CHAPTER

07

LIFTING AND SHORING

CHAPTER 07
LIFTING AND SHORING

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CHAPTER 07
LIFTING AND SHORING

07-CONTENTS

CHAPTER 07
LIFTING AND SHORING

JACK AIRPLANE - MAINTENANCE PRACTICES

1. General

A. This procedure has the following tasks:

(1) Lift the airplane with the jacks.

(2) Lower the airplane off the jacks.

B. When lifting the airplane with the three primary jack points (raising the complete aircraft), you can jack the airplane in winds up to 35 knots (40 mph).

TASK 07-11-01-580-815

2. Lift the Airplane with the Jacks

(Figure 201)

A. General

CAUTION DO NOT JACK THE AIRPLANE AT THE MAIN JACK POINTS OR AXLES WHILE THE TAIL STAND IS INSTALLED. IF YOU JACK THE AIRPLANE, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(1) The airplane has three main jack points and four auxiliary jack points.

(a) The main jack points are the wing jack points A and B, and aft body jack point C.

(b) The four auxiliary jack points have one stabilizing and three landing gear axle jack points.

1) The stabilizing jack point is the forward body jack point D.

2) The three landing gear axle jack points (Figure 202):

a) Jack points F on each main gear axle

b) Jack point E below the nose landing gear axle.

(2) You can lift the airplane on jacks at different gross weights as long as the load on the individual jack points is not more than the maximum permitted.

(a) The sum of the individual jack point loads must not be more than the maximum jack weight.

(b) Airplane gross weight and center of gravity must be within allowable limits.

B. References

Reference	Title
08-21-02-580-801	Level the Airplane With a Plumb Bob and Inclinometers (P/B 201)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
20-40-11-910-801	Static Grounding (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-8950	Jack - Tripod, Main Body/Wing
	Part #: 02A7895C0100 Supplier: 59603 Part #: 1286.00 Supplier: 1777B Part #: 1288.00 Supplier: 1777B Part #: 1484.00 Supplier: 1777B Part #: 1496.00 Supplier: 1777B Part #: 50-60-44 Supplier: 00994 Part #: 7235A Supplier: 94861 Part #: 725A Supplier: 94861 Part #: 759A Supplier: 94861 Part #: 8826 Supplier: 94861 Part #: FEN352 Supplier: D2029 Part #: TJSL0E03503 Supplier: D2029 Part #: TJSL1E03501 Supplier: D2029
COM-11238	Jack - Tripod, Forward Body
	Part #: 02A7896C0100 Supplier: 59603 Part #: 0916.00 Supplier: 1777B Part #: 1284.00 Supplier: 1777B Part #: 1287.00 Supplier: 1777B Part #: 1289.00 Supplier: 1777B Part #: 1481.00 Supplier: 1777B Part #: 1481.90 Supplier: 1777B Part #: 1484.00 Supplier: 1777B Part #: 1488.00 Supplier: 1777B Part #: 1496.00 Supplier: 1777B Part #: 15-54-40 Supplier: 00994 Part #: 714A Supplier: 94861 Part #: 718B with Leg Kit 1 Supplier: 94861 Part #: FEN122 Supplier: D2029 Part #: FENT101 Supplier: D2029 Part #: TJ2S03001 Supplier: D2029 Opt Part #: 718A Supplier: 94861 Opt Part #: 795D1100 Supplier: 00994 Opt Part #: D01051 Supplier: D2029

(Continued)

Reference	Description
COM-11239	Jack - Tripod, Aft Body Part #: 0917.00 Supplier: 1777B Part #: 1275-1100 Supplier: 00994 Part #: 1284.00 Supplier: 1777B Part #: 1286.00 Supplier: 1777B Part #: 1481.00 Supplier: 1777B Part #: 1481.90 Supplier: 1777B Part #: 1484.00 Supplier: 1777B Part #: 1488.00 Supplier: 1777B Part #: 1496.00 Supplier: 1777B Part #: 15-100-40 Supplier: 00994 Part #: 714ALEGEXT Supplier: 94861 Part #: 725A w/ 36" Leg Ext Supplier: 94861 Part #: 8882 Supplier: 94861 Part #: FEN121 Supplier: D2029 Part #: FEN15 Supplier: D2029 Part #: FENT354 Supplier: D2029 Part #: TJSL0E01003 Supplier: D2029 Part #: TJSL1E01001 Supplier: D2029
SPL-1494	Jack Adapter - Wing Part #: C07002-1 Supplier: 81205
SPL-1495	Jack Adapter - Aft Body Part #: C07004-1 Supplier: 81205
SPL-1496	Jack Adapter - Forward Body Part #: C07007-23 Supplier: 81205 Opt Part #: C07007-19 Supplier: 81205
SPL-1499	Pin - Lock, NLG Towing Lever Part #: A09003-2 Supplier: 81205 Opt Part #: A09003-1 Supplier: 81205
SPL-1871	Retention Straps - Shock Strut, NLG/MLG Part #: C32030 -31 Supplier: 81205 Opt Part #: C32030-10 Supplier: 81205
STD-11729	Plumb Bob

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
110	Subzone - Body Station 130 to Station 396
115	Nose Landing Gear Wheel Well - Left
146	Aft Cargo Compartment Equipment Bay - Right
192	Lower Wing-To-Body Fairing - Under Wing Box

E. Prepare to Lift the Airplane on Jacks

SUBTASK 07-11-01-480-001

(1) Do the steps that follow to prepare to lift the airplane on the jacks:

(a) Make sure that the nose gear tires are near the center position.

WARNING MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

WARNING ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(b) Make sure that the landing gear down lock pins and NLG towing lever pin, SPL-1499, are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

NOTE: If the tires are not near the center position, and Nose Landing Gear (NLG) towing lever pin is not installed, then you may not be able to center the tires.

(c) If electrical power is supplied to the airplane while it is on jacks, do the step that follows:

WARNING IN THE AIR MODE MANY OF THE AIRPLANE SYSTEMS CAN OPERATE AND CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

1) Make sure that the airplane is in air mode when raised on jacks, do these tasks:
   a) Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801
   b) Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

(d) Make sure that the airplane gross weight and Center of Gravity (CG) are within the approved limits (Figure 203).

(e) Obey the maximum jacking loads for the specific jack points, and applicable tire data shown in Table 201 or Table 202.

Table 201/07-11-01-993-805 737-800 Jack Points Data

JACK POINTS AND LOCATION		BALANCE ARM*[1]	BUTTOCK LINE	HEIGHT ABOVE GROUND - INCHES (mm)		MAXIMUM LOAD - POUNDS (KG)*[2]	JACK ADAPTER
				MIN*[3]	MAX*[4]		
A	RIGHT WING	562.3	94.8R	65.4 in. (1661.2 mm)	100.4 in. (2550.2 mm)	65,843 lb (29,866 kg)	C07002
B	LEFT WING	562.3	94.8L	65.4 in. (1661.2 mm)	100.4 in. (2550.2 mm)	65,843 lb (29,866 kg)	C07002
C	AFT BODY	1298.9	11R	105.5 in. (2679.7 mm)	134.0 in. (3403.6 mm)	21,673 lb (9831 kg)	C07004
D	FORWARD BODY	96.6	47.6L	57.6 in. (1463.0 mm)	96.0 in. (2438.4 mm)	16,566 lb (7514 kg)	C07007
E	NOSE GEAR AXLE*[5]	93.0	0	SEE Table 202		17,134 lb (7772 kg)	NONE
F	MAIN GEAR AXLE*[6]	705.6	112.6			82,107 lb (37,243 kg)	NONE

*[1] Balance arms are for gears in the fully-compressed position. Nose gear oleo extension is vertical and does not affect the balance arm of the nose gear jack point or wheels. Balance arms for the main gear jack point and wheels will vary with different oleo extensions.

*[2] The sum of the jack loads at points A through D must be less than 144,600 lb (65,589 kg), or the maximum allowable jack weight (whichever is less). Refer to Figure 203 for the maximum allowable jack weight.

*[3] The shock struts are deflated, wheels on rim.

*[4] The airplane is on jacks with a 4 in. (102 mm) clearance below the main gear.

*[5] Nose gear jack pad is 2.2 in. (55.9 mm) below axle center line.

*[6] Main gear jack pad is 5.4 in. (137.2 mm) below axle center line.

Table 202/07-11-01-993-806 737-800 Landing Gear Tire Data

LANDING GEAR	TIRE SIZE	CONDITION	DISTANCE FROM THE GROUND TO THE BOTTOM OF THE JACK PAD - INCHES (mm)	CLEARANCE BETWEEN THE TIRES - INCHES (mm)
MAIN GEAR	H44.5 X 16.5 - 21 (28 PLY)	NORMAL	12.91 in. (327.91 mm)	15.82 in. (401.83 mm)
		FLAT	8.5 in. (215.9 mm)	14.6 in. (370.8 mm)
		ON RIM	6.8 in. (172.7 mm)	18.3 in. (464.8 mm)
		TIRE CHANGE	18.95 in. (481.33 mm)*[1]	--
NOSE GEAR	27 X 7.75 - 15 (12 PLY)	NORMAL	8.97 in. (227.84 mm)	7.2 in. (182.9 mm)
		FLAT	6.75 in. (171.45 mm)	6.5 in. (165.1 mm)
		ON RIM	6.25 in. (158.75 mm)	8.5 in. (215.9 mm)
		TIRE CHANGE	13.25 in. (336.55 mm)*[1]	--

*[1] If there is a 2 in. (51 mm) tire clearance.

(f) Make sure that the stabilizer trim control is set to neutral (4 units).

(g) Make sure that the aileron and rudder trim controls are set to 0 degrees.

(h) Make sure that the trailing edge flaps and leading edge devices are stowed in the flaps up configuration.

NOTE: The trailing edge flaps and leading edge devices must be stowed in the flaps up configuration for jacking the airplane in winds that approach 35 knots (40 mph).

(i) Make sure that the airplane is turned in the wind direction (if possible) when it is not parked in a hangar or at a gate.

NOTE: When lifting the airplane with the three primary jack points (raising the complete aircraft), you can jack the airplane in winds up to 35 knots (40 mph).

CAUTION

DO NOT DEFLATE THE SHOCK STRUT IF YOU DO A RETRACTION TEST OF THE LANDING GEAR. THE SHOCK STRUT MUST BE FILLED CORRECTLY AND NOT INFLATED ABOVE THE CORRECT PRESSURE. DAMAGE TO THE WHEEL WELL AND SHOCK STRUT WILL OCCUR.

(j) When you lift the airplane on jacks for a gear retraction test, do these steps:

1) Ground airplane in two locations to the jack pads during landing gear retraction tests.

a) Do this task: Static Grounding, TASK 20-40-11-910-801.

b) If the jack pad does not have a grounding pin, attach the grounding strap to any bare metallic part of the jack.

NOTE: This will allow any electrical current to travel through the jack to the ground.

2) Make sure that the nose landing gear shock strut is filled to the correct pressure before a gear retraction test, refer to task: Nose Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-41-610-802.

3) Make sure that the main landing gear shock struts are filled to the correct pressure before a gear retraction test, refer to task: Main Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-31-610-802.

(k) Set the ATC mode switch on the ATC control panel to the STBY position.

CAUTION

THE SHOCK STRUTS MUST BE FULLY DEFLATED BEFORE THE OLEO LOCK ASSEMBLY INSTALLATION. IF THE SHOCK STRUTS ARE NOT DEFLATED, YOU CAN CAUSE DAMAGE TO THE LOCK ASSEMBLY WHEN YOU LIFT THE AIRPLANE ON THE JACKS.

CAUTION

IF YOU WILL RETRACT THE NOSE LANDING GEAR, DO NOT INSTALL THE RETENTION STRAPS. DURING A RETRACTION, THE RETENTION STRAPS WILL CAUSE DAMAGE TO EQUIPMENT.

(l) If you fully deflate the shock struts, install the retention strap, SPL-1871.

NOTE: When you lift the airplane on jacks to make the airplane level, to weigh it, or for general maintenance, it is optional to deflate the shock struts of the landing gear. When you deflate the shock struts, the height that you have to lift the airplane decreases.

CAUTION

HORIZONTAL LOADS DUE TO SCUFFING OR SLIDING WILL BE TRANSMITTED THROUGH THE STRUCTURE TO THE JACK PADS. THIS CAN CAUSE THE JACKS TO FALL OVER.

(m) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	4	C00700	HEATERS DRAIN MAST AIR

(n) When you jack the airplane for the gear retraction test or when the shock struts are deflated and locked, the main gear shock strut will cant to trail 1.85 degrees aft of the vertical axis.

NOTE: When you lift the airplane, normal oleo extension on 88.15 degree angle causes aft wheel movement on the ground a maximum of 0.55 in. (13.97 mm). If the wheels are chocked or parking brakes are set when you lift or lower the airplane, wheel movement will cause the chocks to slide or the tires to scuff on the ground.

(o) Remove the recess fillers and fasteners from the jack pad adapter points at positions A and B.

(p) Install the jack pad adapters with the tools listed below.

NOTE: The aft body jack adapter is a threaded rod with a machined semiball on one end. You put the adapter in the jack pad fitting that is a part of the airplane structure.

NOTE: These adapters should be hand-tightened during installation.

1) Wings, jack adapter, SPL-1494.

2) Aft body, jack adapter, SPL-1495.

CAUTION USE THE BOLTS SUPPLIED WITH THE JACK ADAPTER. IF YOU USE OTHER BOLTS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

(q) Use the forward auxiliary jack adapter when the airplane is not in a hangar and winds are 35 mph (30 knots) (Figure 201).

NOTE: It is the airline's decision if the auxiliary jacks are necessary when the airplane is in the hangar (no wind).

NOTE: When the airplane is not in a hangar, the stabilizing jack must be installed when winds are at 35 mph (30 knots).

1) Install the forward body (jack point D) jack adapter, SPL-1496 as follows (Figure 201).

a) Remove the eight bolts that are supplied with the jack adapter, SPL-1496.

CAUTION USE THE BOLTS SUPPLIED WITH THE JACK ADAPTER. IF YOU USE OTHER BOLTS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

b) Install the jack adapter, SPL-1496, with the eight bolts.

<1> Torque the eight bolts to 160 in-lb (18.1 N·m) - 240 in-lb (27.1 N·m).

2) Preload the stabilizing jack to a maximum of 5000 lb (2268 kg) when winds are 35 mph (30 knots).

CAUTION DURING WINDY CONDITIONS, YOU MUST USE THE STABILIZING JACK (JACK POINT D). YOU MUST PUT A PRE-LOAD ON THE STABILIZING JACK TO A MAXIMUM OF 5000 POUNDS (2268 KILOGRAMS) AT WINDS OF 30 KNOTS (35 MPH). IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

(r) Put the primary main/body tripod jack, COM-8950, tripod jack, COM-11238, and tripod jack, COM-11239, directly below the jack pads A, B, C, and D (required for windy conditions).

NOTE: Jacks must have pressure gages and a conversion table to give the pounds of load at each jack point.

CAUTION DO NOT EXCEED THE JACK MANUFACTURER'S MAXIMUM SCREW EXTENSION HEIGHT LIMIT. EXCEEDING THE LIMIT CAN CAUSE DAMAGE TO THE AIRPLANE AND THE JACK.

(s) Turn the jack screw extension out until the jacks socket is approximately 1.0 in. (2.5 cm) to 2.0 in. (5.1 cm) from the airplane jack pad.

(t) Rotate the Jack to align the castors to follow each other and center the jack.

NOTE: With the caster wheels aligned, they can follow each other when the jack turns clockwise (counterclockwise, where applicable) for alignment and leveling.

(u) Align the jack pads and springs.

(v) Check the jack for vertical position by using a level placed against the jacks main cylinder in two places 90 degrees from each other.

(w) Operate the jack with hand pump or air pressure to push jack post up to the jack pad and seat jack on floor.

WARNING

THE JACKS EXTENSION SCREW LOCKNUT MUST BE LOWERED AS THE JACK IS RAISED PER THE JACK MANUFACTURER'S INSTRUCTIONS. FAILURE TO FOLLOW THE JACK MANUFACTURER'S INSTRUCTIONS CAN RESULT IN PERSONNEL INJURIES AND DAMAGE TO THE AIRPLANE AND JACK.

(x) The jacks extension screw locknut must be lowered as the jack is raised.

F. Lift the Airplane with the Jacks

SUBTASK 07-11-01-580-001

(1) Lift the airplane on the jacks:

(a) Use the plumb bob, STD-11729, on the right wheel well and/or the inclinometer on the left wheel well (TASK 08-21-02-580-801).

NOTE: Use this to find the lateral level and longitudinal attitude while you lift the airplane.

NOTE: The plumb bob, STD-11729, procedure is sufficiently accurate for general jacking, weighing, and gear retraction only. If you must use a more accurate procedure to make the airplane level, refer to Chapter 8, Leveling.

