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Brief Introduction

This Manual shall be kept and repeatedly read by operators.

- · The items of this Operating Manual include Correct Selection, Simple Maintenance, and Routine Examinations.
- · Please read this Manual carefully, prior to operation, for proper driving and maintenance to ensure safety and effective material conveyance.
- · Discrepancy may exist between the items of this Manual and the actual situation, for product improvement.
 - · Please lease or transfer this Manual together with the truck if the forklift truck is leased or transferred.
 - · Please contact the Sales Department of our Company if you are confronted with any issue.

Instructions for symbols with \triangle or \bigcirc are very important to your and others' safety, and please follow this instructions.

⚠ Danger	Indicating forthcoming dangerous situation and it will result in death or severe injury	
	if it is not avoided, therefore you must follow this instruction.	
⚠ Warning	Indicating potential dangerous situation and it will result in death or severe injury if it	
	is not avoided, therefore you must follow this instruction.	
⚠ Attention	Indicating potential dangerous situation and it may possibly result in slight or	
	moderate injury if it is not avoided, therefore you must follow this instruction.	
Note	Sentences related directly or indirectly to personal safety and forklift truck	
	maintenance	

I Safety

For your safety and use efficiency, this chapter will mainly introduce the basic safety rules and warnings during normal use of the typical forklift truck. The same applies to forklift with mast of special specifications and forklift with attachments.

1. Applications of Forklift

(1) Main Applications of Forklift

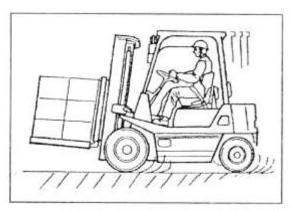
The main application of forklift truck is to convey the cargo on pallet, and is able to stack it on a certain height. In addition, after proper attachments are fitted with the forklift truck, it is also able to convey and stack cargos not placed on pallets.

(2) Prohibited for Use beyond Forklift Applications

Application beyond Forklift applications includes transporting people, lifting people with fork, or traction of other vehicles, etc. The application methods forbidden in this manual shall be absolutely prohibited under any circumstances.

Demonstrations for Use beyond Applications:

- · Someone standing on fork and pallet.
- · Someone standing on pallet to press against cargo.
- · Hanging steel wire directly on fork and going up to lift cargo.
- · Traction of other vehicles.
- · Pushing cargo or other vehicles using fork.
- · Opening/closing doors of other trucks using fork.





2. Operating Sites and Working Environments of Forklift

(1) Ground Status

The operating sites of forklift truck should be flat and firm pavement or ground, and the ventilation condition is good.

The performance of forklift truck depends on the ground status, the running speed shall be properly adjusted, and special care shall be taken during running on inclined roads or potholes pavements.

⚠ Warning

- · It shall be ensured that the trucks running on muddy roads are able to stop in time.
- · Keep away from stones and stumps, and run slowly at a decelerated speed when they are unavoidable. Pay attention not to damage the chassis of truck.

Anti-skid chain shall be used during running on icy and snowy pavements, rush acceleration, rush parking, and rush turning shall be avoided, and the running speed shall be controlled through accelerator Pedal force.

⚠ Warning

- · The driving force of forklift truck may be increased, after anti-skid chain is fitted, but the side skidding performance is reduced, for which special attention shall be aroused.
 - (2) Climatic Conditions

⚠ Warning

- · Under the situation when wind power is very strong, try as much as possible to avoid high lifting actions of mast, to avoid drop of cargo, which may cause accident injury to driver.
 - (3) Measures for Coping with Coldness and Torridity
 - a) Oils

Use oils adaptive to ambient temperature.

In a cold climate, the fuel tank shall be always full of fuel. In this way, the air amount in the fuel tank can be reduced to the minimum extent, and the icing phenomenon caused by moisture condensation can also be eliminated to avoid the evil consequence of the hard start of the fuel system caused by rust.

Hydraulic Oils: L-HM32 (≥-19°C) is now used, and L-HV32 (≥-33°C) is optional in highly cold regions.

Heavy Duty Truck Gear Oils: GL-5 85W/90(-15~49°C) is now used, and GL-5 80W/90 is optional in highly cold regions.

- b) Battery
- · The Freezing season

Under normal charging condition, the electrolyte freezing point is about -35°C.

Keep the battery charged in good condition. The battery shell may be damaged by electrolyte solidification, so the charging capacity should reach at least 75% of the total capacity in order to prevent the solidification.

The most effective way is to keep the Battery electrolyte density was 1.28 g / ml, but not higher than this value.

· In the hot season

The electrolyte water can be easily evaporated in the hot season, so please add distilled water at any moment. Check it once a week and add distilled water.

When the ambient room temperature is high, the battery electrolyte density shall be dropped to 1.220 \pm 0.01 g/ml.

Battery at -10 $^{\circ}$ C \sim 40 $^{\circ}$ C temperature does not require other maintenance (the best use of the range of 20 $^{\circ}$ C \sim 30 $^{\circ}$ C).

⚠ Danger:

- 1. Batteries are strongly corrosive, please keep them away from children, the user should wear protective glasses and rubber gloves when operating the battery, once the eyes, skin and clothes splashed sulfuric acid rinse immediately with plenty of water, severe cases should seek medical treatment immediately.
- 2. Battery should be far away from heat and open flame, charging should be kept ventilated, beware of rupture wounding.
- 3. The battery is sealed with liquid battery. It shall not be opened without permission and be careful to avoid explosion.

4. When installing the battery, do not use metal tools and other connections positive and negative terminals, otherwise it will cause a short circuit even worse a fire or explosion.

c) Cooling System

Forklift cooling system is equipped with long-term antifreeze, the freezing point of the antifreeze is -35 °C (in the more suitable temperature season may be the use of clean water instead of antifreeze).

In the hot season, in order to obtain a good cooling effect, please check the amount of antifreeze, if the antifreeze too little, please add in time. It is recommended to park your forklift in the shade to avoid exposure and make the cooling system work better.

If the radiator heat sink is blocked, it will affect the cooling effect. Should be regularly not more than 0.1Mpa compressed air or steam or water purge heat sink, radiator must also check whether the water leakage. Note:

When flushing the heat sink with compressed air steam or water, place the nozzles at right angles to the heat sink.

Check if the fan belt is too loose, then adjust to the specified tension (specific adjustments, see the engine manual).

Even if the engine is overheated and the coolant (water) is boiling, it is necessary to let the engine rotate with idle speed for 5 minutes to lower temperature before shutting the engine off. In order to cool the engine down as soon as possible, it is recommended to open the engine hood at idle to improve air circulation.

(4) Working Environment

When temperature is at -10°C \sim 40°C, humidity is 50 \sim 70%, and the height above sea level is \leq 1800m, this forklift truck is able for normal work.

Under special working environments, this forklift truck may possibly be unable to be used at standard specification. Make sure to consult with and inquire from our Company, if the forklift truck may possibly be used under following environments.

- · Harbor or seashore areas with danger of salt corrosion.
- ·Chemical factories where forklift truck may possibly affected by acid liquids of other chemical medicines.
- · Environments where danger for initiation of explosion may possibly exist for dust or explosive gases.
- · Cold or torrid regions or high-altitude regions.
- · Environment where certain amount of harmful substance.

Take the internal combustion forklift as an example:

·Prohibit operate and use forklift under atrocious climatic conditions such as occurrence of lightning storm or strong wind, etc.

.When used indoors, make sure that there is good ventilation. Exhaust gas (containing harmful gases such as carbon monoxide) discharged from the internal combustion forklift may cause danger in a confined environment.

3. Safety Issues before Use

(1) Acquirement of Operating Qualification

⚠ Attention

- · Only those operators who have been trained and approved can be allowed to operate forklift truck.
- · The properties of brake, accelerator, and hydraulic control handle for each forklift truck with same technical parameters may not be the same completely. Carefully read this Manual and the label plates on the truck, and get familiar with respective operating items before driving the forklift truck.
 - (2) Dress during Driving Forklift Truck



Attention

- · Please put on work clothes, labor protective shoes, and wear safety helmet when truck is driven.
- · Please don't wear loose clothes, for the sake of safety, to avoid being caught up on leading to unexpected danger.
 - (3) Prohibit drunk driving.



· Please don't drive the forklift when you feel tired, and not concentrated, or after taking anesthetic or drunk alcoholic.

(4)Safety of Working Site



- · Before operation and use of forklift is begun, water, oil, sand, ice, or snow, and other factors leading to slippery must be removed first, as such pavements may very possibly result in driver's loss of control over forklift.
- · Don't allow forklift to run on rugged pavements or pavements with tracks as well as pits and ditches, or on the pavements with sharp protrusions, as all such pavements may possibly injure the forklift or give rise to danger for tip over of forklift. Forklift run on smooth pavements, to avoid danger occurrence.
- · If the noise of working environment is too high, it will disturb the driver and for driver to get tired very easily. Danger may also happen for pedestrians as they have no way to notice the cautious sounds of forklift. On this account, driver must pay doubled attention to the surrounding safety when forklift is used under noisy environment.
- · Sufficient light source must be available on working sites, for the need of safety. When working at night, turn on the head lamps.
 - · During operation on platform or at dock, tipping danger exists with forklift, Please drive slowly.
 - (5) Keeping the Driver's Cab Clean

⚠ Attention

- · The driving cab shall always be kept clean.
- · Please don't operate forklift, when hand is wet and skidding or is oil stained.
- · Don't put tools or other objects in driving cab, which may hinder the actions of control rod or pedal.

(6) Integrity of Forklift Truck



⚠ Attention

· Overhead guard and backrest shall be equipped when forklift truck is delivered from factory.

Notes:

· Overhead guard is used for protection against drop of objects. What's worth attention is the overhead guard is used for protection against impaction of dropped small objects

Protective measures for falling objects shall be taken beforehand.

and cabinets, but cannot hold up the dropping impaction of rated loads.

⚠ Warning

- · Without the approval in writing of our Company, it is not allowed to refit or add any operating devices to forklift truck, and otherwise it may possibly affect the rated load or safe operation.
- · Avoid installing any parts that may block off the driver's sight line.

(7)Regular Maintenance

⚠ Attention

· Performing daily examination and repair as well as regular examination and repair

⚠ Warning

· When forklift is found to be damaged or present with failure, stop operation and timely notify the maintainers about the status of forklift truck. The forklift cannot be operated before it has been thoroughly examined and repaired.

(8) Avoiding Fire Hazard

Attention

· In order to prevent the occurrence of fire hazard, accident, or other unpredictable state of affairs, set the fire extinguishers properly and operate the fire extinguishers according to their application requirements.

(9)Overloading Prohibited

⚠ Attention

· Avoid overloading, observe the allowable load and load curve of forklift, and allow the center of gravity for the cargo to be located in the place of load center.

Note

· Allowable load means the maximum load of cargo placed in the area of fork load center.







(10)Using Proper Pallet

Attention

- · Use pallet with both proper size and strength to bear the weight of cargo.
- · Ensure that the cargo is placed on pallet smoothly and that the shape of the cargo matches the pallet.



4. Safety Issues before Use and during Operation

(1) Notices during Initial Startup



⚠ Attention

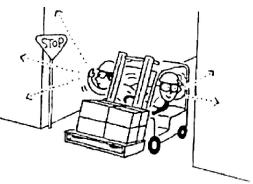
- · Pull up hand brake.
- Shift gear and place the operating handle in neutral gear
- Step on the clutch pedal or brake pedal
- · Adjust seat, to facilitate hand/foot control.
- · Ensure that there is no person on, under, in front of, or behind the forklift truck.
 - (2)Safety Status around Forklift

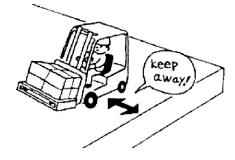
⚠ Attention

- · When bulky cargo is carried and when sight line is not satisfactory, please reverse running or be guided by others.
- · During reverse Running, it is required to face the rear area, and run after direct confirmation of the rear area. Rearview mirror and reversing buzzer are the auxiliary devices.
- · Person shall be available for guide when forklift is driven in a narrow passage.
- · Driver shall park the forklift at the crossroad or other places where line of sight is blocked off, and the truck is to be re-driven when it has been confirmed that there is no person on left or right.
- · Ensure that there is enough safety distance between forklift and roadside or the edge of platform, to prevent fall-off of forklift truck.
- · Forklift is different from automobile, as it is steering with rear wheels. Decelerate running speed, when turning place is approached, and then turn steering wheel.









(3) Aggressive Driving Prohibited

⚠ Attention

- · Avoid turning on key switch, under the situation of pushing down accelerator pedal.
- · Avoid sudden start, brake, or turning. Sudden start or brake may give rise to fall-off of cargo, while sudden turning may lead to tip over of forklift and result in severe accident.
- · Operate the control handle in both cases, no matter it is under full load or empty load status. When fork is at high position, it may cause danger for fall-off of cargo or tip over of forklift.



- · Avoid running over the baffle or obstacle dropped to pieces on ground
- · Decelerate running speed and hoot, when passing other forklift trucks.
 - · Avoid running into soft ground.
- · Please decelerate running speed, when running on damp, slippery, unsmooth, or inclined pavements.
- · Ensure that there is certain clearance between mast and roof as well as access door.





(4)Driving during Lifting of Fork Prohibited

⚠ Attention

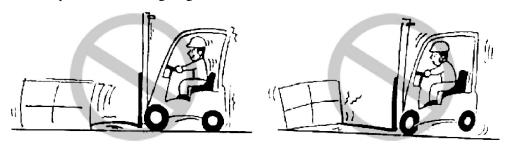
· Avoid driving forklift when fork is rising, and otherwise it may cause unstable status and possibly result in tipping over of forklift.

(5)Do not work with fork tips

⚠ Attention

· Avoid squeezing and pushing cargo or lifting cargo using fork tip, and it may cause jitter of forklift truck

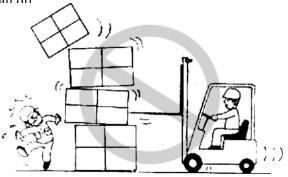
or cargo, when fork tip is used for lifting cargo.



(6)Push/Pull Operation Prohibited

⚠ Attention

Do not work with fork tips. It is not allowed to push/pull cargo using forklift truck, and otherwise cargo may possibly be damaged or fall off



(7)Driving on Ramp

⚠ Attention

· Following rules shall be observed when forklift truck is driven on a ramp.

With Load: Forward running during upgrade, while backward running during downgrade

- · Run the forklift truck with brake during downgrade, and ensure that the fork and the ground do not bump into each other.
- · Avoid steering or loading-unloading operation on a ramp, and otherwise there is danger for forklift truck to turn over.

(8)Offset Load Stacking Prohibited

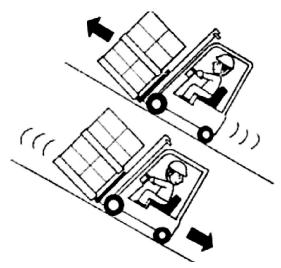
⚠ Attention

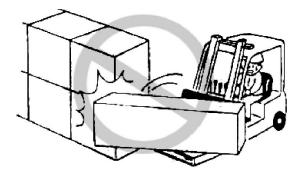
· It must be ensured that cargos are arranged and placed safe and steady during stacking using forklift truck, while fork shall be accurately inserted into pallet, and at the same time the center of gravity for the cargo and the center of forklift truck shall be maintained consistent.

· When offset loaded cargo is conveved. it is very likely for the cargo to fall off. and forklift to tip over.









(9) Anyone on/under Forklift Prohibited

⚠ Warning

- · It is strictly prohibited to carry anyone on fork or pallet.
- · It is not allowed for anyone to sit on the operating forklift except the driver.
 - · Avoid using anyone to replace counter weight.
- · It is prohibited for anyone to stand on cargo or pass under the fork.





(10)Entry into Mast Mechanism Prohibited

⚠ Warning

 \cdot It is prohibited for any part of human body to enter into between the mast mechanism and the truck body.

Attention

· When driving please place your body under the overhead guard and it is not allowed to stretch any part of your body outside the forklift profile.

