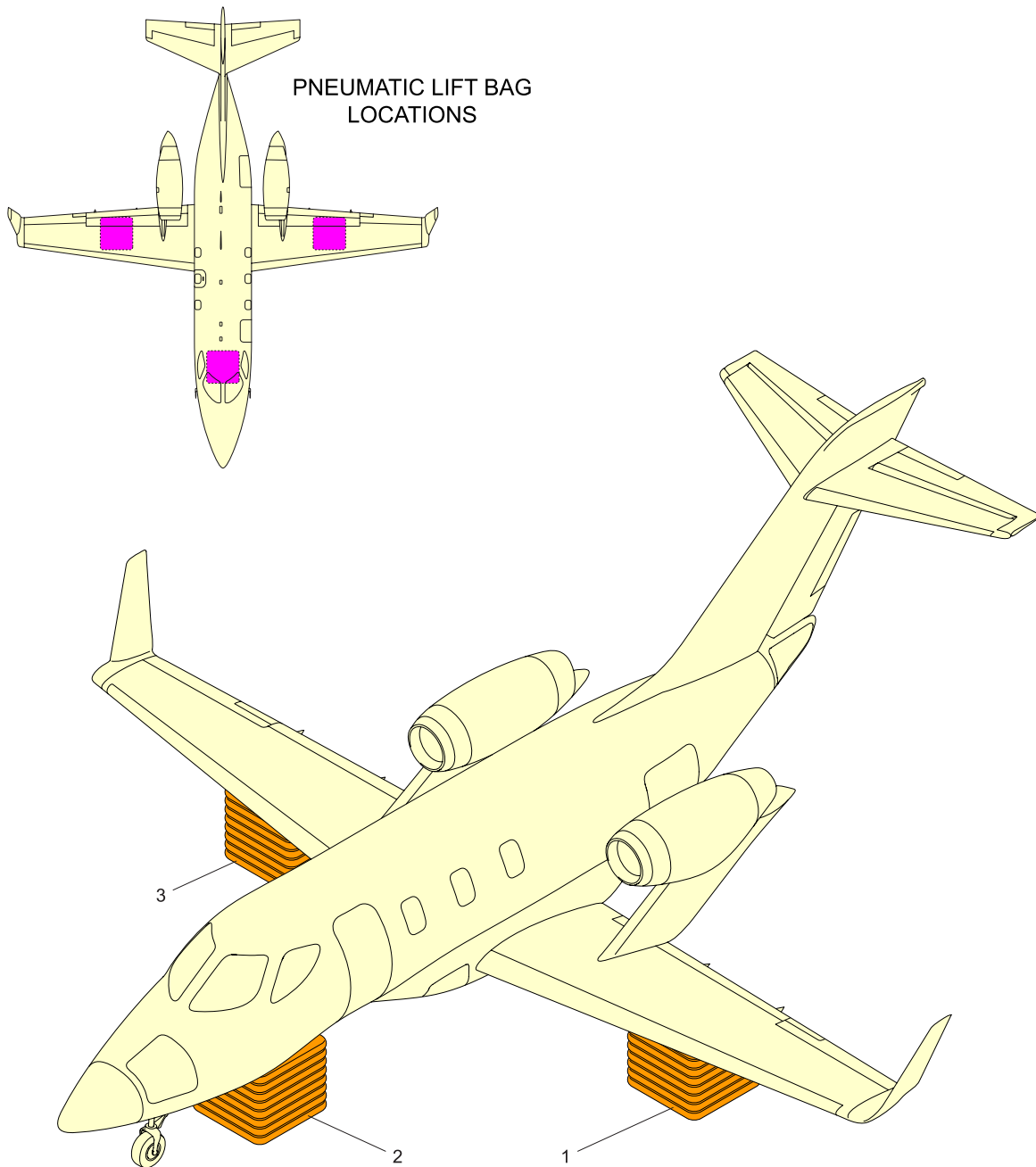


Figure 207
Wing Stations

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Figure 208
Pneumatic Lifting Bag Locations