Volga Dnepr

GROUND OPERATIONS MANUAL

Volga-Dnepr Airlines LLC

No. Rk-VDA-112 edition 4

Ulyanovsk city

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PART 0
INTRODUCTION

0.1 GENERAL PROVISIONS

Put into effect	instead of No. Rk-VDA-112.2.17
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This document is created in the development of	Operation Manual No. Rk-VDA-102 Continuing airworthiness management organization No. Rk-VDA-114
The requirements of this document extend to	aircraft ground operations and cargo handling
This document is intended for the use by	personnel of servicing and refueling companies
The person who is responsible for implementation and control of the document execution is:	Head of ATOC
The person who is responsible for periodical checks and the document upgrades is:	General actualization – Head of the audit group of the continued airworthiness Part 1 - Purchasing Director Part 2 - Head of AES Part 3 – Head of the Transportation Organization Group
Periodical check frequency:	Once per year

This Manual has been developed for external suppliers at the departure airports of the Volga-Dnepr Airlines aircraft. For internal use, ground operations and cargo handling procedures have been developed:

- Maintenance Organization Exposition No. Rk-VDA-103,

- Manual to the organization of cargo transportation No. Rk-VDA-106.

The current version of the manual is published on the website of Volga-Dnepr Airlines LLC at:

https://airline.volga-dnepr.com/en/company/ground-handling/

If the servicing company has its own standard ground handling procedures and significant inconsistencies are identified, the standard airline procedures set out in this Manual are taken as the basis for ground handling operations.

Ground handling operations - the list of works and operations for post-flight servicing and preparation for the departure of the aircraft, from the moment of placing it in operational parking in order to prepare it for departure and before departure from the beginning of its movement associated with departure.

Ground handling operations include:

a) On-site parking service:

1. Meeting and leave taking of the aircraft;
2. Establishing communication with the crew;
3. Grounding the aircraft;
4. Ensuring power supply of the aircraft from a ground source;
5. Air conditioning in the cabin of the accompanying cargo persons and the crew cabin using a ground source;
6. Heating of aircraft engines and aircraft systems with aerodrome heaters (in cold weather);
7. Opening/closing cargo doors;
8. Visual control of engines starting;
9. Aircraft towing;
10. External visual inspection of the aircraft.

b) Aircraft servicing:

1. Potable water system servicing;
2. Lavatory system servicing;

3. Refueling and fuel drain.

c) De-icing and anti-icing treatment.

d) Disinsection treatment.

0.2 REGULATORY REFERENCES

This manual contains references to the following external documents:

Doc. 9284 AN/905 - “Technical Instructions for the Safe Transport of Dangerous Goods by Air” with Annexes

Doc. 9481 AN/928 – “Instruction on the Procedure of Actions in an Emergency in Case of Aircraft Incidents Associated with Dangerous Goods”

ST/SG/AC.10/1/Rev.22 – Recommendations on the Transport of Dangerous Goods, United Nations, 2021

ST/SG/AC.10/11/Rev.7 - Guidelines on Tests and Criteria, United Nations, 2019

FAR-82 "General Rules for the Air Transportation of Passengers, Baggage, Cargo and Requirements for Passenger, Shippers, Consignees Service" approved by order of the Ministry of Transport of the Russian Federation No. 82 dated June 28, 2007;

FAR-141 – Federal Aviation Regulations "Rules for the Carriage of Dangerous Goods by Civil Aviation Aircraft", approved by Order No. 141 of the Ministry of Transport of the Russian Federation dated September 05, 2008

0.3 TERMS, DEFINITIONS, DESIGNATIONS AND ABBREVIATIONS

The following terms, definitions, abbreviations and designations are also used in this document:

AC	Aircraft
AC Senior Engineer	Representative of the VD Airlines, who is the head of the technical team of the VD Airlines
ASS	Aviation Safety Service
ATC	Air Traffic Control, in the text is used as an air traffic control station with air traffic controllers
Cockpit	Flight compartment
CPC	Cargo Planning Center of VD Airlines
De-icing and anti-icing	De-icing and anti-icing treatment
DG	Dangerous Goods
ERA	Equipment Restricted Area
FOD	Foreign Object Debris
GOM	Ground Operation Manual
GPU	Ground Power Unit
GSE	Ground Support Equipment - auxiliary equipment located at the airport, usually on the apron, in the terminal service area
Loadsheet	Load sheet means a document which enables the pilot-in-command to determine that the aircraft's load and its distribution throughout the aircraft are such that the mass and balance limits of the aircraft are not exceeded
MLG	Main Landing Gear
NLG	Nose Landing Gear
OCC	Operations Control Center
PIC	Pilot In Command
POL	Petroleum, oil and lubricants
RDR	Aircraft airborne radar station, as a rule, it is located under the radome of the aircraft

Refueler	Fuel tanker
TT	Technical Team - a group of engineering and technical personnel of the VD Airlines, which is part of the crew, and performs maintenance of the aircraft
TWR	Aerodrome Control Tower - air traffic control center with air traffic controllers
ULD	Unit load device
VD Airlines	Abbreviated name of Volga-Dnepr Airlines LLC
VDA	Volga-Dnepr Airlines LLC
VHF	Very High Frequency = ultra short waves - a range of radio waves combining meter, decimeter, centimeter and millimeter waves used at the airfield for communication

0.4 CONTACT DETAILS OF VD AIRLINES

Organization and operational management of aircraft ground handling operations and transportation	Head of the duty shift of the Operations Control Center	24 hours a day: Tel. +7 (8422) 59-01-17 Fax. +7 (8422) 20-49-97 E-mail: gikp@volga-dnepr.com
Organization and control of the provision of ground handling operations for aircraft at transit airports	Leading Dispatcher on flights ground support, Dispatcher of flights operation support	24 hours a day Tel. +7 (8422) 59-01-03 gh@volga-dnepr.com
Control over the performance of ground handling operations for aircraft at transit airports	Operation Duty Engineer on IAO DS ATOC	24 hours a day: Tel. +7(8422) 59-00-82 di@volga-dnepr.com
Control of AC loading	Load master	Tel. +7(8422) 59-02-08 ggp@volga-dnepr.com
The conclusion of contracts for ground handling, fuel service, audit	Head of the Procurement Department for the category of ground support and jet fuel	Tel. +7(8422) 59-03-74 handling@volga-dnepr.com

PART 1
GENERAL REQUIREMENTS FOR SERVICING AND REFUELING COMPANIES

1.1 GUARANTEES AND RESPONSIBILITIES

The servicing company must ensure that only qualified and authorized personnel who have undergone appropriate theoretical and practical training, as well as internship in accordance with established local regulations, will be allowed to perform these works and operate the equipment.

During ground handling of the aircraft, only serviceable equipment that undergo regular maintenance corresponding to the type of aircraft should be used. Moreover, in accordance with the procedure established by the servicing company, for each auxiliary equipment, mechanization tool used in the process of ground handling, mandatory records are kept of scheduled preventive and routine maintenance work to support them in good condition.

The servicing company must ensure that all departments involved in the performing of ground handling operations and their provision are equipped with all necessary communications, workplaces are provided with modern software, the premises correspond the specifics of the activity. All employees should be provided with special clothing that takes into account their type of activity, including personal protective equipment.

A specialist who performs given amount of work, is responsible for the quality and safety of the procedures of ground handling operations for the aircraft Control over the quality of ground handling in general on the part of the servicing company should be carried out by a designated responsible specialist with the necessary training and skill, on the part of the airline - by an employee performing representative functions at this airport, or in his/her absence - by the flight crew.

The opening/closing of cargo doors on all aircraft of VD Airlines, as well as visual control over the start of engines on the AN-124-100 (-150) aircraft is carried out only by members of the technical crew of the VD Airlines. The execution of these procedures by the servicing company is prohibited.

1.2 CONTRACTS ON GROUND HANDLING OPERATIONS

1.2.1 Service by Contract or Agreement

When performing flights under the program, the provision of ground handling services by an external supplier is formalized by a contract or agreement.

The requirement to conclude contractual relations applies to all work performed in the frames of ground handling operations, including such as refueling, anti- and de-icing treatment. The servicing company is fully responsible for performing these functions in accordance with operational safety requirements.

In a typical case, contractual relations with third-party organizations are possible only after an audit and approval of procedures for fuel supply, ground and airport services, their compliance with the standards of the VD Airlines set out in this Manual.

When VD Airlines performs exclusively charter cargo flights, it is possible to conclude a contract without conducting a mandatory audit, provided that the guarantees of the servicing company or the designated agent are obtained to follow the provisions of this Manual.

The agreement or contract for ground handling of aircraft must provide for the right of the Airline in the person of its authorized representative:

1. To perform regular (recommended once every 2 years) quality checks of the materials used by the servicing company (jet fuel, other fuels and lubricants, de-icing liquid, water, gas, hydraulic and other liquids);
2. To require additional laboratory analysis of samples of materials used;
3. To request any documentation provided for this material, confirming the passage of quality control of materials by the servicing company.

When making contractual relations for ground operations, priority is given to the format of the "IATA Standard Ground Handling Agreement".

IATA Airport Handling Manual (IATA AHM) contains detailed instructions and examples of a typical ground handling agreement and a service level agreement. In addition, IATA publishes a standard agreement for the supply of jet fuel.

If it is not possible to conclude a standard IATA agreement, the ground handling contract or agreement must contain the following:

1) list of ground handling services to be provided by the servicing company;
2) list of additional services that can be provided by the servicing company at the request of the Airline;
3) duration of the contract or agreement and the terms of its termination;
4) obligations of the servicing company and the Airline;
5) the need to comply with the requirements of this Manual and other Airline standards related to the servicing the aircraft, accompanying cargo, baggage, and mail.

The contract or agreement for the fuel supply of aircraft must contain the technical requirements of the industry standard, specifications and types of fuel for each given type of aircraft in accordance with the technical documentation.

In order to meet the quality of the services provided to the Airline standards, one of the following actions must be performed:

1) an "Agreement on the Quality of Services Provided" - SLA (Service Level Agreement) to be concluded, which is an official Annex to the Ground Handling Agreement signed between the servicing company and the Airline, or
2) the Contract or Ground Handling Agreement contains measurable specifications that can be checked by the Airline in order to make sure that the requirements affecting operational safety are met by the servicing company.

The conclusion of an agreement on the quality of services provided, or the introduction of measurable specifications into the ground handling agreement is the basis for monitoring this activity.

If the servicing company engages subcontractors to perform ground handling functions, these functions are transferred to subcontractors by contract or other legal means. In this case, even if the ground handling functions are performed by a third party, the responsibility remains with the servicing company.

1.2.2 Service Based on the Application

When performing one-time charter flights, it is possible to service without a contract according to an application for support sent by the on-duty shift of the VD Airlines directly to the service provider or designated agent. This application must contain a reference to the need to follow the provisions of this Manual, as well as information and a request for:

for commercial landing of AN-124/IL-76

- organization of aircraft servicing for commercial landing (ground power supply, toilet service, water refueling and truck);
- provision of weather data and NOTAM for departure;
- parking confirmation;
- organization of cargo loading/unloading;
- organization of garbage collection upon arrival of the aircraft;
- provision of de-icing means for aircraft at the request of PIC;
- booking single rooms in a hotel;
- provision of cars for the crew to/from the hotel;
- catering at the request of PIC;

for a technical stop on AN-124/IL-76

- organization of aircraft servicing for commercial landing (ground power supply, water refueling and truck);

- organization of garbage collection upon arrival;
- provision of weather data and NOTAM for crew departure;
- parking confirmation;
- provision of de-icing means for aircraft at the request of PIC;
- catering at the request of PIC.

for refueling AN-124/IL-76:

- airplane type;
- schedule;
- required fuel quantity;
- type of payment.

1.3 AUDITS AND INSPECTIONS

In accordance with Chapter 1.2 of this Manual, before entering into a contract or agreement, as well as subsequently, with the recommended frequency of ones every two years, VD Airlines may conduct audits of organizations performing ground services, refueling, cargo handling.

The company VD Airlines sends a notification to the organization about the audit within the time limits specified by the contract or agreement.

In addition to audits, the VD Airlines conducts regular inspections of compliance with the requirements of the Ground Handling Manual, including the performance of work on the apron:

- meeting and departure of the AC;
- services compliance with international requirements and GOM VDA;
- aircraft towing procedures;
- refueling with liquids and fuel;
- operation safety;
- de-icing and anti-icing treatment.

Inspectors are included in the crew and perform checks at the airports of arrival/ departure.

Due to the fact that VD Airlines performs charter flights, prior notification of the inspected organizations is not required during inspections. The basis for the inspection is the requirement that the procedures of service and refueling companies comply with this manual.

Based on the results of audits or inspections, a notification of identified inconsistencies is sent to the audited organizations. Within the period specified in the notification, service and refueling companies are required to develop corrective measures.

PART 2
GROUND HANDLING

2.1 ACCESS TO THE AIRPLANE. AIRPLANE GUARD.

The aircraft must be under constant reliable protection and access to it must be restricted:

- By the crew when using the aircraft for flight operations, during short-term parking at a transit airport;
- By engineering and technical staff (technical team) during the maintenance of the aircraft;
- By the security service when the aircraft is parked, when no maintenance or ground handling work is being carried out on it and this aircraft has been handed over to protection.

The responsibility for the aircraft, including the plane's documentation on board, and its protection is borne by the official whose signature is the last on the receipt of the aircraft in the logbook, the log of reception and transfer.

The right to carry out the transfer of the aircraft under protection and its reception from protection has the person authorized for this type of activity. At the same time, such authorized persons are:

- From the crew - any crew member appointed by the commander of the aircraft for these purposes;
- From the engineering aviation service – a Senior Engineer of the aircraft, or a representative of the company who has the authority to do so;

The transfer of the aircraft from one official to another is allowed only if the receiving person has a document (a flight assignment, a maintenance task card, a log of the parking attendant, a log of the reception and transfer of the aircraft under protection).

The person responsible for the aircraft and its security is obliged to:

1. Do not leave the aircraft unattended, do not allow persons who are not related to its maintenance to enter it;
2. Do not leave the aircraft with the entrance doors and hatches open, with ladders and stairs attached;

3. In case of temporary termination of work on the aircraft, close doors, cargo doors, manholes, engine and APU cowls, folding panels and landing gear doors, as well as remove ladders from the aircraft;
4. Keep the established fire protection regime in the parking site.

The transfer of the aircraft under protection and its reception from protection is carried out by a Senior Engineer of the aircraft.

The security service is obliged to train employees admitted to permanent or one-time work on the transfer of aircraft under protection and reception from protection, as well as to monitor the completeness of compliance with the requirements of this procedure.

2.2 OPERATION OF MEANS OF GROUND HANDLING

Only trained, qualified and authorized personnel should be allowed to operate the equipment.

Personnel should not use self-propelled vehicles and equipment while using portable electronic devices. Such devices should be used only if there is a corresponding “Hands free” device, either personal or installed.

Under no circumstances should the equipment cross the trajectory of the taxiing aircraft. Aircraft and pedestrians always have a preferential right of movement.

Before the aircraft arrives at the parking place, the apron equipment must be located behind the line limiting the location of the equipment, while the parking brakes must be activated.

When the equipment is located near the aircraft or outside the aircraft servicing area, the parking brakes of the equipment must be engaged, while the gearshift switch must be in the parking or neutral position.

Ground handling facilities must be in working condition.

When approaching the aircraft or moving from the aircraft, the equipment should not go faster than the speed of a walking person (5 km /h).

The guides and safety handrails on the loaders must be extended.

Stabilizers, if they are installed on the equipment, must be extended.

Hoses or cables/harnesses must be secured on the equipment before starting to move.

Lifting devices should not be moved in the raised state, this is allowed only for their final installation.

The cargo should not be transported on equipment not intended for this purpose.

In loaded transporters, cargo must be secured with locks, stops, handrails or belts throughout the ENTIRE TIME, except for the time when cargo is loaded or unloaded from such equipment.

Inoperable equipment should be labeled "Does not work", such equipment should be immediately sent to the repair/maintenance service.

When arranging equipment, special attention should be paid to the distance between vehicles, aircraft, other equipment and fixtures.

If the operator's vision is limited (for example, when the equipment is approaching the aircraft or leaving the aircraft), it is necessary to resort to the help of a signalman, of a member of the technical team responsible for the approach, or a technical team specialist appointed by him/her.

Standard hand signals should be used to guide ground equipment.

The specialist assisting the operator at the approach/departure must be positioned in such a way as to be able to accurately judge the distances; he/she must also be constantly visible and be able to transmit signals to the operator of the vehicle.

When the electric/self-propelled equipment is in operation mode, the operator must be at arm's length from the emergency controls.

It is forbidden to leave vehicles with the engine running in the parking area if they do not have external emergency controls.

Self-propelled equipment must be stopped completely to check the brakes before entering the restricted access area, as well as before approaching the aircraft.

After the loading is completed, all loading equipment must be removed from the aircraft.

Before towing the aircraft to the take-off place, all equipment, with the exception of the equipment necessary for departure, must be located behind the boundary line.

2.3 DANGEROUS AREAS NEAR THE AIRCRAFT WITH RUNNING ENGINES

The impact of jets from propulsion engines is dangerous. When the engine is started, the following dangerous phenomena may occur:

- There is an intense suction from the front side of the engine, which can pull people and various objects into the air path of the engine;
- Very hot, high-speed gases escape from the exhaust nozzle of the turbine;
- The airflow from the fan at high thrust has a very high speed;
- When the thrust reversal is activated, the airflow from the fan goes forward, while the exhaust gases of the turbine go backwards.