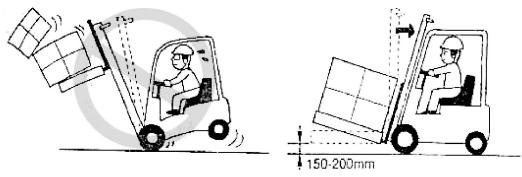




(11)Rise of Fork Prohibited, during Forward Tilt of Mast

⚠ Attention

- · During forward tilt of mast, it is not allowed to lift cargo or start forklift truck, and the mast shall be back tilted to place when cargo is lifted or forklift truck is started to stabilize cargo. During running (with load or without load), the distance between the fork and the ground shall be maintained at 150-200mm.
 - · It is not allowed for mast to tilt forward, under the status when cargo is being forked.
 - · The forklift truck shall be stopped first when cargo is to be lifted.
 - · Avoid loading-unloading cargo, when forklift truck is under the tilted status.



(12)Into-Carriage Operation

Attention

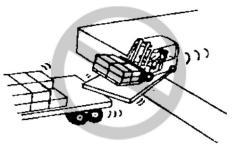
- · Loading-unloading operation can only be performed on cargo deck with trailer properly fixed for forklift truck.
- · Fix bridge piece properly and examine its strength, prior to start of operation.
- · Decelerate the truck during access into the carriage, and pay attention to the safety of bridge piece.
 - (13)Getting on/off Forklift Truck

Attention

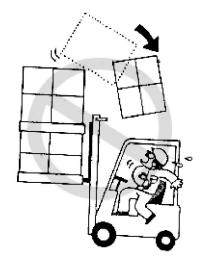
- · It is prohibited to jump on/off the forklift truck.
- · Hold the handle with hand, and step the foot on pedal, when getting on/off the forklift truck.
- · It is not allowed to hold steering wheel or operating rod, when getting on/off the forklift truck.
 - (14)Cargo height higher than OHG Prohibited

Attention

- · Cargo shall be placed against the backrest. The height of cargo cannot exceed the backrest, and otherwise it is liable to cause cargo to slide towards the direction of operator, while driver may possibly be bruised by cargo.
- · The superposed stacked cargo shall be properly fixed using rope before conveyance, to prevent collapse.







(15)Anti-loosening of Chain

Attention

· When chain is loose, avoid extracting the fork from inside the pallet, and otherwise it may cause fall-off of cargo or turnover of forklift.

Notes

- · When chain is loose, pull a little bit the lifting handle upward, for fork to rise, so as to correct the loose status of chain.
- ·If the chain appears worn during use, when the chain pitch change value exceeds 2 ‰ of the standard value, the chain must be replaced to ensure the load-bearing safety.

(16)Fork Adjustment

⚠ Attention

- ·Adjust the spacing of fork to the most proper position, according to the size of pallet for loading cargo. Pay attention not to push down to hand, during adjustment.
- ·After for spacing adjustment is completed, fix the fork using fork fixed pin. If it is not fixed, it is liable to move during running process, cargo may possibly fall off, and may also possibly squeeze the cargo into pieces.
 - (17)Conveyance of Super width or Super length Cargo

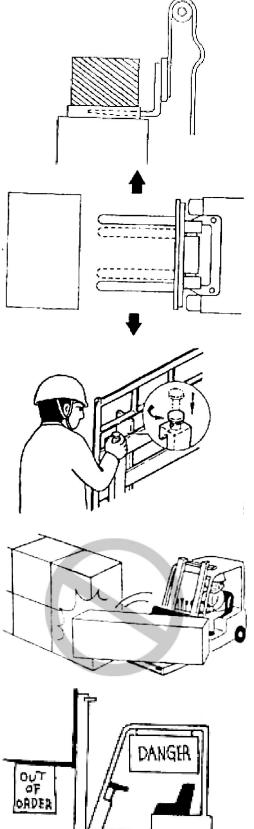
⚠ Attention

- · Pay special attention to driving, when super length and super width cargo is conveyed.
- · Slow down during both steering and lifting cargo, to avoid cargo movement, and at the same time pay attention to surrounding safety.
- · When super width or super length cargo is conveyed, it is required for forklift to be equipped with proper widened fork carriage and lengthened fork. Its load-bearing capacity shall be within the specified center of load, and its load-bearing capacity is the same as that of the standard fork carriage, but the center of cargo shall be superposed as much as possible with the center of forklift truck, with offset to be controlled within 100mm from the center of 1-3.5t forklift truck, and within 125 mm with offset from the center of 3.8-x5t forklift, 5-x12t forklift control within 150mm. Its load-bearing capacity is the same as that of the standard fork, and once the center of load moves forward, make sure for load reduction.

(18)Bare-handed unloading Prohibited

Attention

· Don't unload cargo using hand, as falling danger exists with cargo.



(19)Parking of Failure Truck



- · If forklift truck is parked at roadside, caution or "Failure" shall be marked on the truck, and the key shall be pulled off.
- · If fork cannot be dropped for failure, a rather obvious mark shall be made in this place, to prevent bumping into other vehicles and pedestrians.
- (20)Notices after Work Completion and Departure from Forklift



- · Mast shall tilt forward slightly, while fork shall be dropped naturally, and otherwise, danger for stumbling and injuring other's human body may exist.
 - · Place the gear shift handle on neutral position.
 - · Pull up the parking brake handle.
 - · Turn off the key switch and take off the key.
 - (21)Parking

Attention

- · Please park the forklift truck in the designated place.
- · Enough strength must be available in the parking place and it will not hinder traffic safety.
- · It is prohibited to park in or nearby the place of inflammables.
- · It is prohibited to park on a slope, as unpredictable movement may occur with forklift truck. If it has to be parked on a ramp, stopping blocks shall be added in the places of tires to prevent movement of forklift truck.

(22)Noise

The maximum noise value outside the forklift truck shall not be larger than 89dB (A), and the measurement method is to be executed according to JB/T3300 Standard. Measure the noise with sound pressure level in the place of driver, and measure the noise with sound power level around.

⚠ Attention

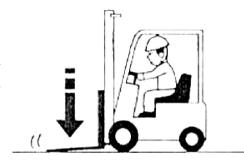
· Noise value may increase, in both cases when working pavement is potholes uneven and large distortion of tire.

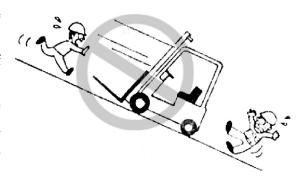
5. Safety Issues during Service and Maintenance

(1)Sites for Maintenance and Service

⚠ Attention

- ·It should be at designated places and equipped with adequate equipment and security facilities · This site shall be a level ground.
- · This site shall be well ventilated.
- · This site shall be provided with fire extinguishing devices.





(2) Notices before Maintenance and Service

⚠ Attention

- · No smoking
- · Wearing various protective appliances (safety helmet, shoes, goggles, gloves, and boots) and suitable clothes
 - · Wiping off the effluent oil timely
- · It is required to firstly clean up the original dirty oil and dust on the joints using brush or cloth, and then to add lubricating oil, when lube is added.
 - · It is required to turn off the key switch and pull off the battery plug, except for the needs in some cases.
 - · It is required to drop the fork to ground, when the forklift truck is maintained and serviced.
 - · Use compressed air to clean electrical components, and it is not allowed to use bottled gas or steam.
 - (3)Notices for Maintenance and Service

Attention

- · It is required to take care not to place the foot under the fork, and not to be stumbled by the fork.
- · It is required to fill up cushion blocks and other objects under the inside mast, when fork is raised, to avoid sudden drop of the fork and the mast.
- · It is required to carefully open and close the front bottom plate and the battery container cover plate, to avoid finger extrusion.
- · It is required to make a mark to facilitate later continued work, when it cannot be completed for a single time.
- · Avoid maintenance work before the internal pressure of oil circuit is dropped, as very high pressure exists in hydraulic circuit.
- · It is required to see doctor for diagnosis and treatment immediately, when anyone is injured by HP electricity.
 - \cdot Don't use the mast assembly as a ladder.
 - · It is strictly prohibited to put your hand, foot, and body in between the truck frame and the mast.
- · When maintenance and service are performed during heat engine, please pay attention that the temperature of transmission device or hydraulic system is possibly rather high. On this account, the truck shall be cooled down prior to maintenance and service, to prevent accidental scald.
 - (4) Examination and Replacement of Tires.

Attention

- · Tire shall be disassembled and assembled by the service office designated by our Company.
- · It is required for professionals to convey the HP air.
- · It is required to wear safety goggles, when compressed air is used.
- ·(Split rim)Don't loosen the bolts and nuts in the connecting place of wheel rim, when tire is disassembled, as HP gas is available inside the tire, and loosening of bolt, nut, and rim may give rise to very dangerous situation.
 - (5)Use of Jack (during tire Replacement)

⚠ Warning

· It is not allowed for maintenance staff to get under the forklift, when jack is used to jack up the forklift.

Attention

- · It shall be ensured that there is no body and no load either on the forklift truck, when jack is used to jack up the truck.
- · It is required to stop using jack, when wheels of forklift truck are off ground, and fill up the cushion blocks under the truck, to avoid drop of the forklift truck.
 - · Actions shall be taken not to allow forklift truck to slide, before jack is used to jack up the truck.
 - (6)Requirements for Discharge of Wastes (Electrolyte waste Liquid, and oil, etc)

⚠ Attention

· The waste liquids on the forklift truck shall be recovered according to the stipulations of local government, and it is not allowed to discharge them at discretion.

6. Safety Issues for Use of Battery

Lin order to protect your personal safety, please be sure to read and comply with the following safety instructions:



(1)Do not touch the positive and negative terminals of the battery with both hands at any time.



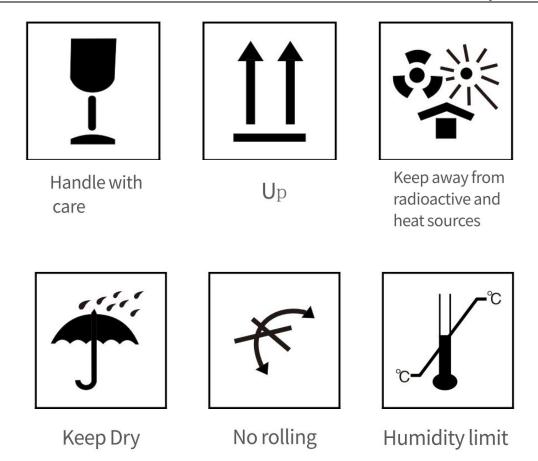
(2) While cleaning the vehicle, prevent high-voltage components from contact with water to avoid adverse consequences.



(3)Always wear insulated gloves when operating and maintaining the battery system, and do not wear metal jewelry such as watches.



(4)Keep the battery system away from highly corrosive and flammable environments and away from sources of ignition when in operation.



Tips:

If you find abnormalities in daily maintenance, please contact our after-sales service department to deal with, strictly prohibit private operation (not unauthorized disassembly or repair).

Maintenance after every 6 months/1000 working hours shall be carried out by qualified personnel or authorized personnel of the battery manufacturer.

7. Safety Issues for Installation, Adjustment, and Use of Attachments

(1)Installation of Attachments

In order that the attachments will not slide leftwards and right wards along the fork carriage of forklift truck during operating process, resulting in safety issue, make sure for the installation to be rational, reliable, and safe.

After being put up and installed, the attachments with upper hooked stop blocks shall be embedded into the gaps of the meshed crossbeam, for the offset of centerline for attachment and the center of fork carriage to be within a ranger less than 50mm, and otherwise it may affect the traverse stability of forklift truck. After being put up and installed, the attachments with rotating functions (paper roll clamp, bale clamp, multi-purpose clamp, and barrel clamp) shall be welded with stop blocks on both sides in the places connected between crossbeam on the fork carriage and the attachments, to prevent the occurrence of leftward and rightward slide of attachments during operating process. When attachments with lower hooked locations are installed, the clearance in the fitting place of the lower hook and the place of crossbeam under the fork carriage at the same time shall be

properly adjusted.

The form of Hook installation for attachments of various medium and small tonnages in the world are all adopted, and the requirements of international standard ISO 2328 (Installation Dimensions of Hook Fork and Fork Carriage for Forklift Trucks" must be strictly followed to select the attachments to match the forklift truck.

(2)Use of Attachments

- a)Operation of attachments with forklift trucks shall be provided with practical experience in driving and operation of forklift trucks, and at the same time it is required to firstly get familiar with related instructions on the label plates for the attachments of forklift truck, read relevant operating manuals (especially the user guides, installation instructions, and other data of professional companies for attachments), and fully understand the basic performances and operating methods of attachments for the forklift truck, especially it is required to have a fairly detailed understanding about the allowable loads and lifting heights of the attachments as well as the dimensions of cargo and the applicable scopes of attachments.
- b) When attachments of forklift truck with multiple functions are operated, it shall not allow the two actions to be performed at the same time, and the other action must proceed only after one action has been completed.
- c) It is strictly prohibited for attachments of forklift truck to be used overloaded, and unbalanced loading at high cargo position is not advocated. It can only be operated in a short time for the unbalanced loading operation at high cargo position (especially when it is the flat clamp of side-moving type with combination valve used for control, namely the flat clamp shared by side-moving cylinder and adjustable distance cylinder), while the offset shall be strictly controlled within a range of 100mm both leftward and rightward, respectively.
 - d) It is strictly prohibited for attachments of forklift truck to run under the status of high cargo position.
- e) It is strictly prohibited for anyone to stand within a 1.5m range under the attachments of forklift truck and under the shadow of cargo (except for the driver's position protected with overhead guard), to avoid accident.
- f) It is strictly prohibited for forklift with attachments to perform emergency brake during operating and it is required to drive at a slow speed when the truck is loaded.
 - g) It is prohibited to make any change to the forklift's attachments without the approval of our company.

⚠ Attention

"Bearing Capacity of Attachments" indicated in the samples of manufacturers for various attachments is only a kind of evaluation of estimate for the attachments themselves under stress, while it is not the bearing capacity of attachments adaptable to this large system of the whole forklift truck. The rated bearing capacity of forklift truck shall be taken as the bearing capacity, and the bearing capacity of attachment themselves is the smallest among the three integrated bearing capacities of CBU. As the actual rated bearing capacity on the final data plate after forklift truck is matched with attachments, so long as the mass of cargo conveyed does not exceed this allowable value, it may satisfy applications of various working conditions. Generally speaking, the integrated bearing capacity of CBU is the smallest numerical value among the three after calculation.

8. Safety Issues for Use of LPG Forklift Truck

- (1) Notices When Filling Gas
- a) There are two ways for LPG forklift truck refueling, one is to change a cylinder, and the other is to directly inflate the steel cylinder of the forklift truck.

- Filling gas or change cylinder must be executed in a well-ventilated, safe outdoor place which complies with local fire safety standard.
 - Forklift truck must be parked stably and shut down, and then the operator leaves the driver's seat.
- Carefully handle the steel cylinder, when unloading it from the forklift truck, it should not be collided, thrown or rolling on the ground.
 - When filling gas, it must be carried out by professionals.
 - During the gas filling process, the relevant staff must monitor the entire process and not to leave .
- b) For each time of changing or inflating a cylinder, the operator should develop the habit of checking the steel cylinder.
 - Whether the cylinder has serious dents, scratches or rust or not.
 - Whether the appearance of all parts of the cylinder has obvious damages, any air leaks or not.
 - Whether the safety relief valve of the cylinder is blocked or not.
- Check whether the steel cylinder is within the validity period of the annual review. If it is expired, it shall be reported to the local authorities for annual review as soon as possible. The cylinder reaching 15 years service life should be claimed as scrap if there is no relevant department recognition.
 - •LPG cylinders may not exceed the truck profile.

Attention

If any of the above situations exists, the steel cylinder shall not be used or filled with gas again, and it shall be replaced and repaired.

(2) Quality and Composition of LPG Fuel

The purity of LPG has a direct impact on the operations of forklift truck. If the LPG contains impurities, foreign matters, moisture or excessive tar components, the pipes and fittings of LPG system will be blocked and then be failed. For example, the engine running may not be smooth, and the horsepower output may be inadequate. And more seriously, it may cause engine flameout and hard start and so on.

