TOWING - MAINTENANCE PRACTICES

TASK 09−10−00−584−801
1. Towing of the Aircraft

NOTE: This maintenance procedure is divided into two parts:

- The towing of completed aircraft (with interiors installed)
- The towing of not completed (or green) aircraft (with no interiors installed).

A. Reference Information

REFERENCE	DESIGNATION
TASK 07−10−00−080−801	Removal of the Ballast Boxes
TASK 07−10−00−480−801	Installation of the Ballast Boxes
TASK 12−11−01−650−801	Pressure Refueling
TASK 12−12−00−610−803	Servicing of the Hydraulic System Accumulators
TASK 24−00−00−863−801	Opening of Non−Thermal Circuit Breakers
TASK 24−00−00−863−802	Closing of Non−Thermal Circuit Breakers
TASK 24−00−00−910−801	Electrical/Electronic Safety Precautions
TASK 24−22−00−861−801	Energize the Auxiliary AC−Power Supply
TASK 24−22−00−861−802	Removal of Power from the Auxiliary AC−Power Supply
TASK 24−41−00−861−801	Connect and Energize External AC Power
TASK 24−41−00−861−802	Remove External AC Power
TASK 29−10−00−862−803	Pressurize the No. 3 Hydraulic System
TASK 29−10−00−862−804	Release Hydraulic Pressure−No. 3 Hydraulic System
TASK 32−44−00−910−801	Set the Parking Brake
TASK 32−44−00−910−802	Release the Parking Brake
WBM 01−80−60	Balance Limits − Towing

B. Tools and Equipment

REFERENCE	DESIGNATION
GSE 07X−10−06	Support, Rear Fuselage
GSE 09X−10−01	Towbar Tractor
GSE 09X−10−02	Towbar, Air Transportable
GSE 10X−11−04	Wheel Chocks, Rubber
GSE 23X−51−01	Headset With Mic, Ground Crew
GSE 23X−51−02	Cord, Headset Extension
Commercially Available	Light Wand

NOTE: Refer to the BD−700 ILLUSTRATED TOOL AND EQUIPMENT MANUAL to make sure that you use the correct equipment configuration.

C. Job Set−Up

(1) Obey all the safety precautions that follow during the towing procedure:

(a) Obey all the electrical/electronic safety precautions (TASK 24−00−00−910−801).

(b) Make sure that the tires are correctly inflated.

(c) Make sure that the nose−landing−gear shock strut is correctly filled.

(d) Make sure that the nose landing−gear (NLG) lockpin is installed.

(e) Make sure that the main landing−gear (MLG) lockpins are installed.

(f) Make sure that the nosewheel steering system is not armed.

WARNING: STAY AWAY FROM THE TORQUE LINK WHEN YOU RELEASE THE HANDLE. THE TORQUE LINK IS SPRING-LOADED AND WILL MOVE UP QUICKLY WHEN YOU PULL THE RELEASE HANDLE. IF YOU DO NOT OBEY THIS SAFETY PRECAUTION, YOU CAN CAUSE INJURY TO PERSONS.

(g) Disconnect the torque links as follows:

1 Pull the two quick−disconnect handles at the same time.

CAUTION: MAKE SURE THE LOWER TORQUE LINK IS NOT PUSHED UP. IF THE LOWER TORQUE LINK IS UP, IT CAN COME IN CONTACT WITH THE SHOCK STRUT ASSEMBLY. THIS CAN CAUSE DAMAGE TO THE AIRCRAFT.

2 Disconnect the top torque link from the lower torque link. Make sure the lower torque link is not pushed up.

(h) Make sure that brake accumulator No. 3 is sufficiently pressurized as follows:

NOTE: The accumulated pressure will last for approximately 20 minutes.

1 In the flight compartment, on the ELECTRICAL control panel, set the BATT MASTER switch to ON.

2 On the EICAS, on the HYDRAULIC synoptic page, make sure that the INBD BRAKE hydraulic system pressure is a minimum of 1100 psi (7584.28 kPa) and the No. 3 hydraulic system quantity is a minimum of 20%.

3 If necessary, pressurize the accumulator as follows:

a Pressurize the No. 3 hydraulic system (TASK 29−10−00−862−803).

b On the hydraulic synoptic page, make sure that the INBD BRAKES pressure indication shows 3000 psi.

NOTE: You can pull the parking brake handle six times before you must pressurize the brake accumulator No. 3 again.

c Release pressure in the No. 3 hydraulic system (TASK 29−10−00−862−804).

4 In the flight compartment, on the ELECTRICAL control panel, set the BATT MASTER switch to OFF.

(i) Make sure that the landing gear selector−handle is in the DN position.

(j) Make sure that all external servicing equipment is disconnected from the aircraft.

(k) Make sure that the ground wire is disconnected from the aircraft.

(l) The minimum number of persons in the crew are as follows:

NOTE: If you cannot pressurize the brake accumulator No. 3, then the brakes will not operate correctly. If this occurs, you must put two more persons in position (one person with chocks at each set of main wheels) for safety.

NOTE: The accumulated pressure will last for approximately 20 minutes.

1 When you tow the aircraft in open areas, two persons are necessary.

NOTE: One person operates the tow vehicle (tug).

The other person is the brake operator and operates the brakes in the flight compartment.

2 If you tow the aircraft in confined areas, five persons are necessary.

NOTE: One person operates the tug.

Two persons, one at each wing end, are positioned to make sure that there is sufficient clearance for the wing ends.

One person makes sure that the tail of the aircraft has sufficient clearance.

The other person is the brake operator and operates the brakes in the flight compartment.

(m) Make sure the person who operates the tug can hear, speak to or get signals from the other persons on the crew.

NOTE: The person who operates the tug controls the tow operation.

(n) If you tow the aircraft in low visibility, the ground crew must have light wands to give signals.

(o) Make sure that there is a crew member in the flight compartment to operate the parking brake in an emergency.

D. Procedure

Refer to Figure 201.

CAUTION: OBEY THE PRECAUTIONS THAT FOLLOW WHEN YOU TOW THE AIRCRAFT:

- MAKE SURE THAT THE NOSE-LANDING-GEAR SHOCK STRUT IS CORRECTLY FILLED BEFORE YOU DISCONNECT THE TORQUE LINKS.
- MAKE SURE THAT THE TORQUE LINKS OF THE NOSE LANDING GEAR ARE DISCONNECTED. IF THE AIRCRAFT IS PUSHED BACK IN A STRAIGHT LINE, THE TORQUE LINKS CAN STAY CONNECTED.
- KEEP THE TURNS AS LARGE AS POSSIBLE. MAKE ONLY SLOW CHANGES TO SPEED AND/OR DIRECTION.
- MAKE SURE THAT A MINIMUM OF 5000 LB (2268 KG) OF FUEL IS IN THE TANKS OR THE LOAD ON THE NOSE LANDING GEAR IS NOT LESS THAN 1900 LB (862 KG) AND THAT THE C OF G OF THE AIRCRAFT IS WITHIN THE C OF G ENVELOPE LIMITS. IF NECESSARY, MAKE A BALLAST OR FUEL ADJUSTMENT TO GET THE CORRECT LOAD. IF YOU DO NOT DO THIS, YOU CAN DISCONNECT OR DAMAGE THE STEERING MECHANISM AND/OR CAUSE THE AIRCRAFT TO TIP OVER.

IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE AIRCRAFT AND EQUIPMENT CAN OCCUR.

CAUTION: DO NOT TOW THE AIRCRAFT IF THE FLIGHT COMPARTMENT WINDOWS ARE REMOVED. THE FLIGHT COMPARTMENT WINDOWS ARE INTEGRAL PARTS OF THE STRUCTURE. IF YOU TOW THE AIRCRAFT WHEN THE FLIGHT COMPARTMENT WINDOWS ARE REMOVED, DAMAGE TO THE EQUIPMENT CAN OCCUR.

CAUTION: DO NOT TOW THE AIRCRAFT IF THE STRUCTURAL FLOOR PANEL IS REMOVED. THE STRUCTURAL FLOOR PANEL IS AN INTEGRAL PART OF THE STRUCTURE. IF YOU TOW THE AIRCRAFT WHEN THE STRUCTURAL FLOOR PANEL IS REMOVED, DAMAGE TO THE STRUCTURE CAN OCCUR.