The risk becomes greater if, for any reason, the aircraft stops and then activates additional thrust for breakaway and continuation of maneuvering.

Vehicles and personnel must remain outside the aircraft danger areas (see Figure 1, Figure 2) when the engines of the aircraft are running and / or anti-collision lights are flashing.

In order to prevent incidents and accidents related to the operation of aircraft engines, never stay and do not place equipment before and during the departure or arrival of aircraft:

- in the engine air intake area;
- in the engine exhaust air stream area.

Ground personnel and/or equipment shall be kept away from the engine air intake and exhaust air stream areas.

2.3.1 Engine Air Intake Area

Personnel who are near the power plant during its operation should be aware of the hazardous areas located behind the edge of the air intake cowl.

This risk zone extends around the outer diameter and up to the leading edge of the power plant.

If the wind speed at the ground is more than 25 knots (12.85 m/s), the boundaries of the risk area increase by 20%.

If the apron covering in the parking area is wet or covered with ice, it must be cleaned to prevent injury to personnel.

After the engine is shutdown, allow the engine to run out before approaching the air intake.

Make sure that personnel who do not know the dangerous areas located near the power plants cannot get into these areas.

The suction force near the air intake can pull hats, glasses, loose clothing and shawls out of your pockets. All loose items must be removed before you work near the engine.

When the engine is started, a low pressure area is created in the air intake.

This low pressure area causes a large volume of air to move from the leading edge of the air intake into the engine.

The air located near the air intake has a significantly higher velocity than the air that is located at a distance from it.

When you are near the air intake, the suction force of the engine increases not gradually, but suddenly.

It is recommended that ground personnel stay out of the air intake danger zone for at least 30 seconds after the fuel cut-off signal from the crew cabin.

2.3.2 Exhaust Area

At high operating conditions, the exhaust gases of the fan and turbine can blow away dust, rocks, sand and other foreign objects located at a distance of 300 feet (91.4 m) or more.

The aircraft must be arranged in a parking place so as to avoid injury to personnel, damage to equipment or other aircraft.

Use blast fences that deflect thrust if the engines are started without sufficient space to reduce the exhaust power from the fan and turbine to zero.

High-temperature exhaust gases can spread to a distance of 300 feet (91.4 m) or more from the exhaust nozzle with wind moving along the gases.

Concrete coatings are recommended, because the exhaust gas temperature of the engine is sufficient to melt bitumen (asphalt) coatings.

At the moment of starting the engine, all flammable materials must be removed from the exhaust nozzle, because the fuel accumulated in the exhaust tract can ignite and escape as a jet of flame.

Caution! It is forbidden to cross the exhaust area with the engine running.

2.3.3 Entrance Corridor

When the engine is running, if you need to be at the engine, enter and exit the engine cowl area along the entrance/exit corridor.

For your safety, it is recommended to use a safety belt, air intake fences and safety devices. They are not required when the air bleed is disconnected from both engines and servicing is performed within the access corridor.

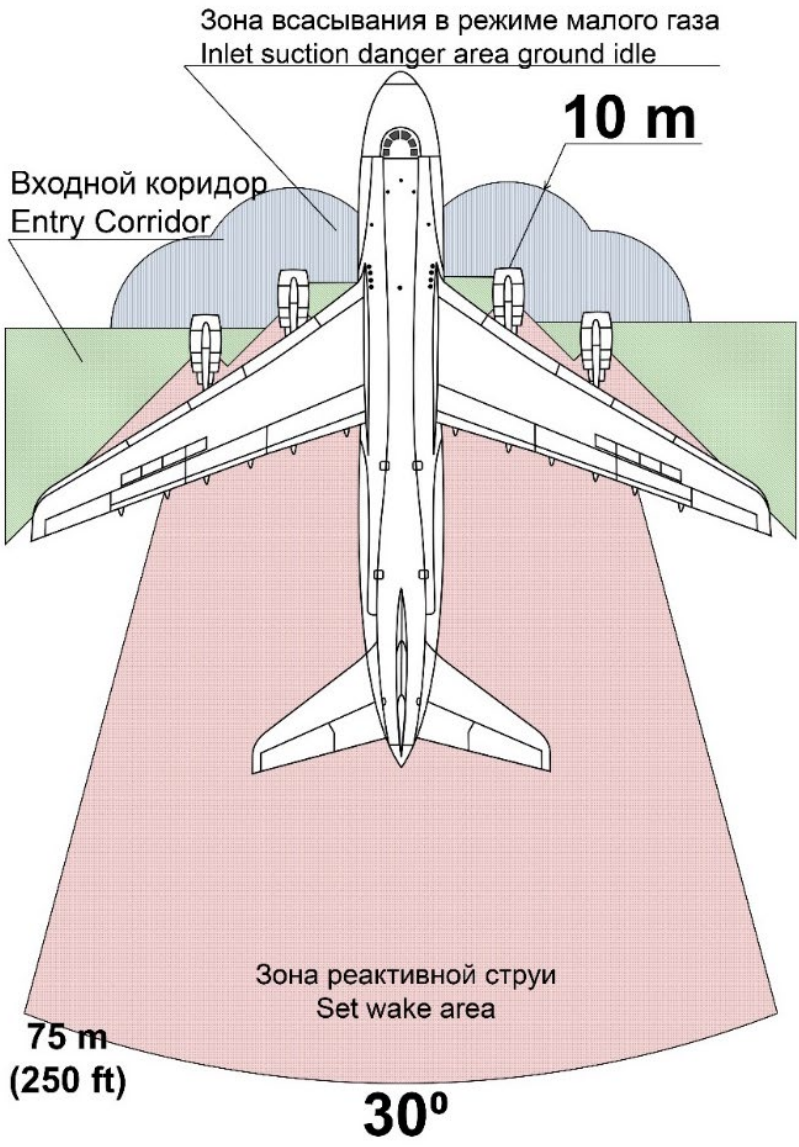


Figure1. AN-124-100 (-150) hazardous areas with engines running at idle power

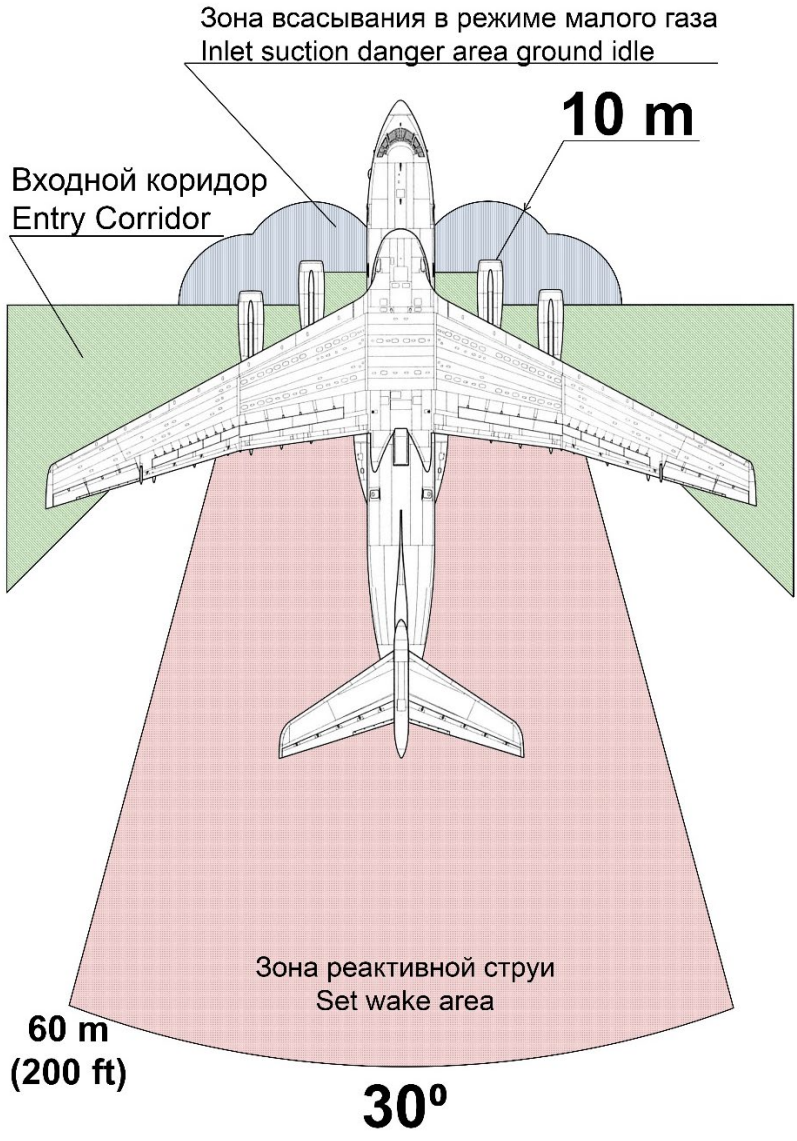


Figure 2. IL-76TD-90VD hazardous areas with engines running at idle power

2.4 APPROACH (LEAVING) OF SPECIAL VEHICLES TO/FROM THE AIRCRAFT DURING GROUND HANDLING

The provision of special vehicles for aircraft handling is carried out in accordance with the technological schedule.

Special vehicles designed to work in the aircraft service area are equipped with fire extinguishing equipment and thrust pads. In addition, loading and unloading machines, trucks are equipped with shock-absorbing devices that prevent hard contact with the fuselage of the aircraft.

The approach (leaving) and installation of special vehicles in the working position during aircraft handling are carried out in accordance with the standard diagrams of approach (leaving) and maneuvering of special vehicles during aircraft handling under the guidance of the head of the approach (leaving).

The head of the approach (leaving) during handling of VD Airlines aircraft can only be a member of the technical team of VD Airlines aircraft who is appointed by the Senior Engineer of the aircraft. The head of the approach (leaving) must be at the aircraft until the end of the work of special vehicles.

The head of the approach (leaving) when working in the service area of the aircraft:

1) directs with the help of established signals the movement of special vehicles in accordance with the standard diagrams of approach (leaving) and maneuvering of special vehicles when servicing aircraft;
2) supervises the approach (leaving) of special vehicles to/from the aircraft from a convenient location, providing control over the approach of special vehicles to the aircraft and maintaining visual communication with the driver;
3) gives a signal to the driver if he/she is convinced that there are no obstacles for maneuvering the special vehicle near the aircraft, as well as for lifting (lowering) the platform or working body of the special vehicle;
4) gives a signal to stop the special vehicle at a distance that excludes damage to the aircraft;

5) installs a thrust pad under one wheel that prevents the movement of the special vehicle to the aircraft;
6) installs the pad on the other side of the wheel;
7) checks disconnection of cables, connectors, hoses and grounding cables from the aircraft after completion of work;
8) removes the pad from the departure side of the special vehicle and gives the signal "drive away";
9) removes the second pad after the departure of the special vehicle at a distance of at least 5 m (for trucks of the baggage carts - at least 1 m) from the aircraft;
10) places the thrust pads on a special vehicle.

Stop of special vehicles at the approach to:

1) when servicing an aircraft, it is stopped at a distance of at least 0.5 m from the extreme points of the aircraft;
2) tankers, mobile filling units and oil tankers - at least 6 m;
3) motor heaters - at least 3 m;
4) thermal blowing machines - at least 3.5 m.
5) the maximum distance from the extreme points of the aircraft to the special vehicle is determined based on the technical capabilities of special equipment and safety considerations. In any case, the stop of special vehicles is carried out within the service area of the aircraft, designated with the appropriate marking (red line).

Special vehicles are stopped during loading and unloading operations at a distance of at least 0.1 m, but not more than 0.2 m.

The driver of special vehicle when working in the **service area** of the aircraft:

1) stops the special vehicle no closer than 10 m from the extreme points of the aircraft;

2) enters the service area only with the permission of the head of the approach;
3) performs guide signals for approach (leaving) of special vehicles to/from aircraft.
4) stops the special vehicle when approaching the aircraft at a safe distance, excluding damage to the aircraft;
5) stops the special vehicle and leaves the service area at the first request of the head of the approach (leaving) or a member of the aircraft crew;
6) takes measures to immediately remove the disabled special vehicle from the aircraft service area, from the apron and parking lot, then reports the incident to the shift supervisor (foreman) and the dispatcher of the special transport service.

In case of an incorrect maneuver of a special vehicle, as a result of which there is a risk of damage to the aircraft, the head of the approach gives the driver a signal "stop", then a signal to perform a maneuver that excludes damage to the aircraft, after that gives the command to remove the special vehicle from the aircraft service area. After the departure of the special vehicle at a distance of 2-5 meters outside the service area of the aircraft, it gives the signal "stop" to the special vehicle, and then ensures the re-entry of the special vehicle to the aircraft.

2.4.1 Signals for Special Transport Operators during Ground Handling

These signals are recommended by IATA. These signals must be used if it does not contradict the local established rules.

Hand signals are intended for use by the responsible manager in direct interaction with the operator to facilitate the movement of any ground handling equipment, both on the apron and directly in the aircraft, if required for cargo with non-standard dimensions, shape or weight.

(see Table1. Hand signals)

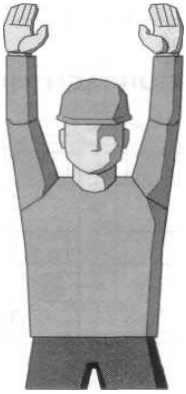
The supervisor for a certain maneuver must clearly show the appropriate commands to avoid any possible confusion and must remain the only person responsible for the procedure until the signal "FINISH THE COMMAND".

The supervisor must use only the following approved hand signals and must be fully prepared accordingly.

The supervisor must be in a position where he/she can constantly maintain visual contact with the operator (driver) during the maneuver. If visual contact between the operator (driver) and the supervisor is lost, the cargo, equipment, or vehicle must be stopped and remain so until visual contact is restored.

To avoid any possible confusion with the flight crew, no hand signals for cargo, equipment or vehicle movement should be used until the aircraft is parked. This is also true when taxiing an aircraft until the aircraft has vacated the parking space.

Table1. Hand signals

ПРИВЛЕЧЬ ВНИМАНИЕ ОПЕРАТОРА, ПРИНИМАЙ КОМАНДУ ATTRACT OPERATOR'S ATTENTION, RECEIVE COMMAND  Руки удерживать выше головы в вертикальном положении с ладонями, повернутыми вперед **Значение**: *я обеспечиваю этот маневр. Вы будете принимать команды только от меня.* Hold hands above head in vertical position with palms turned forward. **Significance**: *I provide this maneuver. You will receive commands from me only.*	ЗАКОНЧИТЬ КОМАНДУ FINISH COMMAND  Руки, перекрещенные на груди. **Значение**: *я больше не даю Вам команд.* Arms crossed on chest. **Significance**: *I do not give command any more to you.*

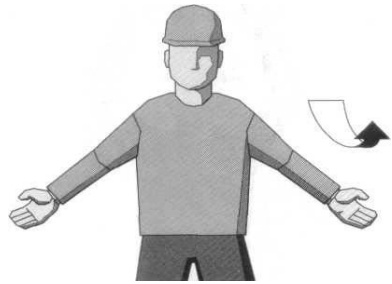
ДВИЖЕНИЕ ВПЕРЕД
(Движение к руководителю)
MOTION FORWARD
(Motion to supervisor)

Руки немного в стороны и несколько раз взмахнуть к себе, делая знак движения вперед.

Hands slightly apart and wave hands several times backwards showing motion forward.

ДВИЖЕНИЕ НАЗАД

MOTION BACKWARD

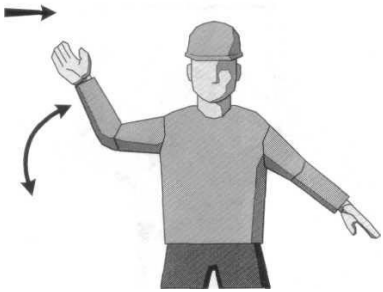


Руки в стороны, ладони вперед, махнуть несколько раз, вперед и назад.

Hands apart, palms forward, wave hands several times, forward and backwards.

ПОВОРОТ ВПРАВО

TURN RIGHT

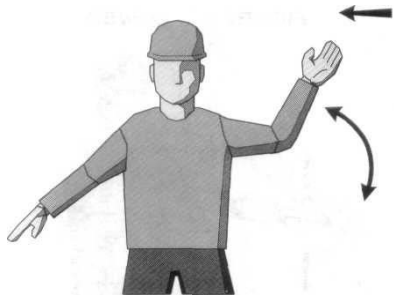


Левая рука вниз, рука вытянута, правая рука несколько раз передвигается вверх - вниз.
Скорость движения руки указывает степень поворота.

Left arm downwards, arm is stretched, right hand moves several times upwards and downwards
Speed of arm motion indicates degree of turn.