- The LPG fuel with high purity, low impurities, water and tar, especially with a propylene content of not more than 5% must be used.
- If the user is in a place with poor local gas source, be sure to implement regular maintenance to remove accumulated foreign matter and tar in the LPG system, and replace the filter netting to ensure the smooth running of the engine; the worse is the fuel quality, the shorter is the maintenance cycle.
- In cold areas when temperature is below zero, the natural evaporation of LPG is slowed down, so at this time the propane component of LPG should be added to facilitate evaporation.
 - (3) Treatments for Accident and Emergency
 - a) General LPG is added with odorant, so it is easy to detect leakage if the smell is smelt:
- Immediately drive the forklift truck to the outdoor ventilated area, turn off the engine and make sure that there are no fireworks nearby.
 - Wind and close the manual switch on the LPG tank.
- Carefully and gradually check the pipes, joints and LPG conversion devices, find out the leak position, and invite Professionals for repair.
 - b) If an accident occurs:
 - Immediately park the truck and shut down the engine.
 - Wind and close the manual switch on the tank.

- Ensure there are no fireworks around the forklift, using a fan to diverge the heat if necessary.
- Invite a professional for thorough examination of the problems and for fixing.
- c) If fire occurs:
- If possible, wind and close the manual switch on the tank.
- If there is water source nearby, water the tank to keep it cool.
- Immediately notify the fire department for fire fighting.
- If the tank is also on fire, the personnel nearby should be urgently evacuated.
- (4) Notices for Use:
- Forklift truck shall not work in a place with fire source.
- All the wire connectors of forklift truck must be firm to prevent short circuits or other faults.
- The fuel meter of instrument stand of single-fuel LPG forklift truck is not used, please check the liquid level gauge on the tank.
- Do not add fuel into the fuel tank of single-fuel LPG forklift. But after clearing the fuel tank, the non-burning and anti-freezing material can be added and then the tank filler can be covered.
 - The LPG with high purity, good quality and composition shall be used as far as possible.
- According to the recommended method of original gasoline engine manufacturer, the regular maintenance should be implemented, which includes the ignition system, cooling system, intake and exhaust system, engine body and other mechanical equipment. In addition, the machine oil, spark plug and air filter net should be regularly changed.
 - LPG system should b
- If the LPG system failed, it should be reported to our company sales service department repairs as soon as possible and then it will be repaired by the professionals.

9. Label Plates

Label plates pasted on truck are used to indicate operating methods and notices of truck. This is not only for you to easily use the forklift, but also for the sake of improving forklift performance. Please re-paste the label plate immediately, after any of them is dropped out.

(1)Safety Label Plate





(2)Label Plate of Notices for Use



⚠ Attention

General Rules

To make the truck and you safety, operator should obey these rules below: 1.Only trained and authorized operator shall be permitted to operate the truck. 2.Before starting truck you should check all control and alarm device, if there are

any damaged or objection, you could not operate it until repaired it.

3.When carry the load, the weight should not much overload. The fork shall insert in the load entirely and well proportioned. It is not permitted use only one fork to

load.

4.You should operate the truck smoothly when start, turning, travel, brake and parking. On a slick or wet road, you should decrease speed when turning.

5.Load travel should lower the goods down and tilt the mast backwards.

6.Be carefully when traveled on a grade. If the slope angle is bigger than 10%, travel forward up slope and backward down slope. Never turn sideways and stack load on an incline.

7. Notice the foot parsoners having nothers and the decrease which

to an on an incline.

7. Notice the foot passenger, barrier, pothole and the clearance upside.

8. It is prohibited picking up a man or standing on the fork.

9. No permitted to operate the truck or attachment on other position except the operator's seats.

10. Do not carry the load unpackaged. Be carefully to carry these goods with large.

size.

11.Notice the load not drop from the load bracket for those trucks that overall

maximum lift height is higher than 3 meters. If necessary, make some protective

12.When leaving the truck, you should let the fork down, make the shift lever neutral shut down the engine and cut the power. Parking on a grade, make sure to tighten the brake lever. If necessary, use a block when parking on a grade for a

13.Travel with load as low as possible and tilt back the mast. 14.Before driving over a dock-board or bridge-plate, be sure that it is properly

secured and strong enough to sustain the weight.

15.Make sure that there is no naked flame near the area, never smoke. The driver should not remain seated when adding fuel.

L6.The truck with attachments should be treated as a loaded truck.

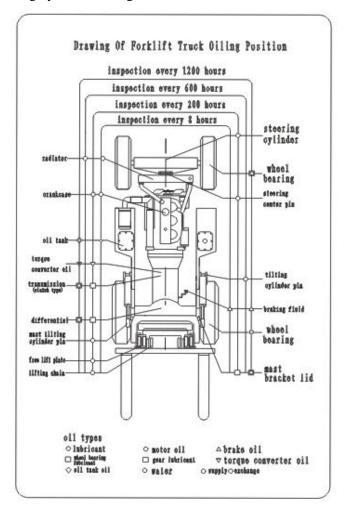
(3) Internal combustion counterbalanced forklift nameplate



⚠ Attention

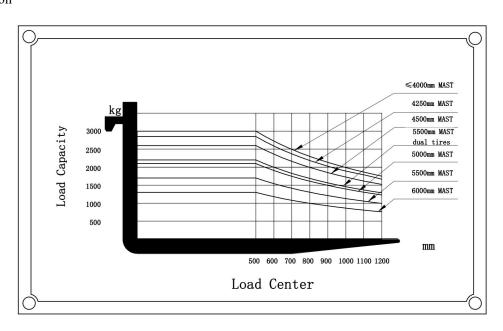
Internal Combustion CE Counterbalance Forklift Truck Model. Type Series No. Power KW Self Weight Kg Tilt Angles (F/R) 0/ Ex-factory. date Attachment (Y/N) Load Center Maximum Fork Height Load Capacity Kg without attachment with attachment mm Kg

(4) Label Plate for Lubricating System Drawing



(5) Label Plate for Load Curve (Demonstration)

⚠ Attention



(6) Label Plate for Essentials of Inspections before Start



Essentials of Operation

- Preparation
 1.The amount of oil and fuel should be normal.
- 2.The amount of water, the gas pressure of the tyre and fastener should be normal.

 Starting Engine

- normal.
 Starting Engine
 1.Remember the position and function of the pedal and handle. Do not depress the inching pedal to brake the powershift forklift. Before starting, please check whether the pedal's free trip is normal; whether the brake pedal can work normally.
 2.Please preheat the engine before starting. (No more than 30 seconds at a time) Please start the engine in no more than 15 seconds at a time. Wait for more than 2 minutes to restart. If the engine can't start three times, it should be started again after checking.
 3.Idling the forklift for 3 to 5 minutes after starting. The meter, lamp and horn should be effective.
 4.The fork and mast should tilt and go up and down smoothly; the handle should reset naturally.
 5.Release the parking brake lever: depress the clutch pedal (or inching pedal), operate the shifting handle, and depress the accelerator pedal slightly to start the forklift. Please check the operation of the brake and steering system when the forklift is running slowly.
 Driving & loading
 1.The clutch (or inching pedal) and shifting handle should be operated first in order to change speed or direction.
 2.Be sure to come to a complete stop before gear shifting.
 3.When working in close quarters or on rough road, be aware of the distance to avoid collision.
 4.When working with a load, weight and dimension of the goods should accord with the load chart.
 5.When working with a load, see that the fork is about 300mm from the ground and the mast tilt back to ensure the safety of the goods. Sudden brake and swerve are prohibited in the process of working.

 After working

- After working
 1.After the truck has been stopped, move the direction lever to neutral position and descend the fork to the ground. Idle the truck for 2 to 3 minutes, then flame out, cut the electricity off and strain the parking brake
- minutes, then hame out, cut the electricity off and strain the parking brake lever.

 2.Check for oil leakage and looseness. Wash the forklift.

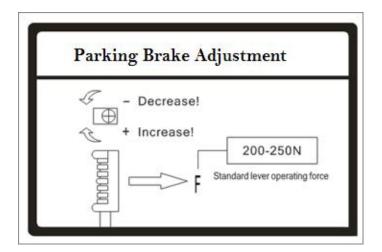
 3.In severe cold environment, please let the chilled water out if antifreeze has not been added to it and carry the cell into the greenhouse.

 4.Check and wash the filter basket weekly. If the oil metamorphoses, please
- change in time.

Thanks for choosing our forklifts!

(7) Label Plate for Parking Brake Adjustment

Attention



(8)Label Plate for Adding Hydraulic Oil





(9)Label Plate for Tire Safety (Pneumatic Tire)





(10)Label Plate for Lifting





(11) Label Plate for No Flushing





(12)Label Plate for Prohibition from Entering Rear Space of Mast





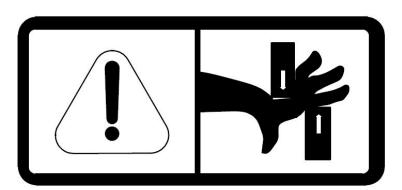
(13) Label Plate for No Manned

⚠ Attention



(14)Label Plate for Attention to Hand Injury

⚠ Warning



(15) Label Plate for Filling Fuel Oil (the left is diesel decal, and the right is gasoline decal) Note:





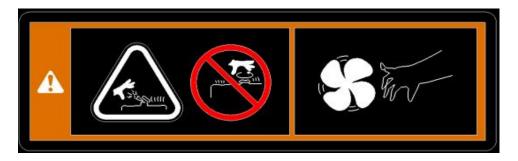
(16) Label Plate for Filling Antifreeze





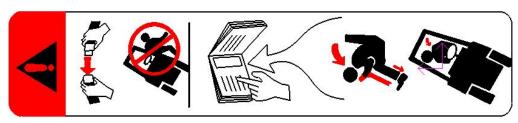
(17) Label Plate for Fan Safety





(18) Label Plate for Anti-collapse

⚠ Warning



(19) Label Plate for Seatbelt

⚠ Attention



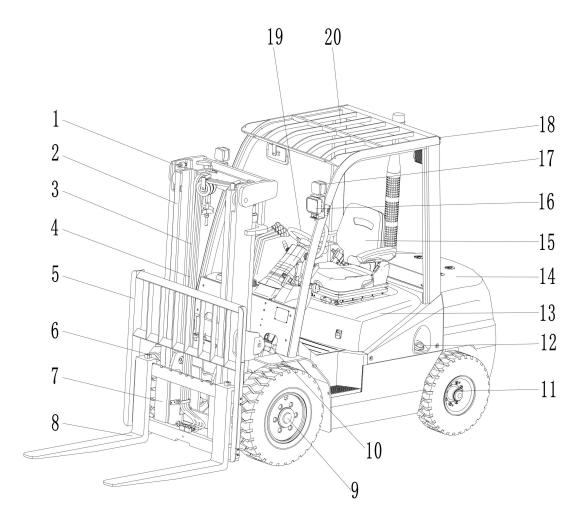
(20) Label Plate for Adding Brake Oil





II Operating Devices and Operating Methods

1. The name of the forklift components



- 1. Outside Mast
- 2. Inside Mast
- 3. Lifting Chain
- 4. Lifting Cylinder
- 5. Backrest
- 6. Fork Locating Pin
- 7. Fork Carriage
- 8. Fork
- 9. Driving Axle
- 10. Tilting Cylinder

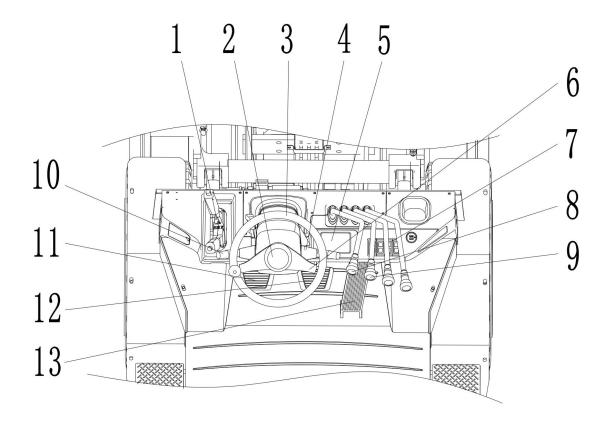
- 11. Steering Axle
- 12. Fuel Tank Cover
- 13. Combustion Engine Cover
- 14. Counterweight Steering
- 15. Driver's Seat
- 16. Front Headlight
- 17. Front Combination Light
- 18. Rear Combination Lamp
- 19. Overhead Guard
- 20. Steering Wheel



- 1. Outside Mast
- 2. Inside Mast
- 3. Lifting Chain
- 4. Lifting Cylinder
- 5. Backrest
- 6. Fork Locating Pin
- 7. Fork Carriage
- 8. Fork
- 9. Driving Axle
- 10. Tilting Cylinder

- 11. Steering Axle
- 12. Fuel Tank Cover
- 13. Combustion Engine Cover
- 14. Counter weight
- 15. Driver's Seat
- 16. Front Headlight
- 17. Front Combination Light
- 18. Rear Combination Lamp
- 19. Overhead Guard
- 20. Steering Wheel

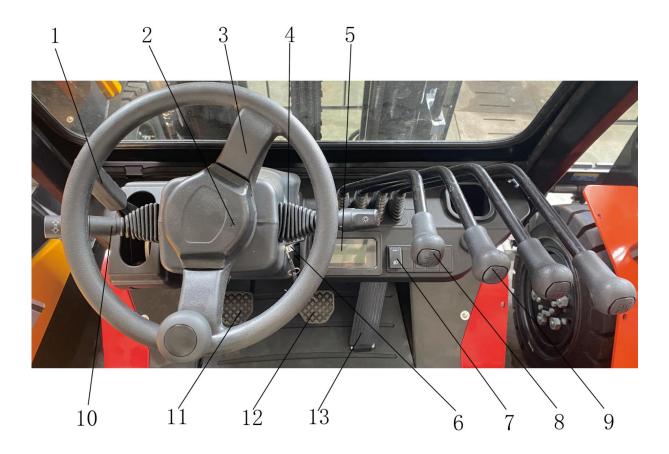
2. Various switches and controls



- 1. Parking Brake Handle
- 2. Horn Pushbutton
- 3. Steering Wheel
- 4. Turn Signal Handle
- 5. Display
- 6. Starter Switch
- 7. Combined Switch

- 8. Lifting Handle
- 9. Tilting Handle
- 10. Forward Backward Handle
- 11. Inching Pedal
- 12. Brake Pedal
- 13. Accelerator Pedal

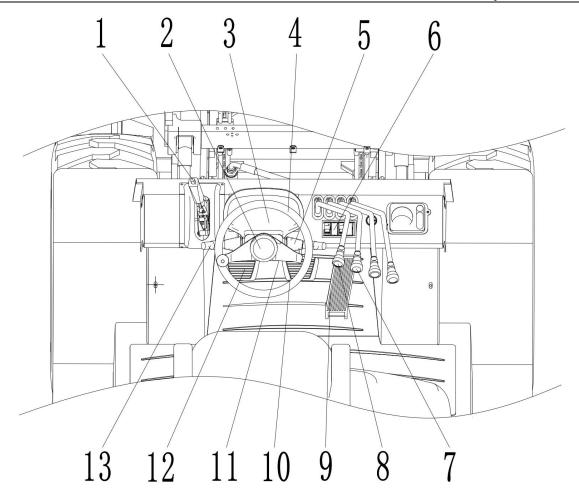
F series internal-combustion forklift



- 1. Parking Brake Handle
- 2. Horn Pushbutton
- 3. Steering Wheel
- 4. Turn Signal Handle
- 5. Display
- 6. Starter Switch
- 7. Combined Switch

- 8. Lifting Handle
- 9. Tilting Handle
- 10. Forward Backward Handle
- 11. Inching Pedal
- 12. Brake Pedal
- 13. Accelerator Pedal