WARNING

MAKE SURE ALL PERSONS ARE AWAY FROM THE LEADING EDGE SLATS. THEY CAN MOVE AUTOMATICALLY (UNLESS OTHERWISE INHIBITED) DURING MAINTENANCE WHEN EITHER HYDRAULIC SYSTEM HAS PRESSURE AND THE TRAILING EDGE FLAPS ARE IN POSITION 1, 2, OR 5: ALSO WHEN THE NOSE OR THE MAIN LANDING GEAR AIR/GROUND RELAYS GIVE AN IN FLIGHT CONDITION. IF YOU DO NOT OBEY THESE INSTRUCTIONS, INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING

MAKE SURE THAT YOU RAISE THE JACKS AT PADS A AND B BEFORE, OR AT THE SAME TIME AS, THE JACK AT JACK PAD C. IF YOU LIFT THE TAIL JACK BEFORE THE WING JACKS, YOU WILL FORCE THE NOSE OF THE AIRPLANE DOWN ON THE NOSE GEAR. THIS CAN PUT TOO MUCH LOAD ON THE TAIL JACK POINT. IT CAN ALSO PUT TOO MUCH LOAD ON THE TAIL JACK POINT AND THE NOSE STABILIZING JACK POINT WHEN YOU USE THE STABILIZING JACK. IF YOU DO NOT OBEY THESE INSTRUCTIONS, INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(WARNING PRECEDES)

CAUTION LIFT THE AIRPLANE ON JACKS IN A HORIZONTAL ATTITUDE TO PREVENT SIDE LOADS INTO THE JACK POINTS. THIS CAN CAUSE THE JACKS TO MOVE OFF THE PADS OR PUT TOO MUCH LOAD ON THE JACK POINTS AND CAUSE DAMAGE TO THE AIRPLANE STRUCTURE.

(b) Put one person at each jack to operate the jack and to make sure that the jack loads stay at the approved limit.

(c) Do not read pressure for jack reading, use “ton” reading.

(d) Put one person at the plumb bob, STD-11729, and/or the inclinometer.

1) The plumb bob, STD-11729, and/or the inclinometer observer must continuously monitor the airplane to make sure that it is lifted on the jacks in a level ±0.5 degree of pitch and ±3 degrees of roll.

(e) Remove the wheel chocks.

(f) Release the parking brake.

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

CAUTION WHEN YOU LIFT OR LOWER THE JACK, DO NOT PERMIT MORE THAN ONE INCH CLEARANCE BETWEEN THE JACK RAM LOCKNUT AND THE COLLAR. TOO MUCH CLEARANCE CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE IF THERE IS A FAILURE OF THE JACK.

(g) Jack the airplane until the landing gear does not touch the ground.

NOTE: When you jack the airplane for a gear retraction test, jack the airplane 4 in. (10 cm) or more for tire arc sweep clearance.

(h) If you must stabilize the airplane, lift the forward fuselage jack pad D until you hold sufficient weight to make the airplane stable.

NOTE: The jack must be turned such that a line between the aft two footpads are perpendicular to airplane centerline. The jack must also be centered below the jack pad.

NOTE: You must pre-load the stabilizer jack to a maximum of 5000 lb (2268 kg) in winds of 30 knots (35 mph).

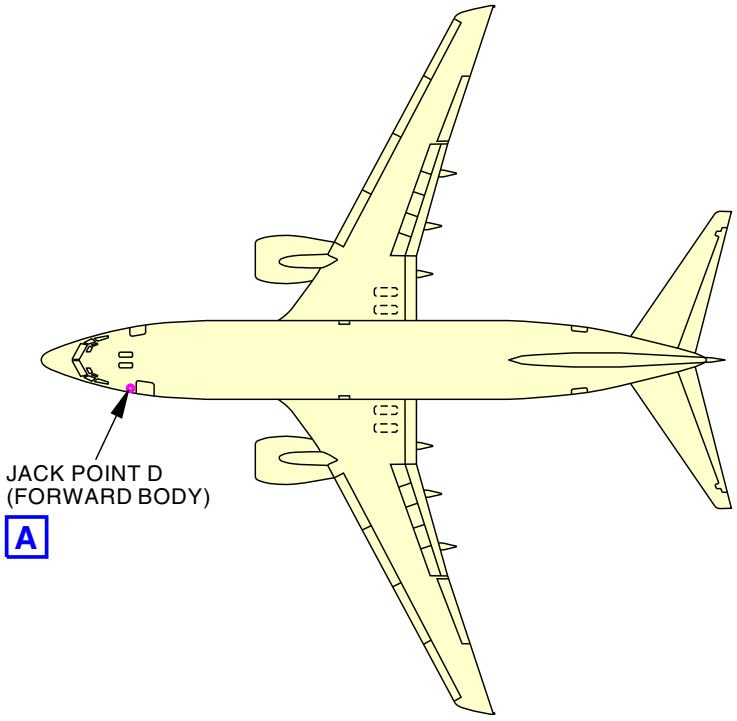
(i) When you lift the airplane, always lower all the jack ram locknuts at the same time you lift the jacks.

1) Keep a clearance of 1.0 in. (2.5 cm) or less from the nut to the collar until you complete the jacking.

2) Tighten the nut and tighten the lockscrew.

3) Too much clearance can cause damage to the airplane structure if there is a failure of the jack.

END OF TASK



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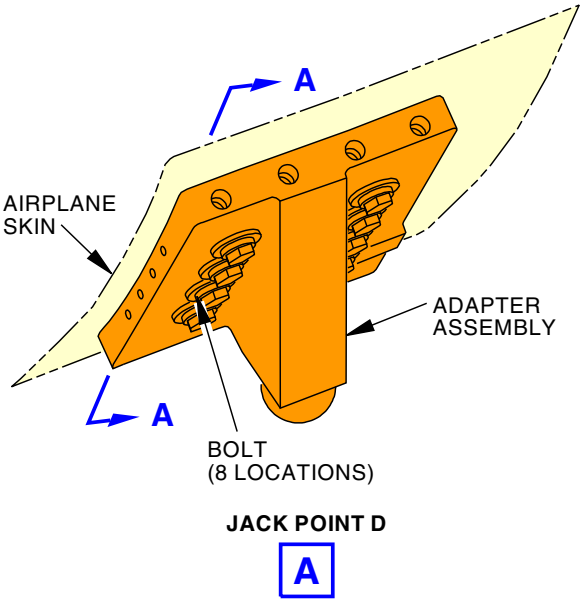

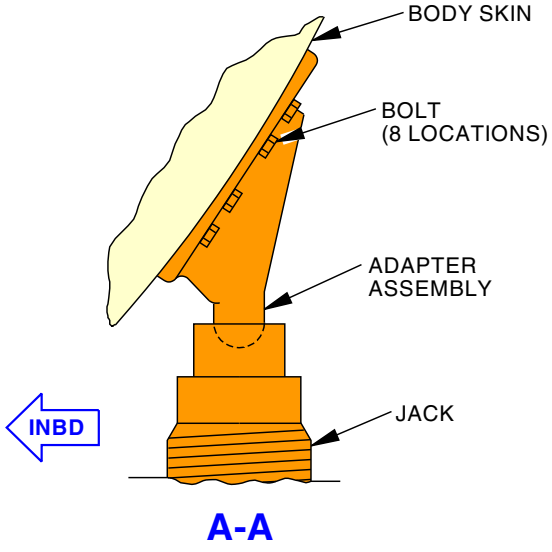

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Forward Body Location, Jack D Adapter Fitting
Figure 201/07-11-01-990-843

TASK 07-11-01-580-816

3. Lower the Airplane Off the Jacks

(Figure 202)

A. References

Reference	Title
10-11-05 P/B 201	CHOCK INSTALLATION
12-15-31-610-802	Main Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
32-00-01-080-801	Landing Gear Downlock Pins Removal (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1499	Pin - Lock, NLG Towing Lever Part #: A09003-2 Supplier: 81205 Opt Part #: A09003-1 Supplier: 81205
STD-11729	Plumb Bob

C. Consumable Materials

Reference	Description	Specification
A00159	Compound - Sealing, Thread-Locking, Anaerobic, Single-Component (100-200 In-lbs)	ASTM D5363 Grp 3 Cl 2 Grd 1 (SUPERSEDES MIL-S-46163)
C00064	Coating - Aluminum Chemical Conversion	BAC5719 Type II Class A (MIL-DTL-5541 Class 1A)
C00175	Primer - Urethane Compatible, Corrosion Resistant	BMS10-79 Type III
G00009	Compound - Organic Corrosion Inhibiting	BMS3-23
G01659	Swab - Cotton Or Rayon, (Disposable)	
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38
G50262	Wiper - Cleaning	BMS15-5

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
110	Subzone - Body Station 130 to Station 396
115	Nose Landing Gear Wheel Well - Left
146	Aft Cargo Compartment Equipment Bay - Right
192	Lower Wing-To-Body Fairing - Under Wing Box

E. Lower the Airplane

SUBTASK 07-11-01-580-015

CAUTION DO NOT LOWER THE AIRPLANE OFF THE JACKS WHILE YOU INSTALL THE TAIL STAND. IF YOU LOWER THE AIRPLANE WITH THE TAIL STAND INSTALLED, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(1) Do the steps that follow to lower the airplane off the jacks:

CAUTION MAKE SURE THE AREA BELOW THE AIRPLANE IS CLEAR OF ALL EQUIPMENT BEFORE YOU LOWER THE AIRPLANE. IF YOU DO NOT OBEY THESE INSTRUCTIONS, DAMAGE TO THE AIRPLANE AND EQUIPMENT CAN OCCUR.

(a) Make sure that the area below the airplane is clear.

(b) Make sure that the landing gear control is in the down position.

WARNING MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(c) Make sure that the nose and main landing gear ground lockpins are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

CAUTION MAKE SURE THAT THE INSTALLED STABILIZING JACKS ARE REMOVED, BEFORE YOU LOWER THE AIRPLANE. IF YOU DO NOT REMOVE THE STABILIZING JACKS BEFORE YOU LOWER THE AIRPLANE, STRUCTURAL DAMAGE TO THE AIRPLANE CAN OCCUR.

(d) Lower the stabilizing jack at jack point D, if jack point D was used (Figure 202).

NOTE: Refer to the jack manufacturers instructions.

NOTE: Keep 1 in. (3 cm) clearance between the locknut and collar.

1) Remove the auxiliary jack from below the airplane.

NOTE: Do this immediately after the jack clears the jack adapter and the adjacent airplane structure.

(e) Put wheel chocks in position to be installed when the airplane is on the ground (CHOCK INSTALLATION, PAGEBLOCK 10-11-05/201).

1) Make sure that the wheel chocks do not touch the tires while you lower the airplane.

CAUTION WHEN YOU LIFT OR LOWER THE JACK, DO NOT PERMIT MORE THAN ONE INCH CLEARANCE BETWEEN THE JACK RAM LOCKNUT AND THE COLLAR. TOO MUCH CLEARANCE CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE IF THERE IS A FAILURE OF THE JACK.

(f) Loosen the lockscrew in the jack ram locknut at the jack.

NOTE: It is possible you will have to raise the jack ram a small amount. This will remove the load from the locknut and permit the locknut to move up the ram.

(g) Adjust the locknut up the ram until the locknut is less than 1 in. (3 cm) from the jack collar.

(h) Put one person at each jack location, and one person at the plumb bob, STD-11729, and/or the inclinometer.

1) Make sure that there is communication between each person and the coordinator for the jack procedure.

CAUTION DO NOT LOWER THE WING JACKS A AND B BEFORE THE TAIL JACK C OR THE NOSE GEAR WILL TOUCH FIRST. THIS WILL OVERLOAD THE TAIL JACK POINT C. IF YOU DO NOT OBEY, DAMAGE CAN OCCUR.

(i) Lower the jacks at jack points A, B, and C evenly and at the same time.

1) Use the inclinometer, to make sure that the airplane roll is not more than ±3 degrees.

2) Use the plumb bob, STD-11729, to make sure that the airplane pitch is not more than ±0.5 degree.

NOTE: Always keep a 1 in. (3 cm) clearance between the locknut and the jack collar. If nose and main gear oleo lock assemblies are not installed, be sure that there are no obstructions in front of the main gear wheels and that parking brakes are not set. Because of a 1.85 degree cant of the shock strut, the wheels will move approximately 0.55 in. (1.40 cm) forward because of oleo retraction.

NOTE: You can remove a jack "hang up" condition. To do this, you lift and lower the jack until the ram is free. If the condition continues, lift and crib the airplane until you can replace the defective jack.

NOTE: Once main gear tires contact the ground, a nose down attitude beyond 1/2 degree is expected.

(j) Remove the jacks from jack points A, B, and C.

NOTE: Remove the jacks from below the airplane immediately after the jacks have cleared the jackpads and the adjacent structure.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 07-11-01-410-004

(1) Remove the jack adapters from jack points A, B, C, and D (if applicable).

SUBTASK 07-11-01-420-001

(2) Immediately install the jack fitting cover plate and fasteners at positions A and B.

(a) Remove any extruded Cor-Ban 27L Compound, G50237, with dry wiper, G50262, or swab, G01659.

(b) Make sure that the primer is in good condition in the recess for the jack fitting cover plate.

1) If primer repair is necessary, clean and manually apply coating, C00064, to bare metal then apply one layer of primer, C00175, to the repair area.

(c) Apply Cor-Ban 27L Compound, G50237, to the faying surface.

(d) Install the jack fitting cover plate with the fastener after you apply corrosion inhibiting compound, G00009, or BMS3-38 on all areas of the fastener hole including the countersink, and apply compound, A00159, on the threads of the fastener.

NOTE: The correct fastener is BACB30NN4K11.

(3) Remove the plumb bob, STD-11729, from the right wheel well.

SUBTASK 07-11-01-610-001

(4) If it is necessary, service the shock struts for the main landing gear, do this task: Main Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-31-610-802.

SUBTASK 07-11-01-610-002

(5) If it is necessary, service the shock strut for the nose landing gear, do this task: Nose Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-41-610-802.

SUBTASK 07-11-01-840-001

(6) Return airplane back to ground mode, do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

SUBTASK 07-11-01-080-001

(7) Remove the NLG towing lever pin, SPL-1499, do this task: Landing Gear Downlock Pins Removal, TASK 32-00-01-080-801.

SUBTASK 07-11-01-860-001

(8) Reset the Proximity Switch Electronic Unit (PSEU) as follows:

NOTE: When you simulate air mode by jacking the airplane you will induce nuisance faults.

(a) Push the ON/OFF switch on the PSEU BITE panel to turn the PSEU BITE display on.

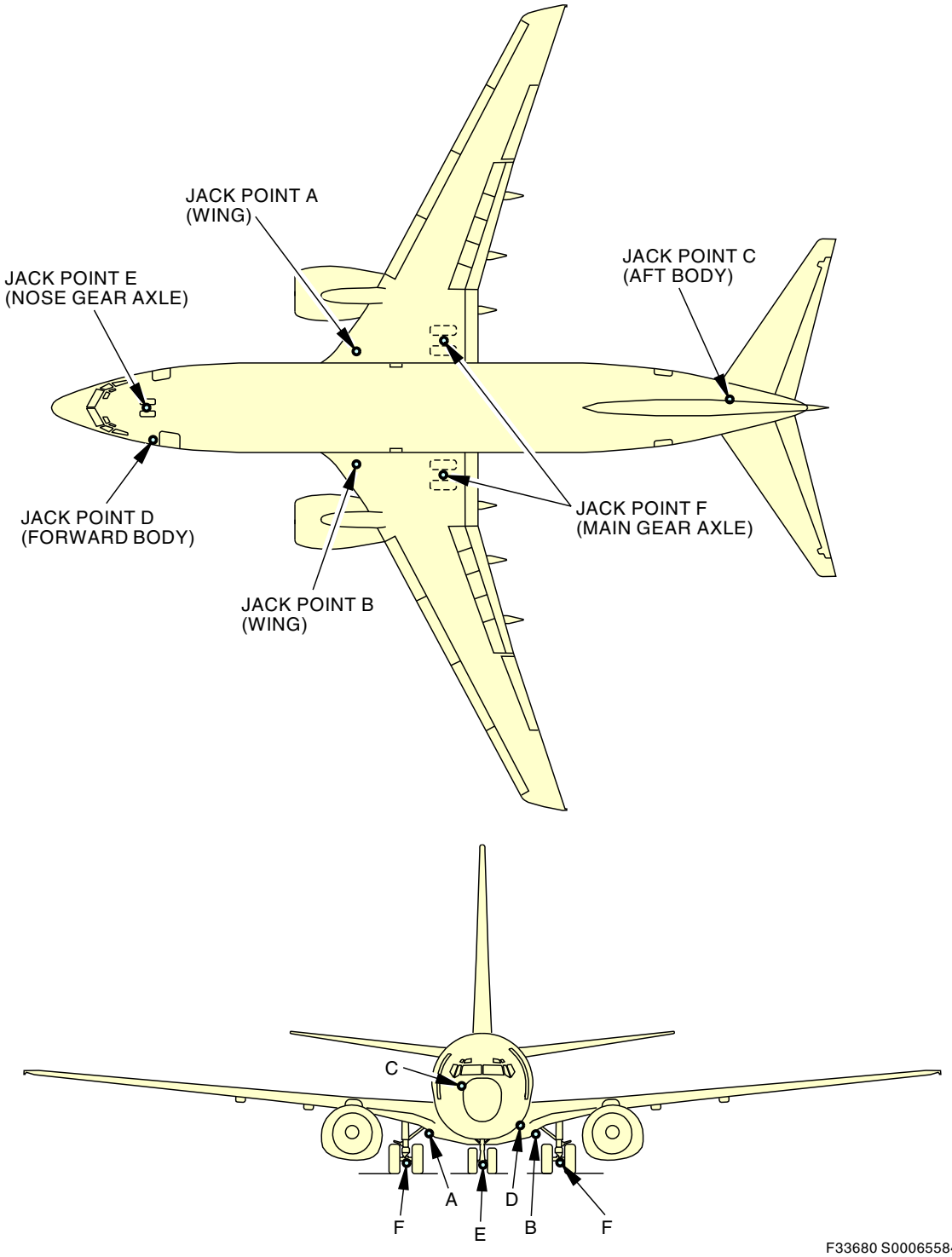
(b) Push YES switch to the following prompt: EXISTING FAULTS?

(c) Push the up arrow key until RESET LATCHES? shows on the PSEU display.