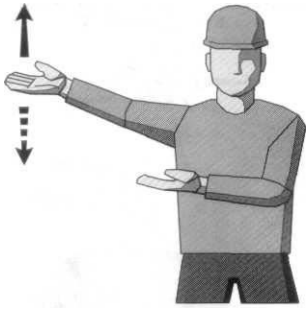
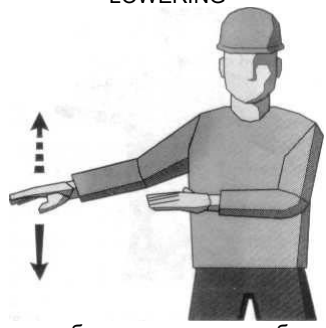
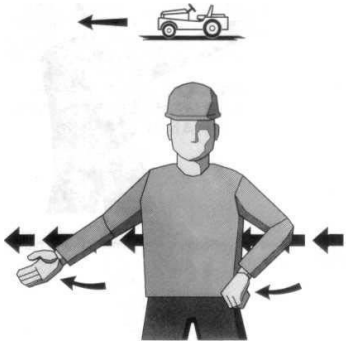
ПОВОРОТ ВЛЕВО

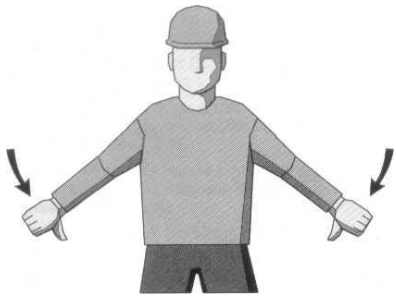
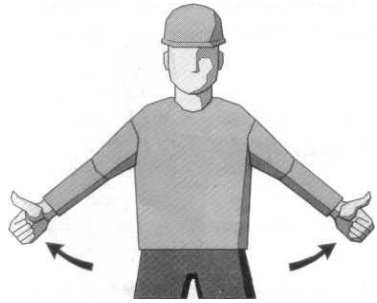
TURN LEFT

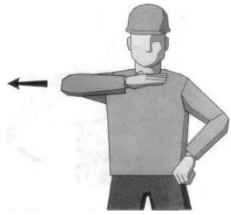
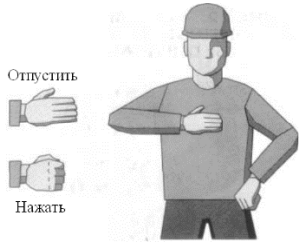


Правая рука вниз, рука вытянута, левая несколько раз передвигается вверх - вниз.
Скорость движения руки указывает степень поворота.

Right arm downwards, arm is stretched, left arm moves several times upwards and downwards.
Speed of arm motion indicates degree of turn.

ПОДЪЕМ ELEVATION  Вытяните обе руки к грузу или оборудованию ладонями вверх, движение руки в направлении подъёма. Stretch both hands towards cargo or equipment with palms upwards, arm motion towards elevation.	ОПУСКАНИЕ LOWERING  Вытяните обе руки к грузу или оборудованию ладонями вниз, движение руки в направлении спуска. Stretch both hands towards cargo or equipment with palms downwards, arm motion towards lowering.
СОПРОВОЖДАЮЩЕЕ ДВИЖЕНИЕ ACCOMPANYING MOTION  Движение с грузом или оборудованием. Покачивание противоположной руки. *Сохранение визуального контакта с оператором или водителем.* Movement with cargo or equipment. Rocking opposite hand. *Maintaining visual contact with operator or driver.*	ОСТАНОВКА STOP  Руки несколько раз перекрестите над головой (быстрота движения рук должна быть связана с безотлагательностью остановки), *Немедленная остановка: руки со сжатыми кулаками перекрещиваются над головой.* Cross arms several times above head (Speed of arms motion should be associated with mandatory stop). *Immediate stop: cross hands with fists clenched above head.*

УКАЗАТЬ РАССТОЯНИЕ INDICATE DISTANCE  Расстояние, показанное между руками, точно соответствует свободному существующему пространству. Distance shown between arms corresponds exactly to present free space.	«О.К», ВСЕ СВОБОДНО! ИЛИ ПРОДОЛЖИТЕ САМИ! УЕЗЖАЙТЕ! “O.K”, ALL CLEAR! OR PROCEED YOURSELF! GO OUT!  Подъем вытянутой правой руки, сжав руку в кулак, подняв большой палец. Raise stretched right hand arm, having made fist, and raised thumb.
ЗАФИКСИРОВАТЬ ВКЛЮЧЕННЫЕ СТАБИЛИЗАТОРЫ INTERLOCK TURNED ON STABILIZERS  Руки вниз, ладони рук скрыты, большие пальцы вытянуты, движения рук к себе. Arms downwards, hand palms are concealed, thumbs are stretched, arms motion backwards.	ЗАФИКСИРОВАТЬ СНЯТЫЕ ИЛИ ОТКЛЮЧЕННЫЕ СТАБИЛИЗАТОРЫ INTERLOCK REMOVED OR TURNED OFF STABILIZERS  Руки вниз, ладони рук скрыты, большие пальцы вытянуты, Движения рук от себя. Arms downwards, hand palms are concealed, thumbs are stretched, arms motion forward.

ОТКЛЮЧИТЬ ИСТОЧНИК ЭНЕРГИИ (ЭЛЕКТРИЧЕСТВО, ТОПЛИВО, ВОЗДУХ) TURN OFF POWER SOURCE (ELECTRICITY, FUEL, AIR)  Правая рука горизонтальна на уровне плеч, ладонь развернута вниз, рука покачивается от положения вытянутой руки до горла. Right arm is horizontal at shoulder level, turn palm is turned downwards, arm is rocked from stretched arm position to throat.	ОСТАНОВИТЬ ДВИГАТЕЛЬ SHUT DOWN ENGINE  Правая рука на уровне плеча, ладонь вниз, рука от груди выполняет горизонтальные движения вправо, движение руки поперек груди. Right arm at shoulder level, palm downwards, arm moves from chest horizontally to right, arm motion across chest.
СОЕДИНИТЬ ИЛИ ОТСОЕДИНИТЬ CONNECT OR DISCONNECT  Поднятая левая рука с пальцами, повернутыми горизонтально. **Соединить**: Правая рука с зажатым кулаком перемещается вверх до соприкосновения с ладонью левой руки. **Разъединить**: Правая рука с зажатым кулаком от ладони левой руки вниз Left hand is raised with fingers turned horizontally **Connect**: Move right hand with fist made upwards up to contact with left hand palm. **Disconnect**: Right hand with fist made moves from left hand palm downwards.	ТОРМОЗА ВКЛ\ВЫКЛ APPLY\RELEASE BRAKES  Правая рука поднимается горизонтально перед туловищем. **Тормоза отпустить**: Со сжатым кулаком, затем распрямляются пальцы ладонью внутрь. **Нажать на тормоза**: С распрямленными пальцами, ладонь внутрь, затем сжать кулак. Right arm raises horizontally in front of body. **Release brakes**: Make fist, then straighten fingers with palm inwards. **Apply brakes**: Fingers are stretched, palm inwards, then make fist.

2.5 AIRCRAFT ARRIVAL

2.5.1 Preparation for Arrival

Prior to arrival of the aircraft, an external service provider should:

1) check parking lot and remove all trash;
2) make sure that the surface of the parking area is free of ice, snow, etc. in order to ensure the safe movement of the aircraft;
3) make sure that the parking place is able to accept this type of aircraft, the marking on the apron is clearly visible, the stop line of the NLG wheel of this type of aircraft is highlighted with proper marking;
4) make sure that all ground vehicles are removed from the maneuvering zone, and sufficient distance is provided between the aircraft and structures/equipment;
5) make sure that the path of movement and the apron area are free from objects and obstacles that the aircraft may encounter or endanger others with a jet stream.
6) make sure that signalmen are present;
7) make sure that additional ground personnel (such as those accompanying at the wingtip) are present (if necessary);
8) specialists performing the functions provided for in this procedure should be located outside of hazardous areas.

It is dangerous:

All persons participating in activities on arrival of an aircraft must stay away from arriving aircraft and not approach the aircraft until they are convinced that:

- engines are shutdown and run out;
- anti-collision lights are off;
- chocks are installed under the MLG wheels.

The permission to access the aircraft is given by the agent responsible for the actions for meeting the aircraft.

When taxiing the aircraft to the parking place, the ground equipment should be positioned in such a way that its maximum dimensional points do not intersect with the trajectory of the aircraft and, if possible, are parallel to the fuselage or the centerline of the main surface so that, in case of failure of the braking system, they do not collide with the aircraft.

Before the arrival of the aircraft, the following equipment must be in working condition and be available at parking area:

1) chocks (for a certain type of aircraft);
2) safety cones (for certain type of the aircraft);
3) ground power supply (if necessary);
4) day or night wands (if necessary).

2.5.2 Area and constraint line of the placement of ground equipment

The Equipment Restricted Area (ERA) is defined as the apron area bounded by a red line, which is called the Equipment Restricted Line, in which the aircraft is parked during ground operations. ERA must be free of obstructions

and foreign objects (FOD) prior to and during the arrival and departure of the aircraft.

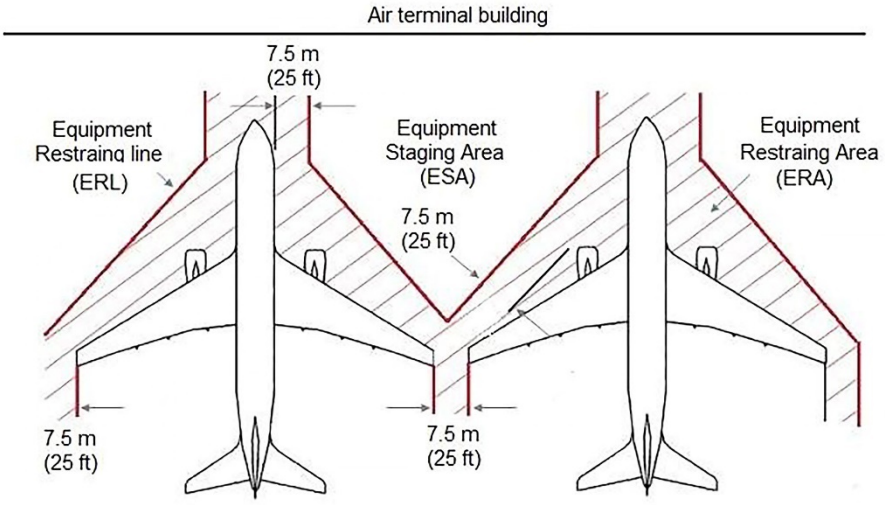


Figure**3** . **Equipment Restricted Line**

2.5.3 Meeting the Aircraft

Acceptance of the aircraft into the parking lot should be carried out by the ground service of the airport. The meeting person must control the taxiing of the aircraft to the parking lot, give the command to shutdown the engines, install temporary thrust chocks under the wheels of the MLG, ensure the presence of safety cones indicating dangerous places.

If the aircraft arrives with a non-working anti-collision light, do not approach the aircraft before radio communication is established with the crew.

In exceptional cases (when landing at transit airports with undeveloped infrastructure), by decision of the PIC, members of the technical team can perform the functions of securing the aircraft taxiing into parking area and the aircraft taxiing from the parking area.

Only specially trained and authorized personnel are allowed to direct the movement of the aircraft.

The Aircraft Traffic Management Specialist is responsible for providing standard aircraft traffic control signals when taxiing the aircraft to and from the parking lot. All signals given must be clear and accurate.

A specialist in aircraft traffic management must wear a special vest with fluorescent markings, which allows the crew of the aircraft to easily identify him/her as a specialist responsible for guiding the movement of the aircraft.

To send all signals by the ground personnel involved in the process, it is necessary to use Dayglo-coated signal rods, signal blades or mittens. At night or in low visibility conditions, it is necessary to use light rods.

In adverse weather conditions or on a polluted platform surface, towing must be carried out at low speed.

2.5.4 After Aircraft Stopping

After shutdown the engines and anti-collision beacons:

- install temporary chocks under the MLG wheels in accordance with the paragraph 2.5.5and confirm the installation to the crew;
- install a ground power unit, if required (the connection is carried out by members of the technical team of the aircraft);
- place safety cones;
- upon arrival, perform an inspection for damage to the aircraft, paying particular attention to:
  - ✓ all cargo doors;
  - ✓ all access panels;
  - ✓ aircraft fuselage;
  - ✓ engine cowls.

If damage is detected, immediately inform the crew, (aircraft Senior Engineer) and do not move ground equipment to the aircraft in the area of damage detection.

2.5.5 Locking of the Aircraft (Installing the Wheel Chocks)

Due to the probability of "jamming" of unsuitable chocks on the AN-124-100 (-150) aircraft, only complete chocks from this aircraft are allowed to be installed. Their installation is carried out by the technical team of VD Airlines.

It is prohibited to install chocks on the AN-124-100 (-150) aircraft by ground personnel of the servicing company.

Blocking Aircraft IL-76TD-90VD

Make sure you have the necessary number of serviceable chocks for the arriving aircraft, taking into account the apron and weather conditions.

For the IL-76TD-90VD aircraft, 8 chocks are required. Temporary installation of 4 chocks under the outer wheels in front and behind the main landing gear is allowed.

It is forbidden to install chocks under the NLG landing gear.

Personnel need to know the dangerous zones in the area of the wheels of the aircraft, in particular, the brakes (strong heating after braking) and the protrusions of the landing gear and antennas doors.

The staff of the service company, after:

- the aircraft has completely stopped;
- engines are shutdown and run out;
- anti-collision lights are off

install the chocks according to Figure 5 . Diagram of standard chocks installation for IL-76TD-90VD

Note.

In the future, the chocks can be replaced with complete ones from this AC by the specialists of the technical team of the aircraft.

Then the designated member of the ground staff gives the flight crew a hand signal "Chocks are installed".

When installing wheel chocks, stay away from the wheel path, as serious injury may occur if the AC starts to roll before the final installation of the chocks.

Approach / move away from the MLG either in front or behind. This minimizes the risk of serious injury as aircraft tires burst in the direction of the wingtips.

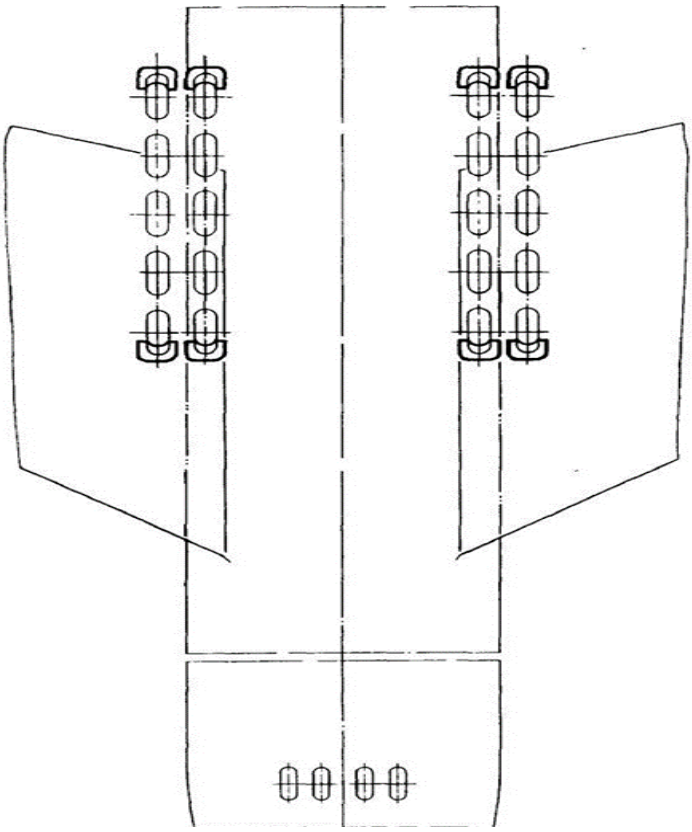


Figure**4** . **Diagram of standard chocks installation for AN124-100 (150)**

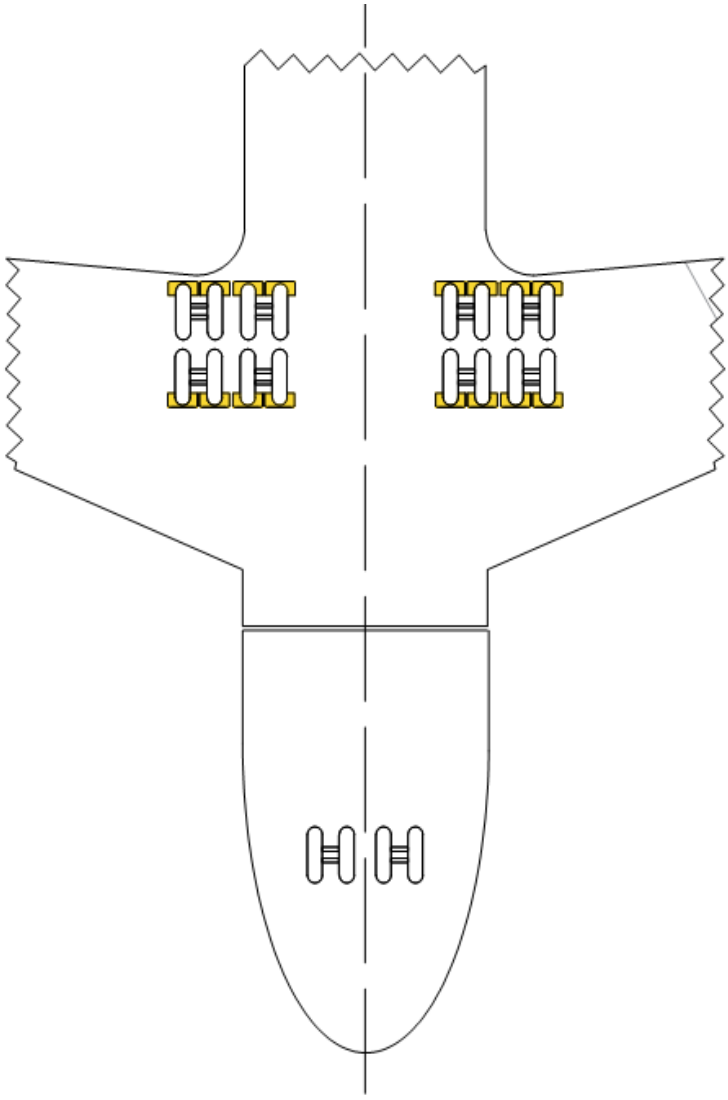


Figure 5 . Diagram of standard chocks installation for IL-76TD-90VD

2.5.6 Ground Power Unit (GPU)

It is allowed to pre-install GPU inside ERA areas, if there is a special parking space for the GPU.