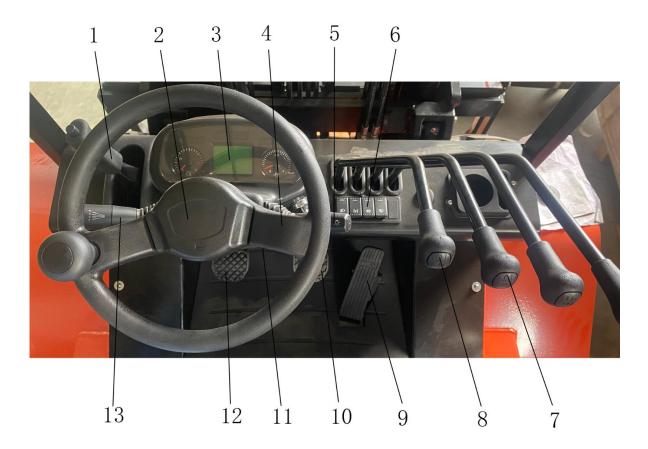
F series internal-combustion forklift



- 1. Parking Brake Handle
- 2. Horn Pushbutton
- 3. Steering Wheel
- 4. Turn Signal Handle
- 5. Display
- 6. Starter Switch
- 7. Combined Switch

- 8. Lifting Handle
- 9. Tilting Handle
- 10. Forward Backward Handle
- 11. Inching Pedal
- 12. Brake Pedal
- 13. Accelerator Pedal

R series internal combustion off-road forklift



- 1. Parking Brake Handle
- 2. Horn Pushbutton
- 3. Steering Wheel
- 4. Turn Signal Handle
- 5. Display
- 6. Starter Switch
- 7. Combined Switch

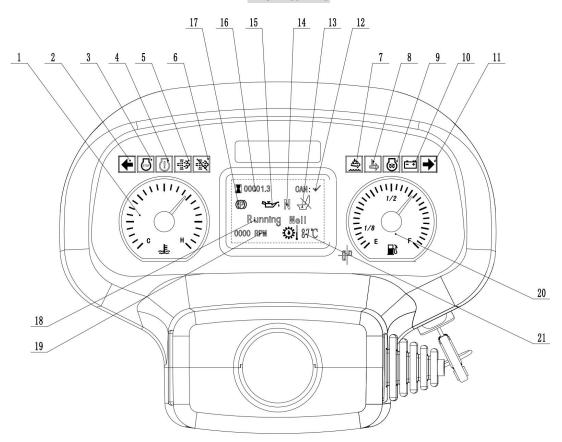
- 8. Lifting Handle
- 9. Tilting Handle
- 10. Forward Backward Handle
- 11. Inching Pedal
- 12. Brake Pedal
- 13. Accelerator Pedal

R series internal combustion off-road forklift

3. LCD (Liquid Crystal Display) Instruments

R series internal combustion off-road forklift

The first kind







1. Water temperature meter, Shows the engine water temperature.



: 2.left turn indicator lamp, Shows the left turn signal lamp of the forklift is working.



: 3.Stop warning light.



: 4.Engine check light.



: 5.DPF regeneration prohibition indicator light.



: 6.DPF prohibit regeneration light.



: 7.Driver alarm system indicates low urea level.



: 8. High exhaust temperature alarm lamp.



: 9.Preheating indicator lamp, said preheating system work.



10. Charging indicator lamp, said the generator do not charge on the battery.



: 11.Right turn indicator lamp, said forklift turn right signal lamp work.



: 12.CAN bus communication.



: 13.Seat indicator light, The person left the seat.



: 14.Display gear state, N said neutral position.



: 15.Oil pressure warning light.



000013: 16.Timer -Total engine working hours.



: 17.Hand brake warning The lamp.

Running Well: 18.Engine status fault code.

0000 RPM : 19.Engine speed.



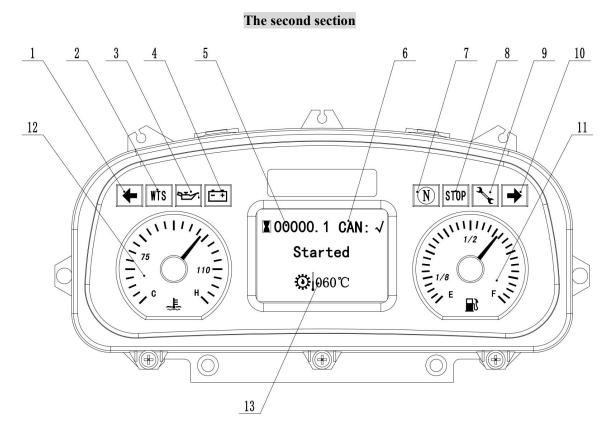
: 20. The fuel gauge, Shows the amount of oil remaining in the fuel tank.



: 21.Torque converter oil temperature sensor.

Remark:

Hour meter and weighing share a digital area, hour meter work when power on, press any key, then display the weight and KG, at the same time, hour meter chart go out .







1.Left turn indicator lamp, said forklift turn left signal lamp work.



: 2.Preheating indicator lamp, said preheating system work.



3.Low oil pressure indicator lamp, show that the engine oil pressure is low.



4. Charging indicator lamp, said the generator do not charge on the battery.

X 00001.3 : 5. Timer - Total engine working hours.

CAN bus communication.



7.Neutral indicator light,N indicates that the forklift direction gear is neutral.



8. Charging indicator lamp, said the generator do not charge on the battery.



9. The fault indicator lamp, show the engine has fault.



10.Right turn indicator lamp, said forklift turn right signal lamp work.



11. The fuel gauge, Shows the amount of oil remaining in the fuel tank.

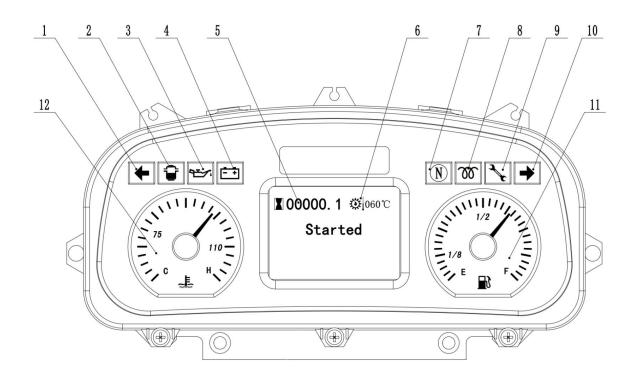


12. Water temperature meter, Shows the engine water temperature.



27 %: 13. Transmission oil temperature warning light. The transmission oil temperature is too high.

The third section







: 1.Left turn indicator lamp, said forklift turn left signal lamp work.



2.Oil-water separation indicator light, The water content in the oil-water separator is too much and requires manual drainage.



3.Low oil pressure indicator lamp, show that the engine oil pressure is low.



4. Charging indicator lamp, said the generator do not charge on the battery.







7. Neutral indicator light, N indicates that the forklift direction gear is neutral.



8.Preheat indicator, indicating that the engine is warming up.



9. The fault indicator lamp, show the engine has fault.



10.Right turn indicator lamp, said forklift turn right signal lamp work.



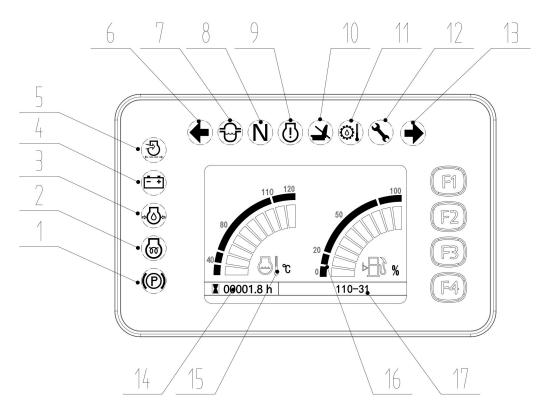
11. The fuel gauge, Shows the amount of oil remaining in the fuel tank.



12. Water temperature meter, Shows the engine water temperature.

F series internal-combustion forklift

The first kind







1. Hand brake warning The lamp.



2.Preheat indicator, indicating that the engine is warming up.



: 3.Low oil pressure indicator lamp, show that the engine oil pressure is low.



: 4.Charging indicator lamp, said the generator do not charge on the battery.



: 5.Air filter clogging indicator lamp,said air filter clogging.



6.Left turn indicator lamp, said forklift turn left signal lamp work.



7.Oil-water separation indicator light, The water content in the oil-water separator is too much and requires manual drainage.



8. Neutral indicator light, N indicates that the forklift direction gear is neutral.



9.Engine check light.



: 10.Seat indicator light, The person left the seat.



: 11.Display the transmission torque converter oil temperature.



: 12. The fault indicator lamp, show the engine has fault.



13.Right turn indicator lamp, said forklift turn right signal lamp work.

■ 00001.8 h : 14.Timer -Total engine working hours.

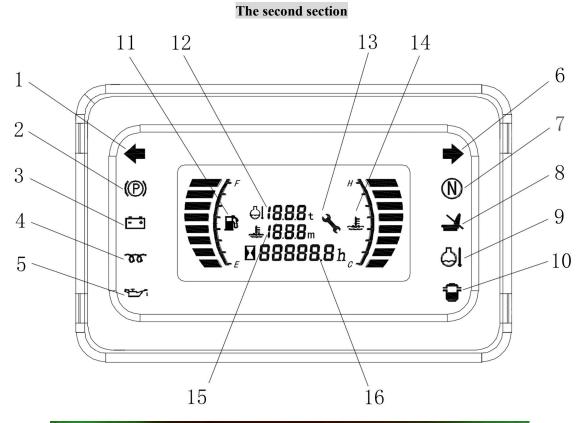


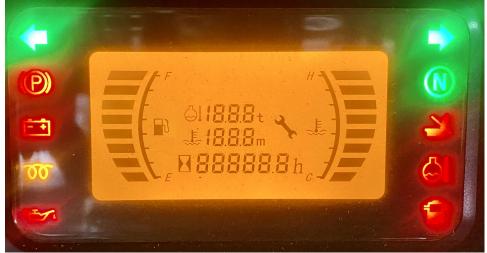
\$7°C: 15. Water temperature meter, Shows the engine water temperature.



16. The fuel gauge, Shows the amount of oil remaining in the fuel tank.

110-31: 17.Fault code.







: 1.Left turn indicator lamp, said forklift turn left signal lamp work.



: 2.Hand brake warning The lamp.



: 3. Charging indicator lamp, said the generator do not charge on the battery.



: 4.Preheat indicator, indicating that the engine is warming up.



: 5.Low oil pressure indicator lamp, show that the engine oil pressure is low.



: 6.Right turn indicator lamp, said forklift turn right signal lamp work.



7. Neutral indicator light, N indicates that the forklift direction gear is neutral.



8.Seat indicator light ,The person left the seat.



9.Transmission oil temperature indicator.



: 10.Oil-water separation indicator light, The water content in the oil-water separator is too much and requires manual drainage.



: 11.The fuel gauge, Shows the amount of oil remaining in the fuel tank.

12. Timer -Total engine working hours.



: 13. The fault indicator lamp, show the engine has fault.



: 14. Water temperature meter, Shows the engine water temperature.

4. Switches Part

Light Switch

△ Attention

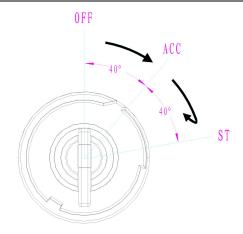
On/Off of this light is irrelevant with the position of key switch, and so pay attention not to forget turning off the light.

(1) Preheating start switch

Before the engine starting, the gear lever should in the neutral position, at this point, the display shows neutral (N), otherwise the engine will not be able to started. This is because the forklift has the start-up protection function, to prevent the risk.

The key switch is under 'OFF', insert/pull out the key, when the engine started, return the key switch to 'OFF', the engine will automatically shut down.

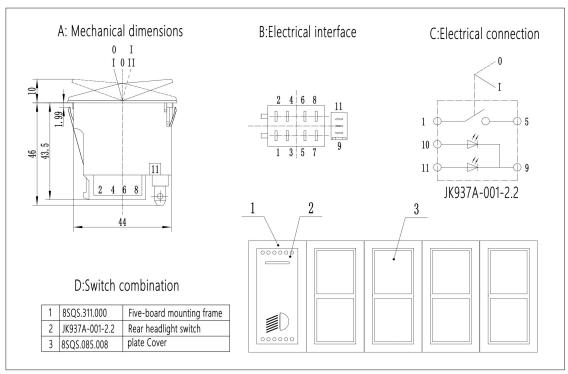
Turn the key switch to ACC, the forklift electrify, preheating system works automatically, heating the air, preheating indicator lamp is light up, indicator the preheating system state. After $8 \sim 12$ s, preheating work completed, preheating system automatically stop working, and turn the key switch to ST , start the engine. After the engine starting, loosen the key switch, key switch is reset to the ACC.

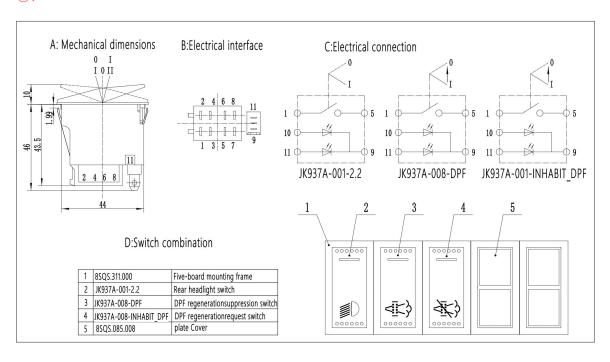


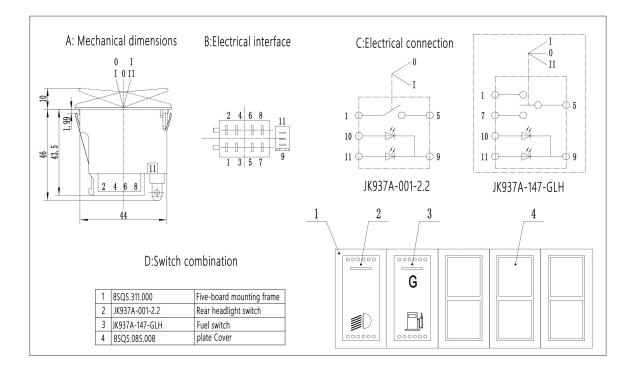
Note:

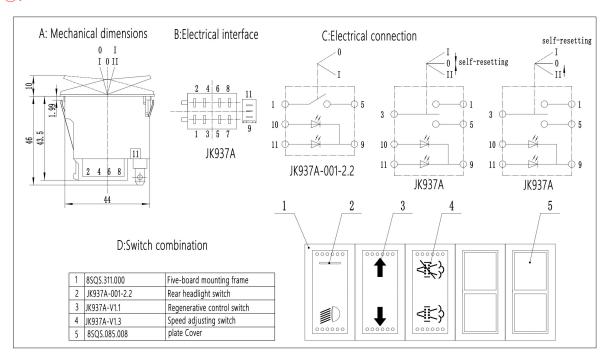
- 1. The engine stopped, please do not put the key switch at the ACC, so as not to cause the battery power loss;
 - 2. The engine is running, please do not turn the key switch to ST, to prevent the damage of starter motor;
- 3. The startup, a start time is not more than 5 s, the intervals of 2 start time should be more than 120 s, if still can't start the engine for continued 3 times, should first find out the reason and start.