NOTE: Towing the aircraft with the main cabin door open is permitted as long as you obey the speed limit and you prevent sudden stops and starts.

(1) To tow a completed aircraft, do the procedures that follow:

(a) For a completed aircraft, it is possible that a tail heavy condition can occur during towing if there is less than 5,000 lb (2 268 kg) of fuel in the tanks. Do one of the steps that follow, as applicable:

- If there is less than 5000 lb (2 268 kg) of fuel, determine the minimum load on the NLG for towing. Refer to the weight and balance manual (WBM01−80−60); or
- If there is not sufficient fuel, add fuel to satisfy the 5000 lb (2 268 kg) minimum (TASK 12−11−01−650−801); or
- Install the four fly away boxes in the aircraft (TASK 07−10−00−480−801); or
- Install the two fly away boxes with the two ground−handling ballast boxes inside the aircraft.

(b) In the flight compartment, do the steps that follow:

1 Set the parking brake (TASK 32−44−00−910−801).

2 Signal the tug operator that the parking brake is set.

(c) Remove all the wheel chocks.

(d) Install the towbar on the nose gear.

(e) Engage the axle engagement pins on the towing head with the holes in the ends of the nose gear axle.

(f) Connect the towbar to the towing vehicle.

(g) In the flight compartment, do the steps that follow:

1 Release the parking brake (TASK 32−44−00−910−802).

2 Signal the tug operator that the parking brake is released.

(h) Close the passenger door, as applicable.

NOTE: Towing the aircraft with the main cabin door open is permitted, but you must obey the speed limit and make sure that you do not have sudden stops and starts.

(i) Slowly tow the aircraft forward at a speed of not more than 15 mph (24 km/h), or not more than 5 mph (8 km/h) if the ballast weight is installed.

NOTE: Use only the tug to control the towing speed and not the aircraft brakes.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(j) If necessary, push back the aircraft at a speed of not more than 3 mph (5 km/h).

NOTE: Use only the tug to control the towing speed and not the aircraft brakes.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(k) If the aircraft is turned before it is parked, move it forward or rearward in a straight line for a short distance.

NOTE: This is necessary to remove twist forces from the landing gear before you stop the aircraft.

(l) When the aircraft is in the correct position, stop the aircraft with the tug.

(m) In the flight compartment, do the steps that follow:

1 Set the parking brake (TASK 32−44−00−910−801).

2 Signal the tug operator that the parking brake is set.

WARNING: MAKE SURE THE WHEEL CHOCKS ARE PUT AT THE NOSE AND MAIN WHEEL/TIRE ASSEMBLIES. MOVEMENT OF THE AIRCRAFT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

(n) Put the wheel chocks forward and aft of both the NLG and the MLG wheel assemblies.

(o) Release the parking brake (TASK 32−44−00−910−802).

(p) Disconnect the towbar from the towing vehicle.

(q) Connect the torque links as follows:

1 Pull and hold the two quick−disconnect handles fully out.

2 Align the pivot of the top torque link with the pivot of the lower torque link.

3 Release the quick−disconnect handles.

4 Make sure that the two quick−disconnect pins engage fully with the pivot of the lower torque link.

(r) Disconnect the towbar from the nose landing gear.

(s) If the left or right wing tanks each contain more than 12,000 Lbs (5443 Kg) of fuel, you must vent the fuel system as follows:

1 If using the APU, do as follows:

a Connect and energize auxiliary ac−power supply (TASK 24−22−00−861−801).

b On the EICAS control panel, push the FUEL pushbutton to display the fuel synoptic page.

c On the FUEL control panel, push in the XFEED SOV switch/light and make sure of the results that follow:

- On the FUEL control panel, the OPEN light on the XFEED SOV switch/light comes on
- On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the open position
- On the EICAS FUEL synoptic page, the left and right primary pumps show in green
- On the EICAS primary page, you see the XFEED VALVE OPEN message.

d Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

e On the FUEL control panel, push out the XFEED SOV switch/light and make sure of the results that follow:

- − On the FUEL control panel, the OPEN light on the XFEED SOV switch/light goes off
- − On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the closed position
- − On the EICAS primary page, the XFEED VALVE OPEN message does not show.

f Remove power from the auxiliary ac−power supply (TASK 24−22−00−861−802).

2 If using external AC power, do as follows:

a Connect and energize external ac power to the aircraft (TASK 24−41−00−861−801).

b In the flight compartment, on the EMS CDU, set the circuit breaker that follows to OUT (TASK 24−00−00−863−801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

c Pull the left engine fire−handle.

d Set the L ENGINE RUN toggle switch to ON.

e Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

f Set the L ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

g Push the left engine fire−handle to its OFF position.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

h Pull the right engine fire−handle.

i Set the R ENGINE RUN toggle switch to ON.

j Let the right AC primary pumps operate for two minutes to remove fuel from the vent system.

k Set the R ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

l Push the right engine fire−handle to its OFF position.

m In the flight compartment, on the EMS CDU, set the circuit breaker that follows to IN (TASK 24−00−00−863−802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

n Remove external ac power from the aircraft (TASK 24−41−00−861−802).

(t) If the aircraft is still in a possible tail heavy condition (less than 5,000 lb (2 268 kg) of fuel in the tanks), do the steps that follow, as applicable:

1 Install the rear fuselage support.

2 If the four fly away boxes are installed in the aircraft and are not necessary, remove them (TASK 07−10−00−080−801).

3 If the two fly away boxes with the two ground−handling ballast boxes are installed in the aircraft and are not necessary, remove them.

(2) To tow an aircraft not completed internally (green aircraft), do the procedures that follow:

(a) For a green aircraft, a tail heavy condition usually occurs during towing. Do one of the steps that follow, as applicable:

- Install the four fly away boxes in the aircraft (TASK 07−10−00−480−801); or
- Install the two fly away boxes with the two ground−handling ballast boxes inside the aircraft.

(b) Set the parking brake (TASK 32−44−00−910−801).

(c) Signal the tug operator that the parking brake is set.

(d) Install the towbar on the nose gear.

(e) Engage the axle engagement pins on the towing head with the holes in the ends of the nose gear axle.

(f) Connect the towbar to the towing vehicle.

(g) Close the passenger door, as applicable.

NOTE: Towing the aircraft with the main cabin door open is permitted, but you must obey the speed limit and make sure that you do not have sudden stops and starts.

(h) Remove all the wheel chocks.

(i) Release the parking brake (TASK 32−44−00−910−802).

(j) Slowly tow the aircraft forward at a speed of not more than 5 mph (8 km/h).

NOTE: Use only the tug to control the towing speed and not the aircraft brakes.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(k) If necessary, push back the aircraft at a speed of not more than 3 mph (5 km/h).

NOTE: Use only the tug to control the towing speed and not the aircraft brakes.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(l) If the aircraft is turned before it is parked, move it forward or rearward in a straight line for a short distance.

NOTE: This is necessary to remove twist forces from the landing gear before you stop the aircraft.

(m) When the aircraft is in the correct position, stop the aircraft with the tug.

(n) Set the parking brake (TASK 32−44−00−910−801).

WARNING: MAKE SURE THE WHEEL CHOCKS ARE PUT AT THE NOSE AND MAIN WHEEL/TIRE ASSEMBLIES. MOVEMENT OF THE AIRCRAFT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

(o) Put the wheel chocks forward and aft of both the NLG and the MLG wheel assemblies.

(p) Release the parking brake (TASK 32−44−00−910−802).

(q) Disconnect the towbar from the towing vehicle.

(r) Connect the torque links as follows:

1 Pull and hold the two quick−disconnect handles fully out.

2 Align the pivot of the top torque link with the pivot of the lower torque link.

3 Release the quick−disconnect handles.

4 Make sure that the two quick−disconnect pins engage fully with the pivot of the lower torque link.

(s) Disconnect the towbar from the nose landing gear.