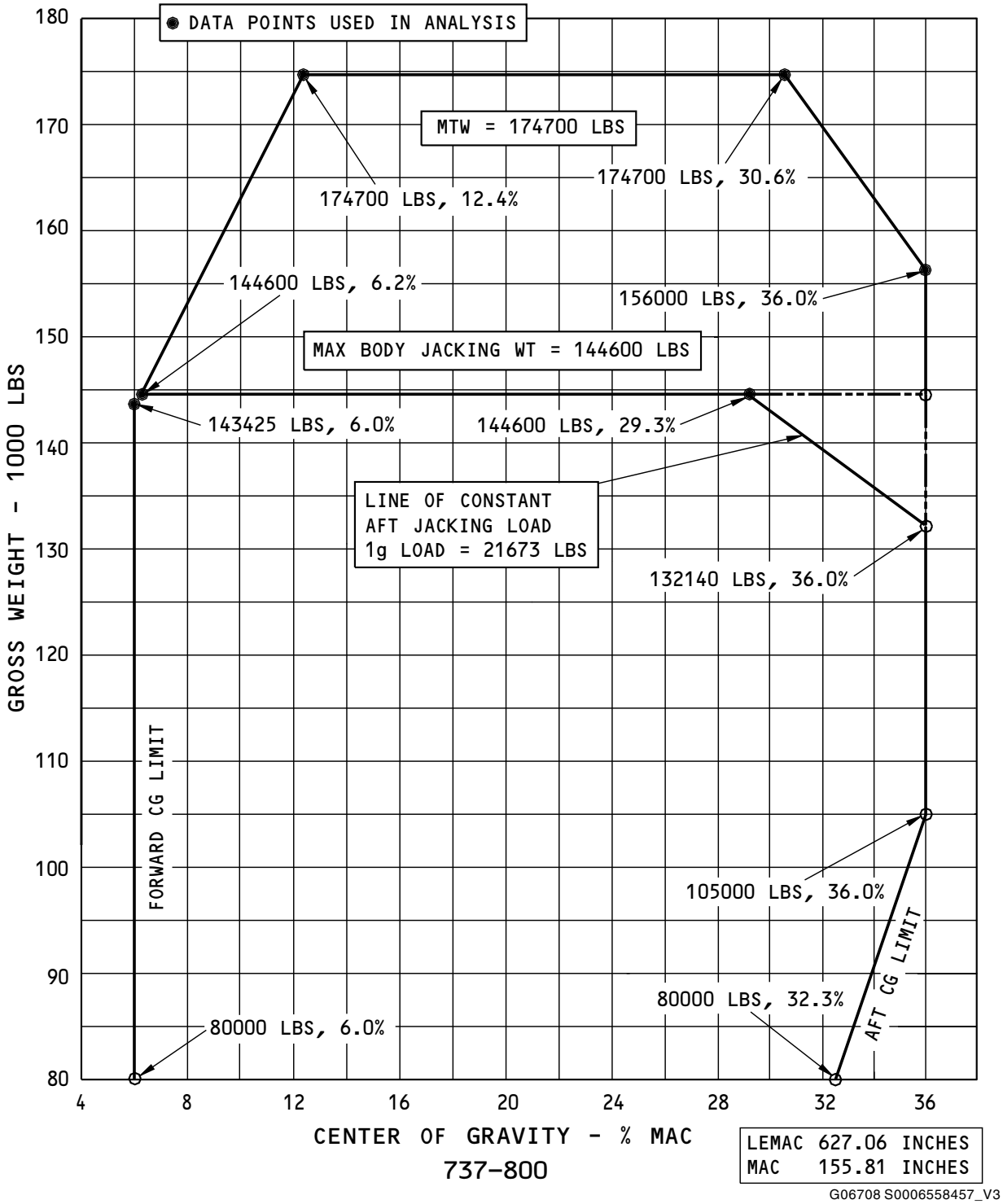
(d) Push the YES switch to select this option.

(e) Push YES switch to the following prompt: ARE YOU SURE?

——— END OF TASK ———



Jack Point Locations
Figure 202/07-11-01-990-801



Maximum Gross Weight versus Center of Gravity
Figure 203/07-11-01-990-833

JACK AIRPLANE AXLES - MAINTENANCE PRACTICES

1. General

A. This procedure contains these two tasks:

(1) Lift the Airplane Main Landing Gear with Axle Jacks.

(2) Lift the Airplane Nose Landing Gear with Axle Jacks.

B. When lifting the landing gear at an axle jack point, you can jack the airplane in winds up to 30 knots (34.5 mph).

TASK 07-11-03-580-801

2. Lift the Main Landing Gear Axles with the Axle Jacks

A. General

(1) This task can be used for one, two, or no tires flat on the same axle.

(2) There are jack points under each landing gear axle to permit the removal of the wheel and tire or brake assembly without jacking the complete airplane.

(3) Make sure that you have the correct axle jack pad heights and clearances between the tires (TASK 07-11-01-580-815).

NOTE: The dimensions can change when conditions change.

(4) The design of the axle jack points will permit to change two flat tires on the same landing gear while the airplane is at the Maximum Taxi Weight (MTW).

NOTE: The load on an axle jack point must not be more than the maximum permitted.

(5) Follow these safety instructions when you lift the airplane on the axle jacks:

(a) Lift only one main landing gear at a time.

(b) Remove only one wheel on each gear at a time.

NOTE: You can remove two wheels from the nose gear only when a jack with a mechanical safety provision (lock device) is used.

(6) If it is possible, make sure that the airplane is turned in the wind direction when it is not parked in a hangar or at a gate.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
09-11-00-580-801	Maintenance Towing (P/B 201)
10-11-05 P/B 201	CHOCK INSTALLATION
12-15-51-610-802	Add Nitrogen or Air to the Tire (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1505	Chocks - Wheel Part #: 19CAL455 - Type 1 Supplier: $1329 Part #: 99-9028-6000 Supplier: 59603 Part #: AC6820-LR Supplier: 032T9 Part #: ALPHACHOCKS MAX Supplier: 6X2T3 Part #: W86 Supplier: 3XZM7 Part #: W88-RH Supplier: 3XZM7 Opt Part #: W88 Supplier: 3XZM7 Opt Part #: W92 Supplier: 9L752
COM-5928	Jack - Axle, Main Gear Part #: 1063.50 Supplier: 1777B Part #: 1387.50 Supplier: 1777B Part #: 2265-10PR Supplier: 00994 Part #: 50P9AR Supplier: 94861 Part #: 65P10 Supplier: 94861 Part #: 65P10AR Supplier: 94861 Part #: 8842 Supplier: 94861 Part #: 8919 Supplier: 94861 Part #: RC4509 Supplier: D2029
SPL-1880	Downlock Equipment - NLG and MLG Part #: C32026-15 Supplier: 81205 Opt Part #: C32026-1 Supplier: 81205 Opt Part #: C32026-6 Supplier: 81205

D. Location Zones

Zone	Area
713	Nose Landing Gear
734	Left Main Landing Gear
744	Right Main Landing Gear

E. Precautions for the Tail Stand

SUBTASK 07-11-03-580-031

(1) Obey the following tail stand precautions:

CAUTION

DO NOT JACK THE AIRPLANE AT THE MAIN JACK POINTS OR AXLES WHILE THE TAIL STAND IS INSTALLED. IF YOU JACK THE AIRPLANE, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(a) Do not jack the airplane at the main jack points or axles while the tail stand is installed.

F. Prepare to Lift the Airplane Main Landing Gear Axles with the Axle Jacks

SUBTASK 07-11-03-580-001

WARNING

MOVEMENT OF CARGO, PASSENGERS, OR CREW INTO OR OUT OF THE AIRPLANE WHILE THE AXLES ARE ON JACKS CAN CAUSE A CHANGE IN THE CENTER OF GRAVITY AND CAUSE A HIGH LOAD ON THE AXLE JACKS. IT CAN ALSO CAUSE THE AIRPLANE TO FALL OFF THE JACKS. INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Make sure that the airplane center of gravity is within the specified limits (TASK 07-11-01-580-815).

SUBTASK 07-11-03-580-002

WARNING MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Make sure that the landing gear downlock downlock equipment, SPL-1880, is installed (TASK 32-00-01-480-801).

SUBTASK 07-11-03-580-012

(3) Make sure that the airplane is turned in the wind direction when it is not parked in a hangar or at a gate.

NOTE: You can lift the airplane on the airplane axles in winds up to 30 knots (34.5 mph).

G. Lift the Main Landing Gear

SUBTASK 07-11-03-580-003

CAUTION INSTALL THE JACK AT THE SPECIFIED AXLE JACK PAD. IF YOU INSTALL IT AT A DIFFERENT LOCATION, DAMAGE TO THE LANDING GEAR WILL OCCUR.

(1) If one tire on the main gear axle is flat, do these steps:

(a) Use the axle jacks to lift the airplane.

(b) If you cannot install the axle jacks, do these steps:

WARNING MAKE SURE THE INCLINE BLOCK RAMP ANGLE IS NOT MORE THAN 5 DEGREES. IF THE ANGLE IS HIGHER, YOU CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Put an inclined block below the good wheel.

2) Make sure that the incline block ramp angle is not more than 5 degrees.

3) Make sure that the block is of sufficient height to make the subsequent installation of an axle jack not necessary.

4) Tow the airplane to move the main landing gear wheel up on the inclined blocks (TASK 09-11-00-580-801).

SUBTASK 07-11-03-580-004

(2) If two tires on the main gear axle are flat, do these steps:

(a) If jacks of a correct height are available, use the axle jacks to lift the airplane.

(b) If jacks of a correct height are not available, do one of the following steps:

1) Do the servicing of the main landing gear tire that is serviceable (TASK 12-15-51-610-802).

NOTE: A serviceable tire, is a tire in satisfactory condition that can be inflated and is installed correctly.

a) Install the main gear axle jack, COM-5928, or equivalent.

WARNING MAKE SURE THE INCLINE BLOCK RAMP ANGLE IS NOT MORE THAN 5 DEGREES. IF THE ANGLE IS HIGHER, YOU CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

2) Do these steps to lift the main gear wheels onto inclined blocks:

a) Put one inclined block below each wheel of the main gear axle where an axle jack is necessary.

b) Make sure that the incline block ramp angle is not more than 5 degrees.

NOTE: The blocks must be level at a minimum height of 4 in. (10.16 cm) to install a jack with a closed height of 10 in. (25.40 cm).

c) Tow the airplane to move the main landing gear wheel up on the incline blocks (TASK 09-11-00-580-801).

d) Put a wheel chock, COM-1505, around the nose gear and opposite main landing gear (PAGEBLOCK 10-11-05/201).

e) Install the main gear axle jack, COM-5928, or equivalent.

(c) Lift the applicable landing gear on the axle jack, COM-5928, or equivalent.

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

1) Operate the axle jack, COM-5928, or equivalent to lift the airplane to the correct height.

NOTE: Refer to the jack manufacturer's instructions.

SUBTASK 07-11-03-580-019

(3) If no tires are flat on the main gear axle, do these steps:

WARNING FULLY DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY. OR, DO AN INSPECTION OF THE WHEEL AND TIRE TO MAKE SURE THAT THEY ARE SAFE. AIR PRESSURE CAN CAUSE AN EXPLOSION OF THE DAMAGED WHEEL AND TIRE COMPONENTS. INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING REMOVE ONLY ONE WHEEL AND TIRE ASSEMBLY FROM THE MAIN LANDING GEAR AT A TIME. IF YOU REMOVE THE TWO WHEEL AND TIRE ASSEMBLIES AT THE SAME TIME, STRUCTURAL DAMAGE AND INJURY TO PERSONS CAN OCCUR IF THE AIRPLANE FALLS.

(a) Put the jack directly below the jack pad on the main landing gear axles:

1) Examine the wheels on the axles that are not lifted with the jack.

2) Install the wheel chock, COM-1505, on all of the wheels on the axles that are not being lifted with the jack (PAGEBLOCK 10-11-05/201).

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

3) Install the axle jack, COM-5928, or equivalent to lift the airplane to the correct height.

NOTE: Refer to the jack manufacturer's instructions.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 07-11-03-580-021

(1) Make sure that the area below the airplane is clear of all personnel and equipment.

SUBTASK 07-11-03-580-005

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

(2) Lower the airplane off of the axle jack.

NOTE: Refer to the jack manufacturer's instructions.

SUBTASK 07-11-03-580-022

(3) Remove all jack equipment from below forward and aft axles.

END OF TASK

TASK 07-11-03-580-802

3. Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E

A. General

(1) This task can be used for one, two, or no tires flat on the same axle.

(2) Follow these safety instructions when you lift the airplane on axle jacks:

(a) Lift only one main landing gear at a time.

(b) Remove only one wheel on each gear at one time.

NOTE: Removal of the two wheels from the nose gear is only possible when a jack with a mechanical safety device (lock device) is used.

(3) If it is possible, make sure that the airplane is turned in the wind direction when it is not parked in a hangar or at a gate.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-21-580-801	Lift the Airplane Nose with the Nose Jack at Jack Point D (P/B 201)
09-11-00-580-801	Maintenance Towing (P/B 201)
10-11-05 P/B 201	CHOCK INSTALLATION
12-15-51-610-802	Add Nitrogen or Air to the Tire (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1484	Jack - Axle, Nose Gear
	Part #: 0152.00 Supplier: 1777B Part #: 02-7813C0100 Supplier: 59603 Part #: 5004-55 Supplier: 00994 Part #: 5007-56 Supplier: 00994 Part #: 53D22004 Supplier: 00994 Part #: 642S Supplier: 94861 Part #: 8842 Supplier: 94861 Part #: J-AXLE12HPA Supplier: CD856 Part #: RC4509 Supplier: D2029 Part #: RH1606 Supplier: D2029 Opt Part #: 1008-50 Supplier: 00994 Opt Part #: 5923-010 Supplier: 00994 Opt Part #: RH1029 Supplier: D2029
COM-1505	Chocks - Wheel
	Part #: 19CAL455 - Type 1 Supplier: $1329 Part #: 99-9028-6000 Supplier: 59603 Part #: AC6820-LR Supplier: 032T9 Part #: ALPHACHOCKS MAX Supplier: 6X2T3 Part #: W86 Supplier: 3XZM7 Part #: W88-RH Supplier: 3XZM7 Opt Part #: W88 Supplier: 3XZM7 Opt Part #: W92 Supplier: 9L752
COM-5928	Jack - Axle, Main Gear
	Part #: 1063.50 Supplier: 1777B Part #: 1387.50 Supplier: 1777B Part #: 2265-10PR Supplier: 00994 Part #: 50P9AR Supplier: 94861 Part #: 65P10 Supplier: 94861 Part #: 65P10AR Supplier: 94861 Part #: 8842 Supplier: 94861 Part #: 8919 Supplier: 94861 Part #: RC4509 Supplier: D2029
SPL-1499	Pin - Lock, NLG Towing Lever
	Part #: A09003-2 Supplier: 81205 Opt Part #: A09003-1 Supplier: 81205
SPL-1880	Downlock Equipment - NLG and MLG
	Part #: C32026-15 Supplier: 81205 Opt Part #: C32026-1 Supplier: 81205 Opt Part #: C32026-6 Supplier: 81205

D. Location Zones

Zone	Area
713	Nose Landing Gear

E. Precautions for the Tail Stand

SUBTASK 07-11-03-580-024

(1) Obey the following tail stand precautions:

CAUTION

DO NOT JACK THE AIRPLANE AT THE MAIN JACK POINTS OR AXLES WHILE THE TAIL STAND IS INSTALLED. IF YOU JACK THE AIRPLANE, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(a) Do not jack the airplane at the main jack points or axles while the tail stand is installed.

F. Prepare to Lift the Airplane Nose Landing Gear with the Axle Jack

SUBTASK 07-11-03-580-007

WARNING

MOVEMENT OF CARGO, PASSENGERS, OR CREW INTO OR OUT OF THE AIRPLANE WHILE THE AXLES ARE ON JACKS CAN CAUSE A CHANGE IN THE CENTER OF GRAVITY AND CAUSE A HIGH LOAD ON THE AXLE JACKS. IT CAN ALSO CAUSE THE AIRPLANE TO FALL OFF THE JACKS. INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Make sure that the airplane center of gravity is within the specified limits (TASK 07-11-01-580-815).

SUBTASK 07-11-03-580-025

WARNING

MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

WARNING

ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

I (2) Make sure that the landing gear downlock pins downlock equipment, SPL-1880, and NLG towing lever pin, SPL-1499, are installed (TASK 32-00-01-480-801).

SUBTASK 07-11-03-860-004

(3) Make sure that the airplane is turned in the wind direction when it is not parked in a hangar or at a gate.

NOTE: The airplane can be lifted on the airplane axles in winds to 30 knots (34.5 mph).

SUBTASK 07-11-03-480-001

CAUTION

DURING WINDY CONDITIONS, YOU MUST USE THE STABILIZING JACK (JACK POINT D). YOU MUST PUT A PRE-LOAD ON THE STABILIZING JACK TO A MAXIMUM OF 5000 POUNDS (2268 KILOGRAMS) AT WINDS OF 30 KNOTS (35 MPH). IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

(4) Use the forward auxiliary jack adapter (jack point D) when the airplane is not in a hangar and winds are 30 knots (35 mph) (TASK 07-11-01-580-815 and TASK 07-11-21-580-801).

NOTE: It is the airline's decision if the auxiliary jacks are necessary when the airplane is in the hangar (no wind).

NOTE: When the airplane is not in a hangar, the stabilizing jack must be installed when winds are at 30 knots (35 mph).

SUBTASK 07-11-03-580-014

(5) Make sure that the parking brake is set.

SUBTASK 07-11-03-580-016

(6) Make sure that the wheel chock, COM-1505, is installed.