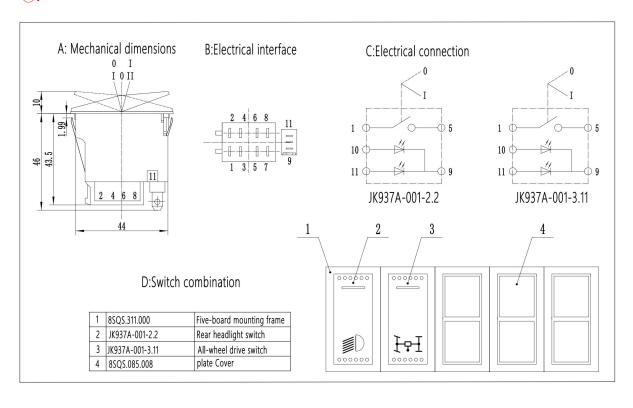
(2) rocker switch

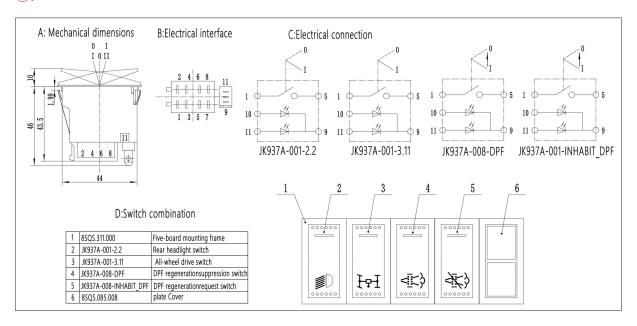


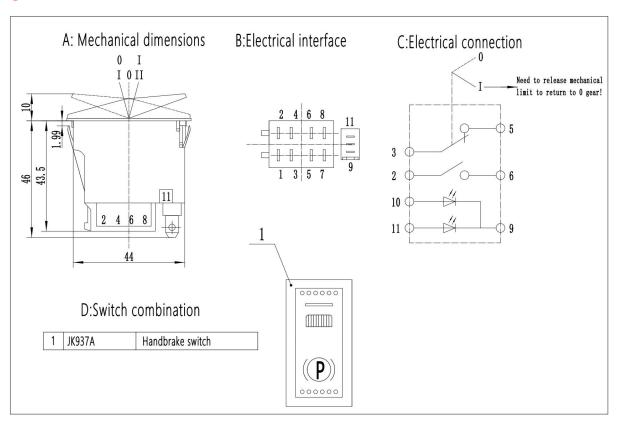


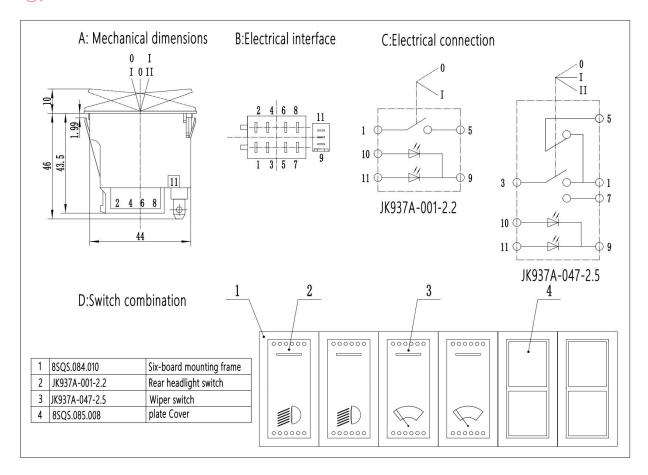












(3) The light and sound alarm system

The system includes a variety of lighting equipment, lights, horn, reversing buzzer, etc.

Combination lamp: combination lights include head lamp (55 w), and width lamp (5 w), the turn signal lamp (21 w) of three parts;

Three color taillights: three color taillights include the turn signal lamp (21 w), and width lamp (5 w), the brake lamp (21 w), reversing light (10 w) of four parts;

Reversing light (55 w);

Warning lights (2 w).

5. Control Part

(1)Steering Wheel

The forklift truck will turn right, when steering wheel is turned rightward, while the truck turns left, when steering wheel is turned leftward. The rear part of forklift truck is able to swing outwards.



F series internal-combustion forklift



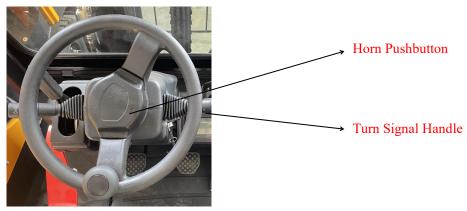
R series internal combustion off-road forklif

∆ Warning

The forklift's engine powers the hydraulic steering unit and steering is difficult when the engine is off. To re-hydraulic steering, you must restart the engine.

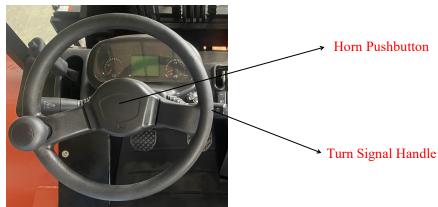
(2) Horn Pushbutton





When press the rubber cover in the centre of the steering wheel, bumming sounds can be produced. Even if the start switch is in "OFF" position, the horn can still produce sounds.

R series internal combustion off-road forklif



The center of the steering wheel button is the horn push button, when pushed, the horn will be honking.

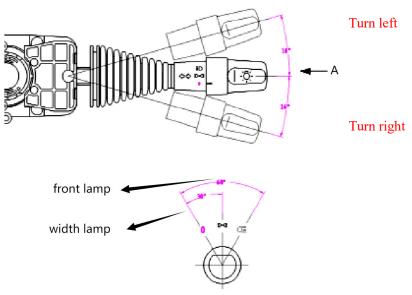
(3) Turn Signal Handle

This handle represents turn directions of forklift truck. When the handle is in turn position, the turn signal indicator begins to flash.

R	Turn right indicator		
N	Neutral position		
L	Turn left indicator		

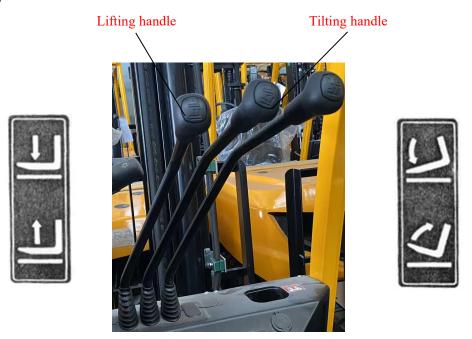
Attention

· Turn signal handle cannot automatically return back to the neutral position like that of in common car, it needs manual reset.



internal-combustion forklift truck turn signal handle

(4) Lifting Control Rod



Pushing/pulling this handle forward or backward for the fork to be able to fall and rise. The rising speed is controlled by the back tip angle of the handle and the accelerator pedal under the step angle, while the falling speed is controlled by the front tip angle of the handle.

(5) Tilting Control Rod



Tilt of mast can be achieved through pushing/pulling the tilting handle forward or backward. Push forward this handle for mast to tip forward, and pull backward this handle for mast to tip backward. Tipping speed depends on the tip angle of the handle and the accelerator pedal under the step angle.

△ Attention

The multi-way valve carries front tipping auto-locking valve, and the mast is unable to tip forward even if the tipping handle is pushed forward, when electric circuit is disconnected.

(6)Parking Brake Control Handle



In parking brake, this handle acts on the front wheel through back tip, for brake to generate braking force. Push forward the handle to loosen the brake.

Micro switch is available on the left side of hand brake, and pulling tight the handle may invalidate the operation.

∆ Warning

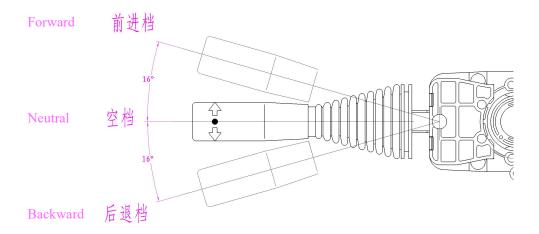
Make sure to fill up the wheels firmly using firm wedge blocks, if the forklift truck has to be parked on a ramp.

(7) Hydraulic Transmission Forklift Truck

Forward – backward lever



F	Forward			
N	Neutral			
R	Backward			

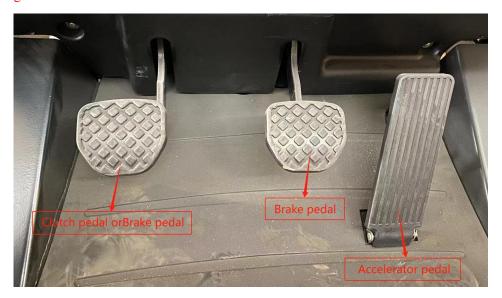


The Electro-hydraulic Transmission drive is controlled by a combination switch mounted on the steering column, and each forward, backward have two speed gears. It is necessary to park the forklift completely before changing gears. When moving the lever for backward gear, the reversing lights will be on.

Attention

•The lever must be turned to neutral position before starting the engine.

(8) Driving brake



Refer to the above figure: clutch pedal or inching pedal (left), brake pedal (middle) and accelerator pedal (right).

Mechanical Transmission Forklift

Clutch pedal

The purpose of installing the clutch is to control the connected or separated status between engine and transmission. If stepping the clutch pedal, the engine is separated from transmission, while loosening the clutch pedal, the power can be transmitted from engine to transmission via clutch.

⚠ Attention

·It is not allowed to operate the forklift truck when the clutch is in semi-connection and semi-separation condition.

Hydraulic Transmission Forklift Truck

Inching pedal

When stepping the inching pedal, oil pressure in hydraulic clutch decreases (needle of oil pressure gauge points to the left side), and the operator is allowed to give inching operation. When running the lifting system at high speed condition, this pedal can be used to move the forklift truck slowly.

When this pedal is stepped completely, it can also be used as a brake pedal.

⚠ Danger

·When start the engine on downhill or slope road condition, it is necessary to use brake pedal rather than inching pedal. If using inching pedal on downhill road condition, the vehicle will descend under the action of the inertia due to the brake control has no effect on the engine, therefore the brake control of the vehicle is bad. If using inching pedal when starting on slope road condition, the vehicle will coast down the slope under the action of the inertia, and it is very dangerous.

Accelerator pedal Stepping the accelerator pedal can improve running speed of the engine, while releasing this pedal, the engine will run at idle speed.

Brake pedal

Pressing the brake pedal can reduce the speed or stop the vehicle, meanwhile, the brake lamp lights up.

6. Forklift Body Part

(1)Seat

Install a seat suitable for the operator in the forklift.

(2) Seat Adjusting Lever

Move the seat adjusting lever rightwards, to adjust seat to a position comfortable for sitting and easy for operation. Prior to operation, operator shall adjust the seat properly and ensure that the seat has been reliably locked up.

(3)Overhead Guard





F series internal-combustion forklift truck

R series internal combustion off-road forklif

The overhead guard is used to protect operator from being injured by falling objects from above. It must have enough anti-impaction strength. It is forbidden to remove or rebuild it for use. If it is found to be loose, it must be fastened in time.

(4) Backrest

Attention

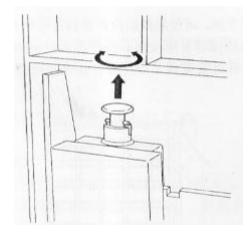
•The backrest is an important safety part which can prevent the goods loaded on the fork sliding to the operator. It is forbidden to remove or rebuild it for use. If it is found to be loose, it must be fastened in time.

(5) Hood of internal combustion engine

The hood of internal combustion engine can be opened completely to facilitate maintenance services. If you want to open the hood of internal combustion engine, just pull up the latch on internal combustion engine hood (1-x5t forklift hood lock switch on the hood, 5-x12t hood lock switch on the instrument rack), with little force, the internal combustion engine hood can be opened with the help of the spring in internal combustion engine hood. If you want to close the hood of internal combustion engine, just press the front part of the hood down until the latch is in locking condition(Gas spring with self-locking function, the gas spring must be unlocked before closing the hood).

⚠ Warning

·When you close the hood of internal combustion engine, pay attention not to stick your fingers in it.



(6) Positioning pin of the fork

The positioning pin of the fork can lock the fork in a fixed position. The clearance of the fork can be adjusted by means of pulling the positioning pin up and turning 1/4 circle, and fixing it in required position. The adjustment of fork clearance should be subject to the requirements of the specified loading goods.

⚠ Warning

- ·After placing the fork in a position symmetric to the centerline of the vehicle, lock the positioning pin.
- (7) Towing pin

Towing pin is applicable only to the following conditions:

- ·Use when the forklift truck is in trouble condition and cannot continue to drive (such as wheel's sinking into the side ditch);
 - ·Load or unload goods to the forklift truck for transportation.

Attention

·It is strictly forbidden to use it in towing or towed operation.

(8) Safety pedal and safety handle



Safety pedals are equipped in both sides of the vehicle body. Safety handle is located on the left support of overhead guard. It is necessary to use safety pedals and safety handle when getting on or off the vehicle (Need to get on and off the truck from the left).

(9) Fuse box



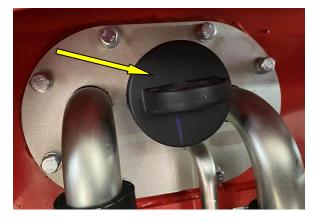
The fuse box is installed in the electrical box.

(10) Brake fluid reservoir



The brake fluid reservoir is installed in the left side of inner surface of the instrument panel. The reservoir is semi-transparent so that we can observe the level of the brake fluid from the outside.

(11) Cover of the hydraulic oil tank



Cover of the hydraulic oil tank is installed in the right side of the inner engine hood ,Hydraulic oil is injected from this port.

(12) Fuel tank cap



Fuel tank cap is located on the left rear side of the vehicle body. To open it, just turn it in counterclockwise direction.

⚠ Attention

·A vent hole is located in fuel tank cap so that the air can enter into the fuel tank. If the vent hole is blocked, some troubles will occur in fuel system. When filling fuel each time, check whether the vent hole is in good status.

⚠ Attention

—Fill fuel—

Stop the forklift, shut down the engine and place the parking brake lever in lock position. Make sure there are no open fire and no smoking around. The driver should not stay in vehicle forklift when filling fuel.

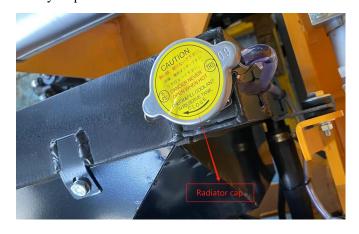
·It is necessary to cover the cap after filling fuel. A loose cap may cause fuel leakage or start a fire under poor condition.

·Before starting the engine, make sure the cap of the fuel tank is covered tightly and there is no fuel leakage on or around the vehicle.

·When checking the fuel level, be mindful not to use open fire such as fire from match or cigarette lighter.

(13) Water tank cap

Water tank cap is located in the lower part of rear cover plate of the internal combustion engine. It is unnecessary to open this cap for daily inspection.



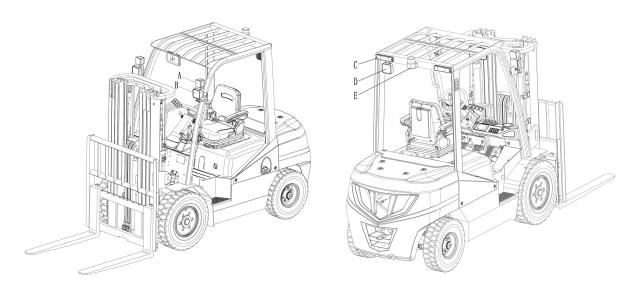
(14) Water tank

Coolant recovery tank is located near the battery.

⚠ Warning

•Do not open water tank cap if the temperature of the engine is too high. Cover the tank cap with a cloth, Turn left slightly to reduce the pressure in the tank, be careful of opening the tank pressure cover. Open the cap under pressure, a sudden pressure release will produce steam flow, causing personal injury. Slowly release the cap to allow steam to escape, then unscrew the cap. Do not wear gloves to prevent scalding from burning hot water.

(15) Lamps



The front part of the vehicle is equipped with front combination lamp A (turn signal lamp and width lamp) and two headlamps B.

The rear part of the vehicle is equipped with rear combination lamps including Tricolor taillights C, headlamp D and annunciation lamp E.





- ① Combination lamp: head lamp (55W), width lamp (5W), turn signal lamp (21W)
- ② Three color taillights include: the turn signal lamp (21W), width lamp (5W), brake lamp (21W), reversing light (10W);
- 3 Warning light (2W) .

⚠ Attention

·Check the working conditions of lamps. If there is any lamp burn, lampshade damage or dirt, replace or repair it immediately.

·If it is required to install a rear illuminating lamp, contact sales service department of our company, we will send technician to install it for you.

(16) Rear-view mirror A

Attention

- ·Keep the surface of rear-view mirror clean.
- ·Ensure a good rear view, adjust the surface of rear-view mirror to a position.