(t) If the left or right wing tanks each contain more than 12,000 Lbs (5443 Kg) of fuel, you must vent the fuel system as follows:

1 If using the APU, do as follows:

a Connect and energize auxiliary ac−power supply (TASK 24−22−00−861−801).

b On the EICAS control panel, push the FUEL pushbutton to display the fuel synoptic page.

c On the FUEL control panel, push in the XFEED SOV switch/light and make sure of the results that follow:

- On the FUEL control panel, the OPEN light on the XFEED SOV switch/light comes on
- On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the open position
- On the EICAS FUEL synoptic page, the left and right primary pumps show in green
- On the EICAS primary page, you see the XFEED VALVE OPEN message.

d Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

e On the FUEL control panel, push out the XFEED SOV switch/light and make sure of the results that follow:

- − On the FUEL control panel, the OPEN light on the XFEED SOV switch/light goes off
- − On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the closed position
- − On the EICAS primary page, the XFEED VALVE OPEN message does not show.

f Remove power from the auxiliary ac−power supply (TASK 24−22−00−861−802).

2 If using external AC power, do as follows:

a Connect and energize external ac power to the aircraft (TASK 24−41−00−861−801).

b In the flight compartment, on the EMS CDU, set the circuit breaker that follows to OUT (TASK 24−00−00−863−801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

c Pull the left engine fire−handle.

d Set the L ENGINE RUN toggle switch to ON.

e Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

f Set the L ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

g Push the left engine fire−handle to its OFF position.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

h Pull the right engine fire−handle.

i Set the R ENGINE RUN toggle switch to ON.

j Let the right AC primary pumps operate for two minutes to remove fuel from the vent system.

k Set the R ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

l Push the right engine fire−handle to its OFF position.

m In the flight compartment, on the EMS CDU, set the circuit breaker that follows to IN (TASK 24−00−00−863−802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

n Remove external ac power from the aircraft (TASK 24−41−00−861−802).

(u) If the aircraft is still in a possible tail heavy condition (less than 5,000 lb (2 268 kg) of fuel in the tanks), do the steps that follow, as applicable:

1 Install the rear fuselage support.

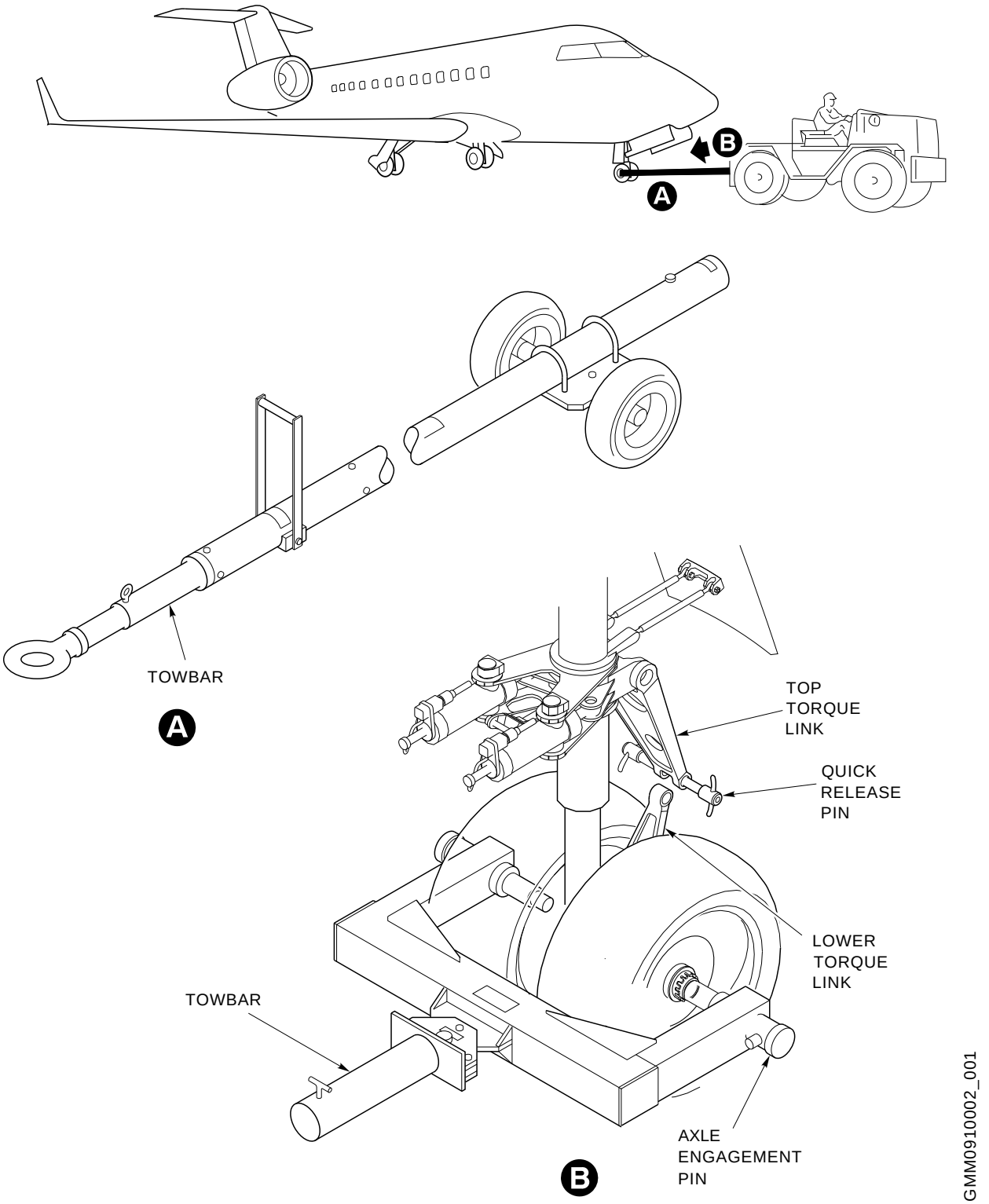
2 If the four fly away boxes are installed in the aircraft, remove them (TASK 07−10−00−080−801).

3 If the two fly away boxes with the two ground−handling ballast boxes are installed in the aircraft, remove them.

E. Close Out

(1) Remove all tools, equipment, and unwanted materials from the work area.

(2) If necessary, remove the electrical power from the aircraft (TASK 24−00−00−861−802).



Towing − Maintenance Practices
Figure 201

TASK 09−10−00−584−802

2. Towing of the Aircraft with the Towbarless Vehicle

A. Reference Information

REFERENCE	DESIGNATION
TASK 07−10−00−080−801	Removal of the Ballast Boxes
TASK 07−10−00−480−801	Installation of the Ballast Boxes
TASK 12−11−01−650−801	Pressure Refueling
TASK 24−00−00−910−801	Electrical/Electronic Safety Precautions
TASK 24−22−00−861−801	Energize the Auxiliary AC−Power Supply
TASK 24−22−00−861−802	Removal of Power from the Auxiliary AC−Power Supply
TASK 24−41−00−861−801	Connect and Energize External AC Power
TASK 24−41−00−861−802	Remove External AC Power
TASK 29−10−00−862−803	Pressurize the No. 3 Hydraulic System
TASK 29−10−00−862−804	Release Hydraulic Pressure−No. 3 Hydraulic System
TASK 32−44−00−910−801	Set the Parking Brake
TASK 32−44−00−910−802	Release the Parking Brake

B. Tools and Equipment

REFERENCE	DESIGNATION
GSE 07X−10−06	Support, Rear Fuselage
GSE 09X−10−06	Aircraft Towing Vehicle − 75,000 lbs Maximum Capacity − LEKTRO AP8750B−AL
GSE 09X−10−07	Aircraft Towing Vehicle − 120,000 lbs Maximum Capacity − LEKTRO AP8850SDA
GSE 09X−10−08	Aircraft Towing Vehicle − 100,000 lbs Maximum Capacity − JETporter JP−2
GSE 09X−10−09	Aircraft Towing Vehicle − 100,000 lbs Maximum Capacity − JETporter JP−2S

REFERENCE	DESIGNATION
GSE 10X−11−04	Wheel Chocks, Rubber
GSE 23X−51−01	Headset With Mic, Ground Crew
GSE 23X−51−02	Cord, Headset Extension
GSE 52X−11−01	Support − Drop Down Door
Commercially Available	Light Wand

NOTE: Refer to the BD−700 ILLUSTRATED TOOL AND EQUIPMENT MANUAL to make sure that you use the correct equipment configuration.