G. Lift the Nose Landing Gear Axle with the Axle Jack

SUBTASK 07-11-03-580-028

CAUTION

INSTALL THE JACK AT THE SPECIFIED AXLE JACK PAD. IF YOU INSTALL IT AT A DIFFERENT LOCATION, DAMAGE TO THE LANDING GEAR WILL OCCUR.

(1) If you lift the airplane at nose jack point D, an axle jack is not necessary (TASK 07-11-21-580-801).

SUBTASK 07-11-03-580-008

CAUTION

THE FUSELAGE AFT OF THE MAIN LANDING GEAR CAN LOWER WHEN YOU LIFT THE NOSE LANDING GEAR. MAKE SURE THAT THE AREA BELOW THE AIRPLANE IS CLEAR OF ALL EQUIPMENT BEFORE YOU LIFT THE NOSE LANDING GEAR. IF YOU DO NOT OBEY THESE INSTRUCTIONS, DAMAGE TO THE AIRPLANE AND EQUIPMENT CAN OCCUR.

(2) If one tire on the nose gear axle is flat, do these steps:

(a) Use the axle jacks to lift the airplane.

(b) If you cannot install the axle jack, do these steps:

WARNING

MAKE SURE THE INCLINE BLOCK RAMP ANGLE IS NOT MORE THAN 5 DEGREES. IF THE ANGLE IS HIGHER, YOU CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

1) Put an inclined block below the good wheel.

2) Make sure that the incline block ramp angle is not more than 5 degrees.

3) Make sure that the block is of sufficient height to make the subsequent installation of an axle jack not necessary.

4) Tow the airplane to move the nose landing gear up on the inclined blocks (TASK 09-11-00-580-801).

SUBTASK 07-11-03-580-009

(3) If two tires on the nose gear axle are flat, do these steps:

(a) If jacks of a correct height are available, use the axle jacks to lift the airplane.

(b) If jacks of a correct height are not available, do one of the two following procedures:

1) Do the servicing of the nose landing gear tire that is serviceable (TASK 12-15-51-610-802).

a) Make sure that one tire is in satisfactory condition to be inflated and is installed correctly.

b) Install the axle jack, COM-1484, or equivalent.

WARNING MAKE SURE THE INCLINE BLOCK RAMP ANGLE IS NOT MORE THAN 5 DEGREES. IF THE ANGLE IS HIGHER, YOU CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

2) Lift the nose gear wheels onto inclined blocks:

a) Put one inclined block below each wheel of the nose gear axle that you need to install an axle jack.

<1> Make sure that the incline block ramp angle is not more than 5 degrees.

NOTE: The blocks must be level at a minimum height of 4 in. (102 mm) to install a jack with a closed height of 10 in. (254 mm).

b) Tow the airplane to move the nose landing gear wheels up on the inclined blocks (TASK 09-11-00-580-801).

c) Put the wheel chock, COM-1505, around the wheels of the main landing gear (PAGEBLOCK 10-11-05/201).

d) Install the axle jack, COM-1484, or equivalent between the wheels of the gear.

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

(c) Operate the nose axle jack, COM-1484, or equivalent to lift the airplane to the correct height to get a 2.0 in. (50.8 mm) ground clearance.

NOTE: Refer to the jack manufacturer's instructions.

SUBTASK 07-11-03-580-029

(4) If no tires are flat on the nose gear axle, do these steps:

WARNING FULLY DEFLATE THE TIRE BEFORE YOU REMOVE THE WHEEL AND TIRE ASSEMBLY. OR, DO AN INSPECTION OF THE WHEEL AND TIRE TO MAKE SURE THAT THEY ARE SAFE. AIR PRESSURE CAN CAUSE AN EXPLOSION OF THE DAMAGED WHEEL AND TIRE COMPONENTS. INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING REMOVE ONE WHEEL AND THE TIRE ASSEMBLY FROM THE NOSE LANDING GEAR AT A TIME. IF YOU REMOVE THE TWO WHEEL AND THE TIRE ASSEMBLIES AT THE SAME TIME, THE AIRPLANE CAN FALL. STRUCTURAL DAMAGE AND INJURY TO PERSONNEL CAN OCCUR.

(a) Put the jack directly below the jack pad on the nose landing gear axle:

1) Examine the wheels on the axle that is not lifted with the jack.

2) Install the wheel chock, COM-1505, on all of the wheels on the axles that are not being lifted with the jack (PAGEBLOCK 10-11-05/201).

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

3) Install the axle jack, COM-5928, or equivalent to lift the airplane wheel(s) to the necessary height.

NOTE: Refer to the jack manufacturer's instructions.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 07-11-03-580-010

WARNING OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU OPERATE THE JACKS. IF YOU IGNORE THE INSTRUCTIONS, INJURIES TO PERSONNEL AND DAMAGE TO THE EQUIPMENT CAN OCCUR.

(1) Lower the airplane off of the axle jack.

NOTE: Use the jack manufacturer's instructions.

SUBTASK 07-11-03-860-013

(2) Remove the axle jack from below the axle.

SUBTASK 07-11-03-860-012

(3) Remove the NLG towing lever pin, SPL-1499, from the nose wheel steering mechanism.

SUBTASK 07-11-03-580-018

(4) If it is necessary, release the parking brake.

END OF TASK

TILT AIRPLANE FOR TAIL CLEARANCE - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Tilt the airplane for the tail clearance

(2) Balance check for the tilted airplane

(3) Tow the tilted airplane

(4) Lower the airplane nose with the nose lift dolly

TASK 07-11-06-580-801

2. Tilt the Airplane For the Tail Clearance

(Example of a Nose Lift Dolly/Figure 201, Vertical Tail Height Versus Nose Gear Jack Height/Figure 202, Nose Gear Shock Strut Extension/Figure 203, Moment Due to Ballast/Figure 211, Balance Check for Towing Tilted Airplane/Figure 213)

A. General

(1) You can lift the airplane nose with a nose lift dolly, COM-8827 to lower the airplane's tail for clearance in the hangar or storage area (Example of a Nose Lift Dolly/Figure 201).

(2) You must add ballast when the total moment of the airplane about the main gear axle is not more than +1000 in-lbX(10)-3 (Moment Due to Ballast/Figure 211, Balance Check for Towing Tilted Airplane/Figure 213).

(a) This step will keep the airplane stable when you lift the airplane nose.

(3) You can use a nose gear ramp to permit the vertical fin to go through the hangar door.

B. References

Reference	Title
10-11-05 P/B 201	CHOCK INSTALLATION
12-14-01-600-801	Potable Water System - Drain (P/B 301)
12-15-31-610-802	Main Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
12-17-01-610-801	Waste Tank Servicing (P/B 301)
28-26-00-650-801	Fuel Tank Defueling (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1505	Chocks - Wheel Part #: 19CAL455 - Type 1 Supplier: $1329 Part #: 99-9028-6000 Supplier: 59603 Part #: AC6820-LR Supplier: 032T9 Part #: ALPHACHOCKS MAX Supplier: 6X2T3 Part #: W86 Supplier: 3XZM7 Part #: W88-RH Supplier: 3XZM7 Opt Part #: W88 Supplier: 3XZM7 Opt Part #: W92 Supplier: 9L752
COM-8827	Lift Dolly - Nose Part #: AM-2067-M-100 Supplier: 9M323 Part #: HW0702 Supplier: D2029

D. Location Zones

Zone	Area
710	Subzone - Landing Gear: Nose Landing Gear and Landing Gear Doors
730	Subzone - Left Main Landing Gear and Landing Gear Doors
740	Subzone - Right Main Landing Gear and Landing Gear Doors

E. Prepare to Lift the Airplane with a Nose Dolly

SUBTASK 07-11-06-580-001

(1) Do the steps that follow to prepare to lift the airplane with a nose lift dolly, COM-8827:

(a) Defuel the airplane to a maximum of 6000 lb (2722 kg) of fuel. Do this task: Fuel Tank Defueling, TASK 28-26-00-650-801.

NOTE: The 6000 lb (2722 kg) fuel weight is the maximum that is permitted for this task.

(b) Drain the potable water and waste water tanks, do these tasks: Potable Water System - Drain, TASK 12-14-01-600-801 and Waste Tank Servicing, TASK 12-17-01-610-801.

(c) If there is snow or ice on the empennage, make sure to remove the unwanted material.

(d) Inflate the nose shock strut, do this task: Nose Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-41-610-802.

1) Hold the shock strut with the nylon strap, a rope, a sling (or applicable equipment) to keep the Dimension X to 23 in. (58.4 cm) maximum (Nose Gear Shock Strut Extension/Figure 203).

2) Make sure Dimension "X" is not more than 23 in. (58.4 cm) (Nose Gear Shock Strut Extension/Figure 203).

(e) Inflate the shock struts on the main gear, do this task: Main Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-31-610-802.

1) Make sure the minimum extension on the shock struts is 1.50 ±0.13 in. (38.10 ±3.18 mm).

(f) Find the nose height that is necessary to get the tail clearance (Vertical Tail Height Versus Nose Gear Jack Height/Figure 202).

(g) Make sure the nose landing gear is in its neutral position.

(h) Do the steps that follow to put the nose lift dolly, COM-8827 on the nose gear:

1) Remove the rear lock bar from the nose lift dolly, COM-8827.

2) Put the nose lift dolly, COM-8827 in the center of the nose gear.

3) Disconnect the torsion links on the nose landing gear.

4) Install the nose lift dolly, COM-8827 lock bar behind the tires.

WARNING MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(i) Make sure all the landing gear downlocks are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801

(j) Loosely put wheel chock, COM-1505 on the main gear wheels (CHOCK INSTALLATION, PAGEBLOCK 10-11-05/201).

(k) You must add ballast when the total moment of the airplane about the main gear axle is not more than +1000 in-lbX(10)-3, (Moment Due to Ballast/Figure 211, Balance Check for Towing Tilted Airplane/Figure 213).

1) This step will keep the airplane stable when you lift the airplane nose.

F. Lift the Airplane Nose

SUBTASK 07-11-06-210-001

WARNING MAKE SURE THAT ALL PERSONS ARE AWAY FROM THE LEADING EDGE SLATS. THEY CAN MOVE AUTOMATICALLY DURING MAINTENANCE UNLESS YOU DO PRECAUTION PROCEDURES. IF YOU DO NOT OBEY THESE INSTRUCTIONS, INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING DO NOT LIFT THE AIRPLANE NOSE MORE THAN 84 INCHES (2.13 METERS). THE AIRPLANE WILL NOT BE STABLE IF YOU LIFT THE NOSE MORE THAN 84 INCHES (2.13 METERS). THIS CAN CAUSE DAMAGE TO THE AIRPLANE AND INJURY TO PERSONNEL.

(1) Do the steps that follow to lift the airplane nose to the necessary height with the nose lift dolly, COM-8827.

NOTE: See the nose lift dolly, COM-8827 manufacturer's instructions.

(a) Operate the gear scoop "DOWN" to hold the nose lift dolly, COM-8827 in the uplock position.

(b) Make sure the airplane brakes are released.

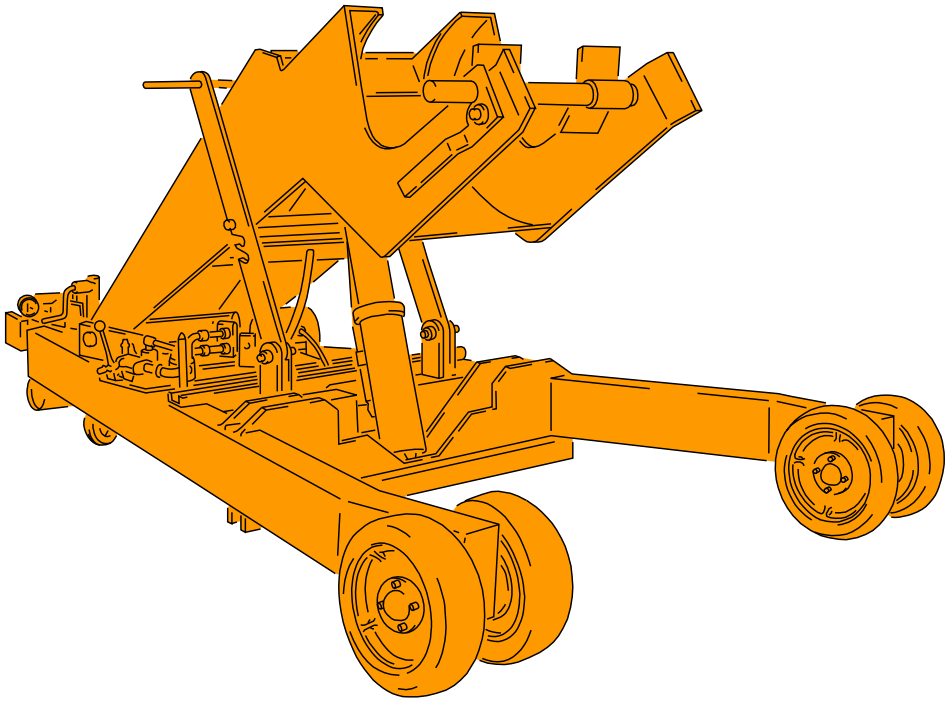
CAUTION DO NOT TOW THE AIRPLANE WHEN THE STRUT EXTENSION (DIMENSION "X") IS MORE THAN 23 INCHES. THIS CAN CAUSE DAMAGE TO THE CENTERING CAMS ON THE NOSE GEAR.

(c) Make sure the Dimension "X" is not more than 23 in. (58.4 cm) (Nose Gear Shock Strut Extension/Figure 203).

1) If Dimension "X" is more than 23 in. (58.4 cm), release the strut pressure until Dimension "X" is 23 in. (58.4 cm) or less.

2) Adjust the strut limit, if it is necessary.

END OF TASK



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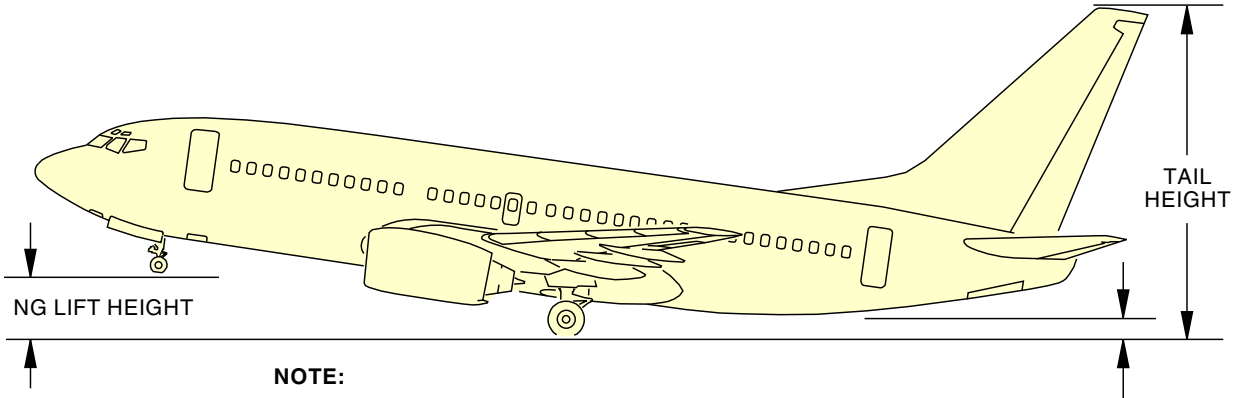
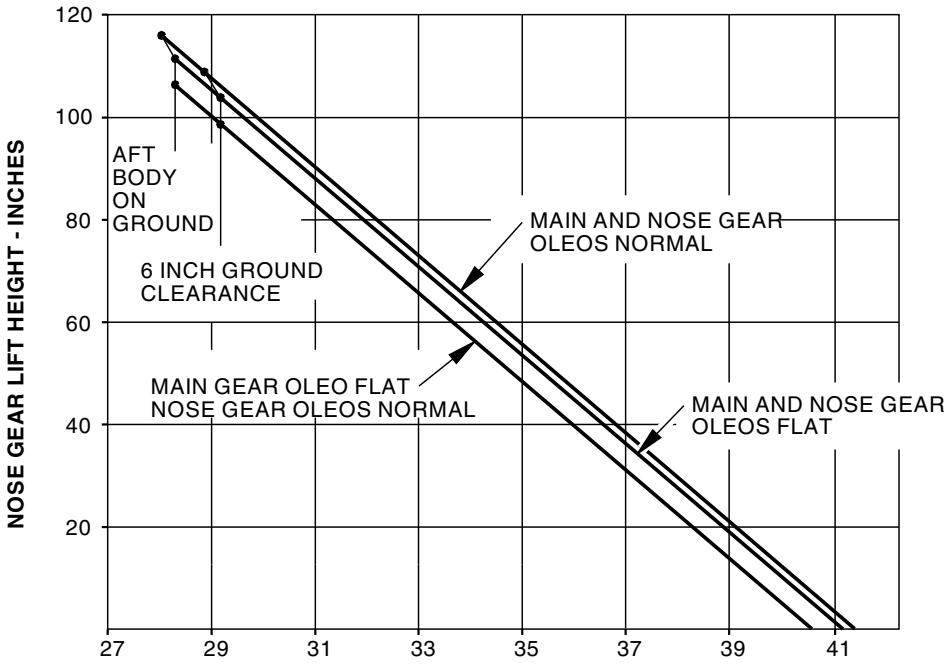
Example of a Nose Lift Dolly
Figure 201/07-11-06-990-801



NOTE:

1. NO WING FUEL
2. CG LOCATION AS NOTED
3. 737-700, (-600,-800 ARE EQUIVALENT)



TAIL HEIGHT ABOVE THE GROUND - FEET
737-600 BASED ON 73,000-83,000 LB 18-26% MAC CG

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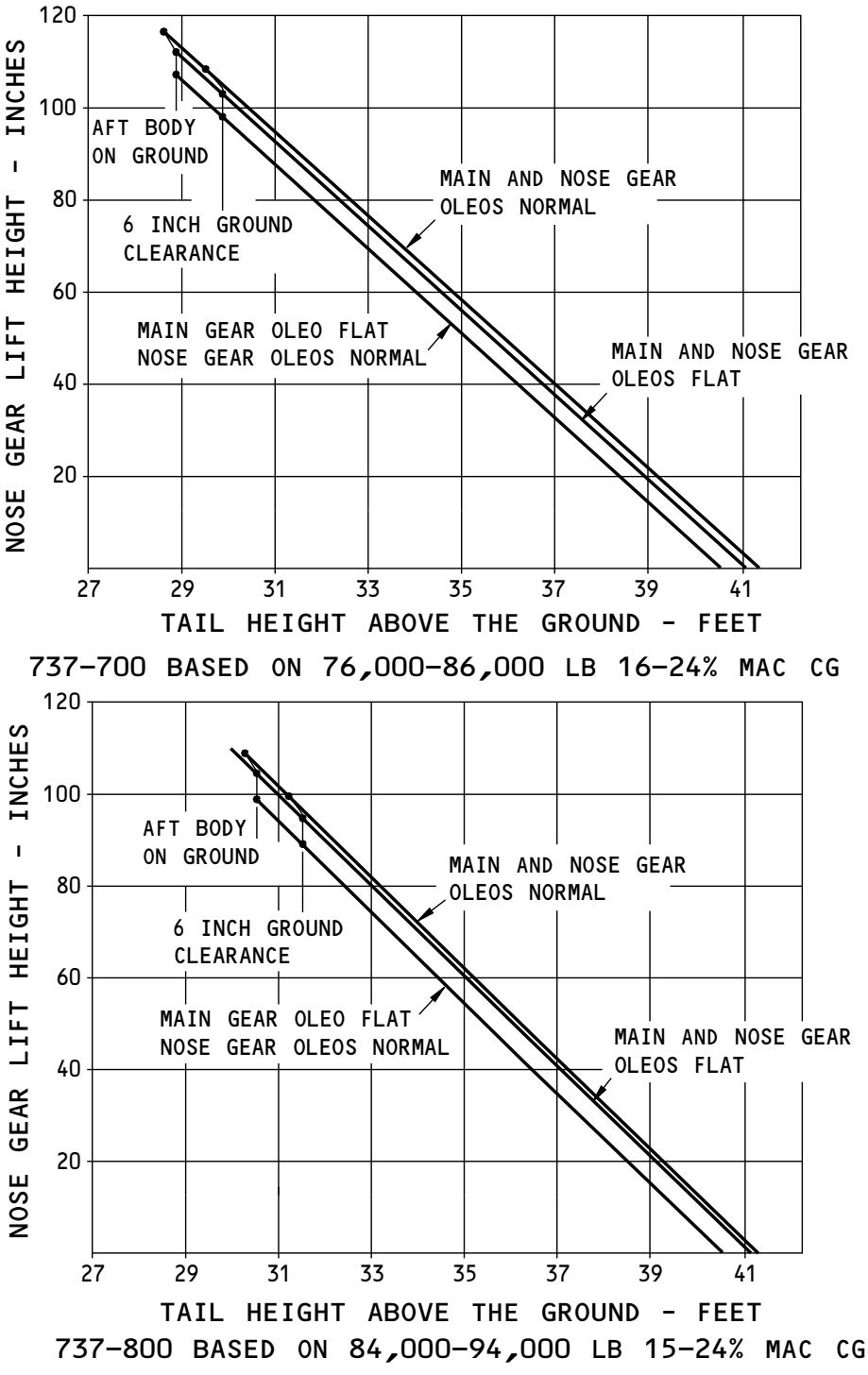
Vertical Tail Height Versus Nose Gear Jack Height
Figure 202/07-11-06-990-802 (Sheet 1 of 2)



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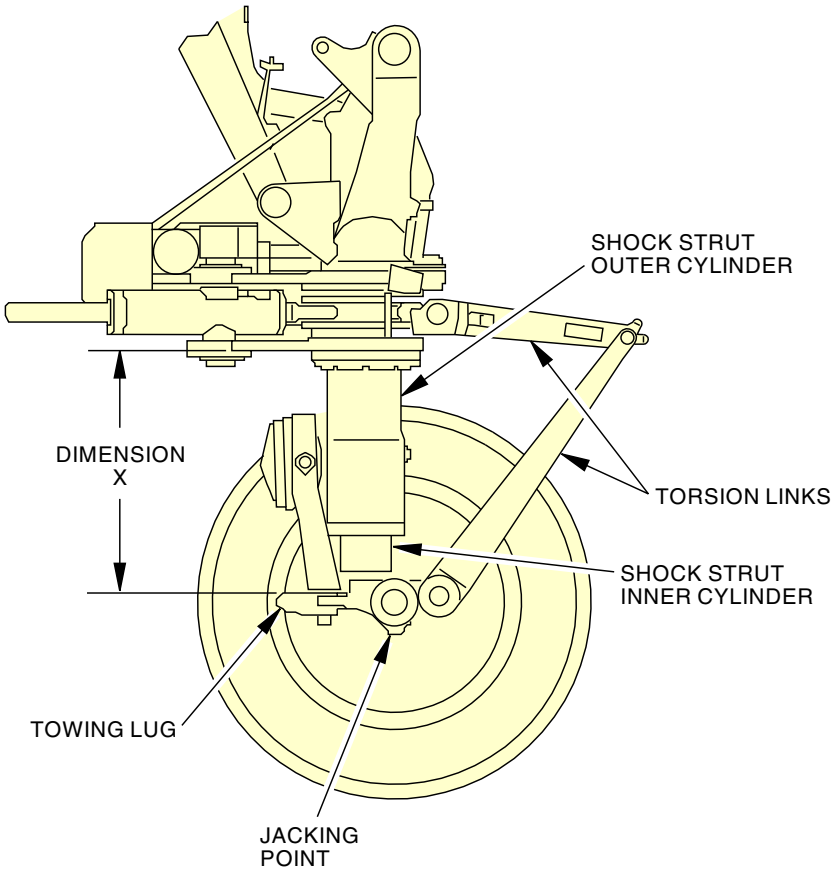
Vertical Tail Height Versus Nose Gear Jack Height
Figure 202/07-11-06-990-802 (Sheet 2 of 2)



STRUT POSITION	DIMENSION X
FULLY COMPRESSED	13.5 INCHES
FULLY EXTENDED	25.5 INCHES

F69764 S0006558472_V3

Nose Gear Shock Strut Extension
Figure 203/07-11-06-990-803

TASK 07-11-06-280-801

3. Balance Check for the Tilted Airplane

(Moment Due to Airplane Weight/Figure 204, Moment Due to Tilting/Figure 205, Moment Due to Fuel Movement/Figure 206, Moment Due to Wind/Figure 207, Moment Due to Tow Vehicle Acceleration/Figure 208, Moment Due to Towing Upgrade/Figure 209, Moment Due to Dolly Restraint/Figure 210, Moment Due to Ballast/Figure 211, Maximum Nose Gear Load/Figure 212, Balance Check for Towing Tilted Airplane/Figure 213, Vertical Tail Height Versus Degree of Tilt of the Airplane After Jacking/Figure 214)

A. General

(1) When you lift the airplane nose, the center of gravity of the airplane moves aft with respect to the main gear axle.

(a) This movement, plus the wind, grade of the ramp, and fuel movement can cause the airplane to move.

1) This can also make the aft fuselage of the airplane touch the ground.

(b) You must complete a balance check form to make sure the airplane will be stable.

1) Add the ballast, if it is necessary.

NOTE: You can use the dolly as a ballast.

a) If you use the dolly as ballast, make sure the dolly is attached to the nose gear wheels.

B. Balance Check for the Tilted Airplane

SUBTASK 07-11-06-970-001

(1) Do the steps that follow to do the balance check for the tilted airplane:

(a) Add the moments about the main gear because of the items listed below:

1) Airplane weight (Moment Due to Airplane Weight/Figure 204).

2) Tilted airplane (Moment Due to Tilting/Figure 205).

3) Fuel movement (Moment Due to Fuel Movement/Figure 206).

4) Wind (Moment Due to Wind/Figure 207).

5) Tow vehicle acceleration (Moment Due to Tow Vehicle Acceleration/Figure 208).

6) Grade of the Ramp (Moment Due to Towing Upgrade/Figure 209).

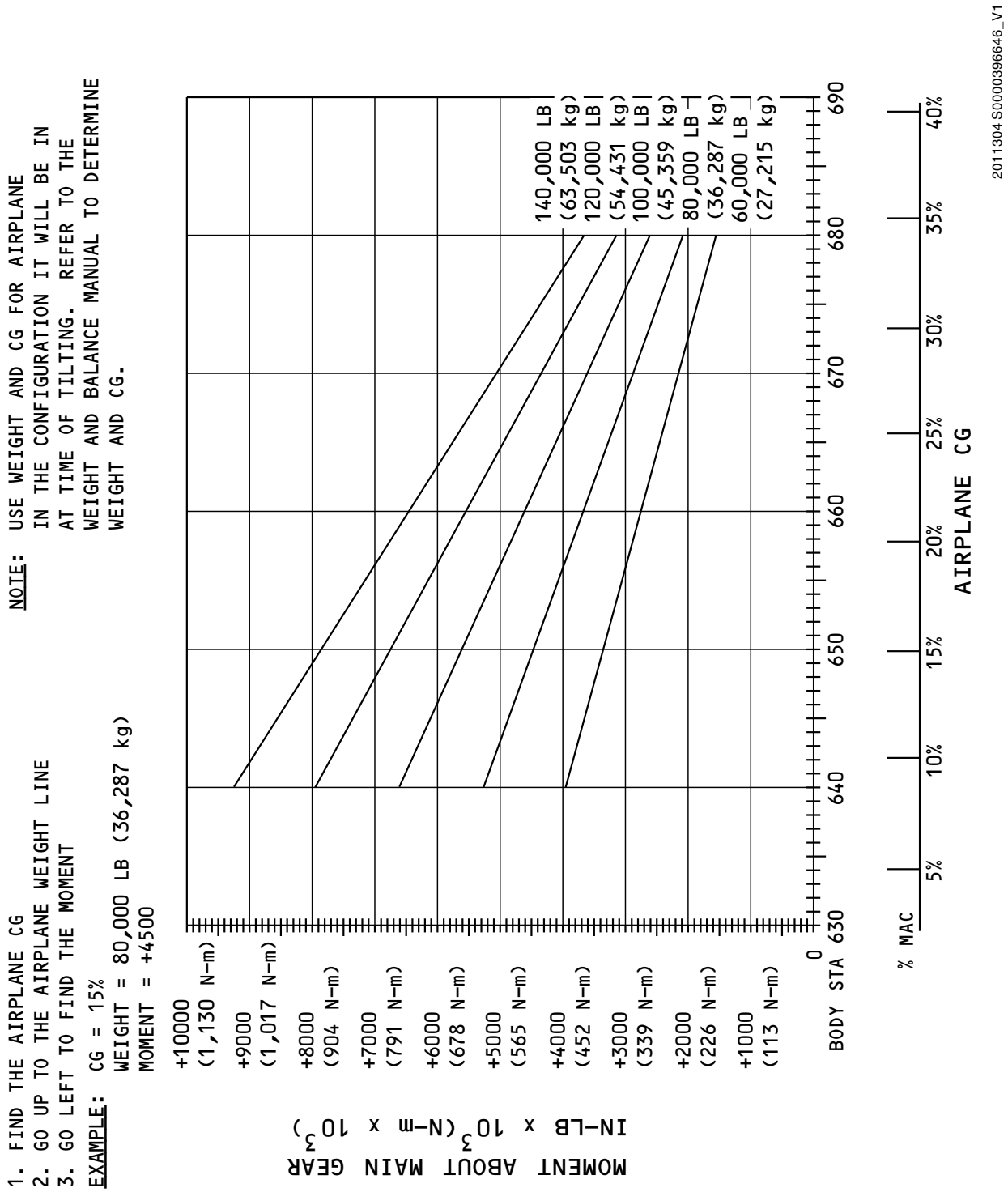
7) Dolly restraint (Moment Due to Towing Upgrade/Figure 209, Moment Due to Dolly Restraint/Figure 210).

a) Make sure the sum of these moments is more than +1,000,000 inch-pounds.

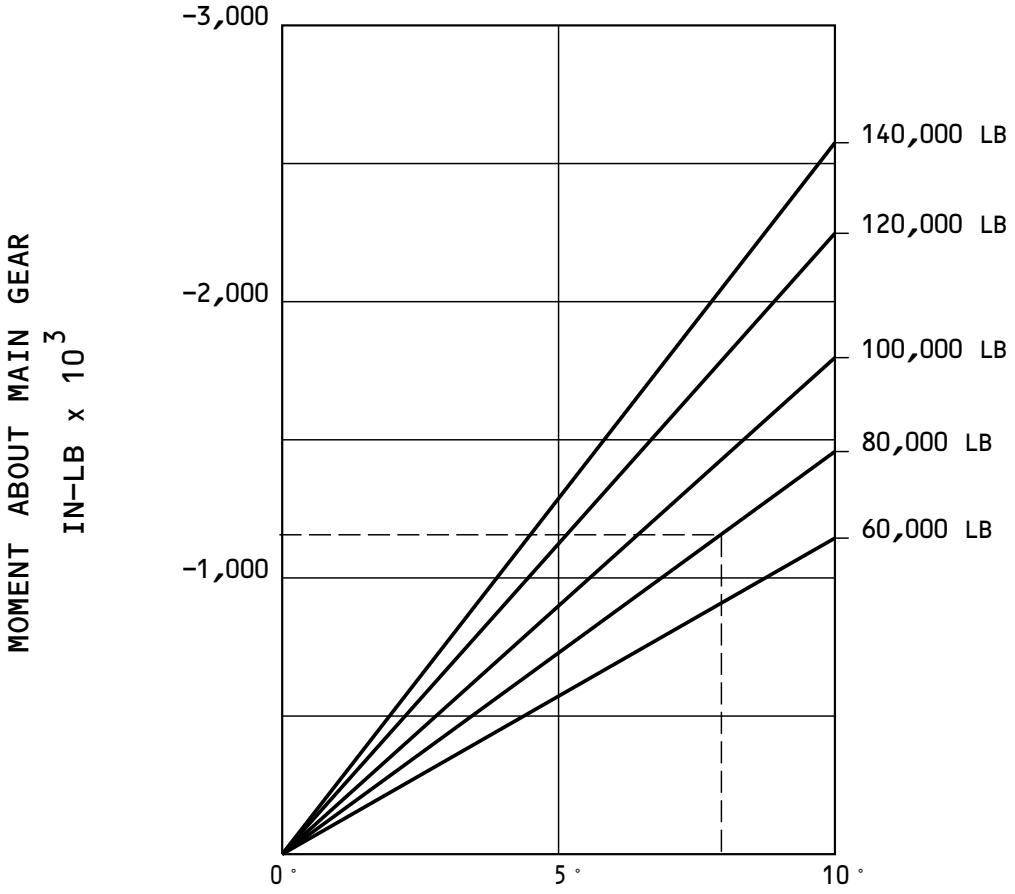
b) Make sure the dolly has the capacity equivalent to or more than the maximum load of the airplane nose (Maximum Nose Gear Load/Figure 212).

NOTE: (Moment Due to Ballast/Figure 211, Balance Check for Towing Tilted Airplane/Figure 213) is an example to calculate a balance check when you tow the airplane.