III Driving and Operation

Some notices for correct driving operation are introduced here, in order for your forklift to maintain good performance, safe use, and frequent operation.

1. Use of New Forklift

The service life of your forklift depends on use at the time when the forklift is new. In the early stage of 200-h operation, please pay high attention to the following items:

⚠ Attention

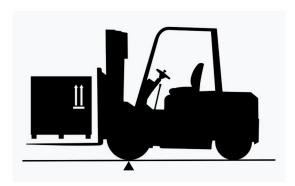
- . No matter what season, warm up machine before operation.
- ·Timely practical maintenance.
- · Avoid harsh operation, and avoid unreasonable use.
- · Add lubricating oil and lubricating grease timely, and replace oil timely.
- · Strictly execute the Battery Service Manual.

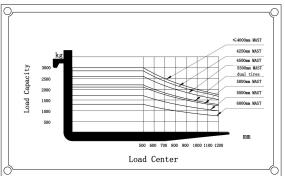
2. Relationship between Load and Forklift Stability

Within the load curve, the forklift truck takes the center of front wheel as pivot point, to maintain the mutual balance for the load on truck body and fork. Pay attention to the load amount and the load center, to maintain the truck stability.

⚠ Warning

· If it goes beyond the load curve, danger exists for the rear wheel to be raised and under an atrocious situation, as the forklift truck may possibly turn over, leading to severe accident. As indicated in the figure, the same result exists with cargo closed to fork tip and increase in cargo weight, while under such circumstances, the loading capacity shall be reduced along with.





3. Load Center and Load Curve

Load center is the distance from the front end face of fork to the cargo center of gravity. The abovementioned load curve diagram has indicated the relationship between the truck load center and the allowable load quantity (load allowable for use). The data plate is pasted on the forklift, and it shall be replaced with a new one, if damaged or lost.

⚠ Warning

- · If the truck is equipped with attachments for disposal of cargos, such as side moving device, bucket, or rotating fork, its load allowable for use lower than the corresponding standard trucks (without any attachment) is attributed to the following reasons:
 - a) Load for weight of equivalent attachments is reduced.
- b) The load allowable for use is reduced in the same principle, as the length of attachments has aroused the load center to move forward.
- · The installation of attachments has aroused the load center to move forward, called "Loss of Load Center".
 - · Avoid exceeding the load allowable for use of load curve pasted on truck or attachments.

4. Stability of Forklift

The standard for stability of forklift truck is specified in ISO or other standards. However the stabilities described in these standards are not applicable to all the operating status, while the stabilities of forklift truck vary for different operating status.

Under following operating status, the maximum stability is ensured:

- a) The ground is level and firm.
- b) The truck is operated under standard no-load status or loaded status.

Standard No-Load Status: Fork or other load-bearing accessories 300mm off ground, and mast free from load and properly back tipped

Standard Loaded Status: For or other load-bearing accessories 300mm off ground, with the load quantity allowable for use at the standard load center, and the mast properly back tipped

⚠ Warning

· During cargo loading-unloading, try as much as possible to tip forward or backward at a minimum degree. Unless the load is firmly fixed or rigid cargo rack is used, or the lifting height is low, and otherwise avoid tipping forward.

5. Conveyance and Loading-Unloading of Forklift

(1)Conveyance of Forklift

Attention

- · When cargo truck is used for conveyance, in order not for the forklift truck to move about inside the carriage, the wheels shall be stopped, and the forklift truck shall be properly fixed using rope, etc.
- · Attention shall be paid to the whole length, whole width, and whole height, when forklift truck is loaded, unloaded as well as conveyed on highways, and relevant legal regulations shall be observed.
 - (2)Loading-Unloading of Forklift Truck

Attention

- · Please use lap plate typical of enough length, width, and strength.
- · Pull up the parking brake of the cargo truck practically and effective, and the wheels shall be stopped.
- · The lap plate shall be practically fixed at the center of carriage, and grease shall not be attached on the lap plate.
- · The left and right heights of lap plate shall be the same, to facilitate a stable operation of vehicle when forklift truck is loaded-unloaded.
- · In order to prevent danger, please don't change direction or perform any traverse movement on the lap plate.
- · When forklift truck is loaded onto cargo truck, reversing operation shall be performed slowly, in order for the left and right tires to come aboard at the same time.
 - (3)Lifting of Forklift Truck

⚠ Attention

- · Forklift shall be lifted by professionals·
- .Rope shall be used to hook up the designated lifting position on forklift.
- · The rope used shall have enough bearing capacity.
- · Designated lifting positions are also available for the detachable parts and components on forklift.

6. Starting Forklift Truck

- (1)Before Starting Forklift Truck
- · Prior to truck operation, it shall be examined as to whether or not all the control devices and warning devices are under normal operation, and it is prohibited to start forklift truck, if there is any damage or failure which has not yet been corrected.
 - Check the security situation around the vehicle.
 - a) Start Gasoline Engine

• Cooler

Step the accelerator pedal 2-3 times and release it by means of foot getting away from it, return the preheating start switch to "START" position and start the engine, and then release the switch key after starting the engine.

· Heat engine

Step a half and hold the accelerator pedal, return the preheating start switch to "START" position and start the engine, and then release the switch key after starting the engine.

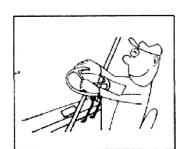
Attention

·When warmly start the engine, do not completely press the accelerator pedal, for this may cause hardness to start. Meanwhile, step the accelerator pedal for several times may also cause hardness to start.

7. Running

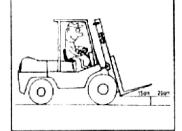
(1)Operator's Posture

Hold the handgrip of steering wheel using left hand, and the right hand is gently put up on the steering wheel and get ready for loading-unloading operation.

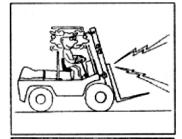


(2)Basic Running Status

The bottom surface of fork is off ground by 150~200mm, and the mast tips back in place.



Look around the forklift truck, examine the safety. Send out signal prior to start of truck.



Hydraulic Transmission Forklift Truck

Step the brake pedal and operate forward – backward gear shift knob



Release the parking brake handle.

Release the brake pedal and step the accelerator pedal, the vehicle begins to run.



(3) Gear shift

Hydraulic Transmission Forklift Truck

- a) Stop the vehicle before changing the travel direction of the vehicle.
- (4) Deceleration

Hydraulic Transmission Forklift Truck

Slightly loosen the accelerator pedal, and step the brake pedal if necessary.

⚠ Warning

The truck must be decelerated

- · At crossroads
- · In crowded places
- · On rough grounds and other rugged surfaces
- · approaching cargo or obstacle
- (3)Steering

Different from normal vehicles, the steering wheel of forklift truck is mounted in the rear part, which allows the rear part to rotate outwards during steering. Slow down the truck, and steer the direction towards the side to be turned, and the steering wheel will rotate somewhat beforehand compared with the truck of front-wheel turning.

(4)Stopping or Parking

Decelerate, push down the brake pedal for truck to stop, and place the reversing handle on the neutral gear.

⚠ Attention

Parking: Park the truck in the place where traffic is not hindered, and

- a) Pull up the handle for parking brake.
- b) Drop the fork to ground.
- c) Turn the key switch to "OFF" position, and press the emergency power disconnecting switch.
- d) Take off the key and keep it properly.

⚠ Warning

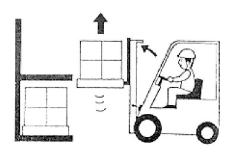
- · Safety Parking
- a)Truck to be parked on a level ground It is the best to park the truck in a spacious place, and if it has to be parked on a slope, park the truck horizontally on the slope, and stop the wheels using wedge blocks, to prevent accidental downslide.
- b) Truck shall be parked in a designated area or a place where traffic is not hindered, and labels or signal lights may be set around the truck, if required.
- c) Truck shall be parked on a firm and hard ground, and it is to be avoided to park the truck on a loose and soft muddy land or a rather slippery pavement.
- d) In the case when lifting system is damaged, and the fork fails to drop on ground, hang a warning flag on the end of the fork, and park the truck in a place where traffic is not hindered.
 - (7) Recovery Service of Failure Forklift Truck

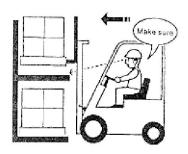
⚠ Attention

· If failure occurs with forklift truck during operation, the truck shall be dragged away timely for repair, to avoid hindering the operation of other vehicle and personnel.

8. Loading

- (1) The spacing of fork shall be as large as possible, for a good traverse stability.
- (2) The forklift truck and the cargo shall be aligned, when for inserts into pallet or directly into cargo.
- (3) The fork must be inserted in parallel, relative to the pallet.
- (4)The fork shall be fully inserted, up to the root of the fork.
- (5)Cargo Lifting
- a) Lift cargo firstly off ground by 5-10cm, and confirm whether or not cargo is steady.
- b) Then, tip the mast backward. Lift the cargo off ground by 150-200mm, and then begin running.
- (6)There is a hindrance when bulky cargo is conveyed, and the truck shall reversely run, except for climbing a slope.





⚠ Attention

- · The loading direction used for fork shall not be reverse to the design loading direction.
- · It is not allowed for fork to carry cargo alone.
- · It is not allowed for fork to be used to drag cargo.
- · It is not allowed for all the parts of fork to be welded.

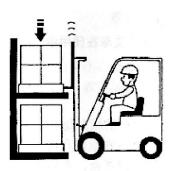
9. Stacking

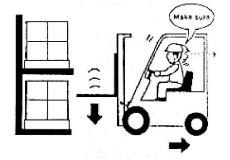
⚠ Attention

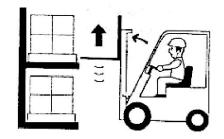
- · The following items shall be examined, before operation of forklift truck starts:
- a) Ensure that there is no cargo to fall or damaged cargo in the loading area.
- b) Ensure that there is no object and cargo stack that may hinder safety.

Stacking shall be performed according to the Following procedure:

- (1) Run at a decelerated speed when the stacking area is approached.
- (2)Park the truck in front of the stacking area.
- (3)Examine whether or not it is safe around the stacking area.
- (4)Adjust the position of forklift truck, for forklift truck to be located in front of the position where the cargo is place in the stacking area.
- (5) The mast is vertical to the ground and the nosing fork exceeds to height of stacked cargo.
- (6)Examine the stacking position and run forward, to park the truck at a proper position.







(7)Ensure that cargo is above the cargo stacking position. Slowly drop the fork, and ensure that cargo has bee properly placed.

- Notes
 - ·When cargo is not completely placed on rack or bearer:
 - a) Lower the cargo until the fork no longer bears the weight.
 - b) Run the forklift truck backwards by 1/4 length of the fork.
- c) Then lift the fork by 50-100mm, move the truck forward and then place the cargo on a proper stacking position.
- (8)Observe the space behind the forklift truck, and run the truck backward to avoid bump of fork and pallet into each other.
 - (9)Make sure that the front part of fork has left the Cargo or pallet, and lower the fork to facilitate running.

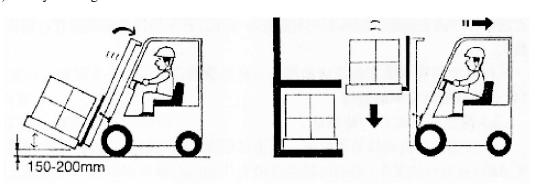
10. Unstacking

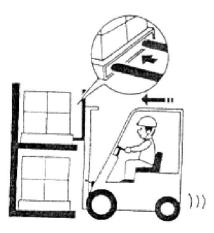
Unstacking shall be performed in the following procedure:

- (1)It is required to run at a decelerated speed when the truck approaches the cargo to be conveyed.
- (2)Park the truck in front of the cargo (30cm distance between cargo and fork tip).
 - (3) Adjust the position of forklift truck in front of the cargo.
 - (4)Ensure that no overloading will happen for the cargo.
 - (5) The mast is vertical to the ground.
- (6)Observe the fork position and move the forklift truck forward, until the fork is completely inserted into pallet.



- · When it is difficult for fork to be completely inserted into pallet:
- a) Insert a length 3/4 of the fork and raise one point of the pallet (50-100mm).
- b) Insert the fork completely into the pallet.
- (7) After fork is inserted into pallet, raise the pallet (50-100mm).
- (8)Observe the space around and move the forklift truck until the cargo is lowered.
- (9)Drop the cargo to off ground by 150-200mm.
- (10) Tip the mast backwards to ensure the stability of cargo.
- (11)Convey the cargo to the destination.





11. Storage

(1)Before Storage

The forklift truck shall be thoroughly cleaned, and examined according to the following procedure, before it is stored:

- a) Clean and remove the oil and grease attached on the truck body using cloth and clear water, as per requirement.
- b) When truck body is cleaned, examine the overall situation of the vehicle, and it is especially required to examine whether or not the vehicle body is sunken or damaged, whether or not tire is worn through, and whether or not iron nail or stone is embedded inside the tire tread pattern.
 - c) Fulfill the oil tank with the specified oil
 - d) Examine whether or not oil leakage exists.
 - e) Add lubricating grease as per requirement.
- f) Examine whether or not the nuts for wheel hub and the jointing surface of cylinder piston rod are loosened, and whether or not bruise and draw mark exist on the surface of piston rod.
 - g) Examine whether or not the rotation for roller of mast is smooth.
 - h) Uplift the lifting cylinder to the top, and allow the cylinder to be filled up with oil.
- i) In the winter or cold season, the long-acting antifreeze does not need to be released, while the cooling water should be exhausted.

⚠ Warning

- · So long as it is found that the forklift needs to be repaired, it ceases to be effective, or it is confronted with unsafe factors, the situation shall be reported to managerial personnel, and the forklift truck shall be stopped for use until it recovers to safe status.
 - (2)Routine Storage
 - a) Park the forklift truck in the designated place, and fill up the wheels using wedge blocks.
 - b) Turn the gear-shift handle to the neutral position, and pull up the parking brake handle.
- c) Turn the key switch to "OFF" position, operate the control rod for multi-way valve for a number of times, and release the remaining pressure in the cylinder and the pipeline.
 - d) Take off the key and have it placed and kept in a safe place.
 - (3)Long-range Storage

Following service and examination items shall be performed based on the service for "Routine Storage":

- a) Park the truck in a relatively high and hard ground, in consideration about rainy season.
- b) Remove the battery from on the forklift truck. Even if the forklift truck is parked outdoors or indoors, the battery shall be placed in a dry, shady, and cool place, if the place is wet and hot, to be charged once every month.
- c) Coat the antirust oil to the exposed parts such as cylinder piston rod and the shafts that may possibly be rusted.
 - d) Cover the parts and components liable to be affected with damp.
- e) The forklift shall be operated at least once a week. The oil and grease on piston rod and shafts shall be removed and the power supply shall be turned on, to allow the forklift to operate forward and backward at a slow speed. Operate the control lever several times to check the mast performance.
 - f) It is avoided to park the forklift truck on such loose and soft pavements of bitumen in summer.

- (4)Operation of Forklift Truck after Long-range Storage
- a) Remove the antirust oil for the exposed parts.
- b) Remove the extraneous substance and water in hydraulic oil tank.
- c) Charge the battery, mount it on the forklift truck, and connect with the lead wire of battery.
- d) Carefully examine everything prior to start.
- e) Add the coolant the required liquid level.
- f) Charge the battery and load it onto the forklift and connect with the battery leads.
- g) Careful inspection before starting.
- h) Preheat forklift.

IV Regular Examination and Maintenance

A comprehensive examination of the forklift truck in advance may avoid truck failure generation and inability to reach its due service life. The number of hours listed in the Regular Maintenance Timetable is determined, based on 8-hour work a day and 200-hour work a month for the forklift truck.

Detailed records shall be kept after examination, and the records shall be retained for 3 years.



- · Only Professional can maintain and repair forklift.
- · Daily and monthly examination and maintenance may be accomplished by operators themselves.