C. Job Set−Up

(1) Obey all the electrical/electronic safety precautions (TASK 24−00−00−910−801).

(2) Make sure that the tires are correctly inflated.

(3) Make sure that the nose−landing−gear shock strut is correctly filled.

(4) Make sure that the nose landing−gear (NLG) lockpin is installed.

(5) Make sure that the main landing−gear (MLG) lockpins are installed.

(6) Make sure that the nose wheel scissors links are disconnected.

(7) Make sure that the nosewheel steering system is not armed.

(8) Make sure that brake accumulator No. 3 is sufficiently pressurized as follows:

NOTE: If you cannot pressurize the brake accumulator No. 3, then the brakes will not operate correctly. If this occurs, you must put two more persons in position (one person with chocks at each set of main wheels) for safety.

(a) In the flight compartment, on the ELECTRICAL control panel, set the BATT MASTER switch to ON.

(b) On the EICAS, on the HYDRAULIC synoptic page, make sure that the INBD BRAKE hydraulic system pressure is a minimum of 1100 psi (7584.28 kPa) and the No. 3 hydraulic system quantity is a minimum of 20%.

NOTE: You can pull the parking brake handle six times before you must pressurize the brake accumulator No. 3 again.

(c) If necessary, pressurize the accumulator as follows:

1 Pressurize the No. 3 hydraulic system (TASK 29−10−00−862−803).

2 On the hydraulic synoptic page, make sure that the INBD BRAKES pressure indication shows 3000 psi.

3 Release pressure in the No. 3 hydraulic system (TASK 29−10−00−862−804).

(d) In the flight compartment, on the ELECTRICAL control panel, set the BATT MASTER switch to OFF.

(9) Make sure that the landing gear selector−handle is in the DN position.

(10) Make sure that all external servicing equipment is disconnected from the aircraft.

(11) Make sure that the ground wire is disconnected from the aircraft.

(12) The minimum number of persons in the crew is as follows:

NOTE: If you cannot pressurize the brake accumulator No. 3, then the brakes will not operate correctly. If this occurs, you must put two more persons in position (one person with chocks at each set of main wheels) for safety.

(a) When you tow the aircraft in open areas, two persons are necessary.

NOTE: One person operates the tow vehicle (tug).

The other person is the brake operator and operates the brakes in the flight compartment.

(b) If you tow the aircraft in confined areas, five persons are necessary.

NOTE: One person operates the tow vehicle (tug).

Two persons are put at wing tips, one at each wing tip, to make sure that there is sufficient clearance for the wing tips.

One person makes sure that the tail of the aircraft has sufficient clearance.

The other person is the brake operator and operates the brakes in the flight compartment.

(c) Make sure the person who operates the tug can speak with and hear the other persons of the crew.

NOTE: The person who operates the tug controls the towing operation.

(13) If you tow the aircraft in low visibility, the ground crew must use light wands to give signals.

(14) Make sure that there is a crew member in the flight compartment to operate the parking brake in an emergency.

D. Procedure

Refer to Figure 202 and Figure 203.

CAUTION: OBEY THE PRECAUTIONS THAT FOLLOW WHEN YOU TOW THE AIRCRAFT:

- MAKE SURE THAT THE NOSE-LANDING-GEAR SHOCK STRUT IS CORRECTLY FILLED BEFORE YOU DISCONNECT THE TORQUE LINKS.
- MAKE SURE THAT THE TORQUE LINKS OF THE NOSE LANDING GEAR ARE DISCONNECTED.
- KEEP THE TURNS AS LARGE AS POSSIBLE.
- MAKE ONLY SLOW CHANGES TO SPEED AND/OR DIRECTION.
- MAKE SURE THAT A MINIMUM OF 5000 LB (2268 KG) OF FUEL IS IN THE TANKS OR THE LOAD ON THE NOSE LANDING GEAR IS NOT LESS THAN 1900 LB (862 KG) AND THAT THE C OF G OF THE AIRCRAFT IS WITHIN THE C OF G ENVELOPE LIMITS. IF NECESSARY, MAKE A BALLAST OR FUEL ADJUSTMENT TO GET THE CORRECT LOAD. IF YOU DO NOT DO THIS, YOU CAN DISCONNECT OR DAMAGE THE STEERING MECHANISM AND/OR CAUSE THE AIRCRAFT TO TIP OVER.

IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE AIRCRAFT AND EQUIPMENT CAN OCCUR.

CAUTION: DO NOT TOW THE AIRCRAFT IF THE FLIGHT COMPARTMENT WINDOWS ARE REMOVED. THE FLIGHT COMPARTMENT WINDOWS ARE INTEGRAL PARTS OF THE STRUCTURE. IF YOU TOW THE AIRCRAFT WHEN THE FLIGHT COMPARTMENT WINDOWS ARE REMOVED, DAMAGE TO THE EQUIPMENT CAN OCCUR.

CAUTION: DO NOT TOW THE AIRCRAFT IF THE STRUCTURAL FLOOR PANEL IS REMOVED. THE STRUCTURAL FLOOR PANEL IS AN INTEGRAL PART OF THE STRUCTURE. IF YOU TOW THE AIRCRAFT WHEN THE STRUCTURAL FLOOR PANEL IS REMOVED, DAMAGE TO THE STRUCTURE CAN OCCUR.

NOTE: If you use the LEKTRO AP8750B−AL towbarless vehicle, make sure that the maximum weight of the aircraft is not more than 75 000 lbs (34 020 kgs).

(1) To tow the aircraft with the towbarless vehicle (tug), do one of the steps that follow:

(a) For a completed aircraft, it is possible that a tail heavy condition can occur during towing if there is less than 5,000 lb (2 268 kg) of fuel in the tanks. Do one of the steps that follow, as applicable:

- If there is not sufficient fuel, add fuel to satisfy the 5000 lb (2 268 kg) minimum (TASK 12−11−01−650−801); or
- Install the four fly away boxes in the aircraft (TASK 07−10−00−480−801); or
- Install the two fly away boxes with the two ground−handling ballast boxes inside the aircraft.

(b) For an aircraft not completed internally (green aircraft), a tail heavy condition usually occurs during towing. Do one of the steps that follow, as applicable:

- Install the four fly away boxes in the aircraft (TASK 07−10−00−480−801); or
- Install the two fly away boxes with the two ground−handling ballast boxes inside the aircraft.

WARNING: STAY AWAY FROM THE TORQUE LINK WHEN YOU RELEASE THE HANDLE. THE TORQUE LINK IS SPRING-LOADED AND WILL MOVE UP QUICKLY WHEN YOU PULL THE RELEASE HANDLE. IF YOU DO NOT OBEY THIS SAFETY PRECAUTION, YOU CAN CAUSE INJURY TO PERSONS.

(2) Disconnect the torque links as follows:

(a) Pull the two quick−disconnect handles at the same time.

(b) Disconnect the top torque link from the lower torque link.

(3) Connect a headset to the service interphone unit.

(4) In the flight compartment, do the steps that follow:

(a) Set the parking brake (TASK 32−44−00−910−801).

(b) Tell the tug operator that the parking brake is set.

(5) Remove all the wheel chocks.

(6) Visually examine the winch strap for possible damage and replace it if necessary.

NOTE: Replace the winch strap for a new one when it shows evidence of excessive wear.

NOTE: Replace the winch strap as per the manufactures operator manual recommendation.

(7) Visually examine the strut strap and its protective sleeve for possible damage and clean it if necessary.

NOTE: Replace the strut strap as per the manufactures operator manual recommendation. Replace the strut strap any time it shows evidence of excessive wear. Examine the protective sleeve on the strut strap. Make sure it is free from grease, dirt or grit that can cause damage to the piston chrome surface. Sheepskin or braided nylon protective sleeve worn through or abrasive materials can cause damage to the piston chrome surface.

WARNING: IF YOU MOVE THE TUG TO AND FROM THE NOSE WHEELS FROM THE REAR, MAKE SURE YOU AND THE VEHICLE WILL NOT TOUCH AIRCRAFT COMPONENTS. IF YOU DO NOT OBEY THIS PRECAUTION, YOU CAN CAUSE INJURY TO YOURSELF AND DAMAGE TO AIRCRAFT AND COMPONENTS.