Place the GPU on the right behind the fairing of the aircraft landing gears, see Figure 6.

The supply of electric power for the maintenance of the aircraft is provided from airfield power supply sources, on which the parameters of electricity (voltage and frequency) must be specified. The points of connection of airfield power supplies to the on-board network are indicated on:

- Figure 9. Placement of ground handling draw-off points (top view) for AN-124-100(150);
- Figure 10. Placement of ground handling draw-off points (bottom view) for AN-124-100(150);
- Figure 12. Layout of ground handling draw-off points for IL-76TD-90VD.

Set the parking brake / install the chock under the GPU wheel.

Note

If the connection cable to the IL-76-TD-90VD is not long enough, the GPU can be installed in the nose of the aircraft (see Figure 14).

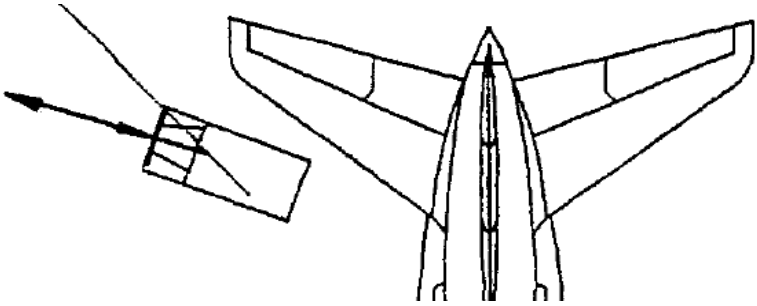


Figure 6 . Ground Power Unit approach diagram

2.5.7 Setting and Removing of Safety Cones

The purpose of "surrounding the aircraft with safety cones" *is to create a safe zone around specific areas of the aircraft that are prone to damage on the ground.*

The design of the cones should:

- be conical in shape;
- have minimum height 750 mm (28.5");
- have minimum base weight 4.53 kg (10 lbs);
- be orange in color with reflective stripes.

Before the arrival of the aircraft, make sure that there are a sufficient number of serviceable road cones to protect the type of aircraft to be serviced.

It is forbidden to set cones in a strong wind!

Do not approach the AC for the placement of cones if all of the following criteria are not met:

- the aircraft has completely stopped;
- engines are shutdown and run out;
- anti-collision lights are off;
- chocks are installed under the landing gear wheels.

Cones must be installed:

1) in front of all engines;
2) in front of all areas of the aircraft that interfere with the normal movement of equipment during ground handling operations;
3) in areas where the proximity of the aircraft may affect the traffic flow on the apron, for example the tail /carriageway;
4) at the wingtips immediately after the aircraft is installed in the parking lot;

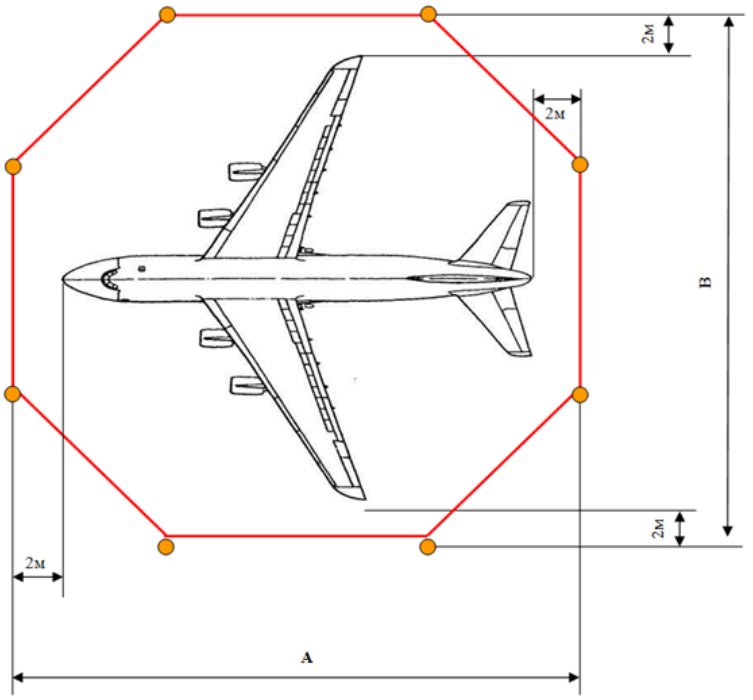
5) in other areas near the aircraft only after obtaining permission to approach the aircraft;
6) at a distance from the "protected" zone to match the purpose of the cone.

GSE should not be installed at the aircraft until all traffic cones have been installed.

All required safety cones shall remain in place until the GSE work and vehicle traffic around the aircraft cease. Before the aircraft departs:

1) Make sure all GSE items are removed from the security area.
2) Remove safety cones from around the aircraft.

In cases where there is no marking of an octagonal zone at the parking lot, its temporary designation with the help of traffic cones is allowed (see Figure 7).



Aircraft type	Dimensions, m (min)	
	A	B
AN-124-100 (150) and its modifications	74	78
IL-76TD-90VD	51	55

Figure 7. Installation diagram of safety cones

2.6 AIRCRAFT TOWING

Ground personnel directs each aircraft towing. This function can be performed by the aircraft technical team or the personnel of the airport or jointly.

To tow the AN-124-100 (-150) of VD Airlines, only own tow - bars included in the onboard equipment kit are used.

For any verbal communication between the crew cabin and ground personnel, the established phraseology must be used.

Standard hand signals should also be used for visual transmission of information using hands (see Flight Rules Annex 2 to the Convention on International Civil Aviation).

Personnel performing the functions of towing guidance or escort at the wingtips should use: during daytime - either rods or gloves of high visibility color, and during work in poor visibility / at night - luminous rods.

2.6.1 Ground Personnel Actions

When towing an aircraft, all people should stay away from dangerous areas around the towing vehicle, tow - bar, NLG and MLG landing gear whells. Personnel on the ground should know that there is a possibility of a collision with the NLG and MLG landing gear wheels, towing vehicle. This is due to the fact that the aircraft will change position during the towing process. Make sure that a minimum 3-meter (10-foot) distance is maintained between people on the ground and the equipment that is being moved. If you do not maintain the minimum distance, a fatal injury may occur.

When connecting the tow - bar to the truck, employees must turn around to face the truck and stand with both feet only on one side of the tow - bar, i.e. they should not throw their legs over the tow - bar.

Personnel should not step over the tow - bar while the towing process is underway.

The person responsible for towing, before starting the movement, must:

- inspect the condition of the coating in order to determine the level of safety for the operation (for example, for the presence of ice, snow, etc.);
- make sure that all ground support equipment is removed from the aircraft and the necessary space is provided between the equipment/fixtures and the aircraft;

- check the absence of power supply cables connected to the aircraft;
- make sure that the chocks from all wheels of the landing gears are removed, the side ladder is removed;
- check the serviceability of the tow - bar and its attachment to the aircraft;
- conduct briefings with all personnel involved in the movement of the aircraft for understanding by all of them of their functions and areas of responsibility when maneuvering;
- make sure that the parking brake is engaged;
- ensure the maintenance of constant communication with the flight crew on the intercom;
- inform the flight crew about the progress of activities on the apron and request permission to disconnect the ground-based energy source;
- perform pre-departure inspection.

Attendant at the wing should:

- be always under the control of the person responsible for towing;
- use 2 adjusting rods, for daytime or illuminated, for operations in low visibility conditions;
- remain at a distance of 1 m from the outside of the wingtips in line with the rear wheel of the main LG.
- ensure that the aircraft's path is free of obstacles, other aircraft, vehicles, etc.;
- give visual signals “Further movement is safe” to the driver of the truck through the distinct movement “Pendulum” with his/her hands.

Towing truck driver shall:

- do not leave the truck without control with the engine running
- before starting towing, align the truck and the tow - bar with the centerline of the aircraft;

- check that the wheels of the tow-bar are fully raised before the start of the movement of the aircraft;
- wait for towing permission from the flight crew or ground crew;
- prior to the start of movement, make sure that the parking brake is released and the anti-collision light of the truck is ON;
- start towing in a straight line;
- keep the minimum speed when maneuvering and gently press the brake;
- avoid steep turns, which leads to excessive tire abrasion;
- inspect the apron during towing, control the distances and the attendants at the wing in order to ensure the movement of the aircraft away from all obstacles. Be prepared for an immediate stop;
- use corresponding lines of markup on apron when maneuvering to ensure safe passage of obstacles;
- do not exceed the limit angles of the NLG;
- make all stops smoothly;
- Observe the minimum safe distance between vehicles, sufficient to stop;
- stop 50 m before crossing the taxiway, if a stop is required;
- upon arrival at the designated place, stretch the aircraft forward in a straight line for several meters so that the wheels of the NLG are in a straight position;
- engage the brakes after towing;
- release the brakes of the truck and switch the speed to “neutral” after engaging the brakes of AC, to release pressure on the tow - bar;
- place the truck on the way of the aircraft and remain visible for the flight crew after the tow - bar has been disconnected from the truck;

Caution!

In order to protect the NLG from damage, the AN-124-100 and IL-76TD-90VD aircraft are marked with markers of the limit angles of rotation of the landing gear.

In case of exceeding the maximum angle of rotation of the NLG, the truck driver must report this to technical team Senior Engineer

2.6.2 Towing Performing

Person responsible for towing shall:

1) get permission from the PIC and attach the truck to the tow-bar;
2) after the PIC command: *"Report readiness for towing"*, report to the PIC: *"The truck is attached, the chocks are removed, there are no obstacles in the parking lot, ground personnel are ready for towing";*
3) take a position either on the truck or on the apron near the NLG;
4) after receiving permission to tow from the ATC and instructions from the PIC of the direction of towing to the engines start site, give the command to the PIC: *"Release the parking brake";*
5) get a report from the PIC: *"The parking brake and NLG wheels steering are released, the crew is ready for towing";*
6) report to PIC: *"Starting towing";*
7) after the end of the movement, give the command to the PIC: *"Towing is finished, apply the parking brake";*
8) get a report from the PIC: *"Parking brake applied";*
9) give the command (visual signal) to the driver of the truck and the attendant at the wing to allow the tow bar to be uncoupled;
10) give the command to turn off the headset and check that the access panel is closed;
11) After uncoupling the tow-bar, report to the PIC: “The tow-bar is removed. *Towing is complete."*

2.6.3 Incidents during Towing

During towing, any incidents may occur, such as intercom failure. If the intercom fails when towing, the towing should be immediately stopped, an alternative type of communication to be established before continuing towing. A list of other incidents and actions of personnel are given in Table 2.

Table 2. Incidents during towing and actions of personnel

Brakes operator	Truck driver
Communication failure	
Reports a failure to the driver through the intercom	Stops the aircraft / truck immediately. Applies truck parking brakes. Calls for help by phone and waits for the “Follow me” escort vehicle until towing is completed.
Failure of the truck	
Informs the terminal area control Applies parking brakes. Listens to VHF and waits for help.	Stops the aircraft / truck. Applies truck parking brakes. Sets chocks.
Coupling failure	
Stops the aircraft with use of parking brakes.	Without slowing down, continue moving forward along the route until the AC stops. Stop the truck according to the position of the aircraft. Set chocks.

Brakes operator	Truck driver
Fire on the truck	
Reports to ATC. Applies parking brakes.	Notifies brake operator. If possible: - stops the truck - uncouples the truck from tow - bar - drives away to a safe distance from the aircraft - extinguishes the fire with a fire extinguisher - sets chocks.
Fire on the aircraft	
Reports to ATC. Applies parking brakes. Extinguishes the flame with board fire extinguisher.	Stops the aircraft / truck immediately. Disconnects the tow - bar Drives truck away to a safe distance.
Accident with another aircraft or vehicle	
Contact the TWR, indicate the position and nature of the problem. Listen to the VHF frequency and wait for help	Stops the aircraft / truck immediately. Applies truck parking brakes. Does not disconnect the coupling from the aircraft. Install the chocks under the MLG wheels

2.7 CHARACTERISTICS, DIMENSIONS AND DIAGRAM OF SPECIAL EQUIPMENT PLACEMENT

2.7.1 Characteristics of the AN-124-100 (150) Aircraft and Requirements for Ground Equipment

Requirements for power sources and other ground equipment for servicing the AN-124-100 (150) aircraft are given in Table 3

The dimensions and coordinates of doors, hatches and service points are given in:

- Table 4. Doors, sills height and dimensions for AN-124-100 (150) aircraft;
- Table 5. Coordinates of ground handling draw-off points for AN-124-100(150);
- Figure 8. Sills height and dimensions for AN-124-100(150);
- Figure 9. Placement of ground handling draw-off points (top view) for AN-124-100(150);
- Figure 10. Placement of ground handling draw-off points (bottom view) for AN-124-100(150).

Layout of special equipment when servicing aircraft is shown in Figure 11.

2.7.2 Characteristics of the IL-76TD-90VD and Requirements for Ground Equipment

Requirements for power sources and other ground equipment for servicing the IL-76TD-90VD aircraft are given in Table 6.

The dimensions and coordinates of doors, hatches and service points are given in:

– Figure 7. Installation diagram of safety cones;
– Figure 12. Layout of ground handling draw-off points for IL-76TD-90VD;
– Figure 13. Doors, sills height and dimensions for IL-76TD-90VD aircraft.

Layout of special equipment when servicing aircraft is shown in Figure 14.

Table 3. Requirements for the ground equipment of AN-124-100 (150) aircraft

System	Requirements	Units of measurement	Value
Electrical power supply	Direct current 27 V	kW	12
	Alternating current 200/115 V, 400 Hz, power	kVA	60
Charging wheels with gas (nitrogen)	Nominal pressure for MLG ($T_{outside\ air}$ =+20 °C)	kPa kg/cm^2	1156 11.8
	Nominal pressure for NLG ($T_{outside\ air}$ =+20 °C)	kPa kg/cm^2	1000 10.2
Filling with water	Total volume (front / rear tank)	US gal liter	14 / 40 50 / 150
	Maximum pressure	psi kg/cm^2	30 2
Sanitary treatment (toilets)	Total volume of the sink tank (front / rear tank)	US gal liter	19 / 37 70 / 140
	Total volume of the washer tank (front / rear tank)	US gal liter	4 / 8 15 / 30
	Total reserve of the washer tank (front / rear tank)	US gal liter	4 / 8 15 / 30
	Maximum pressure	Lb/in^2 kg/cm^2	30 2

Table 4. Doors, sills height and dimensions for AN-124-100 (150) aircraft

Door	Distance from nose RDR		Door size		Sill height			
					Minimum		Maximum	
Number	meters	inches	meters	inches	meters	inches	meters	inches
A	9.10	358.00	1.205 x 0.800	47.5 x 31.5	3.45	136.0	3.80	150.0
B	11.70	460.50	1.075 x 1.855	42.4 x 73.0	2.45	96.5	2.80	112.0
C	11.70	460.50	1.400 x 0.850	55.0 x 33.5	7.30	287.4	7.65	302.0
D	20.33	800.00	0.602 x 0.742	24.0 x 29.2	9.55	376.0	9.90	390.0
E	38.57	1518.50	0.920 x 0.510	36.2 x 20.0	7.70	303.2	8.05	318.0
F	49.30	1940.00	1.500 x 0.850	59.0 x 33.5	7.30	287.4	7.65	302.0

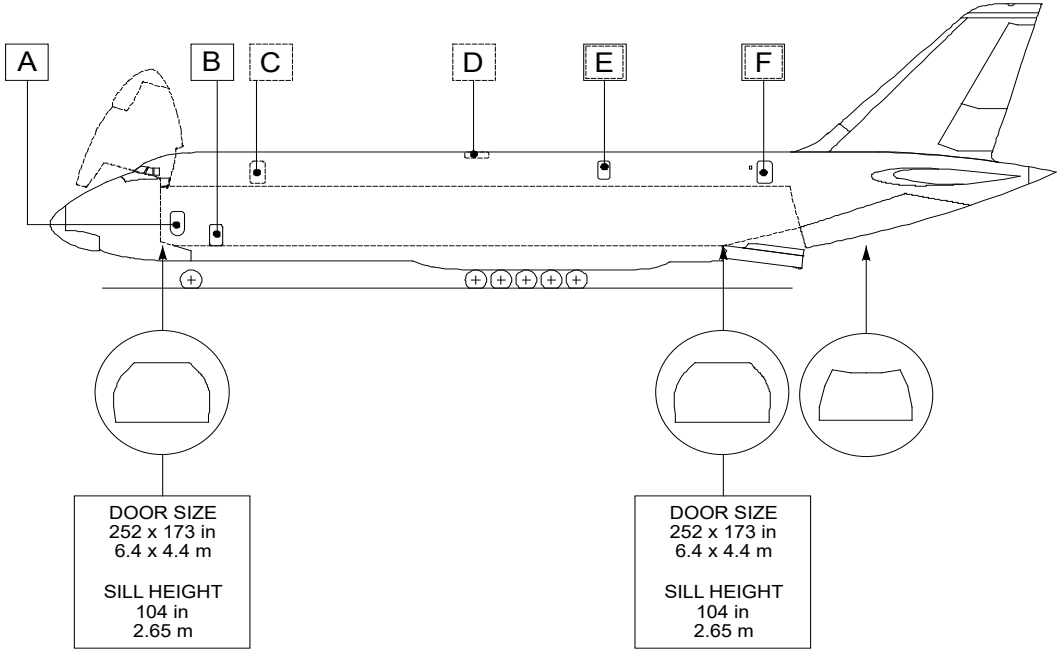


Figure **8**. **Sills height and dimensions for AN-124-100(150)**

Table 5. Coordinates of ground handling draw-off points for AN-124-100(150)