——— END OF TASK ———



Moment Due to Airplane Weight
Figure 204/07-11-06-990-804



1. FIND THE MAXIMUM ANGLE THE AIRPLANE IS TO BE TILTED
2. GO UP TO THE AIRPLANE WEIGHT
3. GO LEFT TO FIND THE MOMENT

EXAMPLE: TILT = 8°
WEIGHT = 80,000 LB
MOMENT = -1150

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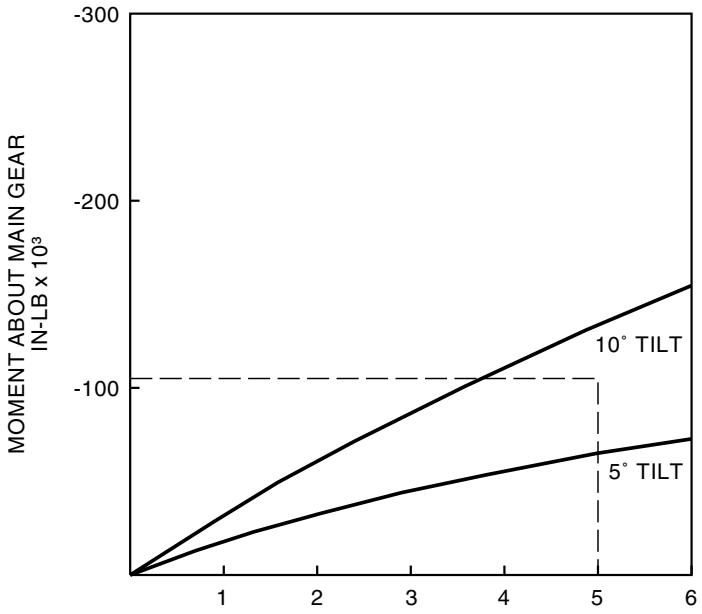
Moment Due to Tilting
Figure 205/07-11-06-990-805

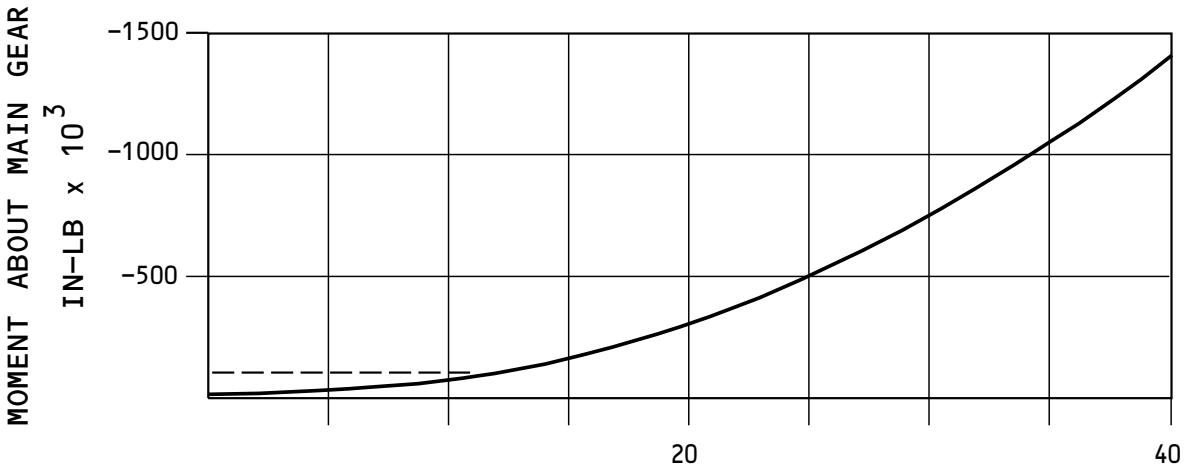


1. FIND THE TOTAL FUEL WEIGHT
2. GO UP TO THE TILT LINE
3. GO LEFT TO FIND THE MOMENT

EXAMPLE: TILT = 8˚
FUEL WEIGHT = 5,000 LB
MOMENT = -105 IN-LB

F69912 S0006558476_V3

Moment Due to Fuel Movement
Figure 206/07-11-06-990-806



1. FIND THE MAXIMUM WIND VELOCITY
2. GO UP TO THE LINE
3. GO LEFT TO FIND THE MOMENT

EXAMPLE: WIND = 11 KNOTS
MOMENT = -100

CAUTION: TOWING THE AIRPLANE TILTED IN HIGH WINDS IS NOT RECOMMENDED.

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Moment Due to Wind
Figure 207/07-11-06-990-807

AIRPLANE WEIGHT	60,000	70,000	80,000	90,000	MORE THAN 100,000
MOMENT ABOUT MAIN GEAR $IN-LB \times 10^3$	-160	-190	-220	-250	-280

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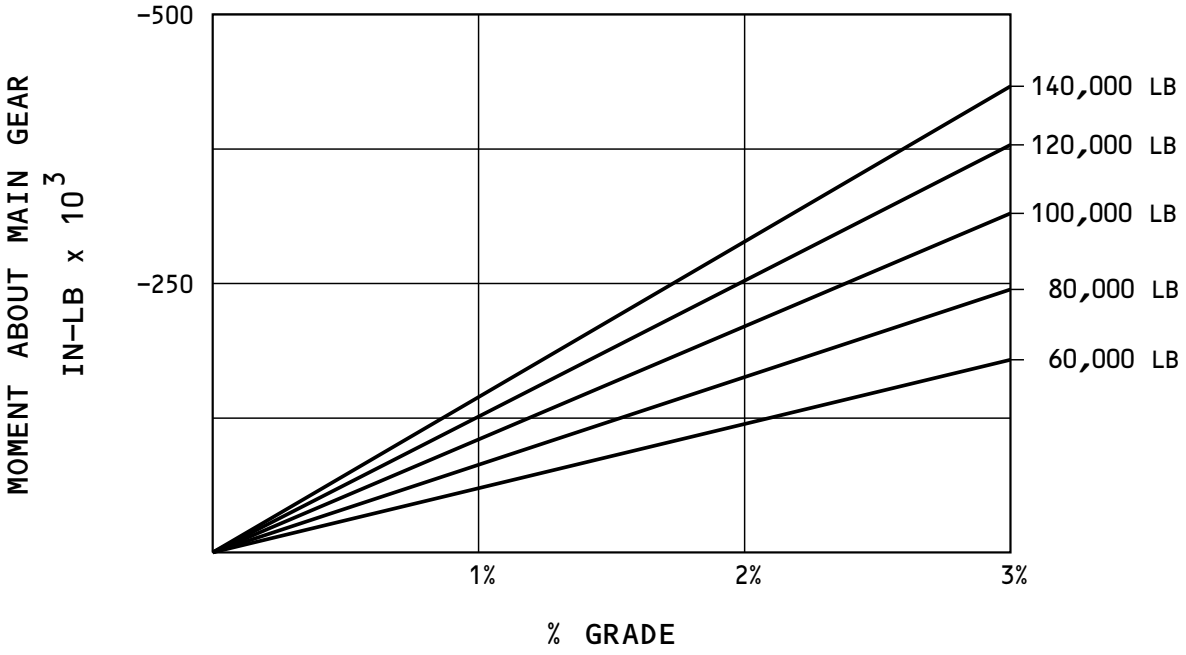
Moment Due to Tow Vehicle Acceleration
Figure 208/07-11-06-990-808



1. FIND THE % GRADE (1% GRADE EQUALS 1-FOOT RISE PER 100 FEET)
2. GO UP TO THE AIRPLANE WEIGHT
3. GO LEFT TO FIND THE MOMENT

EXAMPLE: GRADE = 2%
WEIGHT = 80,000 LB
MOMENT = -160

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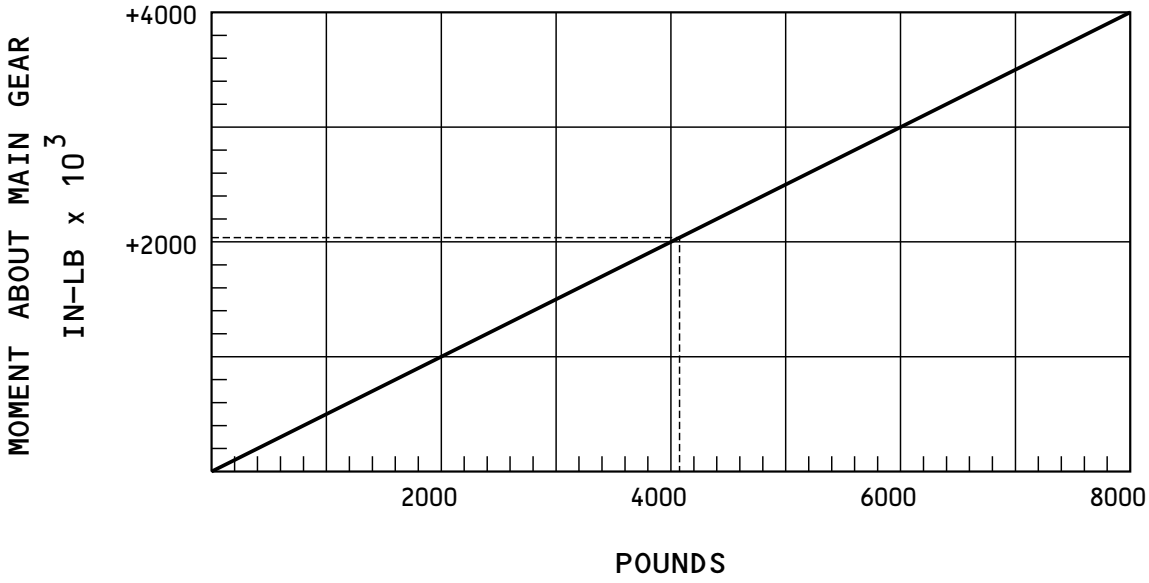
Moment Due to Towing Upgrade
Figure 209/07-11-06-990-809



1. FIND THE MAXIMUM DOWN LOAD THAT THE DOLLY CAN SAFELY APPLY ON THE NOSE GEAR
2. GO UP TO THE LINE
3. GO LEFT TO FIND THE MOMENT

EXAMPLE: MAX RESTRAINT LOAD = 4150 LB
MOMENT = 2030

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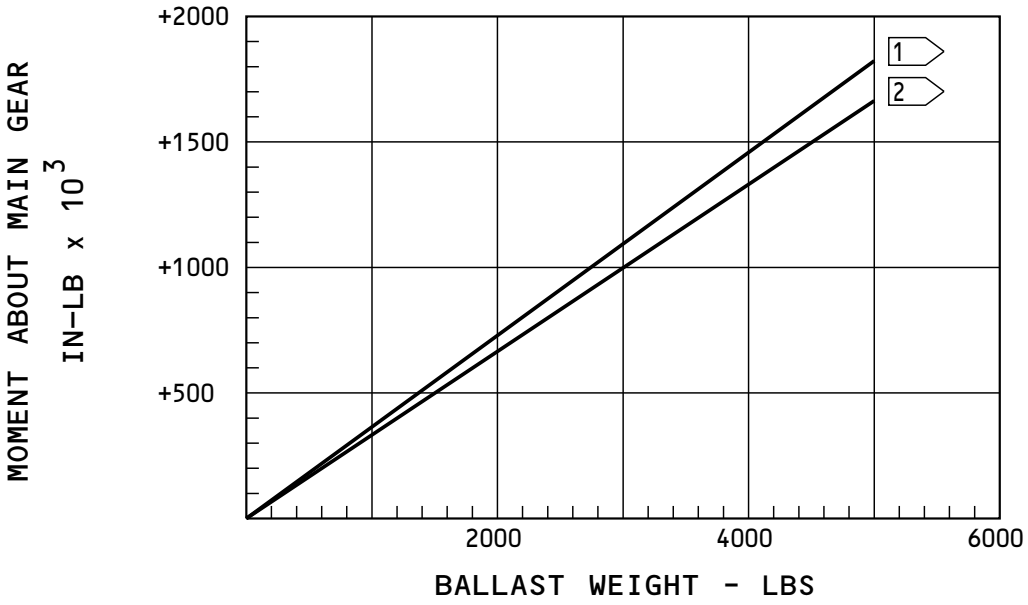
Moment Due to Dolly Restraint
Figure 210/07-11-06-990-810



1. IF BALLAST IS NECESSARY, READ THE MOMENT EFFECT FROM FIGURE 213

EXAMPLE: 1. +MOMENT REQUIRED FROM FIGURE 213 = +200

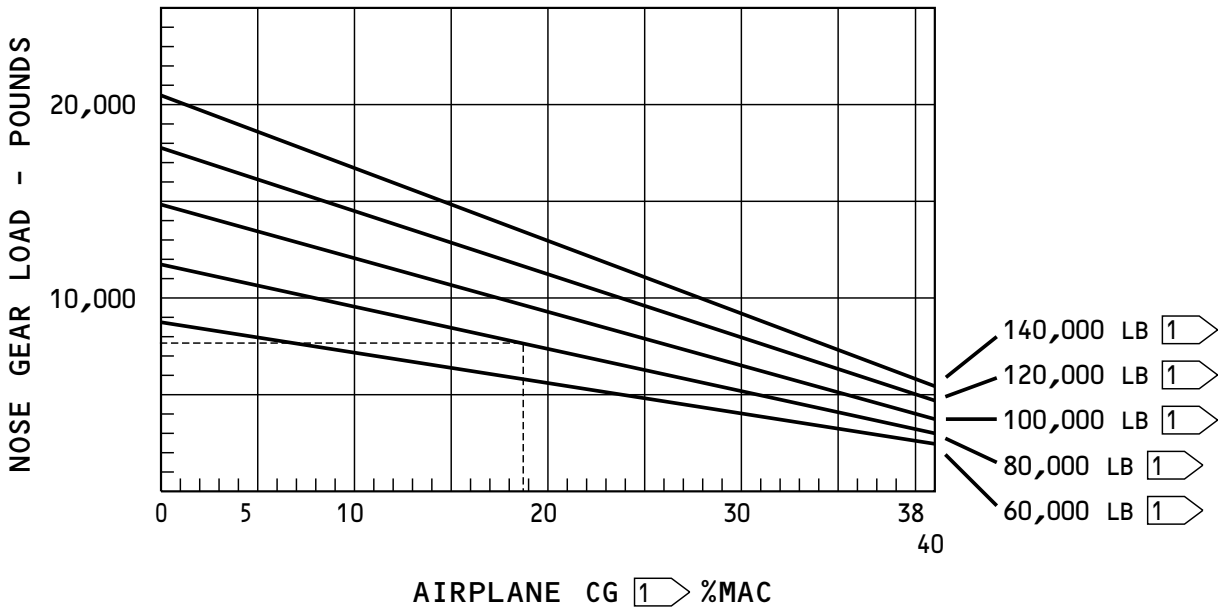
2. +200 = 600 LB BALLAST AT 2 OR
550 LB BALLAST AT 1

1 BALLAST LOCATED ON UPPER DECK FLOOR IMMEDIATELY AFT OF FORWARD ENTRY DOOR

2 BALLAST LOCATED IN FORWARD CARGO COMPARTMENT FORWARD OF DOOR

F69986 S0006558481_V2

Moment Due to Ballast
Figure 211/07-11-06-990-811



EXAMPLE: AIRPLANE TOTAL WEIGHT = 80,000 LB
% MAC = 19%
MAXIMUM NOSE GEAR LOAD = 7700 LB

1 AIRPLANE WEIGHT AND CG
INCLUDE BALLAST (IF USED)

F69989 S0006558482_V2

Maximum Nose Gear Load
Figure 212/07-11-06-990-812

AIRPLANE WEIGHT AND	80,000	LB
CG AT TIME OF TILT [1]	19	% MAC
TOTAL FUEL ON BOARD	5,000	LB
ANGLE OF TILT [2]	8.0	°
MAXIMUM GRADE AIRPLANE IS TO BE TOWED UP	2.0	%
MAXIMUM DOWN RESTRAINT DOLLY IS CAPABLE OF	4150	LB

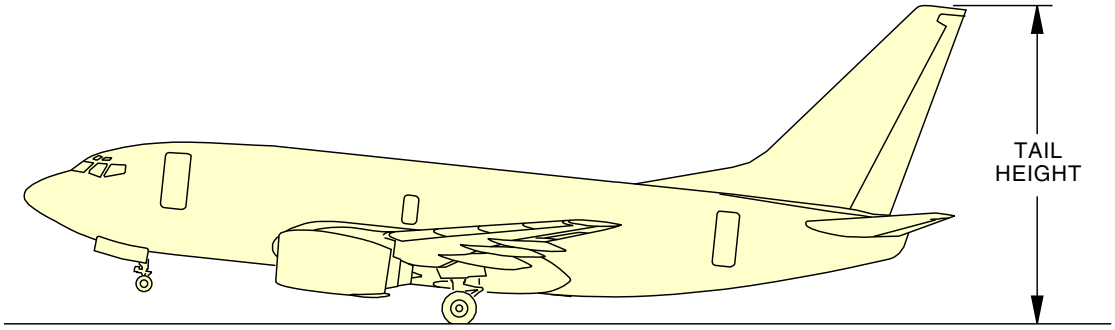
	MOMENT IN-LB X 10^3	
1. MOMENT DUE TO AIRPLANE WEIGHT (FROM FIGURE 204)	+3700	
2. MOMENT DUE TO TILTING AIRPLANE (FROM FIGURE 205)	-1150	
3. MOMENT DUE TO FUEL MOVEMENT (FROM FIGURE 206)	-105	
4. MOMENT DUE TO TOW VEHICLE ACCELERATION (FIGURE 208)	-220	
5. MOMENT DUE TO TOWING UPGRADE (FROM FIGURE 209)	-160	
6. MOMENT DUE TO DOLLY RESTRAINT (FROM FIGURE 210)	+2030	
7. MOMENT DUE TO WIND (FROM FIGURE 207)	-100	
TOTAL ITEMS 1 THROUGH 7 IF TOTAL IS LESS THAN +1000 BALLAST MUST BE ADDED	+3980	
8. MOMENT DUE TO BALLAST (FROM FIGURE 211)	+_____	NOT REQUIRED
TOTAL ITEMS 1 THROUGH 8 MUST BE MORE THAN +1000	+3980	

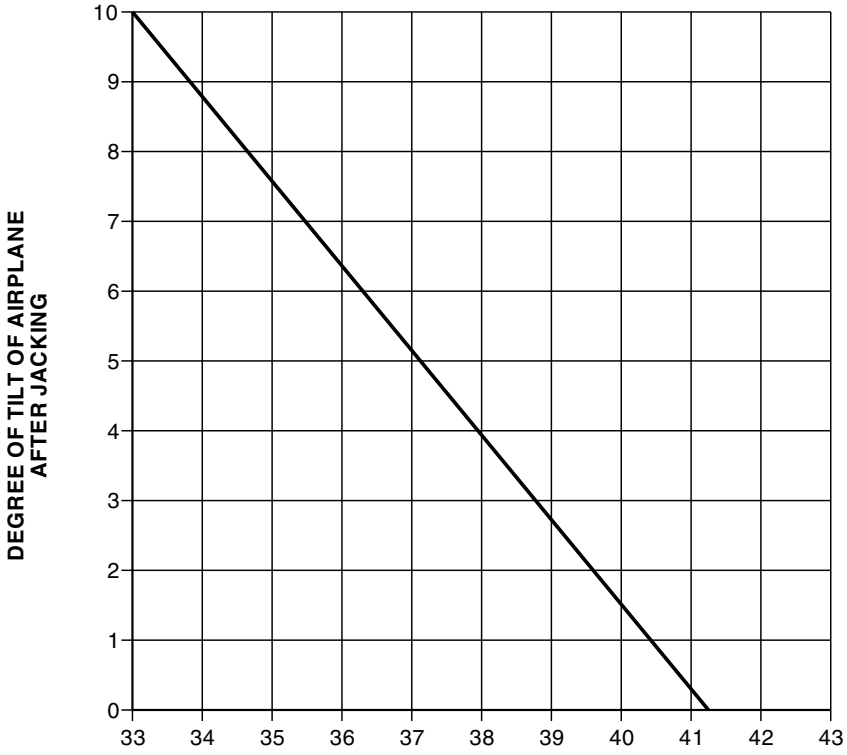
[1] SEE WEIGHT AND BALANCE MANUAL FOR WEIGHT AND CG INFORMATION.