(8) Move the tug to 3 ft (1 m) or less from the aircraft wheels. Make sure that the tug is in line with the nose wheels.

(9) Stop the tug and lower the nose wheel cradle to 1 in (2.54 cm) above the ground.

CAUTION: DO NOT PUT THE STRUT STRAP AROUND THE OUTER CYLINDER WHEN YOU TOW OR PUSH BACK THE AIRCRAFT WITH A TOWBARLESS VEHICLE. YOU CAN CAUSE DAMAGE TO THE NOSE LANDING GEAR.

(10) Put the strut strap around the chrome piston of the NLG strut. If part of the strut strap is not on the piston, make sure that the shock strut has been serviced correctly.

(11) Attach the winch strap to the “D” rings of the strut strap.

NOTE: Make sure that the strut strap is the correct length as follows:

- The “D” rings and the winch strap hook do not come in contact with the winch drum
- The “D” rings and the winch strap hook do not come in contact with the nose−landing−gear.

I (12) In the flight compartment, do the steps that follow:

(a) Release the parking brake (TASK 32−44−00−910−802).

(b) Tell the tug operator that the parking brake is released.

(13) Pull the aircraft on the cradle with the winch until the tire operates the winch cut−off and is tightly held against the stop.

(14) Make sure that the protruding parts on the nose landing gear stay clear of the cradle and the tug body.

(15) Lift the cradle sufficiently until it is approximately 3 in (7.62 cm) above the pavement surface.

NOTE: The pavement surface must be free from obstacles.

NOTE: Towing on an irregular surface of more than 1 in (2.54 cm), including hangar entrance is not permitted.

(16) Make sure that the winch/strut strap tension is tight but lets approximately 0.50 in (1.27 cm) of downward movement of the strap when it is manually pushed.

(17) Close the passenger door, as applicable.

NOTE: Towing the aircraft with the passenger door open is permitted, but you must obey the speed limit and make sure that you do not have sudden stops and starts.

(18) Slowly tow the aircraft forward at a speed of not more than 3 mph (5 km/h).

NOTE: Use only the tug to control the towing speed and not the aircraft brakes.

NOTE: You must stop the towing operation immediately if the aircraft nosewheel−assembly position is different from the cradle position. This can show that a torque force is transmitted to the steering system. If this condition occurs, you must examine the NLG tires and NLG wheels as well as the steering system. Monitor the tire chine and the wheel bead.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(19) If necessary, push back the aircraft at a speed of not more than 3 mph (5 km/h).

NOTE: Control the towing speed using only the tug, not the aircraft brakes.

NOTE: You must stop the towing operation immediately if the aircraft nosewheel−assembly position is different from the cradle position. This can show that a torque force is transmitted to the steering system. If this condition occurs, you must examine the NLG tires and NLG wheels as well as the steering system. Monitor the tire chine and the wheel bead.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(20) If the aircraft is turned before it is parked, move it forward or rearward in a straight line for a short distance.

(21) When the aircraft is in the correct position, stop the aircraft with the tug.

(22) Lower the cradle.

(23) In the flight compartment, do the steps that follow:

(a) Set the parking brake (TASK 32−44−00−910−801).

(b) Tell the tug operator that the parking brake is set.

(24) Put the wheel chocks forward and aft of the MLG wheel assemblies.

(25) Disconnect the winch strap from the NLG strut.

(26) Slowly move the tug away from the aircraft.

WARNING: MAKE SURE THE WHEEL CHOCKS ARE PUT AT THE NOSE AND MAIN WHEEL/TIRE ASSEMBLIES. MOVEMENT OF THE AIRCRAFT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

(27) Put the wheel chocks forward and aft of the NLG wheel assembly.

(28) Install the ground wire.

(29) Release the parking brake (TASK 32−44−00−910−802).

(30) Connect the torque links as follows:

(a) Pull out and hold the two quick−disconnect handles.

(b) Align the pivot of the top torque link with the pivot of the lower torque link.

(c) Release the quick−disconnect handles.

(d) Make sure that the two quick−disconnect pins engage fully with the pivot of the lower torque link.

(31) If the left or right wing tanks each contain more than 12,000 Lbs (5443 Kg) of fuel, you must vent the fuel system as follows:

(a) If using the APU, do as follows:

1 Connect and energize auxiliary ac−power supply (TASK 24−22−00−861−801).

2 On the EICAS control panel, push the FUEL pushbutton to display the fuel synoptic page.

3 On the FUEL control panel, push in the XFEED SOV switch/light and make sure of the results that follow:

- On the FUEL control panel, the OPEN light on the XFEED SOV switch/light comes on
- On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the open position

- On the EICAS FUEL synoptic page, the left and right primary pumps show in green
- On the EICAS primary page, you see the XFEED VALVE OPEN message.

4 Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

5 On the FUEL control panel, push out the XFEED SOV switch/light and make sure of the results that follow:

- − On the FUEL control panel, the OPEN light on the XFEED SOV switch/light goes off
- − On the EICAS FUEL synoptic page, the crossfeed shutoff valve shows in white contour and in the closed position
- − On the EICAS primary page, the XFEED VALVE OPEN message does not show.

6 Remove power from the auxiliary ac−power supply (TASK 24−22−00−861−802).

(b) If using external AC power, do as follows:

1 Connect and energize external ac power to the aircraft (TASK 24−41−00−861−801).

2 In the flight compartment, on the EMS CDU, set the circuit breaker that follows to OUT (TASK 24−00−00−863−801):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

3 Pull the left engine fire−handle.

4 Set the L ENGINE RUN toggle switch to ON.

5 Let the left AC primary pumps operate for two minutes to remove fuel from the vent system.

6 Set the L ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

7 Push the left engine fire−handle to its OFF position.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

8 Pull the right engine fire−handle.

9 Set the R ENGINE RUN toggle switch to ON.

10 Let the right AC primary pumps operate for two minutes to remove fuel from the vent system.

11 Set the R ENGINE RUN toggle switch to OFF.

WARNING: DO NOT TURN THE FIRE HANDLE. IF YOU TURN THE FIRE HANDLE, THE FIRE EXTINGUISHANT CAN COME OUT AND CAUSE INJURY TO PERSONS AND DAMAGE TO THE EQUIPMENT.

12 Push the right engine fire−handle to its OFF position.

13 In the flight compartment, on the EMS CDU, set the circuit breaker that follows to IN (TASK 24−00−00−863−802):

SYSTEM NAME	CIRCUIT BREAKER NAME	BUS NAME
ENGINE	L FADEC CH A	BATT
ENGINE	L FADEC CH B	BATT
ENGINE	R FADEC CH A	BATT
ENGINE	R FADEC CH B	BATT

14 Remove external ac power from the aircraft (TASK 24−41−00−861−802).

(32) If the aircraft is still in a possible tail heavy condition (less than 5,000 lb (2 268 kg) of fuel in the tanks), do the steps that follow, as applicable:

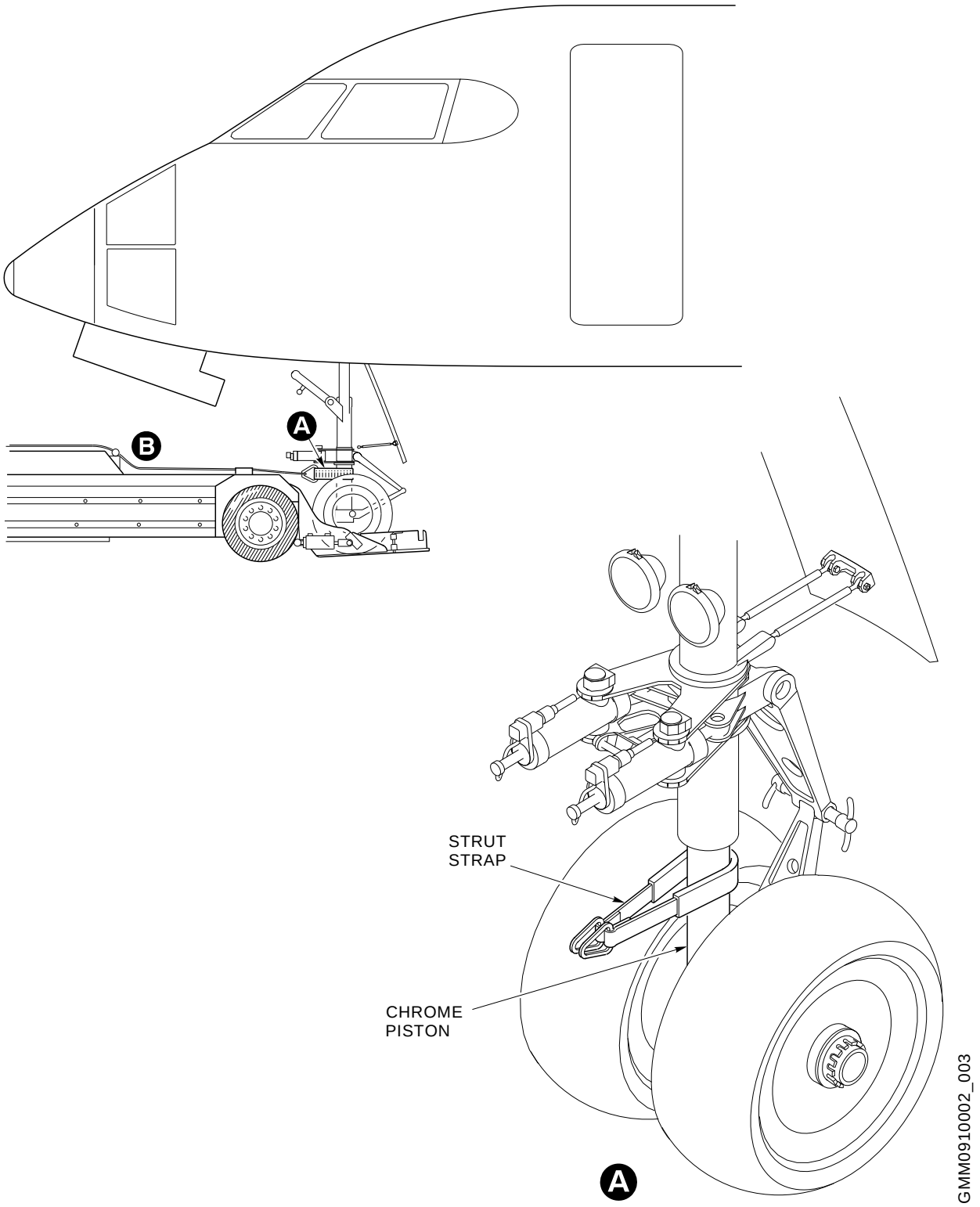
(a) Install the rear fuselage support.

(b) If the four fly away boxes are installed in the aircraft and are not necessary, remove them (TASK 07−10−00−080−801).

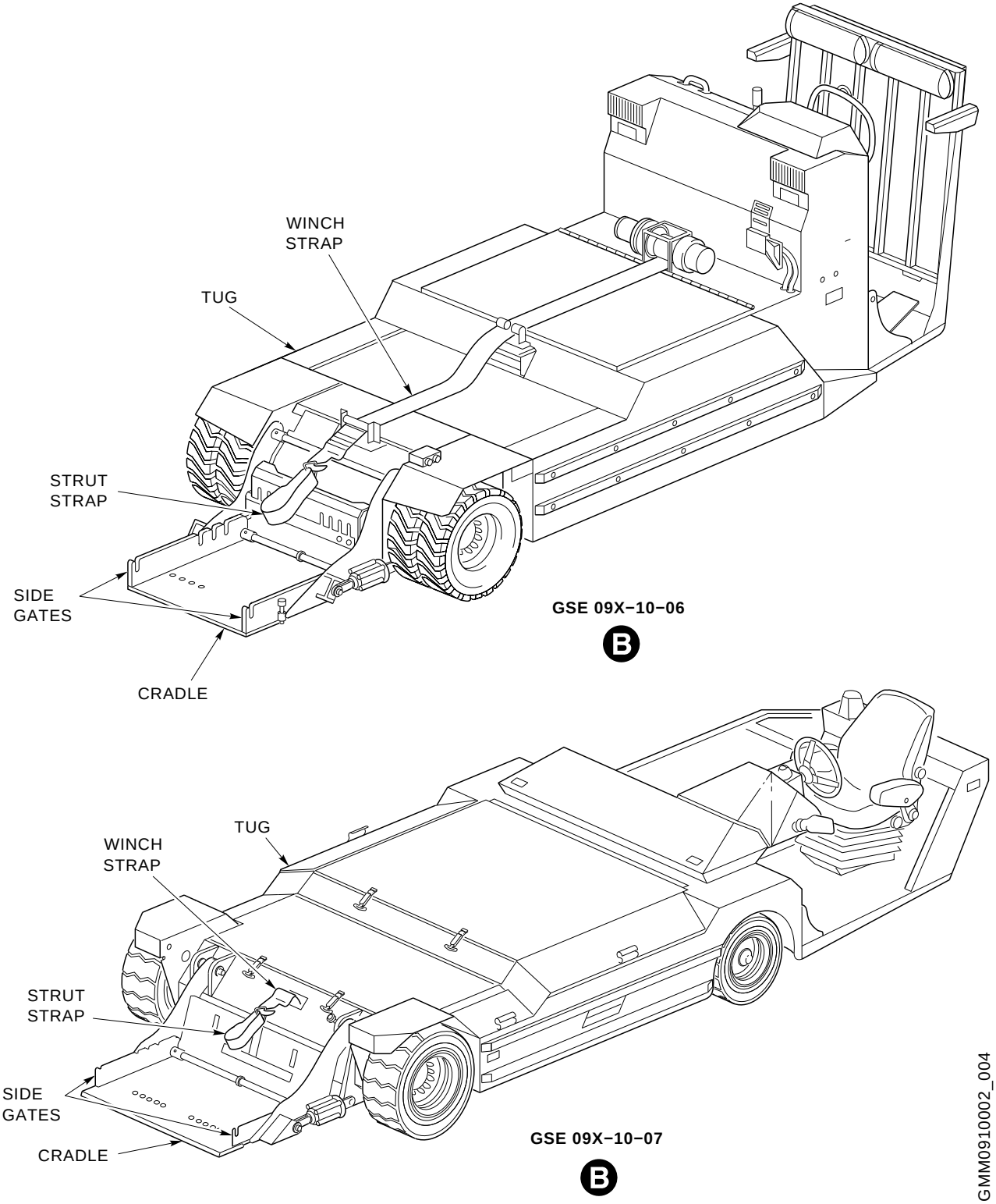
(c) If the two fly away boxes and the two ground−handling ballast boxes are installed in the aircraft and are not necessary, remove them.