System		Distance				Height from ground surface		Notes
		from nose RDR		from aircraft center line		meters	inches	
		meters	inches	meters	inches			
1. Air conditioning		-	-	-	-	-	-	
1a. Cargo hold	Front part	20.615 RIGHT	812.0	2.802 RIGHT	110.4	2.450	96.5	
	Aft end	43.985 LEFT	1732.0	3.440 LEFT	135.5	2.450	96.5	
1b. Flight crew's cockpit		15.485 LEFT 18.335 LEFT	610.0 722.0	2.802 LEFT 2.802 LEFT	110.4 110.4	1.150 1.150	45.2 45.2	Two draw-off points
1c. Technical team compartment		18.905 RIGHT	745.0	2.802 RIGHT	110.4	1.150	45.2	
2. Electricity supply		38.57 RIGHT	1518.5	3.760 RIGHT	148.0	1.005	39.5	
3. Fuel system		28.285 RIGHT / LEFT	1113.4	3.760 RIGHT/LEFT	148.0	1.260	50.0	Left side additional
	Front part	17.765 LEFT	700.0	2.802 LEFT	110.4	1.365	54.0	

System		Distance				Height from ground surface		Notes
		from nose RDR		from aircraft center line		meters	inches	
		meters	inches	meters	inches			
4. Filling with water	Aft end	43.985 LEFT	1732.0	3.440 LEFT	135.5	1.465	58.0	
5. Sanitary treatment (toilets)	Front part	17.625 LEFT	694.0	2.802 LEFT	110.4	1.365	54.0	
	Aft end	43.245 LEFT	1702.5	3.440 LEFT	135.5	1.465	58.0	

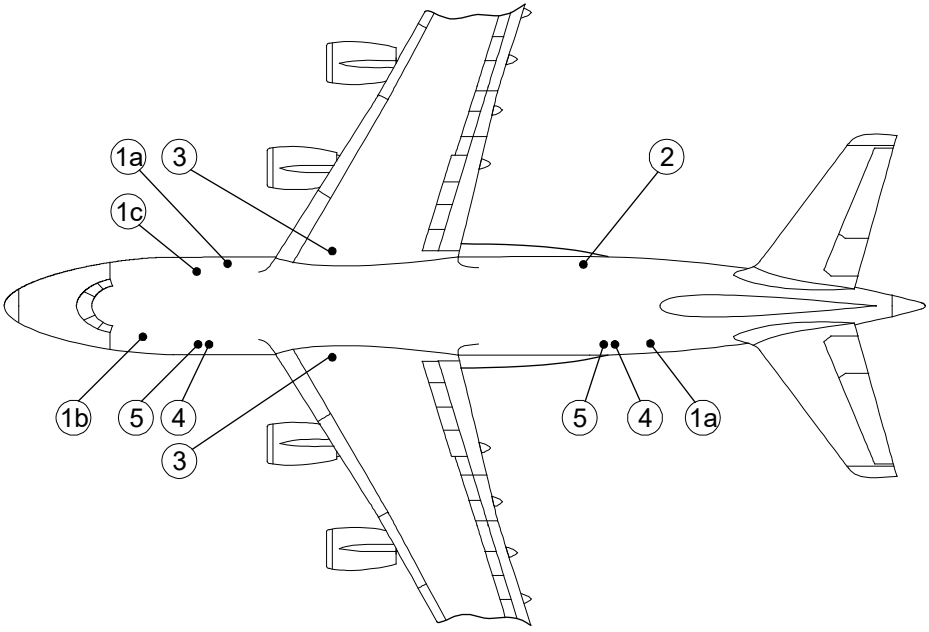


Figure 9. Placement of ground handling draw-off points (top view) for AN-124-100(150)

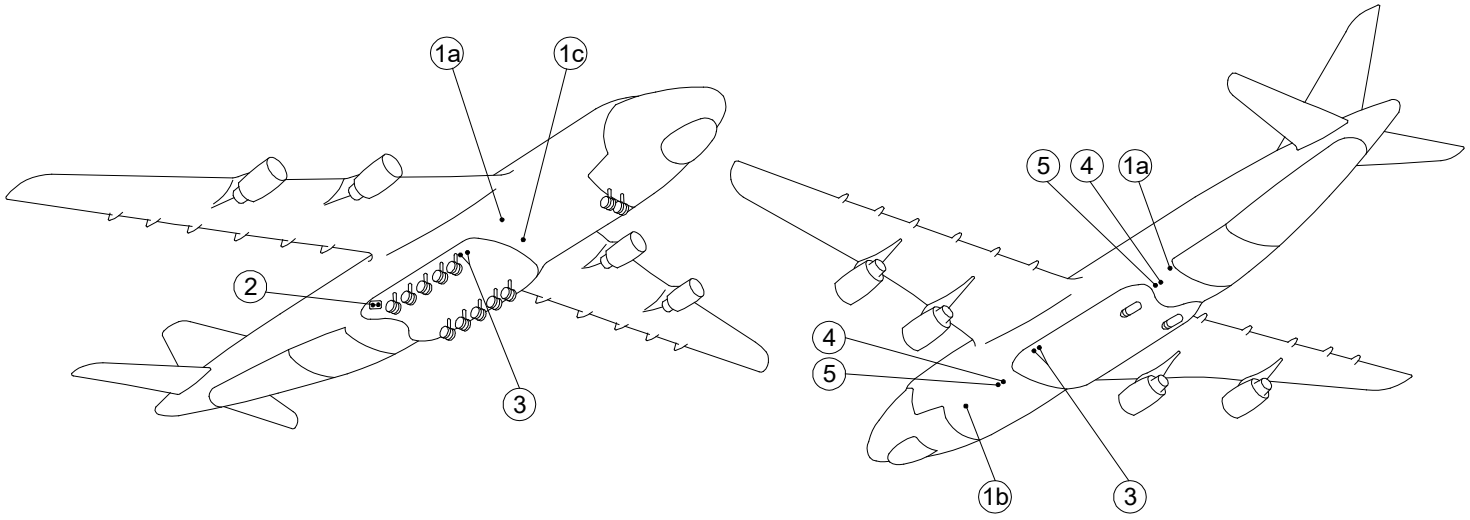


Figure 10. Placement of ground handling draw-off points (bottom view) for AN-124-100(150)

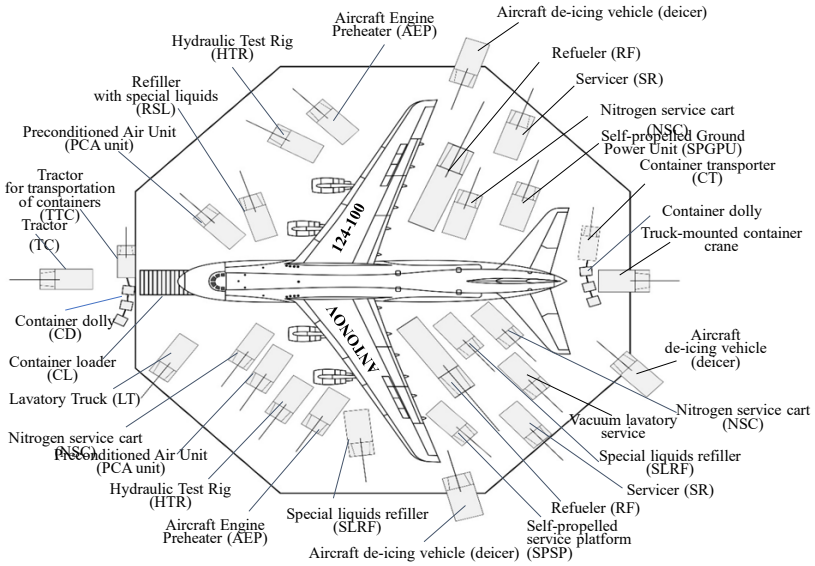


Figure 11. **Layout of special vehicles and equipment when servicing AN-124-100(150) aircraft**

Table 6. Requirements for the ground equipment of IL-76TD-90VD

System	Requirements	Units of measurement	Value
Electrical power supply	Direct current 27 V ±10%	kW	12
	Alternating current 208/120 V±2%, 400Hz±2% (AC), power	kVA	60
Air conditioning	Target air heating/cooling temperature	°C	10/25
	Maximum temperature of the supplied air	°C	80
	Minimum capacity	tons / hour	3
Charging hydraulic system with gas (nitrogen)	Minimum pressure	kg/cm^2	200
	Charging to pressure (at $T_{\text{outside air}}$ =+20 °C)	kg/cm^2	75
Filling with water	Total tank volume (in the toilet, there are 2 removable tanks of 25 l each)	US gal liters	13 50
Sanitary treatment (toilets)	Total tank volume (toilet bowl volume 21 l and chemical liquid 5.5 l)	US gal liters	7 26

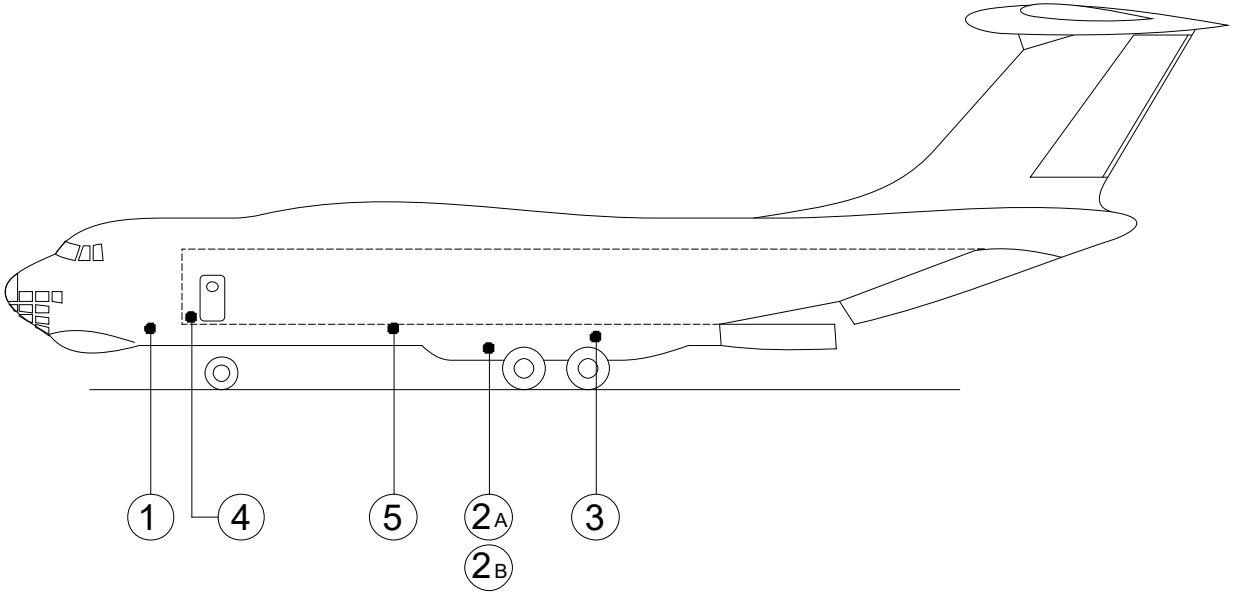


Figure 12. Layout of ground handling draw-off points for IL-76TD-90VD

Table 7. Coordinates of ground handling draw-off points for IL-76TD-90VD

System	Distance				Height	
	from nose RDR		from aircraft center line		meters	inches
	meters	inches	meters	inches		
1. Air conditioning (RH side)	5.62 RIGHT	221	0.55 RIGHT	21.6.	1.53	60
2A. Electrical power supply front part (RH side)	15.70 RIGHT	618	2.00 RIGHT	79.0	1.72	68
2V. Electrical power supply rear part (RH side)	16.00 RIGHT	630	2.00 RIGHT	79.0	1.72	68
3. Fuel system (RH side)	20.40 RIGHT	803	2.95 RIGHT	116.0	1.65	65
4. Lavatory (left side)	6.10 LEFT	240	1.47 LEFT	58.0	2.08	82
5. Charging with gas (RH side) oxygen	14.80 RIGHT	583	1. RIGHT	77.0	1.69	67

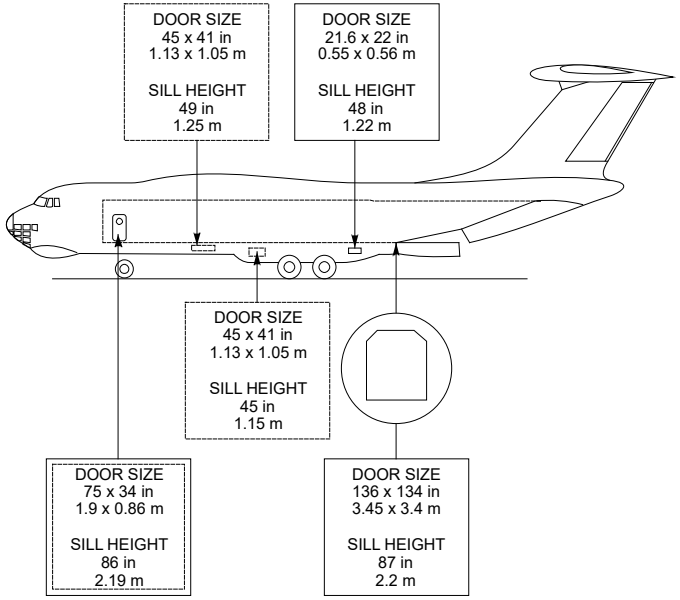


Figure 13. Doors, sills height and dimensions for IL-76TD-90VD aircraft

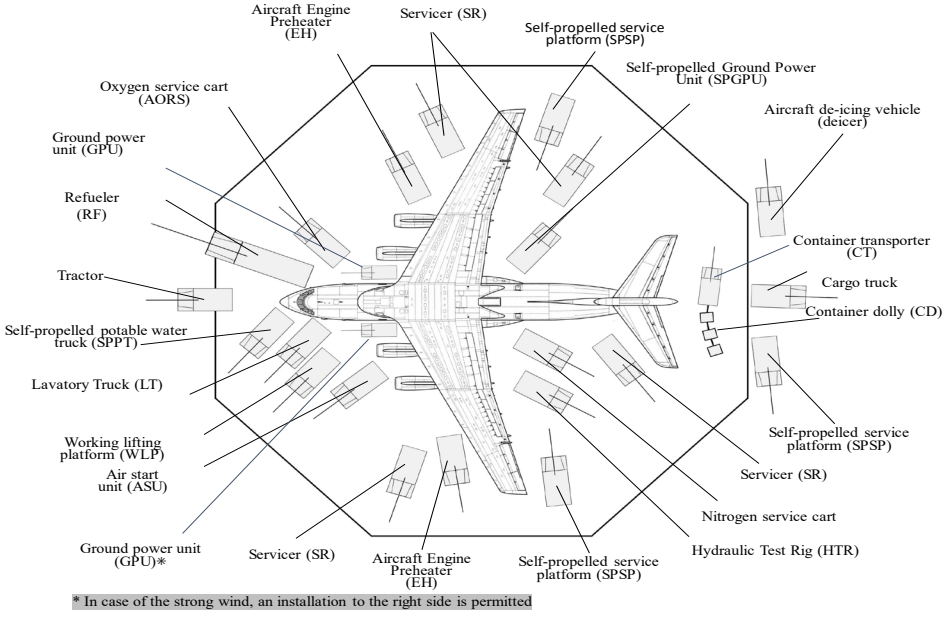


Figure 14 Layout of special vehicles and equipment when servicing IL-76TD-90VD aircraft

2.8 FILLING WITH WATER

2.8.1 Filling with Potable Water

Regardless of the origin, water intended for aircraft potable water supply systems must be chlorinated. Only those products that are approved by local health authorities can be used for chlorination of potable water. The total chlorine content at the filling point in the aircraft should be within 0.3–0.5 mg/l or an equivalent unit of measurement.

The tank of the service unit that has just been filled with drinking water can be used to fill the aircraft in at least 30 minutes in order to give time for the reaction of chlorination substances. The water in the tank of the service unit must circulate during this entire time to ensure complete mixing with the chlorination substances.

Water samples for bacteriological examination from airport water supply systems, vehicles for servicing the aircraft water system should be taken regularly by health authorities and airlines. Water samples should be taken at least four times a year. If there is such a need, the frequency can be increased. Bacteriological contamination should not exceed the standards published by the World Health Organization (WHO), or issued by local health authorities, if they are more stringent.