[2] SEE FIGURE 214 FOR TILT AND CLEARANCE DATA.

F70004 S0006558483_V3

Balance Check for Towing Tilted Airplane
Figure 213/07-11-06-990-813





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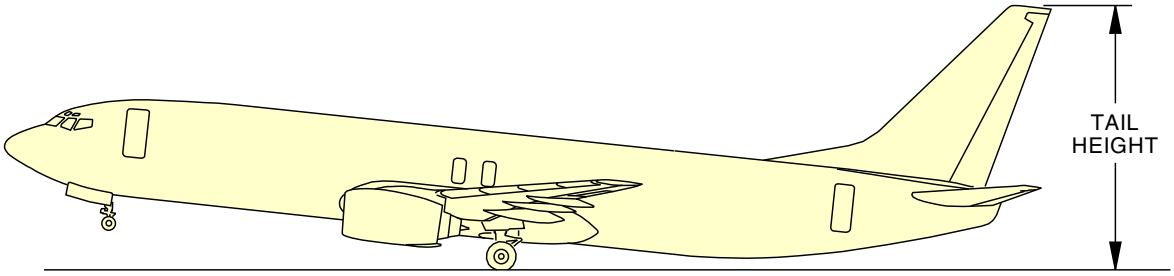
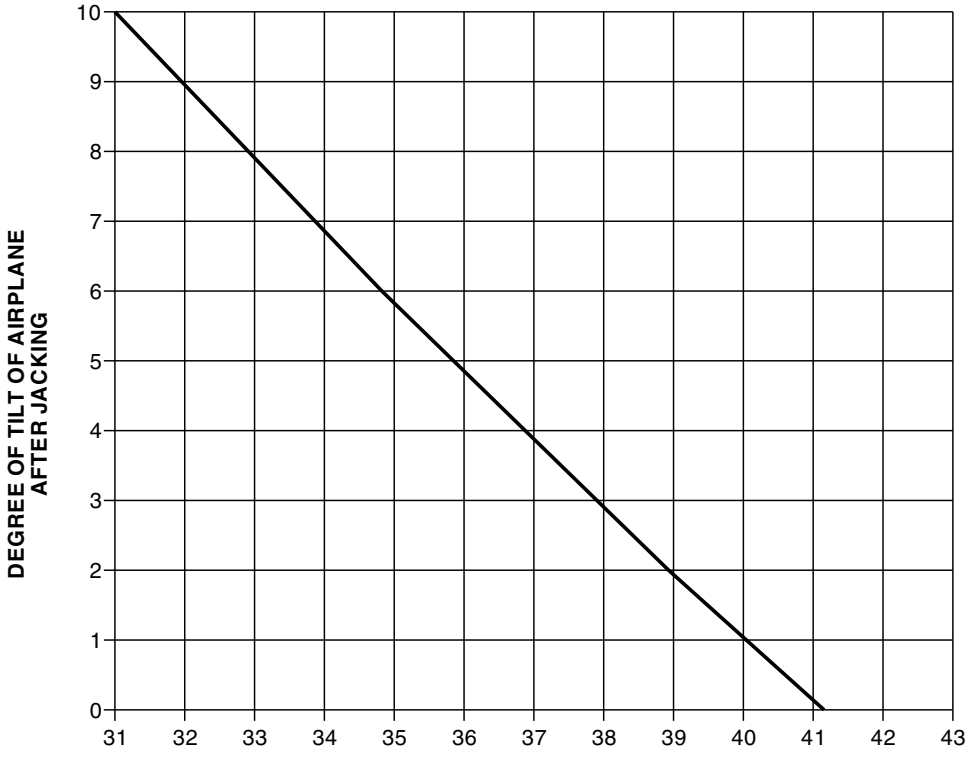
Vertical Tail Height Versus Degree of Tilt of the Airplane After Jacking
Figure 214/07-11-06-990-814 (Sheet 1 of 2)





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Vertical Tail Height Versus Degree of Tilt of the Airplane After Jacking
Figure 214/07-11-06-990-814 (Sheet 2 of 2)

TASK 07-11-06-580-802

4. Tow the Tilt Airplane

A. References

Reference	Title
10-11-05 P/B 201	CHOCK INSTALLATION
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1505	Chocks - Wheel Part #: 19CAL455 - Type 1 Supplier: $1329 Part #: 99-9028-6000 Supplier: 59603 Part #: AC6820-LR Supplier: 032T9 Part #: ALPHACHOCKS MAX Supplier: 6X2T3 Part #: W86 Supplier: 3XZM7 Part #: W88-RH Supplier: 3XZM7 Opt Part #: W88 Supplier: 3XZM7 Opt Part #: W92 Supplier: 9L752

C. Tow the Tilted Airplane

SUBTASK 07-11-06-210-002

(1) Do the steps that follow to tow the tilted airplane:

(a) Make sure all landing gear downlocks are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(b) Make sure the dolly caster is fully retracted.

NOTE: See the dolly manufacturers instructions.

(c) Remove the main gear wheel chock, COM-1505.

CAUTION

TOW THE AIRPLANE SMOOTHLY. DO NOT START OR STOP SUDDENLY WHEN YOU TOW THE AIRPLANE. IT CAN CAUSE DAMAGE TO THE NOSE GEAR OLEO. DO NOT MAKE SHARP TURNS WHILE YOU TOW THE AIRPLANE. IT WILL NOT KEEP THE AIRPLANE STABLE AND YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

(d) Tow the airplane to the necessary location.

(e) Make sure to put the wheel chock, COM-1505 around the main gear wheels when you park the airplane (CHOCK INSTALLATION, PAGEBLOCK 10-11-05/201).

END OF TASK

TASK 07-11-06-580-803

5. Lower the Airplane Nose

A. References

Reference	Title
10-11-05 P/B 201	CHOCK INSTALLATION
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1505	Chocks - Wheel Part #: 19CAL455 - Type 1 Supplier: $1329 Part #: 99-9028-6000 Supplier: 59603 Part #: AC6820-LR Supplier: 032T9 Part #: ALPHACHOCKS MAX Supplier: 6X2T3 Part #: W86 Supplier: 3XZM7 Part #: W88-RH Supplier: 3XZM7 Opt Part #: W88 Supplier: 3XZM7 Opt Part #: W92 Supplier: 9L752

C. Lower the Airplane Nose with the Nose Lift Dolly

SUBTASK 07-11-06-080-001

(1) Do the steps that follow to lower the airplane nose:

(a) Make sure all landing gear downlocks are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

(b) Release the airplane brakes, if it is necessary.

(c) Remove the wheel chock, COM-1505 from the main gear wheels, if installed.

(d) Lift the scoop to remove the dolly uplocks.

(e) Release the uplocks.

(f) Lower the dolly smoothly and slowly.

(g) Put wheel chock, COM-1505 around the main gear wheels (CHOCK INSTALLATION, PAGEBLOCK 10-11-05/201).

(h) Remove the lock bar behind the nose tire and remove the dolly.

(i) Move the dolly away from the airplane.

D. Put the Airplane Back to its Usual Condition.

SUBTASK 07-11-06-420-001

(1) Connect torsion links on the nose gear if they were disconnected.

——— END OF TASK ———

AFT FUSELAGE TAIL STAND - MAINTENANCE PRACTICES

1. General

A. The primary function of the tail stand is to support the airplane tail in an aft center of gravity (referred to as CG) condition during loading and/or unloading of passengers and cargo.

TASK 07-11-08-800-801

2. Aft Fuselage Tail Stand Removal and Installation

(Figure 201)

A. References

Reference	Title
10-11-01 P/B 201	NORMAL PARKING - MAINTENANCE PRACTICES
10-11-03 P/B 201	HIGH WIND CONDITIONS PARKING - MAINTENANCE PRACTICES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-863	Tail Support - Aft Fuselage Part #: C07013-83 Supplier: 81205 Opt Part #: C07013-1 Supplier: 81205

C. Precautions for Removal/Installation of the Tail Stand

SUBTASK 07-11-08-840-001

(1) Obey the tail stand precautions that follow:

(a) Do not tow the tail stand with a vehicle.

CAUTION DO NOT TOW THE AIRPLANE WHILE THE TAIL STAND IS INSTALLED. TOWING THE AIRPLANE WHILE THE TAIL STAND IS INSTALLED CAN CAUSE DAMAGE TO EQUIPMENT.

(b) Do not tow the airplane while the tail stand is installed.

CAUTION DO NOT DEFLATE OR SERVICE THE SHOCK STRUTS WHILE THE TAIL STAND IS INSTALLED. IF YOU DEFLATE OR SERVICE THE SHOCK STRUTS, THE LOAD ON THE TAIL STAND CAN BE TOO LARGE. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(c) Do not deflate or service the shock struts while the tail stand is installed.

CAUTION DO NOT JACK THE AIRPLANE AT THE MAIN JACK POINTS OR AXLES WHILE THE TAIL STAND IS INSTALLED. IF YOU JACK THE AIRPLANE, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH WHICH CAN CAUSE DAMAGE TO EQUIPMENT.

(d) Do not jack the airplane at the main jack points or axles while the tail stand is installed.

WARNING KEEP PERSONNEL AND EQUIPMENT OUT OF THE FALL ZONE AREA WHEN YOU INSTALL OR REMOVE THE TAIL STAND. IF THE TAIL STAND FALLS, INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

(e) Keep the “Fall Zone” area clear of unnecessary equipment and personnel, see Figure 201.

D. Prepare to Install the Tail Stand

SUBTASK 07-11-08-840-002

(1) Make sure that the airplane is parked before installing the tail stand. Do the applicable task:

(a) When parking the airplane in normal conditions, do this task: NORMAL PARKING - MAINTENANCE PRACTICES, PAGEBLOCK 10-11-01/201.

NOTE: Normal conditions consist of winds below 25 knots (46 km/h).

(b) When parking the airplane in windy conditions, do this task: HIGH WIND CONDITIONS PARKING - MAINTENANCE PRACTICES, PAGEBLOCK 10-11-03/201.

NOTE: Windy conditions consist of winds above 25 knots (46 km/h).

1) Do not use the tail stand if wind speeds are above 40 knots (74 km/h).

SUBTASK 07-11-08-840-003

(2) Make sure the tail stand is serviceable.

(a) Check to see if the level indicators are in good condition.

(b) At least once a day, check the function of the gas spring:

1) With the tail stand away from the airplane structure, move the upper tube assembly down until it is at the bottom of its travel.

a) Make sure the upper tube assembly moves freely past the INSTALLATION ZONE band to the full compression band on the lower tube assembly.

2) Slowly release the upper tube assembly and allow it to move to the full extend position.

a) Make sure the OK TO USE band is visible once the upper tube assembly has reached its full extend position.

E. Install the Tail Stand

SUBTASK 07-11-08-400-001

(1) Do the steps that follow to install the tail stand (tail support, SPL-863):

(a) Slowly lift the tip of the tail stand up toward the aft body jack point.

(b) Make sure that you do not hit the tail skid, drain masts, and fuselage with the tool when you install the tail stand.

(c) Insert the tip of the tail stand into the aft body jack point.

(d) Move the base of the tail stand until the tail stand is in the vertical position.

NOTE: The upper tube assembly will compress when lifting the tail stand up to the vertical position.

1) If the upper tube assembly compresses to the red band and it prevents the tail stand to be put in the vertical position, then remove the tail stand and adjust the jack screw shorter to allow for correct installation.

(e) Use the levels to make sure the tail stand is vertical.

1) Move the base of the tail stand as necessary to make the tail stand vertical.

(f) Adjust the jack screw until the upper tube assembly is at the INSTALLATION ZONE band.

NOTE: The upper tube assembly will move up and down during passenger and cargo loading and unloading.

1) Adjust the jack screw by rotating the handles on the lower tube assembly.

F. Remove the Tail Stand

SUBTASK 07-11-08-000-001

(1) Do the steps that follow to remove the tail stand:

(a) Make sure the INSTALLATION ZONE band on the lower tube assembly is visible.

1) If the INSTALLATION ZONE band is not visible, do the step that follows:

a) Remove the load on the tail stand by adjusting the jack screw until the INSTALLATION ZONE band is visible.

NOTE: The tail stand has load on it when the upper tube assembly is in the full compression (red) zone.

NOTE: Adjusting the jack screw until the INSTALLATION ZONE band is visible allows clearance to compress the gas spring before removal of the tail stand.

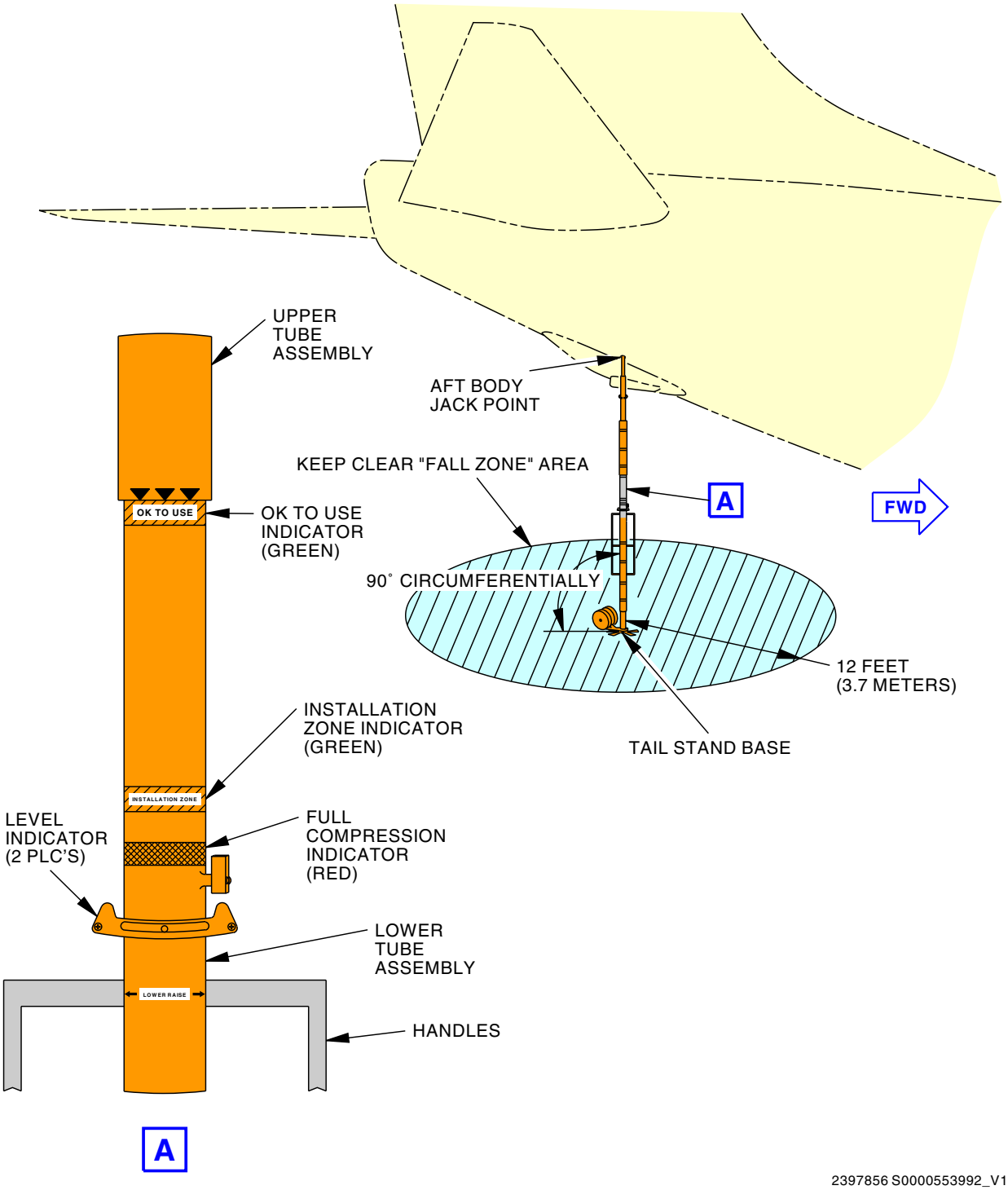
(b) Carefully lift the lower tube assembly up and slowly move the tail stand base away from the vertical position until the OK TO USE band is visible.

(c) Remove the tip of the tail stand from the aft body jack point.

(d) Make sure you do not hit the tail skid, drain masts or fuselage structure when you remove the tail stand.

(e) Carefully move the tail stand away from the airplane.

——— END OF TASK ———



Aft Fuselage Tail Stand Removal and Installation
Figure 201/07-11-08-990-801

JACK AIRPLANE NOSE - MAINTENANCE PRACTICES

1. General

A. This procedure has two tasks:

(1) Lift the airplane nose with the nose jack at Jack Point D.

(2) Lower the airplane nose off of the jack.

B. When lifting the airplane nose with the stabilizing jack point you can jack the airplane in winds up to 35 knots (40 mph).