E. Close Out

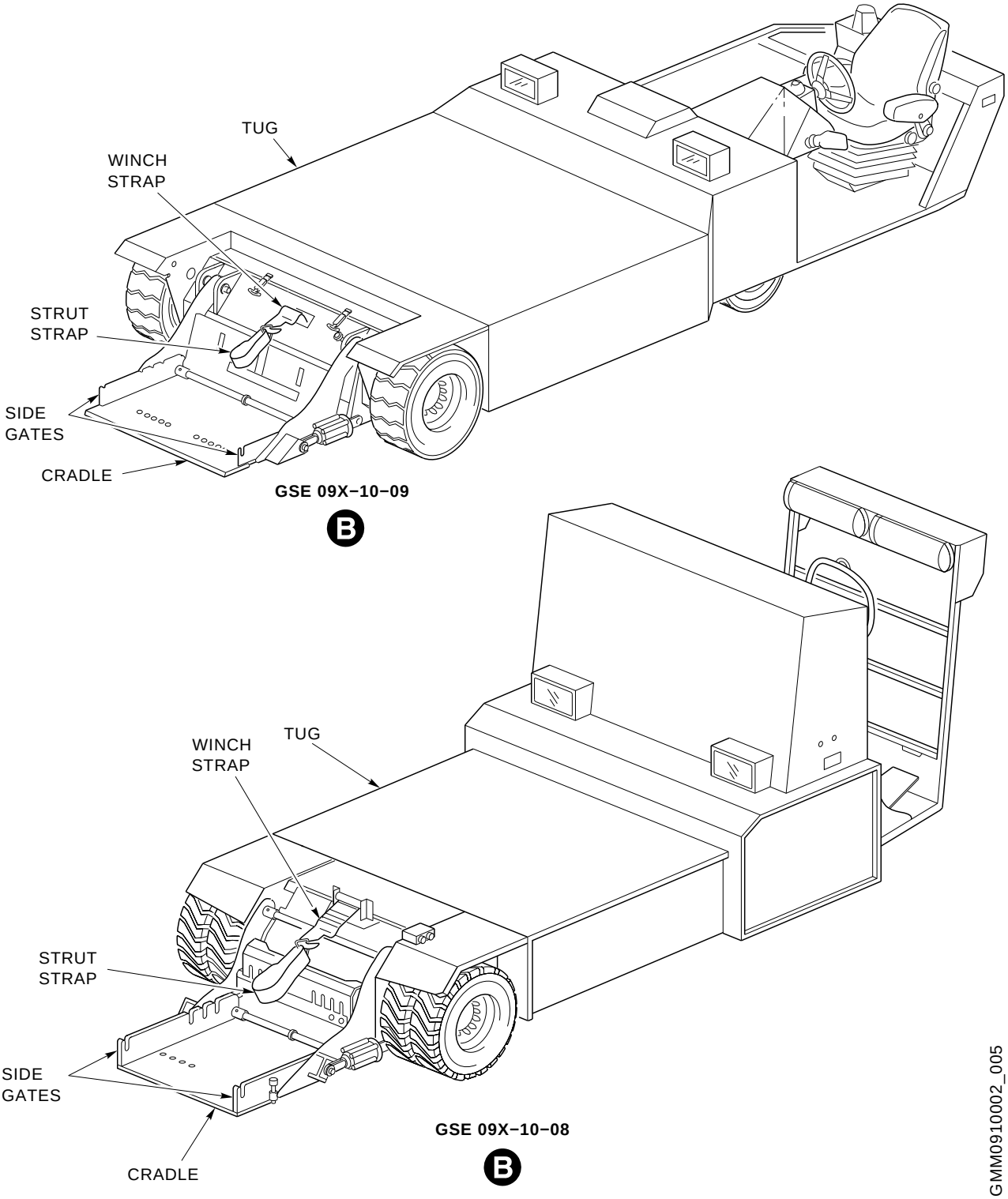
(1) Remove all tools, equipment, and unwanted materials from the work area.



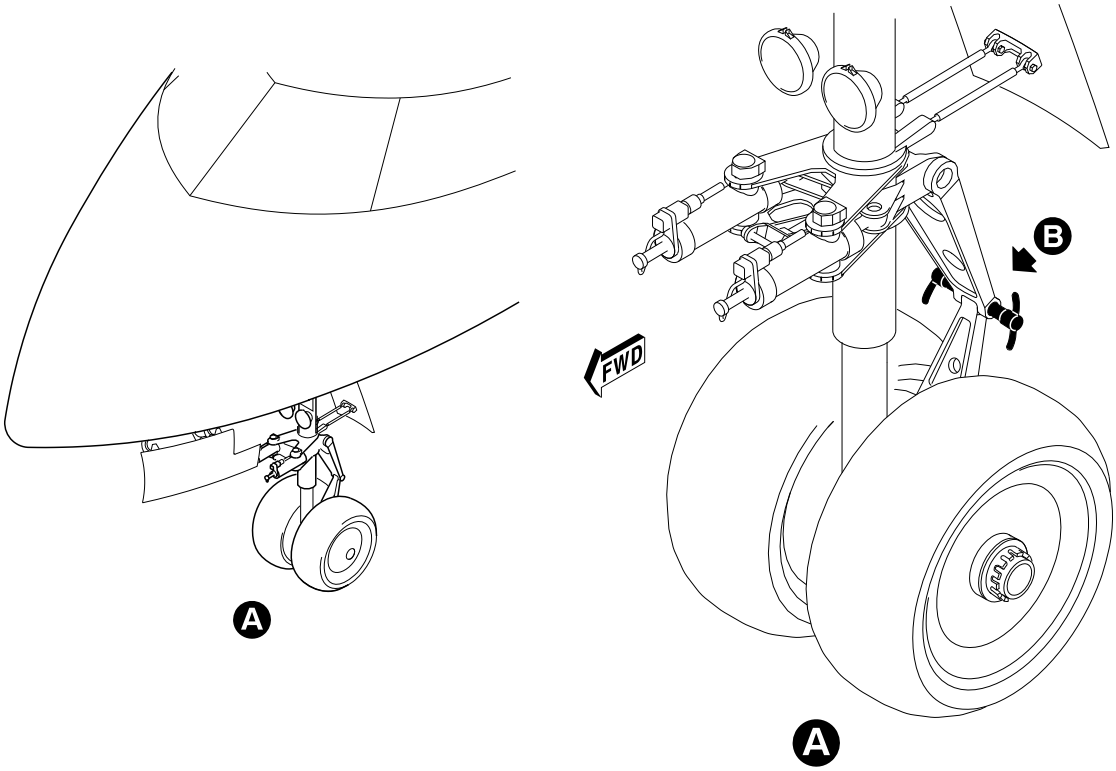
Towbarless Vehicle − Maintenance Practices
Figure 202 (Sheet 1 of 3)

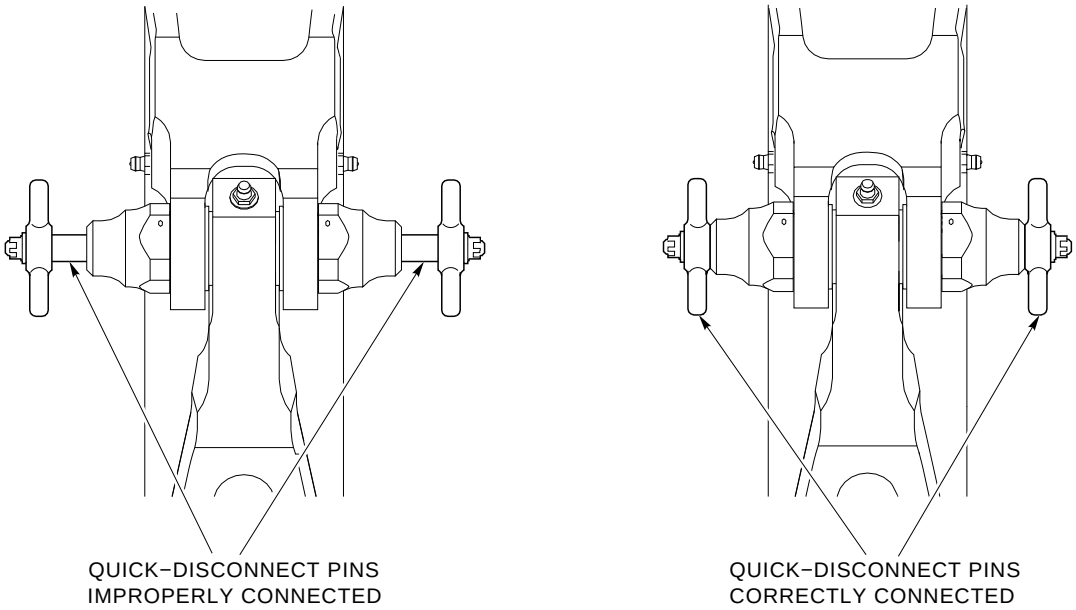


Towbarless Vehicle − Maintenance Practices
Figure 202 (Sheet 2 of 3)



Towbarless Vehicle − Maintenance Practices
Figure 202 (Sheet 3 of 3)





GMM0910002_007

Torque Links Disconnected − Maintenance Practices
Figure 203

TASK 09−10−00−584−803

3. Push Back the Aircraft with Torque Links Disconnected

A. Reference Information

REFERENCE	DESIGNATION
TASK 10−11−00−000−801	Removal of the Nose Landing Gear Lockpin
TASK 10−10−01−400−802	Removal of the Main Landing Gear Lockpins
TASK 10−11−00−000−803	Removal of the ADG Ground Safety Pin
TASK 12−00−06−863−801	Pressurize Hydraulic Systems No. 1 and No. 2
TASK 12−00−06−863−803	Pressurize Hydraulic Systems No. 3
TASK 12−12−32−220−801	Extension Check and Adjustment (with Nitrogen) of the MLG Shock Strut
TASK 12−12−32−220−802	Extension Check and Adjustment (with Nitrogen) of the NLG Shock Strut
TASK 12−12−32−610−806	Servicing of the Tires
TASK 24−00−00−910−801	Electrical/Electronic Safety Precautions
TASK 24−22−00−861−801	Energize External AC System in the External Service Configuration
TASK 24−41−00−861−802	Energize External AC System in the External Ground Service
TASK 29−00−00−910−801	Hydraulic Safety Precautions
TASK 32−45−00−910−801	Set the Parking Brake
TASK 32−45−00−910−802	Release the Parking Brake