If the water supplied to the aircraft has been checked by the health authorities, the results should be available to carriers upon request.

The personnel performing the filling must:

- to have clean clothes;
- to wash hands thoroughly with soap and water before starting filling with water;
- fill the water supply system of the aircraft only after the renewal of the power supply;
- wash the hose before connecting the feed hose to the aircraft;

PROHIBITED:

- to simultaneously carry out filling with potable water and service the toilets by the same personnel;

- to fill the potable water tank from the same water source as the toilet tank;

- to park the potable water service unit in the same area as the toilet service unit;

Note

If filling hoses are not used, the sockets and connectors must be protected from contamination, either using covers or by immersing them in containers containing chlorinated water.

The contents of the service units for filling with potable water must be drained no later than 24 hours after filling.

Cleaning and disinfection of service units should be carried out weekly. The inside of the water tank should be cleaned once a month to eliminate sediment.

2.8.2 AC Lavatories Servicing

The complete procedure for servicing an aircraft lavatory consists of the following 4 stages:

1) drain from tanks;
2) flushing of drain tanks;
3) watering;
4) adding of filler and / or concentrated deodorant as necessary.

Caution

Toilet liquids are corrosive.

Prior to servicing, check the toilet maintenance panel on the aircraft for leaks. If blue horizontal streaks are detected, they must be cleaned.

Check again for leaks after cleaning. In the event of a possible leak, immediately inform a technical team specialist.

Do not attempt to remove the frozen substance in the filling pipelines or connections or service panels. Contact the AC technical team immediately (AC Senior Engineer)

2.9 REFUELING

2.9.1 Refueling Safety Area

This is the distance that is determined from the center of all filling necks, filling caps, filling holes of aircraft, fuel hydrants, fuel hoses and refueling vehicles This distance may be determined by local airport regulations or civil aviation regulations, but must be at least 3 meters.

The intake hoses of the hydrant servicer, the intake connections and the taps of the refueling well are vulnerable to damage caused by the collision of other aircraft servicing vehicles.

In order to improve the visibility of the area where the fuel well tap is located at any time of the day, a warning marking is applied over the well opening that is clearly visible from afar. A design/equipment that provides a similar degree of all-round view from a contrasting (well-visible) material is recommended.

In the dark, the valve of the refueling well and the intake hose should be illuminated.

The servicing company should provide additional methods to protect and increase the visibility of hydrant wells and the intake sleeve of the hydrant servicer.

In the safety area of refueling, all personnel must comply with the following requirements:

1) on the routes of personnel movement, there should be no equipment that is not used for refueling. At the same time, it is necessary to take

measures to exclude the runover of the vehicles and means of mechanization on the supply hoses;

2) use portable electric lamps that are fire and explosion-proof;
3) enter the refueling area only if it is required within your work duties;
4) unnecessarily leave the vehicle's engine running;
5) not to locate ground equipment and vehicles in such a way that they prevent refueling vehicles from leaving the area;
6) do not allow unauthorized persons (passengers) to enter the refueling area;
7) do not use motorized ground equipment (GSE) in the refueling area.

The approach of the tanker should be carried out only at the command of a representative of the VD Airlines.

During refueling, it is possible to perform basic types of aircraft servicing, such as loading and unloading, maintenance, etc. However, in case of a clear malfunction of the equipment located within 6 meters from the refueling operations, such equipment must be turned off.

Attempts to restart it during refueling are prohibited.

2.9.2 Fuel Quality Certificate

Refueling of the aircraft with fuel and lubricant materials that do not have quality certificates is **PROHIBITED.**

The fuel quality certificate (its certified copy) with information about the grade, density, content of the anti-icing additive in the fuel and the temperature of the refueled fuel is presented to a member of the technical team, flight crew or a representative of the VD Airlines on request, before refueling the aircraft.

2.9.3 Checking the Fuel Sediment before Refueling

Before refueling, present the fuel sample drained from the fuel tanker sump to the VD Airlines specialist responsible for refueling to determine the ab-

sence of mechanical impurities and water in it. The presence of water is controlled by an indicator tablet that changes its own color under the action of water.

If water or mechanical impurities are found in the fuel tanker sump, refueling is **PROHIBITED.**

2.9.4 The order of actions of the tanker operator

1. Ground the refueling vehicle by connecting the electric potential equalization cable of the tanker and the aircraft;
2. When refueling is of closed type, couple the tip of the supply hose with the refueling nozzle on the aircraft;
3. Open the covers and the refueling fittings themselves (when refueling is of open type - the fuel tank necks);
4. When refueling is of open type, ensure the electrical connection of the pin of the dispensing tap (gun) with the side socket at the neck of the tank on the aircraft (in the absence of a socket–before starting refueling, it is necessary to touch the AC skin with the dispensing tap no closer than 1.5 m from the neck of the tank);
5. At the command of the person responsible for refueling (VD Airlines specialist), start the fuel supply.
6. At the end of refueling, at the command of the responsible person, stop the fuel supply.
7. Disconnect the tip of the supply hose from the on-board refueling fitting and close the necks of the fittings at the end of refueling.

2.9.5 Engineering and Technical Personnel Actions when Water or Mechanical Impurities Are Detected in the Fuel

According to the operational documentation for the AN-124-100 (-150) and IL-76TD-90VD aircraft, 15 minutes after refueling, it is necessary to drain the fuel sediment to determine the presence of water or mechanical impurities.

AN-124-100 (-150)

If water or mechanical impurities are detected in the fuel sediment on the AN-124-100 (-150) aircraft, another 8-10 liters of fuel must be drained.

If mechanical impurities, water or ice crystals are detected in the fuel sludge re-drained from the aircraft after refueling, in accordance with the OD, the entire tank must be drained.

The Senior Engineer of the aircraft calls fuel tanker for draining fuel and a representative of the refueling company.

IL-76TD-90VD

If water or mechanical impurities are detected in the fuel sludge on the IL-76TD-90VD aircraft, it is required to drain the fuel in portions until the impurities completely disappear.

The Senior Engineer of the aircraft orders the necessary containers in the refueling company, which allows to drain fuel in an open way, as well as a representative of the refueling company.

The drain is carried out at the expense of the VD Airlines in order to eliminate the downtime of the aircraft.

The representative of the refueling company is presented with a copy of the fuel requirement confirming the data on the refueling of the aircraft, the drained sludge with the presence of impurities, and a bilateral protocol on the detection of impurities in the fuel is drawn up indicating the aircraft's tail number, refueling date, fuel tanker number, the number of the control coupon on the suitability of fuel.

A copy of the protocol shall be transmitted to the representative of the refueling company to investigate the causes of mechanical impurities, water or ice in the fuel.

The representative of the refueling company must suspend the fuel tanker that refueled this aircraft for re-analysis of the fuel in its tanks.

The results of the investigation should be transferred to Volga-Dnepr Airlines.

In case of refusal of the representative of the refueling company to sign the protocol, the Senior Engineer fixes this fact with a note on the protocol.

In the future, the protocol is transferred to the procurement service of the VD Airlines to find out the reasons and return the funds spent on refueling and draining fuel.

2.9.6 Refueling of Aircraft with Persons on Board Accompanying the Cargo

If there are persons accompanying the cargo on board the aircraft, during refueling it is necessary to ensure:

- availability of mobile fire extinguishing equipment in the aircraft service area:
- there are no obstacles on the surface area under the exits of the aircraft intended for emergency escape from of the aircraft or emergency evacuation.

Refueling by the open method is prohibited if there are persons on board accompanying cargo

2.9.7 Fuel Spillage

Refueling with jet fuel is stopped at the command of the person who first identified the occurrence of fuel spill. The first one who has identified the occurrence of jet fuel spill immediately gives the command to the refueling company employee to stop the supply of fuel.

In the event of a fuel spill, take the following safety measures:

The staff of the refueling company must:

1) stop fuel supply;
2) inform the representative of the VD Airlines about the spillage and give the command to shutdown the APU (if it is running);
3) stop the power supply generator (if connected and running)
4) contact the local fire department and the airport administration;

5) disconnect the filling (drain) hoses from the aircraft;
6) remove fuel tanker, tank-cars and other mobile vehicles from the aircraft by 75 meters or more;
7) the decision on the need to tow the aircraft from the parking lot is made by the airfield operator in agreement with the PIC, in his/her absence, with the Senior Engineer of the aircraft;
8) limit all activities inside and outside the spillage area to reduce the risk of fire.

It is allowed to collect fuel with a sorbent (sand, etc.) without stopping refueling and calling airport services in case of a slight fuel spill by the decision of the representative of the refueling company and the Senior Engineer of the aircraft.

The protocol of violation of the rules of use of the airfield or a similar document has the right to sign only the PIC or, in his/her absence, the Senior Engineer of the AC.

2.10 DISINSECTION TREATMENT OF AIRCRAFT

Preventive disinsection is carried out on board the aircraft if it has arrived from epidemiologically disadvantaged regions.

The decision to introduce preventive measures on aircraft arriving from these regions is made by the airline's management in accordance with the recommendations of the sanitary and epidemiological service.

Disinsection of the aircraft is required by many states to prevent the appearance or spread of infectious

diseases.

Note: Refusal to perform disinsection may lead to isolation (quarantine) of the persons accompanying cargo and crew for an indefinite time by the decision of the leaders of the health service of the host country.

Disinsection can be carried out by employees of a special service or by the crew of the aircraft.

Each compartment should be processed within 10-15 seconds and only with closed doors and hatches.

The insecticide cannot be sprayed directly on live animals.

Empty vials should always be returned to the special service staff, as they may be necessary as proof of the treatment carried out.

The number of vials required for disinfection of the cabin and lower decks is indicated in the relevant manuals of the aircraft.

If for any reason the doors of the aircraft were opened after the disinsection was completed, the treatment should be repeated before takeoff.

2.11 AC DEPARTURE

Prior to the aircraft departure, make sure that:

1) the plane of the apron is free from foreign objects and certain loose objects;

2) the surface of the apron is free of ice, snow, etc. to ensure the safe movement of aircraft;
3) the apron area is free of objects / obstacles that could damage the aircraft or endanger others due to the effect of a jet stream;
4) persons who are not participating in aircraft departure operations should remain outside the departing aircraft, outside the ERA area;
5) additional ground personnel, such as attendants at the end of the wing, are present (if necessary).
6) communication with the flight crew is established through the intercom:

Aircraft departures using the airfield controller without a headset for communications are performed in exceptional cases.

2.11.1 Pre-flight Activities

Before the aircraft movement, the responsible ground personnel must ensure that the following requirements are met:

Table 8 Pre-flight Activities

Activities	Tail-first towing	Towing forward	Taxiing on own thrust
Required preflight checks on servicing are fulfilled.	+	+	+
Fire protection equipment is available and properly located (according to local rules).	+	+	+
Communication with the crew through the intercom is established.	+	+	+

Activities	Tail-first towing	Towing forward	Taxiing on own thrust
The path and the area to which the aircraft moves is free from foreign objects and other aircraft.	+	+	+
The parking surface is sufficiently free of ice, snow, etc. to ensure the safe movement of aircraft.	+	+	+
GSE is outside the ERA area	+	+	+
Attendants near the wing are present (if applicable)	+	+	
The air intake and air jet areas of the engines are free from people and obstacles such as the GSE.			+
All persons taking part in the movement of the aircraft are out of the area around the truck, landing gears and engines of the aircraft.	+	+	
A qualified brake operator is located in the cabin.	+	+	
The chocks are not removed from under the MLG until the PIC has confirmed the activation of the parking brake of the aircraft, the truck is fully connected to the NLG, and the parking brake of the truck is applied.	+	+	
Compliance with these requirements is submitted to CE by the announcement “GROUND READY FOR PUSHBACK” through the intercom.	+	+	

Activities	Tail-first towing	Towing forward	Taxiing on own thrust
Prior to the connecting the truck to the aircraft, the truck should be parked in front of the aircraft or outside the ERA, but never behind the wing.	+		

2.11.2 Preflight Check

A preflight check of the aircraft by technical team or an external service provider includes inspection of the following:

1. The apron is free of foreign objects that can cause damage to the aircraft or pose a risk to the aircraft.
2. Power cables are disconnected.
3. There are no obstacles in the parking area. Equipment and transport means are not in the path of the aircraft.
4. All aircraft maintenance panels and/or doors are closed and locked (except for the intercom headset).
5. Cockpit/cargo doors are closed. There is no visible damage on the aircraft, especially around the cabins and cargo doors.
6. All inconsistencies observed on the aircraft (for example, obvious damage, fluid leakage) are immediately brought to the attention of the PIC and technical personnel.

Caution!

If one of the specified conditions or measures is not satisfied or not corrected, then inform the airfield supervisor, Senior Engineer of the aircraft or PIC.

This message is mandatory if:

- You have detected traces of unnoticed damage to the aircraft or an unusual fluid flow under the fuselage.
- You see a mistake, failure, malfunction or defect and consider that this may affect the safety of the upcoming flight.

2.11.3 Engines Starting

The workplace of the starting attendant is opposite the corresponding engine, but outside the danger zone indicated in the chapter 2.3_Dangerous Areas near the Aircraft with Running Engines.

Before **you start the engine,** follow these steps:

1. Make sure that there are no tools, unwanted equipment or foreign objects in the air intake;
2. Make sure that the apron cover at the front of the engine is strong and solid;
3. Make sure that the power of the engine does not pull foreign objects from the apron into the interior.
4. Make sure that personnel with loose items (such as hats, glasses, loose clothing, or headscarves) are not in this area.

Starting order:

Person providing start	Report to PIC: *"Ground - ready for start"*
Flight Engineer	After performing the "Preflight checklist" by the flight crew members, requests: *"Ground - check before start"*
Person providing start	After making sure that everything is ready to start the engines in the parking lot and the ground servicing equipment unused for starting is removed: *"The chocks are removed, the ground power supply is disconnected, the plugs and covers are removed, the doors are closed. The start area is free. I allow the start."*
Flight Engineer	Gives the command: *"Start (accelerated, separate, starting sequence). From engines".* Reports: *"Starting the 1st (2nd,3rd,4th) engine".*
PIC	After starting the engines , the PIC reports: *"The engines are running. Ground, do the inspection, get on board."*
Person providing start	Perform an external inspection of the engines. Report: *"The engines are running. No comments. End of communication."*

2.12 DE-ICING AND ANTI-ICING TREATMENT OF AIRCRAFT

Responsibility for making decisions about de-and / or anti-icing treatment rests with the aircraft commander.

If disagreements arise between members of the crew, technical team and ground services of the airport about the need to perform de-icing treatment, the PIC is obliged to make a positive decision.

Aircraft de-icing and anti-icing treatment is carried out by supporting companies certified for work by the Aviation Administration of the state where the airport is located.

Procedures of de-icing and anti-icing treatment should be performed exclusively by personnel trained and certified to perform these works.

The members of the technical team, at the direction of the aircraft Senior Engineer should prepare the aircraft for the de-icing and anti-icing treatment.

After completing the preparatory work and agreeing on the amount of processing, the Senior Engineer of the aircraft gives permission to the operator to carry out the de-icing and anti-icing treatment of the aircraft.

During aircraft handling, interaction should be ensured between airport personnel, aircraft Senior Engineer and aircraft flight crew, which ensure that:

- The aircraft is properly prepared prior to the commencement of the de-icing and anti-icing treatment;
- the flight crew received all the necessary information about the type of fluid applied to the surface of the aircraft;
- the flight crew receives a “ready” signal at the end of processing and prior to the start of the aircraft movement.

After the aircraft has been processed, the aircraft Senior Engineer shall organize a thorough external inspection of the aircraft.

Consequently, the aircraft Senior Engineer should receive from the competent person of the supporting company a document confirming the processing

of the aircraft (de-icing code), which indicates the processed surfaces of the aircraft, the type of fluid (I, II, III, IV), the concentration of fluid in the mixture, expressed as a percentage to the volume, the full name of the anti-icing fluid, the date and local time of de-icing and anti-icing works.

2.13 GROUND INCIDENTS TO BE REPORTED

The purpose of the supervision function is to provide an immediate report to the airline management, flight crew, and relevant authorities all safety information in accordance with local requirements and airline policy.

Immediate actions in the event of an incident are as follows:

1) keep yourself and others out of further risks;
2) in case of injuries, immediately call an ambulance;
3) ensure the safety of the spot in order to prevent the movement of ground equipment and personnel;
4) provide photo registration of the spot.

Persons assigned to carry out supervision should know their responsibilities within local safety plan and emergency response in case of accidents and / or incidents or other emergencies that may occur during the ground operations for the aircraft in accordance with local rules and airline requirements.

Incidents to be reported may include, in particular:

- act of aggression (for example, a THREAT OF EXPLOSION or an AIRCRAFT HIGHJACKING);
- wounding of an employee or an employee of a engaged company providing ground operation services;
- violation of general security or aviation safety procedures;
- damage to the aircraft;
- detection of undeclared dangerous goods;
- emergency equipment does not work or is not available;

- unattended luggage is located inside the airfield security perimeter;
- evacuation conducted in the terminal building;
- there is a potential threat that could cause injury to a crew member (accompanying persons) or to ground personnel;
- apron safety measures are not carried out by vehicles;
- the flight departed without assurance of aviation safety and does not meet the baggage security rules;
- an event where safety standards may be violated;
- an incident with the environment (for example, fuel spillages, etc.).