TASK 07-11-21-580-801

2. Lift the Airplane Nose with the Nose Jack at Jack Point D

(Figure 201)

A. General

CAUTION IF THE TAIL STAND IS INSTALLED, DO NOT LIFT THE AIRPLANE NOSE. IF YOU LIFT THE AIRPLANE NOSE, THE LOAD ON THE TAIL STAND CAN BE TOO HIGH. IF YOU DO NOT OBEY, DAMAGE TO EQUIPMENT CAN OCCUR.

(1) The airplane nose can be left and lowered at two jack points:

(a) The nose jack point at Jack Point D.

NOTE: When you lift or lower the nose you must use the correct precautions.

(b) If the airplane is left at axle Jack Point E, a nose jack is not necessary, do this task: Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E, TASK 07-11-03-580-802.

(2) There are two configurations to jack the nose landing gear.

(a) The cylinder of the nose gear must be correctly inflated to do a gear retraction test.

(b) The nose gear cylinder can be deflated and a lock installed to reduce the height that the nose gear needs to be lifted.

B. References

Reference	Title
07-11-01-580-815	Lift the Airplane with the Jacks (P/B 201)
07-11-03-580-802	Lift the Airplane Nose Landing Gear with the Axle Jack at Jack Point E (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-801	Prepare to Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-5892	Jack - Tripod, Forward Body Part #: 15-54-40 Supplier: 00994 Part #: 714A Supplier: 94861

(Continued)

Reference	Description
SPL-1496	Jack Adapter - Forward Body Part #: C07007-23 Supplier: 81205 Opt Part #: C07007-19 Supplier: 81205
SPL-1499	Pin - Lock, NLG Towing Lever Part #: A09003-2 Supplier: 81205 Opt Part #: A09003-1 Supplier: 81205
SPL-1871	Retention Straps - Shock Strut, NLG/MLG Part #: C32030 -31 Supplier: 81205 Opt Part #: C32030-10 Supplier: 81205
SPL-1880	Downlock Equipment - NLG and MLG Part #: C32026-15 Supplier: 81205 Opt Part #: C32026-1 Supplier: 81205 Opt Part #: C32026-6 Supplier: 81205

D. Location Zones

Zone	Area
100	Lower Half of Fuselage
110	Subzone - Body Station 130 to Station 396
115	Nose Landing Gear Wheel Well - Left

E. Prepare to Lift the Airplane Nose

SUBTASK 07-11-21-580-001

(1) Do the steps that follow to prepare to lift the airplane with the nose jack:

(a) Make sure that the nose gear tires are near the center position.

WARNING MAKE SURE THE DOWNLOCK PINS ARE INSTALLED ON ALL THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR COULD RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

WARNING ONLY USE THE CORRECT PIN FOR THE AIRPLANE MODEL. IF YOU USE AN INCORRECT PIN, THE HYDRAULIC STEERING CAN OPERATE. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(b) Make sure that the landing gear down lock pins downlock equipment, SPL-1880, and NLG towing lever pin, SPL-1499, are installed, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

NOTE: If the tires are not near the center position, and the NLG towing lever pin is not installed, then you may not be able to center the tires.

(c) Make sure that the airplane gross weight and the Center of Gravity (CG) are at the approved limits, refer to this task: Lift the Airplane with the Jacks, TASK 07-11-01-580-815.

NOTE: The components can be moved on the airplane to different locations to change the CG. Do this to make sure that you stay in the load limit of the nose jack point. You must stay in the approved CG and weight limits.

(d) Set the stabilizer control to neutral (4 units).

(e) Set the aileron, and the rudder trim controls to 0 degrees.

CAUTION DO NOT PUT THE AIRPLANE ON THE JACKS IN WINDS MORE THAN 35 KNOTS (40 MPH). IF YOU DO NOT OBEY THESE INSTRUCTIONS, DAMAGE TO THE AIRPLANE CAN OCCUR.

(f) Make sure that the airplane is turned in the wind direction (if possible) when it is not parked in a hangar or at a gate.

NOTE: When lifting the airplane nose with the stabilizing jack point you can jack the airplane in winds up to 35 knots (40 mph).

CAUTION USE THE BOLTS SUPPLIED WITH THE JACK ADAPTER. IF YOU USE OTHER BOLTS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

(g) Use the forward auxiliary jack adapter when the airplane is not in a hangar and winds are 35 mph (30 knots) (Figure 201).

NOTE: It is the airline's decision if the auxiliary jacks are necessary when the airplane is in the hangar (no wind).

NOTE: When the airplane is not in a hangar, the stabilizing jack must be installed when winds are at 35 mph (30 knots).

1) Install the forward body (jack point D) jack adapter, SPL-1496, as follows (Figure 201).

a) Remove the eight bolts that are supplied with the jack adapter, SPL-1496.

CAUTION USE THE BOLTS SUPPLIED WITH THE JACK ADAPTER. IF YOU USE OTHER BOLTS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE.

b) Install the jack adapter, SPL-1496, with the eight bolts.

<1> Tighten the eight bolts to 160 in-lb (18.1 N·m) - 240 in-lb (27.1 N·m).

2) Preload the stabilizing jack to a maximum of 5000 lb (2268 kg) when winds are 35 mph (30 knots).

CAUTION MAKE SURE THE JACK IS CENTERED BELOW THE JACK PAD. IF THE JACK DOES NOT GO INTO THE CENTER OF THE JACK PAD DURING JACKING, IT CAN CAUSE DAMAGE TO THE AIRPLANE OR THE JACK.

(h) Put the nose forward body jack, COM-5892 below the Jack Point D.

NOTE: The jack must have a pressure gage (if it is applicable) and a conversion table to give the pounds of load at each jack point.

(i) Release the airplane brakes.

(j) Move the front chocks on the main landing gear forward approximately 2 in. (51 mm) from the tires.

NOTE: This is to let the tires roll when the nose is lifted.

(k) Remove the chocks from the nose wheels.

(l) If electrical power is supplied to the airplane while it is on jacks, do the step that follows:

WARNING THE AIRPLANE WILL GO INTO AIRMODE WHEN IT IS RAISED ON JACKS CAUSING FLIGHT CONTROL SURFACES AND ICE PROTECTION SYSTEMS TO OPERATE. THESE SYSTEMS CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

1) Make sure that the airplane is in air mode when raised on jacks, do these tasks:
   a) Prepare to Put the Airplane in the Air Mode, TASK 32-09-00-840-801.
   b) Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

F. Lift the Airplane Nose with the Cylinder Lock Installed

NOTE: This step locks the nose landing gear in the compressed position to reduce the jack height when lifting the nose wheels off of the ground.

SUBTASK 07-11-21-580-005

(1) Deflate the nose landing gear shock strut.

SUBTASK 07-11-21-580-002

CAUTION IF YOU WILL RETRACT THE NOSE LANDING GEAR, DO NOT INSTALL THE RETENTION STRAPS. DURING A RETRACTION, THE RETENTION STRAPS WILL CAUSE DAMAGE TO EQUIPMENT.

(2) Install the nose landing gear cylinder lock retention strap, SPL-1871.

NOTE: If the nose gear will left to replace the nose gear shock strut O-rings, this step is not necessary. You will have to extend the shock strut during the O-ring installation procedure.

(a) Put the nose landing gear in its center position.

NOTE: If the tires are not near the center position, and the NLG towing lever pin is not installed, then you may not be able to center the tires.

CAUTION THE FUSELAGE AFT OF THE MAIN LANDING GEAR CAN LOWER WHEN YOU LIFT THE AIRPLANE NOSE. MAKE SURE THAT THE AREA BELOW THE AIRPLANE IS CLEAR OF ALL EQUIPMENT BEFORE YOU LIFT THE AIRPLANE NOSE. IF YOU DO NOT OBEY THESE INSTRUCTIONS, DAMAGE TO THE AIRPLANE AND EQUIPMENT CAN OCCUR.

(b) Make sure that the area below the airplane is clear.

CAUTION DO NOT DEFLATE THE SHOCK STRUT IF YOU DO A RETRACTION TEST OF THE LANDING GEAR. THE SHOCK STRUT MUST BE FILLED CORRECTLY AND NOT INFLATED ABOVE THE CORRECT PRESSURE. DAMAGE TO THE WHEEL WELL AND SHOCK STRUT WILL OCCUR.

CAUTION IF YOU WILL RETRACT THE NOSE LANDING GEAR, DO NOT INSTALL THE RETENTION STRAPS. DURING A RETRACTION, THE RETENTION STRAPS WILL CAUSE DAMAGE TO EQUIPMENT.

(c) Install the lock on the compressed shock strut retention strap, SPL-1871.

G. Lift The Airplane Nose

SUBTASK 07-11-21-580-003

(1) Do the steps that follow to lift the airplane with the forward body jack, COM-5892:

WARNING MAKE SURE THAT ALL PERSONS ARE AWAY FROM THE LEADING EDGE FLAPS AND SLATS. THEY CAN MOVE AUTOMATICALLY (UNLESS OTHERWISE INHIBITED) DURING MAINTENANCE WHEN EITHER HYDRAULIC SYSTEM HAS PRESSURE AND THE TRAILING EDGE FLAPS ARE IN POSITION 1, 2, OR 5: ALSO, THE NOSE OR THE MAIN LANDING GEAR AIR/GROUND RELAYS GIVE AN IN FLIGHT CONDITION. IF YOU DO NOT OBEY THESE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

CAUTION DO NOT DEFLATE THE SHOCK STRUT IF YOU DO A RETRACTION TEST OF THE LANDING GEAR. THE SHOCK STRUT MUST BE FILLED CORRECTLY AND NOT INFLATED ABOVE THE CORRECT PRESSURE. DAMAGE TO THE WHEEL WELL AND SHOCK STRUT WILL OCCUR.

CAUTION YOU MUST NOT PERMIT THE WEIGHT ON THE JACK POINT TO BE MORE THAN THE APPROVED LIMIT. IF YOU DO NOT OBEY THESE INSTRUCTIONS, YOU CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE.

CAUTION WHEN YOU LIFT OR LOWER THE JACK, DO NOT PERMIT MORE THAN ONE INCH CLEARANCE BETWEEN THE JACK RAM LOCKNUT AND THE COLLAR. TOO MUCH CLEARANCE CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE IF THERE IS A FAILURE OF THE JACK.

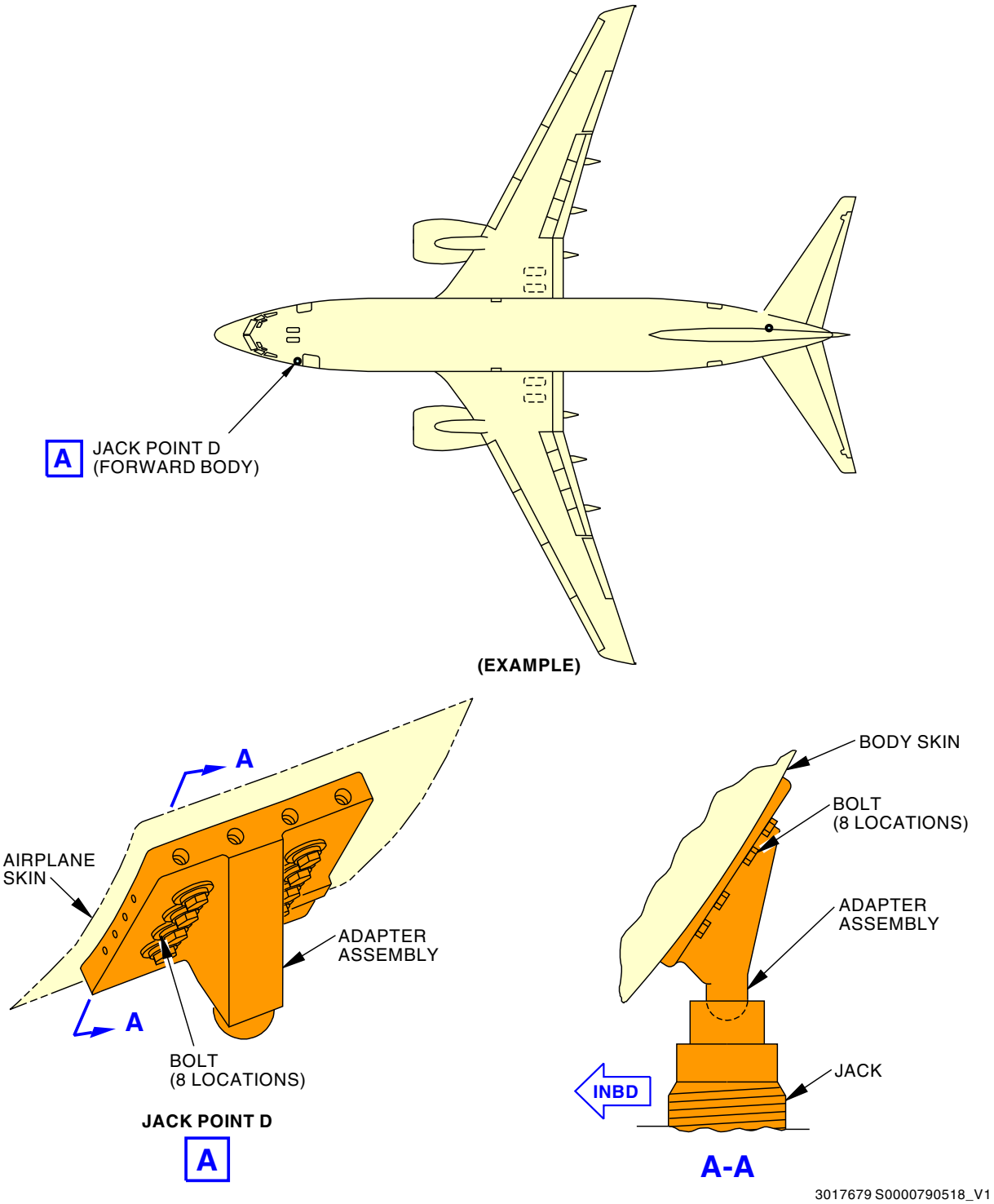
(a) Lift the airplane on the forward body jack, COM-5892.

NOTE: Keep a distance of 1 in. (25 mm) or less between the jack ram locknut and the jack collar.

NOTE: To permit a retraction test of the nose landing gear, lift the nose until there is approximately 4 in. (102 mm) between the nose wheels and the ground.

(b) Screw down the jack ram locknut and tighten the setscrew when the nose gear has the necessary clearance.

END OF TASK



Forward Body Location, Jack D Adapter Fitting
Figure 201/07-11-21-990-801

TASK 07-11-21-580-802

3. Lower the Airplane Nose Off of the Jack

(Figure 201)

A. References

Reference	Title
10-11-05 P/B 201	CHOCK INSTALLATION
12-15-41-610-802	Nose Landing Gear Shock Strut Servicing, Airplane on the Ground (P/B 301)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
32-09-00-840-802	Return the Airplane Systems Back to Their Normal On Ground Condition (P/B 201)

B. Location Zones

Zone	Area
100	Lower Half of Fuselage
110	Subzone - Body Station 130 to Station 396
115	Nose Landing Gear Wheel Well - Left

C. Lower the Airplane Off of the Nose Jack

SUBTASK 07-11-21-860-001

WARNING MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 07-11-21-580-004

(2) Do the steps that follow to lower the airplane nose off of the jack:

CAUTION MAKE SURE THE AREA BELOW THE AIRPLANE IS CLEAR OF ALL EQUIPMENT BEFORE YOU LOWER THE AIRPLANE. IF YOU DO NOT OBEY THESE INSTRUCTIONS, DAMAGE TO THE AIRPLANE AND EQUIPMENT CAN OCCUR.

(a) Make sure that the area below the airplane is clear.

(b) Move the chocks that are installed at the main landing gear 2 in. (50.80 mm) from the tires.

NOTE: This is because the main landing gear tires can move when you lower the nose landing gear and the tires can move onto the chocks.

(c) Make sure that the landing gear control handle is in the down position.

CAUTION

WHEN YOU LIFT OR LOWER THE JACK, DO NOT PERMIT MORE THAN ONE INCH CLEARANCE BETWEEN THE JACK RAM LOCKNUT AND THE COLLAR. TOO MUCH CLEARANCE CAN CAUSE DAMAGE TO THE AIRPLANE STRUCTURE IF THERE IS A FAILURE OF THE JACK.

(d) Lower the nose jack at Jack Point D.

NOTE: You must keep a distance of 1.00 in. (2.54 cm) or less between the jack ram locknut and the jack collar.

NOTE: It is possible you will have to initially lift the jack ram slightly to remove the load on the jack ram locknut and permit the locknut to be moved up the ram.

(e) Lower the jack until the jack is at the bottom or until the airplane weight is fully on the nose landing gear.

1) Move the jack away from the airplane.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 07-11-21-480-001

(1) Make sure that the chocks are installed on the landing gear (CHOCK INSTALLATION, PAGEBLOCK 10-11-05/201).

SUBTASK 07-11-21-080-001

(2) Remove the jack pad adapter from jack point D.

(a) To remove a seized fastener, it is recommended to use fastener removal tools made by Turnex Tools or other tool manufacturers.

SUBTASK 07-11-21-840-001

(3) Do the steps that follow:

(a) If it is necessary, do this task: Nose Landing Gear Shock Strut Servicing, Airplane on the Ground, TASK 12-15-41-610-802.

(b) Do this task: Return the Airplane Systems Back to Their Normal On Ground Condition, TASK 32-09-00-840-802.

——— END OF TASK ———

SHORING - MAINTENANCE PRACTICES

1. General

A. This procedure has a task with a reference to the Aircraft Recovery Document.

TASK 07-20-00-580-801

2. Shoring

A. General

(1) Refer to the Airplane Recovery Document, D6-26A004 for data on Shoring.

END OF TASK