1. Examination Requirements

- (1)Only authentic parts and components are used.
- (2)Only authentic or designated oils and greases are used.
- (3)Clean up the oil filler port and grease nipple using brush or cleaning cloth prior to oil or grease addition.
- (4) The forklift shall be parked on a level ground for examination of oil level and oil addition.
- (5) Prevention, service, and maintenance shall be regularly performed, and attention shall be paid not to injure yourself.
- (6)In the case when you have to work on the listed fork and under the attachments, stay pole shall be used to support the fork or the attachment, to prevent downslide of fork and inner mast.
- (7)It shall be reported to the managerial personnel, if any place of damage or failure is found, and it is prohibited to use this forklift truck before it is repaired.

2. Examination Items

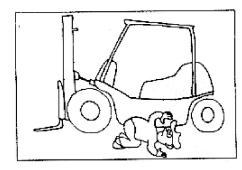
(1)Examination for Leakage of Hydraulic Oil and Transmission Case Oil

Examine whether or not oil leakage exists with joint of hydraulic pipe or driving system, and examination may be performed through touch using hand or visually.

Check whether there are impurities in the fuel or not.



• If fuel leak is discovered before operations, do not start the vehicle, and exclude the leakage before starting the engine.



(2) Examination of tire Air Pressure (Pneumatic tire)

6636







LowPressure

Normal

High Pressure

Examine the status of tires. Too low air pressure may reduce the service life of tire, and increase fuel consumption. Different air pressures for left and right tire or damage of tire may cause different steering forces. Tire standard air pressure:

Capacity Tire pressure	1-1.8t	2-2.5t	3-3.5t	3.8-x4t	4-x5t	5-7t	8-10t	x12t
Front tire (KPa)	790	860	970	930	930	830	760	910
Rear tire(KPa)	1000	860	790	790	860	830	760	910

Screw off the valve cap counterclockwise, and use barometer to measure air pressure of tire. Adjust the pressure to specified value if required, and screw on the lid cap after it is confirmed that there is no air leakage.

Examine whether or not damage exists with the surface of tire connected with ground or its side face, and whether or not wheel rim is distorted.

As a very high air pressure is required by tire of forklift truck to bear a heavy load, any extremely tiny distortion of wheel rim or damage of tire surface connected with ground may both cause accident.

⚠ Warning

- · After tire and rim have been assembled, all the bolts and nuts shall be tightened to the specified torques, before it is allowed for tire to be charged, and the charge tire shall be provided with expansion energy. Tire air pressure shall not exceed the specified value.
- · When air compressor is used for air charge, first of all the pressure shall be properly adjusted. As the maximum output of pressure for air compressor is very high, and it may cause severe accident if it is improperly adjusted.
 - (3) Examination of Wheel Hub Nut Torque

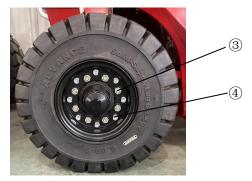
Examine whether or not the hub nut torque is correct.

All the wheel hub nuts shall be tightened to the specified torques.

1-1.8t:150-175N.m

2-10t:480-560 N.m, x12T: 560-650 N.m



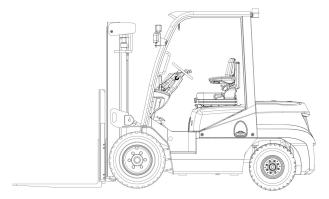


① Wheel Hub Nuts ② Driving Axle Half Shaft Bolts ③ Rear Wheel Hub Bolts ④ Rear Wheel Hub Nut

Attention

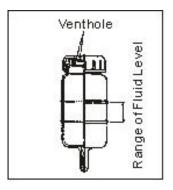
- · When wheel hub nut is detached, never demount the separate wheel hub bolt by mistake.
- · It is very dangerous for wheel hub nut to be loosened. In case it is loosened, the wheel may drop out, leading to tip over of the forklift.

(4)Examination of Overhead Guard



The overhead guard plays a protective function, and it shall be ensured that it is firmly mounted and all the structural components are firm.

(5)Examination of Brake Fluid Level



Examine the level of brake fluid reservoir, and the fluid level shall be between the two cases. It shall be avoided for dust or water to enter into fluid reservoir, during addition.

(6) Coolant Level Inspection



Check the liquid level of the coolant recovery tank. The liquid level should be in a place between lower and upper scale marks. Add coolant if necessary.

(7) Engine Oil Level Inspection

Engine oil level gauge is located on the left side of the engine, draw the oil level gauge out and insert it again after cleaning the ulnar head to check whether the oil level is located between two scale lines.

(8) Fan Belt Tension Level Inspection

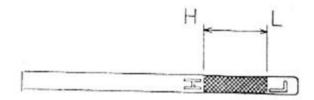
Check the tension of the fan belt and whether it is damaged by means of pressing the middle part of the belt between the water pump and generator with thumb

A Warning

- ·The engine must be turned off when checking the tension of the fan belt.
- (9)Examination of Rear Combination Light

Examine whether or not damage or soilage exists with the rear combination light (tail light, parking light, and reversing light).

(10)Level of Hydraulic Oil



Examine the hydraulic oil level using oil leveler, pull out the oil leveler and wipe it up. Re-insert it and then pull it out, to see whether or not the oil level is located between the high and low two scale lines.

Attention

· Power supply shall be turned off, the fork shall be dropped to the ground, and the forklift truck shall be parked on a level surface, when oil level is examined.

(11Pipeline of Cylinder

Visually examine whether or not oil leak exists with hydraulic pipeline, as well as lifting and tilting cylinders.

(12) Hydraulic transmission oil level





Hydraulic Transmission Forklift

Open the inspection cap and draw the filler cap out, and check the oil level gauge to make sure that the oil level is in proper scale position. If necessary, add particular hydraulic oil.

(13)Examination of Backrest



Examine whether or not the mounted bolts for backrest are loosened, and they shall be tightened up when required.

(14)Fork and Fork Positioning Pin



Examine the mounting status of for positioning pin, and whether or not the fork is distorted or cracked.

(15)Front Headlight and Front Combination Light

Examine whether or not the lamp screens are clean or damaged.

(16)Examination of Reversing Handle

Examine whether or not reversing handle is loosened and the operating hand feeling.

(17) Examination of Multi-way Valve Operating Handle

Examine whether or not operating handles (Lifting, Tilting, and Attachments) are loosened, and whether or not operation is easy.

(18) Examination for Operation of Parking Brake

It shall be confirmed that the parking brake is safe and reliable, after the parking brake operating handle is pulled up.

Preparation prior to Start

Before turning on the power supply, ensure that the gear-shift handle is located at neutral gear, and parking brake is reliable. v

(19)Instruments

Hour meter, trouble meter and running speedometer enable operators to understand the situation of truck during operation.

(20) Inspection of fuel volume

The fuel gauge is installed on the instrument panel. Check whether the fuel volume can satisfy the requirements of a day's working use.

(21)Lamplights

Turn on the light switch, and confirm that corresponding lights are all under normal conditions.

(22)Examination of Turn Signal

Operate the turn signal handle to confirm the normal work of turn signal light.

(23)Examination for Operation of Horn Pushbutton

Press the horn pushbutton to confirm whether or not the horn is able to hoot.

(24) Inspection of clutch pedal

For the forklift truck equipped with hydraulic clutch device, the inspection should be carried out by means of pressing clutch pedal after starting the engine.

(25) Idle stroke of brake pedal

Step the brake pedal and inching pedal (only applies to hydraulic transmission forklift) to check whether the actions of all pedals are stable and the pedals can reset without interference and the two pedal reset in the same plane

(26) Mast operation

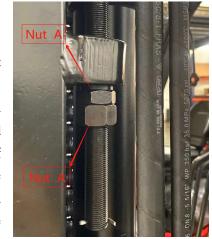
Press the horn and operate the lifting and tilting handle to check whether the lifting and falling of the fork is normal and the tilting of the mast is stable. Check whether the cylinder piston can run to the end of travel, the working condition and sound of overflow valve is normal.

(27) Examination of Tensioning Degree for Lifting Chain

Examine the tensioning degree of lifting chain and whether or not anomaly exists with it.

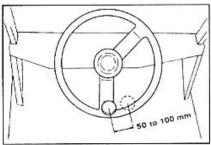
When tensioning degree is examined, the cargo fork shall be lifted by about 50mm, and the middle part of the chain is to be pushed and pressed using thumb. Confirm whether or not the tensioning degrees of left and right chains are consistent, while the locking nut (A) for the fixed pin shall be loosened, and the adjusting nut (B) shall be screwed and adjusted to adjust the chains. It is necessary to ensure that the tension between the two chains is about the same.





· Please use mechanical oil for lubrication of lifting chains, prohibit using lubricating grease.

(28)Steering Wheel Free Stroke



Examine the rotation as well as the axial loosening status of steering wheel. The normal free stroke is 50-100mm, and axial loosening is prohibited.

(29) Inspection of air exhaust

Inspect the air exhaust condition after preheating the engine.

No color or light blue normal: complete combustion

Black abnormal: incomplete combustion

White abnormal: Engine burn oil

Check whether there are abnormal sounds or variations in engine and driving system.

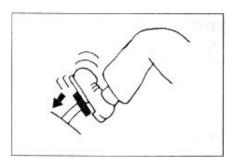
(30) Inspection of clutch control (mechanical transmission forklift truck)

Step the clutch pedal and make sure the clutch is engaged normally without slipping.

Inspection of inching pedal (hydraulic transmission forklift truck)

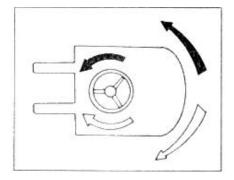
Slightly step the inching pedal to check the deceleration condition of the vehicle.

(31)Examination of Brake



Drive the Forklift at a slow speed and push down the brake pedal to examine the braking effect. The brake light turns on, after the brake pedal is pushed down.

(34)Examination of Steering



Turn the steering wheel, when truck is running at a slow speed, and observe whether or not the left and right steering forces are consistent, and whether or not other abnormal effects exist.

(35)Examination of Parking Brake

Confirm that the truck running at a slow speed can be braked and parked, after the parking brake handle is pulled up.

(36)Examination of Reversing Light and Reversing Buzzer

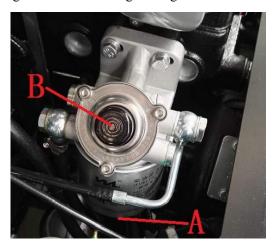
The reversing light turns on and the reversing buzzer hoots, when direction control handle is placed at the backward gear.

3. Maintenance

Diesel Forklift

When the indicator of oil-water separator lights up

- a) Turn off the engine, rotate (A) section for 4 to 5 circles to loosen water drainage screw plug, keep pressing pump (B) until water completely flow out of the oil-water separator.
- b) Tighten the water drainage screw plug and press the pump (B) for several times to check whether the screw plug has leakage.
 - c) Make sure the indicator goes off after starting the engine.



(2) Air exhaust of fuel system

Diesel Forklift



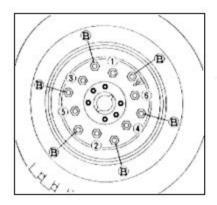
- a) Turn off the engine and loosen the Injector inlet (C) on injection pump, press the pump to exhaust air until the fuel flow out of the screw plug.
 - b) Tighten the exhaust plug to ensure that no fuel leaks.

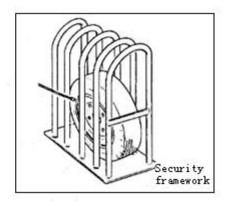
(3)Replacement of Fuse Wire

Fuse wire is able to protect electrical system, and to prevent over-high current. If it occurs that some part fails to work, possibly the corresponding fuse wire is already burned out, and it must be replaced with a fuse wire of the same capacity.

(4)Replacement or Repair of Tire

Get ready the tools and jack prior to replacement of repair.





a) Front Wheel

- · Park the truck on a firm and hard pavement and turn off the engine, and demount all the loads.
- · Pull up the parking brake hand le and fill up the wheel using wedge block, and place the jack under the truck body.
- ·Top up the truck up and keep the tires that you need to replace or service, loosen the nuts for wheel hub, but don't remove the tire.
- · Continue toping up the truck until the tires that you need to replace or service is off ground, take off the nuts and remove the tire.
- · The installation of tire is contrary to the disassembly sequence, and the wheel hub nuts shall be tightened up in a diagonal order.

Examine the tire air pressure, after it has been assembled.

b)Rear Wheel

The procedure is the same as the repair and replacement methods for the front wheel, except that the jack shall be placed under the counter weight.

4. Regular Maintenance Timetable

This timetable is set based on the standard working time and operating conditions, and please perform the maintenance beforehand, if the forklift truck is working under atrocious conditions ("•" indicating replacement).

Engine

Engine	Г			1			T
Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semi-annually (1200 Hours)	Annually (2400 Hours)
	Visually examining engine running status		0	0	0	0	0
	Sound of engine		0	0	0	0	0
	Exhaust color		0	0	0	0	0
	Cleaning or replacing air filter core			0	0	•	•
	Examining crankcase and cleaning scale				0	0	0
Engine	Examining and adjusting valve clearance	Thick Feeler Gage				0	0
	Tightening cylinder head bolt	Torque Wrench		Only first for gasoline engine			Only for C240 Diesel Engine
	Examining cylinder compression pressure	Pressure Gauge					0
Crankshaft Ventilation Device	Examining the blocked or damaged status of valve and pipe					0	0
Speed Governor or Injection Pump	Examining the maximum rotational speed at no load	Tachometer					0
	Whether or not oil leak with engine		0	0	0	0	0
Lubrication	Examining oil volume and cleanliness		0	0	0	0	0
System	Replacing engine oil			50 Hours for First Time	•	•	•
	Replacing engine oil filter core			50 Hours for First Time	•	•	•

Engine

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semi-annually (1200 Hours)	Annually (2400 Hours)
	Visually examining whether or not oil leak with oil pipe, oil pump, and oil tank		0	0	0	0	0
	Examining whether or not fuel filter is blocked				0	0	0
	Cleaning fuel filter (gasoline engine)				0	0	•
	Replacing fuel filter (diesel engine)				•	•	•
Fuel	Examining nozzle, and adjusting pressure status (diesel engine)	Injection test machine				0	0
System	Examining loosening status for the connecting mechanism and cleanliness of carburetor				0	0	0
	Ignition moment (diesel engine	Time Meter			0	0	0
	Jet moment (diesel engine)						0
	Water discharge for fuel tank				0	0	0
	Cleaning fuel tank					0	0
	Examining fuel volume		0	0	0	0	0
	Coolant volume		0	0	0	0	0
	Leaking status		0	0	0	0	0
	Rubber hose ageing status				0	0	0
Cooling System	Performance and installation status of radiator cover			0	0	0	0
	Cleaning or replacing coolant				•	•	•
	Examining tensioning force and damage status for belt of fan		0	0	0	0	0

Power Transmission

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semi-annually (1200 Hours)	Annually (2400 Hours)
Clutch	Examining idle stroke of clutch pedal and clearance between pedal surface and bottom plate when clutch is disengaged	Dividing Ruler	0	0	0	0	0
	Sound and operating status		0	0	0	0	0
	Slide and engagement status		0	0	0	0	0
Mechanical Transmission	Operating status of gear-shift lever and whether or not loosened			0	0	0	0
Case	Examining leakage		0	0	0	0	0
	Replacing oil					•	•
	Leaking status		0	0	0	0	0
	Examining oil volume and replacing oil			0	0	•	•
	Operating and loosening status of gear-shift lever			0	0	0	0
Hydraulic Transmission	Performance of control valve and hydraulic clutch		0	0	0	0	0
Case	Performance of inching valve		0	0	0	0	0
	Idle stroke and movement status of inching pedal		0	0	0	0	0
	Replacing oil suction filter core			200 Hours for First Time		•	•
	Leaking examination		0	0	0	0	0
Front Axle	Replacing oil					•	•
I IOIII AAIC	Loosening status of mounting bolt	Detection Hammer		0	0	0	0

Wheel

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually (2400 Hours)
	Charged Pressure	Barometer	0	0	0	0	0
	Crack or Damage		0	0	0	0	0
	Ground Touchdown Wearing Status			0	0	0	0
Tire	Abnormal Wearing Status	Depth Gauge	0	0	0	0	0
	Whether or not Nail, Stone, or other Extraneous Substance Present on tire			0	0	Ο	0
Tire	Whether or not Nuts are Loosened to be Examined	Detection Hammer	0	0	0	0	0
Installation	Damage Status to be Examined		0	0	0	0	0
Wheel Rim Wheel Spoke	Damage Status of Wheel Rim, Rim Spoke, and Disc Wheel		0	0	0	0	0
	Loosening and Noise to be Examined			0	0	0	0
Axle Bearing	To be Wiped up and Re-filled with Lubricating Oil					•	•
Axle	Distortion, Crake, and Damage Status of Axle Body to be Examined			0	0	0	0

Steering System

Item	Examination Items	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually (2400 Hours)
	Clearance to be Examined		0	0	0	0	0
Steering	Axial Loosening to be Examined		0	0	0	0	0
Wheel	Radial Loosening to be Examined		0	0	0	0	0
	Operating Status to be Examined		0	0	0	0	0
Steering Gear	Whether or not Mounting Bolts are Loosened to be Examined			0	0	0	0
Steering	Whether or not the King Pin is Loosened or Damaged to be Examined			0	0	0	0
Knuckle of Rear Axle	Bend, Distortion, Crake, or Damage Status to be Examined			0	0	0	0
	Installation Status to be Examined	Detection Hammer		0	0	0	0
	Operating Status to be Examined		0	0	0	0	0
Steering	Whether or not Leakage Exists to be Examined		0	0	0	0	0
Cylinder	Whether or not Loosening Exists during Installation and Articulation to be Examined			Ο	Ο	Ο	Ο

Brake System

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually (2400 Hours)
	Idle Stroke		0	0	0	0	0
	Pedal Stroke	Diving Ruler	0	0	0	0	0
Brake	Operating Status		0	0	0	0	0
Pedal	Whether or not Air Present in Brake Pipe		0	0	0	0	0
Parking Brake	Whether or not Brake is Safe and Reliable and Brake Stroke is Enough		0	0	0	0	0
Control	Control Performance		0	0	0	0	0
Rod, and	Control Performance		0	0	0	0	0
Guy Cable, etc	Whether or not Connection is Loosened		0	0	0	0	0

Brake System

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually7 (2400 Hours)
	Damage, Leakage, and Crack			0	0	0	0
Pipeline	Connecting and Clamping Parts, or Loosening Status			0	0	0	0
	Leakage Status			0	0	0	0
Brake Master Cylinder	Oil Level to be Examined for Oil Replacement		0	0	0	•	•
and Wheel Cylinder	Master Cylinder and Wheel Cylinder Acting Status						0

1.8-x12T Internal Combustion Counterbalance Forklift Truck Operation Manual

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Friction Plate Calipers Status of Brake Shoe Action Whether or not Fixed Pin is Rusted Drum and Brake Shoe Whether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Brake Bottom Plate Whether or not Cracked Whether or not Loosening Exists Calipers Calipers Operating Collipers Oping Ruler Oping		Loosened					
Friction Plate Calipers Status of Brake Shoe Action Whether or not Fixed Pin is Rusted Drum and Brake Shoe Mether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Status of Bottom Plate is Distorted Whether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Status of Brake Drum Status of Brake Drum Status of Brake Object St		Wearing Status of	Vernier				0
Brake Drum and Brake Shoe Whether or not Fixed Pin is Rusted Damage Status of Return Spring Whether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Craeked Whether or not Loosening Exists		Friction Plate	Calipers				0
Shoe Action Whether or not Fixed Pin is Rusted Drum and Brake Shoe Return Spring Whether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Oprum Whether or not Operating Time Interval of Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists		Status of Brake					0
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Automatic Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists		Operating Time					
Regulating Device is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists		Interval of					
is Proper to be Examined Wear and Injury Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists		Automatic					0
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Status of Brake Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists		Examined					
Drum Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists O O O O O O O O O O O O O		Wear and Injury					
Whether or not Bottom Plate is Distorted Whether or not Cracked Whether or not Loosening Exists Whether or not Cooked Output Distorted Output Out		Status of Brake					0
Bottom Plate is Distorted Whether or not Plate Whether or not Cracked Whether or not Loosening Exists O		Drum					
Brake Bottom Plate Whether or not Cracked Whether or not Loosening Exists Distorted Whether or not Cracked O O O		Whether or not					
Brake Bottom Plate Whether or not Cracked Whether or not Loosening Exists Whether or not Cracked O		Bottom Plate is					0
Bottom Plate Whether or not Cracked Whether or not Loosening Exists Whether or not Cracked	D 1	Distorted					
Plate Cracked Whether or not Loosening Exists		Whether or not					^
Whether or not Loosening Exists O		Cracked					0
	Plate	Whether or not					
during Installation		Loosening Exists					0
		during Installation					

Lifting System

Τ.	F · · · ·	T. 1	Daily	Monthly	Quarterly	Semiannually	Annually
Item	Examination Item	Tool	(8 Hours)	(200 Hours)	(600 Hours)	(1200 Hours)	(2400 Hours)
	Damage, Distortion, and		0	0	0	0	0
	Wear Status of Fork		Ŭ	0	0	Ŭ	0
	Damage and Wear Status				0	0	0
Fork	of Positioning Pin				0	Ů,	0
	Crack and Wear Status						
	of Welded Parts for			0	0	0	0
	Hook at Rootage of Fork						
	Whether or not Welded						
	Place on Inside						
	Mast/Outside Mast and			0	0	0	0
	Cross Beam is Cracked						
	or Damaged						
	Whether or not Welded						
	Place of Tilting Cylinder						
	Bracket and Mast is			0	0	0	0
	under Poor Connecting			O	O		
	Condition, Cracked, or						
	Damaged						
	Whether or not Welding						
	of Inside/Outside Masts						
	is under Poor			0	0	0	0
	Connecting Condition,						
Mast Fork	Cracked or Damaged						
Carriage	Whether or not Welding						
	of Fork is under Poor			0	0	0	0
	Connecting Condition,			O	O		
	Cracked or Damaged						
	Whether or not Roller is			0	0	0	0
	Loosened			O	0	0	0
	Wear and Damage Status						
	of Bearing Bush for						0
	Mast						
	Whether or not Bolts for						
	Support Cover of Mast is			0		0	0
	Loosened						
	Whether or not Bolts for						
	Bottom of Lifting						
	Cylinder, Bolts for Head			0		0	0
	of Piston Rod, U-bolts.						

1.8-x12T Internal Combustion Counterbalance Forklift Truck Operation Manual

	Crack and Damage Status of Roller and Roller Shaft		0	0	0	0
	Tensioning Status, Whether or not Distorted, Damaged, or Rusted of Chain to be Examined	0	0	0	0	0
Chain and	Oil to be Added for Chain		0	0	0	0
Sprocket	Riveted Pin and Loosening Status		0	0	0	0
	Sprocket Distortion and Damage Status		0	0	0	0
	Whether or not Chain Sprocket Bearing is Loosened		0	0	0	0

Lifting System

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually (2400 Hours)
	Whether or not						
Attachments	Status is Normal to			0	0	0	0
	be Examined						
	Whether or not						
	Piston Rod, Piston						
	Rod Thread, and	Detection					
	Connection are		0	0	0	0	0
	Loosened, as well as	Hammer					
	Distortion and						
Lifting	Damage Status						
Cylinder	Operating Status		0	0	0	0	0
	Leakage Status		0	0	0	0	0
	Wear and Damage						
	Status of Pin and						
	Cylinder			0	0	0	0
	Steel-backed						
	Bearing						
	Whether or not Oil						
	Leak or Noise Exists		0	0	0	0	0
Hydraulic	with Hydraulic			•		-	
Hydraulic Pump	Pump						
	Wearing Status of						
	driving Gear for			0	0	0	0
	Hydraulic Pump						

Hydraulic System

T.			Daily	Monthly	Quarterly	Semiannually	Annually
	Examination Item	Tool	(8 Hours)	(200 Hours)	(600 Hours)	(1200 Hours)	(2400 Hours)
	Oil Quantity to be Examined, or Oil to be Replaced		0	0	0	0	0
Hydraulic Oil Tank	Suction Oil Filter Core to be Cleaned up					0	0
	Extraneous Substance to be Removed					0	0
Return Oil Filter	Return Oil Filter to be Replaced					•	•
Control Valve Rod	Whether or not Connection is Loosened		0	0	0	0	0
	Operating Status		0	0	0	0	0
	Oil Leakage		0	0	0	0	0
Multi-way Valve	Operating Status of Safety Valve and Tilting Auto locking Valve			0	0	0	0
	Safety Valve Pressure to be Measured	Oil Pressure Gauge				0	0
Piping Joint	Leakage, Loosening, Crack, Distortion, or Damage Status		0	0	0	0	0
	Pipe to be Replaced						• 1-2 Years

Electrical System

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semi-annually (1200 Hours)	Annually (2400 Hours)
	Whether or not distributor cap is cracked				0	0	0
	Whether or not spark plug is burned out						0
	Adjusting the clearance of spark plug	Feeler Gage			0	0	0
Ignition	Cleaning the clearance of spark plug				0	0	0
Device (Gasoline Engine)	Mounting status of cover and HP wire						0
	Whether or not distributor is burned out						0
	Wear and injury status of center part for distributor						0
	Filling lubricating oil to rotating shaft				0	0	0
	HP wire breakage status	Test Meter					0
Start Motor	Pinion meshing status				0	0	0
Battery	Electrolyte volume and cleaning			0	0	0	0
	Examining specific weight of electrolyte				0	0	0
Electric Wire	Wire harness injury and loosening status			0	0	0	0
	Loosening status of connection for electric circuit				0	0	0

Safety Devices and Accessories

Item	Examination Item	Tool	Daily (8 Hours)	Monthly (200 Hours)	Quarterly (600 Hours)	Semiannually (1200 Hours)	Annually (2400 Hours)
Seat	Whether or not Bolts are Damaged or Loosened to be Examined					0	0
	Whether or not Truck Frame and Crossbeam are Damaged or Cracked						0
Truck Body	Whether or not Rivets or Bolts are Loosened	Detection Hammer					0
	Repaired Places to be Examined, if Required		0	0	0	0	0
	Comprehensive Examination						0
Lubricating Grease to be Added or Oil	Lubricating Status of Underpan to be Examined after Cleaning	Grease Gun	O	O	0	0	0
to be Replaced	Oil in Oil Tank to be Examined						0

Attention

- · When oil different from that specified for this truck, its replacement cycle cannot be the same as that specified in this Manual. On this account, the time for replacement shall be shortened by 1/2 or 1/4 compared with the time specified in this Manual.
- Though high-viscosity oil has wide operating temperature range, regular renewal is still required. This is because that additive will slowly deteriorate, for viscosity to be lowered, and it will damage hydraulic system severely at the time of high temperature.

V. Hoisting, handling and traction of forklift

1. Hoisting Forklift

Tighten the steel wire on the two end holes of the outer mast beam and on the holes of the counterweight, then hoist the forklift using lifting device. Please refer to the decal for exact hoisting locations

∆WARNING

Do not wrap the steel wire around the overhead guard when lifting.

The steel wire and lifting device shall be strong and heavy enough to sustain the forklift.

Do not hoist the forklift through the driver cabin (Overhead Guard).

Do not stand or go anywhere under the hoisting forklift.

2. Handling

Forklift is normally used in loading/unloading cargos and short distance transport. It is not suitable means for long distance transport. When the forklift needs to be moved to somewhere far, ship, trains and heavy trucks etc which has bigger load capacity than the forklift weight is needed to transport the forklift. To avoid displacement, the tires of the forklift must be supported with wedges and the forklift body must be firmly fastened.

3. Traction

The tow pin under the counterweight is set for traction of the forklift. Tie the steel wire around the pin and reinstall the pin to start traction.

Method of traction after forklift being damaged: Firstly release the park brake, set the gear to neutral. Please pay attention to the ambient traffic for safety and hang a seeable Being Towed mark on the truck.

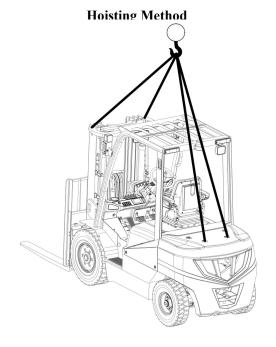
∆WARNING

It is forbidden to tow the forklift which has problems on steering system or on brake system.

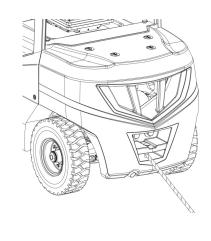
Do follow the traffic rules when applying traction of the forklift trucks.

Prohibit tie the steel wire to locations unadvised.

Prohibit enforce abrupt force on the steel wire.

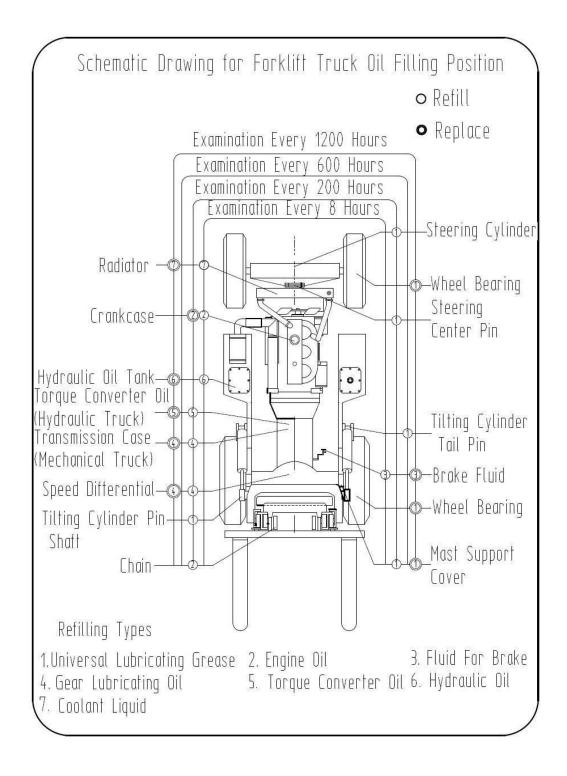


Traction Method



VI Miscellaneous

1. Drawing of Lubricating System



2. Oils Used for Forklift

Name	Original Oil Product	Brand, Code, and Temperature of Use					
Gasoline		92# or 95#					
D: 10:1		Brand of Light Diesel Oil	0#	-10#	-20#	-30#	
Diesel Oil		Application Temperature (°C)	≥4	≥-5	≥-14	≥-29	
Gasoline Engine Oil	Kunlun	Viscosity Grade	5W/30	10W/40	10W/30	15W/40	
(SF)		Application Temperature(°C)	-30~+30	-25~+40	-25∼+30	-20~+40	
Diesel Engine Oil	Kunlun	Viscosity Grade	5W/30	10W/30	15W/40	20W/50	
(CD)		Application Temperature(°C)	-30~+30	-25~+30	-20~+40	-15~+50	
	Kunlun	Viscosity Grade	L-HM32Antiwear Hydraulic Oil		L-HV32Low Temperature Anti-wear Hydraulic oil		
Hydraulic Oil		Application Temperature(°C)	≥-5		≥-20 (in Open Air in Cold Regions)		
Torque converter oil	Kunlun	8# Torque converter oil					
Brake Fluid	Qiushi	DOT4Synthetic Brake Fluid (GB12981-2003 HZY-3)					
Lubricating Grease	Kunlun	3#General Lithium Base Lubricating Grease(-20°C ∼+120°C)					
Heavy-duty Truck	Kunlun	Viscosity Grade	GL-5 85W/90		GL-5 80W/90		
Gear Oil		Application Temperature(°C)	-15~+49		-25~+49		
	uid Kunlun	Code	FD-1	FD-2	FD-2A	FD-3	
Anti-freeze Fluid		Application Temperature(°C)	≥-25	≥-35	≥-45	≥-50	

Note:

- -It is recommended to use Kunlun brand oil products
- -Oil products of different brands cannot be blended in use.