2.14 ADVERSE WEATHER CONDITIONS

2.14.1 Winter (slippery) conditions on the apron

The following precautions should be taken to reduce the risk of accidents:

- plan additional time for all activities on the apron and extra caution when walking on the apron, which may be slippery;
- take special care when driving a vehicle, especially when approaching an aircraft. Remember that vehicles require more distance to stop safely.
- take additional measures to avoid precipitation or snow getting inside the aircraft.
- reduce speed of vehicles in conditions of a slippery apron.

2.14.2 Thunderstorm

When receiving a thunderstorm warning, it is necessary:

- stop all ground operations activities;
- remove the headset connected to the aircraft;
- if necessary, communicate with the crew using standard hand signals;
- do not stay in the open place, under the loading air stares of the aircraft or near any pole;

- stop aircraft refueling.

2.14.3 Strong Wind

Table 9 Necessary actions in case of strong wind

Actions at:	39-50 km/h (24-31 miles/h)	50-62 km/h (31-38 miles/h)	62-75 km/h (38-46 miles/h)
Secure baggage / cargo carts, ladders and tow - bars, and place them close to or resting on the building.	✓	✓	✓
Ensure that parking brakes are enabled on all ground equipment.	✓	✓	✓
Make sure that the empty ULD are secured and the doors / curtains are closed.	✓	✓	✓
Remove foreign objects and remove ULD from aprons.	✓	✓	✓
Empty containers with foreign objects and place in a room if not fixed.	✓	✓	✓
Suspend the use of air conditioning hoses and take them down securely. Remove traffic cones.	✓	✓	✓
Make sure that the landing gears are blocked with chocks in case of strong wind.	✓	✓	✓
Close the doors of the cargo compartments.		✓	✓

Actions at:	39-50 km/h (24-31 miles/h)	50-62 km/h (31-38 miles/h)	62-75 km/h (38-46 miles/h)
Close all aircraft access panels.		✓	✓
Not lift rods on de-icing machines.		✓	✓
Remove ground equipment from the aircraft and secure outside the ERA area at a distance from the aircraft.		✓	✓

2.15 ADMISSION TO THE AIRCRAFT (AVIATION SAFETY)

On the aircraft, following persons are allowed: employees of the VD Airlines, flying on this aircraft, performing maintenance of the aircraft, as well as employees of the airport ASS for the pre-flight inspection of the aircraft .

When performing the international flights, right for admission aboard of the aircraft is obtained by employees of border, customs, medical control and other services for execution of their functions.

When the Airline aircraft is outside the base airport, as well as at foreign airports, the control over admission to the aircraft is carried out by the aircraft duty officer from the crew members appointed by the Commander or by Senior Engineer of the aircraft. The duty officer of the aircraft must be outside the aircraft to monitor compliance with the mode of admission of people and vehicles to the parking lot and to the aircraft, with a red armband.

The crew members of the aircraft pass into the controlled area of airports and on the aircraft if there is information about inclusion in the flight assignment or the general declaration on the crew members' certificates (ID cards) that comply with ICAO standards.

In order to be admitted to the aircraft, the service personnel must have with them the passes of individuals, in which the appropriate access zones are designated and defined.

If, when receiving the aircraft from the ASS employee, a defects of seals, stamps, damage to the aircraft or other violations is found, the Senior Engineer of the aircraft must notify the airport ASS of the incident and, together with the airport ASS staff, perform an additional inspection of the aircraft with the preparation of an inspection report of the aircraft, investigate and determine the cause of unauthorized entry.

The ground handling service provider must have an Aviation Safety Program and, in accordance with it, provide pre-flight inspection of the crew, specialists accompanying the cargo, goods and mail. The fact of the inspection is confirmed by the label of a special marking (sticker) on each cargo place, with a note on the inspection in the cargo air waybill and in the boarding passes of the specialists accompanying the cargo.

PART 3
CARGO HANDLING

3.1 RESTRICTIONS

Volga Dnepr Airlines does not transport passengers on cargo aircraft. In the case of transportation on separate flights of persons accompanying the cargo , it is necessary to carry out in full the control procedures, inspection of escorts in accordance with the procedures of the airport of departure and chapter 3.2 Transportation of Persons Accompanying Cargo and Baggage without Passengers.

Volga-Dnepr Airlines does not carry passengers' baggage. In the case of transportation on separate charter flights of baggage without passengers , it is necessary to fully comply with the requirements for the transportation of general cargo and the chapter 3.2 Transportation of Persons Accompanying Cargo and Baggage without Passengers .

It is prohibited to accept for carriage any cargo, including dangerous, from the following companies at Hong Kong Airport (HKG):

- Cargo Link Logistics HK Co Ltd;
- Sky Pacific Logistics HK Co Ltd.

In the VD Airlines, it is forbidden to accept for transportation any devices manufactured by Vivo company containing lithium cells and batteries. In the VD Airlines, it is forbidden to accept for transportation damaged, counterfeit and untried items according to Doc. 9284 AN/905, lithium cells and batteries in any form and quantity.

3.2 TRANSPORTATION OF PERSONS ACCOMPANYING CARGO AND BAGGAGE WITHOUT PASSENGERS

Processing, inspection and delivery on board of the baggage of persons accompanying the cargo is carried out in accordance with airport procedures.

Baggage allowance for specialists accompanying cargo, using flights with Volga-Dnepr Airlines, is not limited. After passing the pre-flight inspection procedures at the airport of departure, the baggage is transported as carry-on baggage under the responsibility of the specialists accompanying the cargo.

In cases where the inspection of the luggage and carry-on baggage of the persons accompanying cargo at the airport of departure was not carried out or there is no airport ASS, then the inspection shall be entrusted to the load master on the basis of the aircraft PIC decision. The inspection is carried out prior to boarding the aircraft with use of a hand-held metal detector located on board the aircraft. After registration of the specialists accompanying cargo and their baggage, information on this type of load should be recorded by the supplier in the loadsheet, the flight passes (if any) be transmitted to the crew along with the loadsheet.

The boarding of persons accompanying the cargo on board the aircraft and their disembarkation must be carried out under the supervision of the load master. Persons who have passed registration and inspection are allowed to board. Transportation of persons accompanying the cargo in an amount exceeding the number of seats installed on this aircraft is not allowed. Before boarding the aircraft, the load master is obliged to instruct the persons accompanying the cargo on safety measures during boarding and disembarkation, as well as on fire safety rules.

3.3 CARGO PREPARATION

When preparing cargo for transportation on the aircraft, at the stage of its processing at the loading airport, when taking it to the warehouse and loading it on the aircraft, an external service provider should pay special attention to the compliance of the declared cargo weight with the actual one.

The tare weight (containers, pallets, other packaging) must be included in the total weight of the cargo.

When preparing for cargo transportation, the external service provider must fully comply with the IATA requirements for cargo handling in accordance with the provisions of the Airport Handling Manual (AHM).

All shipments to be transported by the Volga-Dnepr Airlines aircraft, shall be carried out through the acceptance process. There are certain procedures

that must be performed regardless of the nature of the cargo and other procedures that exist only for certain types or categories of cargo. FAR-82 "General rules for the air transportation of passengers, baggage, cargo and requirements for passenger, shippers, consignees service" define general requirements for cargo acceptance.

The Volga-Dnepr Airlines designated agent, the load master or any other person designated for cargo acceptance, must accept for transportation only those types of cargo for which verification tools are available and suitable, there are trained personnel for it and these cargoes do not belong to the list of goods prohibited for transportation by the Volga-Dnepr Airlines rules.

3.4 LOADING CONTROL

The CPC provides function of controlling the loading VD Airlines aircraft. The tasks of the CPC include the development of regulatory documents, personnel training, calculation of the weight and balance of the loaded aircraft, as well as completion of the weight-balance document and loadsheet for each departure of the aircraft.

Load master is the person responsible for controlling the loading of the aircraft.

Volga-Dnepr Airlines does not transfer the function of aircraft loading control to external service providers.

The airline determines the requirements for the provision of information on loading cargo documents, reports and messages.

Before starting work, the load master of the VD Airlines instructs the airport or servicing company personnel involved in unloading about the specifics of unloading operations on an airplane, about the rules of entry/departure to/from the aircraft, arrival/exit of a forklift truck on/off the front ramp, about the specifics of movement inside the cargo hold with filling out a log and signing of the instructed persons. After the briefing, the personnel involved must

sign in the "briefing log of third-party organizations involved in loading and unloading operations."

Before starting work on loading the aircraft, the representative of the servicing company at the loading airport must hand over the full set of documents for the cargo to the load master of the VD Airlines.

The actual list of cargo must correspond to what is stated in the documents, including information and documentation on dangerous goods. In case of discrepancies in the number of places or weight, damage to the package, etc., the load master should not start loading until the reason for the discrepancy is determined.

If the number of places according to documents and in fact coincides, the master starts loading the aircraft, and he must use any opportunity to control the compliance of the actual weight of the cargo with the declared.

Cargo having closed sealed volumes (containers, tanks, wooden boxes, cargo packed in sealed film, etc.) must have ventilation openings or valves. In accordance with the requirements of IATA, the cross-section of the valves (vents) on the cargo must be at least 5 sq. cm. per cubic meter of the internal volume of the container. **Double-glazed windows are not accepted for transportation.**

If there is a discrepancy between the dimensions of the ventilation openings and the volumes of containers (tanks), or the absence of openings and the inability to ensure communication of internal cargo volumes with the surrounding atmosphere, the cargo is removed from loading.

If a decision is made by the shipper, his/her agent or the flight customer to transport such cargo, it is necessary to make the following entry in the air waybill: *"Charterer is notified that the cargo may be damaged as a result of low pressure inside the cargo cabin of An-124-100."*

It is allowed to perform mooring operations on the aircraft by the crew of ground personnel at the airport of loading, while the load master is responsible for the accuracy and reliability of mooring of the cargo.

3.4.1 Procedure for Actions in Case of Non-compliance of the Actual Loading with the Sender's Documents

If there is a discrepancy in the loading data (quantity and weight), in order to ensure the flight safety, the sender of the cargo must re-weigh the cargo on stationary scales, followed by correction of shipping documents.

If the actual load exceeds the established limits, the flight must be postponed until the following procedures are carried out:

- change in the amount of the commercial load in the application for the transportation with a corresponding change in the computer plan and a possible change in the route;
- removal of a part of the cargo to an acceptable amount that does not exceed the operational limits.

3.4.2 General Precaution Measures at Loading

1. Before loading the cargo, the representative of the servicing company must check the cargo for leaks.
2. Cargo with inappropriate packing, and also cargo, which can cause damage or contaminate the aircraft, should not be loaded.
3. Containers should not be contaminated during loading (snow, mud, water, etc.).
4. During inclement weather, use a waterproof tarpaulin to protect the cargo from contamination.
5. If torn (or missing) baggage labels and cargo labels are found, the cargo is not loaded until such defects are corrected.
6. If damage to the cargo is detected at the time of arrival to the aircraft or during loading / unloading operations, it is necessary to immediately report to the representative of the VD Airlines.
7. Immediately report on spillage, unusual vapors or odors, etc. to the supervisor, flight crew or local authorities if necessary.

8. Prior to loading, the load master must ensure that the tare weight (containers, pallets, other packaging) is included in the total weight of the cargo.
9. Do not overload (use in excess of the set values) the crane beams, hoists, winches, loading cables and pulleys.
10. Do not allow the use of mooring units and cables, limiters and devices for securing cargo and equipment not provided for in the documentation for this weight.

NEVER!

1) load and unload dangerous goods of any class with engines running and during maintenance and refueling of aircraft with fuel, oil, and other POL;
2) load and unload dangerous goods during a thunderstorm;
3) load and unload during rain substances that are flammable when interacting with water.

3.4.3 Inspection of the Cargo Compartment

Upon completion of the unloading, the final inspection of the cargo compartments shall be carried out to ensure the absence of:

- damage to the compartment;
- spillages in the compartment;
- any forgotten things (luggage, boxes, etc.).

The inspection shall be carried out in the compartment, even if on arrival the compartment did not contain any cargo / baggage (was empty).

If damage to the compartment is detected, a spillage has occurred, or another discrepancy has been found, this should be immediately reported to the supervisor, flight crew, technical team Senior Engineer.

3.5 LOADING PLAN

Volga-Dnepr Airlines specializes in the transportation of oversized and heavy cargo. For each non-standard, unique or general cargo, VD Airlines develops a load plan and loading technology. The servicing company must fulfill the requirements of the Volga-Dnepr Airlines in full for the preparation of cargo for transportation. Load master must load the aircraft in strict accordance with the load plan.

VD Airlines provides complete information on the planned loading of aircraft at transit and base airports, and transmits this information directly to the load master, as well as a copy of the load plan - to the servicing company if it is planned to attract the forces and means of external service providers in the process of loading / unloading aircraft.

If the load plan is prepared by the servicing company or the shipper, then such a load plan must be agreed with the VD Airlines at GGP@volga-dnepr.com or a load master of the AC.

If the weight of the cargo to be loaded exceeds the maximum permissible load on the aircraft floor or the maximum load per linear meter of the compartment, then the load should be distributed to prevent damage to the cargo floor of the compartment.

VD Airlines informs the load distribution requirements for each specific cargo and orders the required amount of material (wooden bars with a cross section of 100x100mm) from the service company at the loading airport.

In some cases, Volga-Dnepr Airlines uses its own load balancers and special platforms to distribute the load of heavy cargoes. In this case, VD Airlines ensures the delivery of this equipment to the loading airport and transfer it to the servicing company.

3.6 AIR TRANSPORTATION OF DANGEROUS GOODS.

3.6.1 Documentation for Dangerous Goods

Packages and ULD with dangerous goods (DG) are accepted on board only if the shipper's declaration for Dangerous Goods (“Shippers Declaration for Dangerous Goods”) is completed and signed by the shipper or his/her authorized agent.

The shipper's declaration for the DG must contain, at a minimum, the following information about the DG submitted for transportation:

1) air waybill number;
2) UN list number of Chapter 3.2 ST/SG/AC.10/1;
3) proper shipping name, supplemented by the technical name, when applicable;
4) hazard class or category, additional hazard and compatibility group (for Class 1);
5) packing group;
6) for non-radioactive materials, the number of packages, net or gross weight (where necessary) of each package;
7) for radioactive materials, the number and category of packages, external packages (OVERPACK) or cargo containers, as well as the transport index and overall dimensions of each item;
8) information about whether the cargo is intended for transportation only on cargo aircraft;
9) the airport where the cargo is to be unloaded;
10) information that the cargo is transported in accordance with state permits (exemptions), when applicable;
11) the serial or identification number of the outer package (OVERPACK) or ULD, when applicable.

Note

The only exception is UN 1845 Carbon dioxide, solid (dry ice) or Dry ice, for which the following must be indicated: UN list number (Chapter 3.2 ST/SG/AC.10/1), proper shipping name, class, total quantity per cargo hold and airport of unloading.

The shipper is responsible for completing the signed declaration of dangerous goods for each shipment of goods containing dangerous substances by definition or classification according to Doc. 9284 AN/905. For each batch containing the DG, the shipper must use the correct form of the document and fill it out in accordance with the requirements of the Doc. 9284 AN/905; guarantee the accuracy, readability, reliability and clarity of the information entered in the form; ensure that the form is signed appropriately when handing it over to the agent or carrier; ensure that the consignment is prepared in accordance with Doc. 9284 AN/905.

Two copies of the declaration must be duly completed and signed for delivery to the carrier at the same time as the cargo. One signed copy is attached to the flight assignment. Another copy must follow along with the cargo to the destination. One of the two copies on which the signature is placed can be a copy. For international transportation, the declaration form must be filled out in English. Formulations in English may be accompanied by an exact translation in another language. In case of domestic flight, it is allowed to fill out the declaration only in Russian.

Notes in the columns of the declaration:

1) air waybill number;
2) departure airport,
3) destination airport

may be entered or corrected either by the shipper, its agent or the receiving carrier, but all other information should be entered only by the shipper.

3.6.2 Acceptance of Dangerous Goods for Transportation

Transportation of dangerous goods, including actions for acceptance, handling during loading and unloading, transportation and actions in an emergency situation in flight and on the ground, in the VD Airlines is carried out in full compliance with the requirements of the Doc. 9284 AN/905.

The shipper (or its agent at the departure airport) is obliged to prepare the DG for air transportation. Only such DG are accepted for carriage on aircraft, the mass (net) of which in one package does not exceed the mass specified in the List of Dangerous Goods (see Table 3-1 Doc. 9284 AN/905). The weight of the cargo (net and gross) must be indicated in the sender's application. All DG transported by the civil aircraft must be weighed by the sender. If the weight data affixed by the sender on the packaging of each item differs from the actual weight (gross) data revealed during the control weighing, the goods are not allowed to be transported.

The responsible specialist of the VD Airlines for the acceptance of the DG on board the aircraft and for the control of loading is the load master of the aircraft. The aircraft load master can take the DG on board the aircraft directly from the shipper (customer) or from an authorized agent at the departure airport.

When transferring the DG on board the aircraft:

1) each package and means of packaging cargo (ULD) with DG must be marked;
2) The DG must comply with the packing instructions and shipping documents according to the requirements of the Doc. 9284 AN/905;
3) the integrity of the packaging must be preserved and there must be no leaks;
4) incorrectly declared, undeclared and hidden DG should not be transmitted.