B. Tools and Equipment

REFERENCE	DESIGNATION
GSE HTAG50SDWFN	Towing Mule (DBP 5000 lb)
GSE 01−1229−0011	Towbar
GSE 01−1215−0000	Towbar − Collapsible, Air Transportable

REFERENCE	DESIGNATION
GSE 01−0571−0011	Attachment Head − Transportable Towbar
GSE H10−60C	Headset − Ground Crew
GSE 40353G01	Cord − Headset extension

NOTE: Refer to the BD−700 ILLUSTRATED TOOL AND EQUIPMENT MANUAL to make sure that you use the correct equipment configuration.

C. Job Set−Up

(1) Obey all the related safety precautions during the push back procedure and complete the following before moving the aircraft:

(2) Obey all the electrical/electronic safety precautions (TASK 24−00−00−910−801).

(3) Prepare the aircraft for the push−back procedure as follows:

(a) Before the aircraft will be pushed back, make sure that the you have the towing crew that follows:

- One towing supervisor to control the towing operation
- One person in the flight compartment to operate the brakes
- One person to operate the towing vehicle
- One person on the left wing−tip and one person on the right wing−tip to monitor sufficient clearance during the turns
- One person behind the tail to monitor sufficient clearance during the turns.

NOTE: The towing supervisor is in control of the towing operation and must have visual and radio communication with all the members of the towing and flight crews at all times. Light wands can be used to give signals in low visibility.

(4) Make sure that the tires are correctly inflated (TASK 12−12−32−610−806).

(5) Make sure that the shock struts of the main and nose landing gear are correctly pressurized (TASK 12−12−32−220−801 AND AMM12−12−32−220−802).

(6) In the flight compartment do the steps that follow:

(a) Make sure that the nose wheel steering system is off.

(b) Make sure that the landing gear selector−handle is in the DOWN position.

(7) Make sure that all ground equipment is removed from areas adjacent to the aircraft.

(8) Make sure that all external services are disconnected from the aircraft.

(9) Make sure that all grounding wire is disconnected from the aircraft.

(10) Make sure that all external doors and panels are closed and installed correctly.

(11) Disconnect the torque links as follows:

(a) Pull the two quick−disconnect handles at the same time.

CAUTION: MAKE SURE THE LOWER TORQUE LINK IS NOT PUSHED UP. IF THE LOWER TORQUE LINK IS UP, IT CAN COME IN CONTACT WITH THE SHOCK STRUT ASSEMBLY. THIS CAN CAUSE DAMAGE TO THE AIRCRAFT.

(b) Disconnect the top torque link from the lower torque link. Make sure the lower torque link is not pushed up.

D. Procedure

CAUTION: WHEN YOU TOW THE AIRCRAFT WITH TORQUE LINKS DISCONNECTED, OBEY THE PRECAUTIONS THAT FOLLOW:

- DISCONNECT THE TOWBAR BEFORE YOU ARM THE NOSEWHEEL STEERING.
- DO NOT TOW AT MORE THAN 15 MPH (24 KM/H).
- DO NOT PUSH REARWARD AT MORE THAN 3 MPH (5 KM/H).
- DO NOT USE THE AIRCRAFT BRAKES TO STOP THE AIRCRAFT UNLESS THERE IS AN EMERGENCY.
- KEEP TURNS AS LARGE AS POSSIBLE.
- MAKE ONLY SLOW CHANGES TO SPEED OR DIRECTION.
- IF YOU DO NOT OBEY THESE PRECAUTIONS, DAMAGE TO THE AIRCRAFT OR EQUIPMENT CAN OCCUR.

CAUTION: MAKE SURE THAT THE LOAD ON THE NOSEWHEEL IS NOT LESS THAN 2000 LB (907 KG) AND NOT MORE THAN THE MAXIMUM LIMIT GIVEN BY THE CG ENVELOPE. IF NECESSARY, MAKE A BALLAST OR FUEL ADJUSTMENT TO GET THE CORRECT LOAD. IF YOU DO NOT OBEY THESE PRECAUTIONS, YOU CAN DISCONNECT OR DAMAGE THE STEERING MECHANISM, AND/OR CAUSE THE AIRCRAFT TO TIP OVER.

(1) To push back the aircraft, do the procedure that follows:

(a) If you push back the aircraft for maintenance, do not remove the lockpins from the landing gear and from the air−driven generator (ADG).

(b) If the flight crew members are on board and you prepare to push back the aircraft from the gates for departure, make sure to remove the ground safety items that follow:

1 Remove the nose landing gear (NLG) lockpin (TASK 10−11−00−000−801).

2 Remove the main landing gear (MLG) lockpins (TASK 10−11−00−000−801).

3 Remove the ADG ground safety pin (TASK 10−11−00−000−803).

(c) When necessary, connect a headset to the service interphone.

(d) Remove the AC electrical power from the aircraft (TASK 24−41−00−861−804 or AMM24−22−00−861−803), when applicable.

(e) In the flight compartment, do the steps that follow:

1 Set the BATTERY MASTER switch to ON.

2 Set the EICAS to the hydraulic synoptic page.

3 Make sure that there is minimum hydraulic pressure of 1500 psi (10342 kPa).

a When the hydraulic pressure is less than 1500 psi (10342 kPa), pressurize hydraulic systems No. 2 and No. 3 (TASK 12−00−06−863−801 AND AMM12−00−06−863−803). Do this until you have a minimum of 1500 psi (10342 kPa) in the system.

4 Apply the parking brake (TASK 32−45−00−910−801). Tell the towing supervisor that the parking brake is on.

(f) Install the towbar on the nose landing gear. Engage the axle engagement pins on the towing head with the holes in the ends of the NLG axle.

(g) Connect the towbar to the towing mule.

(h) Removed all wheel chocks. Tell the flight crew member that the wheel chocks are removed.

(i) In the flight compartment, do the steps that follow:

1 Set the NAV lights switch to ON.

2 Release the parking brake (TASK 32−45−00−910−802). Tell the towing supervisor that the brakes are off.

(j) Push back the aircraft, at a speed of not more than 3 mph (5 km/h), or tow the aircraft forward at a speed of not more than 15 mph (24 km/h). Control the towing speed with only the towing mule.

NOTE: Control the push−back speed with the use of the towing vehicle speed−indicator only.

NOTE: Do not stop the aircraft in a turn if it is not necessary.

(k) If the aircraft is turned before it is parked, move it forward or rearward in a straight line for a short distance.

NOTE: Moving the aircraft in a straight line removes twisting forcing from the landing gear before you stop the aircraft.

(l) When the aircraft is in the correct position, stop the aircraft with the towing mule.

(m) Connect the torque links as follows:

1 Pull and hold the two quick−disconnect handles fully out.

2 Align the pivot of the top torque link with the pivot of the lower torque link.

3 Release the quick−disconnect handles.

4 Make sure that the two quick−disconnect pins engage fully with the pivot of the lower torque link.

5 Advise the flight crew that the torque links have been connected.

(n) In the flight compartment, do the steps that follow:

1 Set the parking brake (TASK 32−45−00−910−801). Tell the towing supervisor that the parking brake is on.

2 Set the NAV light switch to OFF.

3 Set the BATTERY MASTER switch to OFF.

(o) Disconnect the towbar from the towing mule.

(p) Disconnect the towbar from the nose landing gear.

(q) Connect the towbar to the towing mule.

(r) Tell the flight crew member to continue with flight operations.

(s) When applicable, disconnect the headset from the service interphone.

(2) Remove the towing mule, towbar and any other equipment or unwanted materials from the area.