If a consignment containing dangerous goods is not accepted due to non-compliance with the above requirements, then the entire specified cargo will

not be accepted for carriage. The sender is obliged to immediately withdraw this cargo from the territory of the airport (airfield). Also, together with a representative of the servicing company, the load master of the aircraft is obliged to draw up a protocol on the identified inconsistencies in triplicate, which must be signed by the sender's representative. If the sender refuses to sign, the load master must draw up a unilateral protocol. One copy of the protocol remains with the load master, and the second must be handed over to the sender.

3.6.3 Acceptance of Lithium Cells and Batteries

All types of lithium cells and batteries that fully meet the requirements of the Doc. 9284 AN/905 are allowed to be transported in the VD Airlines on aircraft of the AN-124-100(-150) and IL-76TD-90VD type without restrictions on the number and weight per aircraft, with the exception of restrictions from the chapter 3.1. Acceptance of lithium cells and batteries for transportation should be carried out only after checking the availability and correctness of filling in all necessary documents according to Doc. 9284 AN/905, namely:

- air waybill;
- the sender's declaration of dangerous goods, when it is required;
- documents confirming the test of cells and batteries in accordance with the requirements of subsection 38.3 of Part III of the UN Manual of Tests and Criteria ST/SG/AC.10/11;
- document confirming that the battery charge is less than 30% (only for lithium-ion batteries transported separately from the equipment – UN 3480).

When accepting cargo containing lithium cells and batteries on board the aircraft, the load master must check the cargo for compliance with Doc. 9284 AN/905 requirements for packaging, labeling and shipping documentation, as well as to check the cargo for the absence of undeclared (hidden) lithium cells and batteries. When accepting cargo containing lithium cells and batteries on board the aircraft, the load master must perform an external inspection of the

cargo for the absence of signs of damage and fire. In case of their detection, the load master must act according to the procedure specified in the chapter 3.7.

3.6.4 Prohibitions and Restrictions on the Acceptance of Dangerous Goods

In addition to the existing restrictions under the chapter 3.1 Restrictions, there are limits on the total mass of dry ice (UN1845) per aircraft. The maximum permitted mass of dry ice per aircraft is calculated individually for each transportation according to the methodology developed in the VD Airlines.

When taking the DG on board aircraft according to the UN list (ST/SG/AC.10/1) UN3166, UN3528, UN3529 and UN3530, it is necessary to carefully check the absence of fuel leaks, the presence of plugs on the disconnected fuel system pipelines, the closure of the filler necks of fuel tanks, and also fully comply with the relevant packaging instructions of Doc. 9284 AN/905.

The transport of goods that do not fall under the definition of dangerous goods in accordance with Doc. 9284 AN/905, but are under excessive pressure, is prohibited in the VD Airlines. Exceptions are loads that have a certificate confirming the strength of the structure with an indication of the maximum value of the working and collapse pressures.

The load master at the aircraft is responsible for the correctness of loading, placement, mooring and unloading of the DG.

Packages and ULD with DG marked "By Cargo Aircraft Only" (or "Cargo Aircraft Only") must be loaded only on board the cargo aircraft. Packages, cargo and ULD with DG, especially those marked "By Cargo Aircraft Only" (or "Cargo Aircraft Only"), must be loaded in such a way that all hazard markings are visible, and crew members or other authorized persons can have free access to them, as well as have the opportunity to monitor the condition of these packages in flight and on intermediate landings and, if size and weight allow, separate such places from other cargo in flight.

Packages and ULD with DG must be loaded last and placed as close as possible to the cargo doors. It is forbidden to place the DG on the flight deck of the aircraft, in the cabins of the accompanying persons and replacement crew. Packages and ULD with DG must be securely fastened (moored) on board the aircraft to prevent their movement during flight.

The peculiarities of air transportation also establish the need to exclude the joint loading of incompatible DG (due to the possible reaction between them, the danger increases significantly). Packages containing DG that may react dangerously with each other should not be placed in the aircraft side by side or in a position that will lead to their interaction in the event of a leak. In order to ensure acceptable safe distances between places with dangerous goods of different classes, it is necessary to observe, at a minimum, the tables 7-1 and 7-2 of Part 7, Chapter 2 of Doc. 9284 AN/905 Requirements for separate DG placement.

3.7 CARGO INCIDENTS

Cargo may be damaged, cracked, stolen or missing before, during and after transportation. It is important to begin to tackle this problem as soon as it is noticed, so that it can be resolved and the possible risk can be reduced.

If, at any stage of the cargo handling process, the cargo is damaged, missing or its theft noticed, the external service provider, to inspect the cargo, package and / or ULD must:

1) take all measures, including emergency, in case of damage caused to dangerous goods;
2) assess and document damage;
3) depending on the decision taken by the Airlines load master, either to ensure the transfer of the cargo to the flight, or remove it from the aircraft / flight;
4) inform and request feedback from all relevant parties;

5) ensure that all actions and messages are monitored and recorded until a solution is reached;
6) execute a protocol of damage / loss of cargo.

3.7.1 Actions in Case of Incidents with Dangerous Goods

In case of incidents with DG during loading (unloading) and temporary storage at the airport, it is necessary to perform actions to eliminate it. The nature of the actions is determined by the type of incident and depends on the properties of the cargo.

Actions in case of incidents with DG and elimination of their consequences at the airport are carried out in accordance with the approved and agreed Plan of Crisis Situations of the loading (unloading) airport.

In all cases, it is necessary to remove unauthorized persons, isolate the dangerous area and inform the relevant state structures (Ministry of Internal Affairs, Ministry of Emergency Situations, etc.).

To eliminate the consequences of ingress of aggressive substances on the aircraft structure, it is necessary to perform the following works:

1. Work on the removal of chemicals must begin immediately after the detection of a spill, a scattering of corrosive substances inside the aircraft. When removing chemicals, workers should be equipped with respirators, necessary overalls that ensure strict compliance with safety regulations.
2. If acids or substances forming during acid hydrolysis have got on the structure of the aircraft, it is necessary:

- if possible, to completely remove them from the structure by absorbing sand or infused earth;
- remove adsorbents with a stiff brush and dustpan;
- treat sections of the structure with a 10% sodium bicarbonate solution (baking soda);

- make a thorough repeated pouring of these zones with warm and then cold water until the neutral reaction of the washing waters. In places of gaps, spills before a neutral reaction should be especially careful;
- wipe the surface with clean cotton napkins;
- dry the surface with warm compressed air.

3. If alkalis have got on the structure of the aircraft, it is necessary to apply a 5% aqueous solution of acetic acid as a neutralizing solution. The remaining operations should be performed similarly to those given in paragraph 2.
4. If other chemicals have fallen on the aircraft structure, it is necessary to establish their alkalinity or acidity, and then perform the work according to p. 2 or p. 3.
5. If powdered chemicals get on the structure of the aircraft, they should be removed with soft brushes and scoops, paying special attention to the thoroughness of removing chemicals from the gaps and joints of the structure. It is necessary to thoroughly repeatedly rinse the space of the structure into which the loose substances have fallen with a 3% aqueous solution of potassium soap or high-grade household soap until the neutral reaction of the washing waters, then with clean water, after which the surface is wiped dry and dried with warm air.

If mercury gets on the aircraft structure, it is necessary to remove the aircraft from operation, urgently organize an inspection of the aircraft for the presence of mercury contamination and clean (demercurize) the aircraft, if necessary. The inspection and cleaning of the aircraft must be carried out by qualified personnel of an organization that has a certificate (license) for this type of work.

If the spillage or scattering of aggressive chemicals occurred at negative ambient temperatures, it is necessary to make the possible complete removal of substances from the structure by absorbing them with sand or infused earth, remove adsorbents with brushes and a scoop. The final surface treatment – neutralization and spilling – must be carried out in a warm hangar with the

removal of washing solutions and neutralization waste into the sewage system (if there is an appropriate order). In the absence of warm hangars, a positive temperature in the aircraft must be created using ground heating means. If it is impossible to provide the necessary conditions for the complete removal of aggressive substances from hard-to-reach places of the structure, anticorrosive treatment must be performed in the conditions of a repair company when transferring the aircraft for repair.

3.8 ENSURING THE SAFETY OF CARGO ON BOARD THE AIRCRAFT

The provision of cargo safety from the moment the cargo is taken on board and until the moment the cargo is removed from the aircraft is provided by the load master.

The safety of transportation and the safety of cargo must ensure:

a) load master:

- by correctness of the calculation of the weight and balance (c.g.position) of the aircraft for this flight;
- by strict compliance of the loading diagram with weight and balance charts;
- by correctness of loading and reliability of fastening (mooring) of cargo;

b) the co-pilot responsible for commercial loading - by control of the correctness of mooring and compliance of cargo placement with calculation data and weight and balance chart.

The shipper (the customer or its agent) is responsible for:

- accuracy, reliability and completeness of information about the characteristics of each cargo item;
- for the preparation of cargo for air transportation on the aircraft;
- for compliance of cargo data with the data entered in the cargo air waybill;
- for the technical serviceability of packaging tools and packaging kits when they are delivered for transportation under their own seal, as well

as for the presence of markings on the cargo and compliance with its transportation documents.

3.9 TRANSFER OF CARGO TO THE CONSIGNEE (CUSTOMER)

As soon as any part of the cargo is unloaded from the cargo hold of the aircraft, the load master and the consignee or its agent must immediately proceed to inspect the unloaded cargo shipment/cargo item for the integrity of the package and the absence of mechanical damage. Thus, the entire cargo presented for acceptance is inspected.

In case of damage and/or spoilage of the cargo and/or its packaging during loading (unloading), as well as detection of such during inspection of the cargo before loading, the loadmaster is obliged to draw up a protocol of loss and/or damage to the cargo in accordance with the established form, followed by a report to the head of the duty shift of the VD Airlines ATOC. One copy of protocol is attached to the flight assignment.

Upon completion of unloading, the consignee or its agent is obliged to sign in the copy No. 4 of the air waybill that he/she accepted the cargo at the unloading point, indicating the time and date (if necessary, references to the protocol of loss and/or damage to the cargo are also indicated there). A copy of No. 4 should be handed over by the load master to the co-pilot.

3.10 PROCEDURES FOR AVIATION SAFETY MEASURES RELATED TO CARGO

VD Airlines does not have its own cargo terminals, therefore, it attracts external suppliers for cargo handling through the conclusion of contracts for the provision of services, including the provision of aviation safety (AS). To confirm compliance with the AS measures with respect to the cargo, the VD Airlines conducts measures to verify the data of suppliers.

Responsibility for ensuring the safety of the cargo is assigned:

1) at the airports with which the VD Airlines has concluded contracts – for employees of the airport's ASS who carry out pre-flight inspection of cargo using technical means of inspection or manually by visual control at the inspection point of the cargo terminal or at the airport checkpoint; control of cargo delivery from the inspection point to the aircraft; control of cargo loading on the aircraft;
2) at all other airports:

- the shipper is responsible for ensuring all procedures related to the cargo, including security procedures;
- the load master of the VD Airlines – must monitor the documentation and fulfillment by the shipper of all procedures for checking the cargo for safety before loading it on board the aircraft, as well as selective inspection of any batch of cargo accepted for transportation.

In cargo handling premises, the airport ASS should develop a special procedure for issuing passes (permits) for personnel and transport, in order to exclude access by random people to the cargo.

The cargo inspection process must necessarily involve the use of technical means or other methods to ensure the safety of goods during their transportation on any flight, the Registered Agent must fully comply with national requirements and the requirements of the airline in relation to the cargo.

When performing international transportation, cargo inspection should be carried out by airport ASS officers together with representatives of border and customs control authorities. In case of detection of an object in the cargo, which may be an explosive or incendiary device, selective inspection is terminated. An airport ASS officer should call an explosive device specialist. Prior to his/her arrival, emergency safety procedures established in the relevant regulatory documents of the airline must be adopted. In addition, the load master or an employee of the airport ASS is obliged to remove all personnel involved in the inspection and check of cargo to a safe distance (at least 100 m) from the area of detection of a suspicious object.

The pyrotechnic specialists who arrived, after checking and determining whether a suspicious object belongs to an explosive device, decide on further actions to neutralize it. After the explosive device is neutralized, the entire cargo is subject to mandatory re-inspection. If a suspicious item is deemed safe, the cargo inspection continues until its completion.

The result of the inspection is drawn up by the airport representative in an arbitrary form, which is signed by the persons who participated in the inspection. The protocol is drawn up in two copies. The first copy of the protocol remains at the airport of inspection, the second must be transferred to the ASS of the airline through the crew of the aircraft.

ANNEX 1

(recommended)

DANGEROUS GOODS OCCURRENCE REPORT FORM

ОТЧЕТ ОБ ИНЦИДЕНТЕ С ОПАСНЫМИ ГРУЗАМИ

DANGEROUS GOODS OCCURRENCE REPORT

1.Эксплуатант Operator:	**2. Дата случая** Date of occurrence:	**3. Местное время случая** Local time of occurrence:

4. Дата рейса Flight date:	**5. Номер рейса** Flight No.
6.Аэропорт отправления Departure Airport	**7. Аэропорт назначения** Destination Airport
8.Тип воздушного судна Aircraft type:	**9.Регистрация воздушного судна** Aircraft registration:
10. Место случая Location of occurrence:	**11 Страна происхождения груза** Origin of goods

12.Описание случая, включая подробности повреждений, ущерб и т.д. (если необходимо, продолжите на следующей странице)
Description of the occurrence, including details of injury, damage, etc. (if necessary, continue on the next page):

13 Надлежащее отгрузочное наименование (включая техническое наименование) Proper shipping name (incl. technical name):	**14.Номер ООН/ИД (если известно)** UN/ID no.(when known):

15. Класс/категория (если известно): Class/ Category (when known):	**16. Дополнительная опасность:** Additional danger:	**17. Группа упаковывания:** Packing group:	**18. Категория (только для класса 7)** Category (for class 7 only)

19. Тип упаковочного комплекта: Type of packaging set:	**20. Спецификационная маркировка упаковочного комплекта:** Packaging specification marking:	**21. Кол-во грузовых мест:** Number of cargo items	**22. Количество (или транспортный индекс, если применяется):** Quantity (or transport index, if used):
23. Номер авианакладной Reference no. of air waybill:			
24. Номер курьерской отправки, багажной бирки или пассажирского билета: Reference no. courier pouch, baggage tag, or passenger ticket:			
25. Наименование и адрес грузоотправителя, агента, пассажира и т. д. Name and address of shipper, agent, passenger, etc.:			
26. Прочая информация, относящаяся к случаю (включая основания для подозрений, предпринятые действия и т. д.) Other relevant information (incl. grounds for suspicion, any action taken):			
27. Имя и должность лица, составившего отчет: Name and title of person making report:		**28. Номер телефона** Telephone no.:	
29. Код компании\отдела, электронная почта или код информационной почты: Company/dept. code, E-mail or InfoMail code:		**30. Ссылка отчетности:** Reporting ref.:	
31. Адрес: Address**:**		**32. Дата/Подпись:** Date/Signature:	

ANNEX 2

(recommended)

OCCURRENCE REPORT FORM

AT GROUND HANDLING

Station:	Flight Number:	Date:
Aircraft Type:	Aircraft Registration:	Stand Number:

Part 01, **Damage by:**

Ground Equipment: ☐ Other Aircraft: ☐

Vehicle: ☐ FOD: ☐

Jet Blast: ☐ Other: ☐

Date: / / Time of Occurrence: (UTC)

Phase of Operation: Arrival (Positioning) ☐ Servicing ☐ Fueling ☐

Loading ☐ Departure (Walkaround, Pushback) ☐

Scheduled Ground Time: STA: STD:

Actual Ground Time: ATA: ATD:

Delay: hrs min

Part 02, **Details of Defect/Damage:**

Type:

Crack ☐ Hole ☐ Scratch ☐ Dent(s) ☐

Other: _____

Size:

Length: Width: Depth: Unit: ☐ mm ☐ inch

Longitudinal ☐ Circumferential ☐

* As stated by PIC (prefer able completed by PIC)

Part 03, **Damaged Part:**

Engine ☐

Fuselage ☐

Wing ☐

Under Carriage ☐

Compartment ☐

Door ☐

Controls ☐

Lights ☐

Other

_____

Part 04, **Casualties:**

	Number	Fatalities	Non Fatal
Passenger:			
Crew:			
Ground Staff:			

Part 05, **Ground Service Equipment Involved:** Type: Serial (Fleet) Nr.: Company:	Condition (Malfunction) Tires ☐ Brakes ☐ Steering ☐ Lights ☐ Stabilizers ☐ Warning Safety Devices ☐ Other ☐ .....

Part 06, **Personnel Involved:**

Name:	Job Title:	
Company:	ID No.:	License Type:
Name:	Job Title:	
Company:	ID No.:	License Type:

Part 07, **Weather Condition:**	Weather	Surface	Lighting
* Use of Official MET Report	Rain ☐	Dry ☐	Good ☐
	Fog ☐	Wet ☐	Poor ☐
Visibility: m/km	Heat ☐	Ice ☐	Day ☐
Temperature: C	Slush ☐	Slush ☐	Night ☐
		Contamination ☐	Twilight ☐

Part 08, **Sketch:**

Part 09, **Narrative** (description of what happened):

Part 10, **Initial Action Taken:**

Part 11, **Closing Action:**

* Please attach pictures, airline report and any related correspondence

Prepared By:	Name:	Date:
Tel:	Position:	Signature: