

Operation Manual

H1840/HR2150

Telescopic handler

! WARNING

Before operation and maintenance, the drivers and maintenance personnel are required to read this manual thoroughly. Otherwise, fatal accident may occur.

This manual shall be kept properly for future reference by the personnel concerned.

LINGONG HEAVY MACHINERY CO., LTD.

Telescopic handler Operation Manual

880*1230 mm Sextodecimo 8 sheets

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Foreword

Thanks for purchasing the telescopic handler produced by Lingong Heavy Machinery Co., Ltd. This manual introduces the mechanism, driving and operation, technical parameters and maintenance adjustment data of the telescopic handler for safety guidelines and correct use and maintenance of the machine.

How to get the best out of your machine is a goal we pursue together with you, and it depends to a large extent on how familiar you are with the machine and how carefully and thoroughly it is maintained. We sincerely hope that you will read through this manual before starting and operating the machine for the first time and before repairing and maintaining the machine, and that you will master the operation and maintenance described therein.

The illustrations and descriptions in this manual are correct at the time of publication, but due to the continuous improvement of the structure and performance of our products, the design as well as operation and maintenance instructions of the product may be subject to change without notice. For the latest information of the machine or any question about this manual, please consult us.

This manual applies to telescopic handlers. Users should strictly follow the maintenance interval in the maintenance schedule to maintain the machine.

This manual should always be kept at the specified location so that it can be read at any time. This manual is an integral part of the machine and should be handed over when ownership or use of the machine is transferred. If the manual is lost, damaged or illegible, please replace it promptly!

This manual is the property of Lingong Heavy Machinery Co., Ltd., and may not be duplicated or reprinted without our written permission.

! WARNING

- Only the personnel who have been professionally trained and qualified are allowed to operate and maintain the machine.
- Incorrect operation, maintenance and repair are dangerous and may lead to personal injury or death.
- Before operation or maintenance, please read this manual thoroughly.



Otherwise, do not operate, maintain or repair this machine.

- Please load the machine in strict accordance with the rating; otherwise all the consequences arising from overloading or unauthorized modification will be borne by the user.
- The operation instructions and precautions in this manual apply only to the intended use of the machine. If the machine is used for an operation that is out of the specification herein but not prohibited, always make sure that this operation will not cause personal injury to yourself or others.
- Please operate the machine in strict accordance with the safety
 requirements in the manual. The user is responsible for all consequences
 caused by non-compliance with the safety requirements of the machine.



Safety Notices

The operator shall understand and abide by the current national and local safety regulations. If such regulations are not available, the safety instructions in this manual shall prevail.

Most accidents are caused by failure to obey operation and maintenance specifications of the machine.

To avoid unnecessary accident, please read and follow all warnings and precautions in this manual and on the machine before operation or maintenance.

The safety measures are detailed in the "safety" content in chapter I.

Considering the fact that not all possible hazards are foreseeable, it is impossible for safety notices in this manual and on the machine to cover all safety precautions. If it is necessary to take steps and operations not recommended herein, always protect the safety of yourself and others, and keep the machine from any damage. If the safety of some operations remains uncertain, please consult us or dealers.

The operation and maintenance precautions referred to herein apply only to the intended use of this machine. If the machine is to be used for other purposes than those listed herein, it is the user or operator instead of us that shall take the safety liabilities therefrom.

In no case shall any operations expressively prohibited herein be performed.

For the purpose of this manual, the following signal words are applied to identify safety instructions:

DANGER - Indicating any existing dangers that, if not avoided, will cause serious injury or even death, and also serious machine damage.

WARNING - Indicating any potential dangers that, if not avoided, may cause death or serious injury, and also serious machine damage.

CAUTION - Indicating situations that, if not avoided, may cause minor or moderate injury, and also machine damage or shortened machine service life.



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Chapter 1 Safety





/ DANGER:

Failure to comply with the instructions and safety rules in this manual will result in the occurrence of death or serious injury.

MARNING: Do not operate unless

You have understood and practiced the rules of safe operation of the machine in this operation manual.

Avoid dangerous situations. Know and understand the safety rules before proceeding to the next step.

Always perform the inspection before operation.

Always perform pre-use functional testing.

Check the workplace

Use the machine only according to its design intent.

The manufacturer's instructions and safety rules--safety operation manual and machine labels shall be read, understood and observed.

You shall read, understand and comply with the user safety rules and workplace regulations.

You must read, understand and comply with all applicable government laws and regulations.

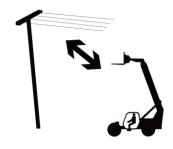
You have received proper training on the safe operation of the machine.

1.1 Unauthorized installation

Any refit may cause danger. Please consult with Lingong Heavy Machinery Co., Ltd. (LGMG for short) before refitting the machine. LGMG shall not be liable for any damage caused by unauthorized refit.

1.2 Classification of hazardous situations

Electric shock hazard:



The machine is not insulated and does not provide protection from electric shock when in contact with or near the wires. Keep adequate safety distances from the power lines and electrical equipment in accordance with applicable government laws and regulations and the instructions in the following table.

Valtage	Required
Voltage	clearance



0~300V	Do not touch
300V ~ 50KV	3m
50KV ~ 200KV	5 m
200KV ~ 350KV	6 m
350KV ~ 500KV	8 m
500KV ~ 750KV	11 m
750KV ~ 1000KV	14 m

- The influence of strong winds or gusts on the movement of the Fork, the swing and relaxation of the wires shall be considered.
- Keep away from the machine if it comes into contact with live wires.
 Before cutting off the power supply, it is forbidden for any person to contact or operate the machine.
- Do not operate the machine when there is lightning or storm.
- Do not use the machine as a ground wire during welding.

Danger of scalding at high

temperature:

When the operation was just completed, the temperature of hydraulic oil, oil and water in the engine, oil and water in the radiator is still very high and there is still pressure. At this time, open the tank cap, radiator cap, draining oil or water, or replacing the filter may cause serious burns. The above operations shall be carried out until the

- temperature drops and the prescribed procedures shall be followed.
- Do not touch the relay when the engine is hot to avoid scalding.
- Do not remove the engine oil temperature sensor, water temperature sensor and air conditioning water pipe to avoid scalding.

1 Danger of misuse:

- If the telescopic handler is not equipped with platform accessories, do not lift personnel.
- It is forbidden to use faulty or poorly maintained machines. Stop using defective/damaged machines.
- It is forbidden to lean the machine against the structure to stabilize the structure.
- Do not climb onto the machine cover.
- It is forbidden to replace parts that are vital to the stability of the machine with parts of different weights or specifications.
- It is forbidden to replace factory-installed tires with tires of different specifications or layers.
- Machine parts that affect safety and stability in any way shall not be changed or disabled.
- Do not disable the safety device.



- Do not operate the machine controls suddenly.
- During cleaning, it is forbidden to directly align the water gun with the engine exhaust port, electrical parts, and batteries, etc.





- Access to the cab using suitable handrails and provided steps; Keep 3 contact points (hands and feet) on the steps and handrails for access to the cab.
- Never grasp the joystick or steering wheel when installing or removing the machine.
- It is forbidden to use fork truck to lift personnel.
- It is forbidden to drill holes in the fork,
 and do not heat or weld the fork.







- Increase the load strictly according to the load curve graph.
- Ensure that the center of gravity of goods are close to the inside of the fork and do not drag the goods.
- Ensure that the road surface can support the machine weight, including the rated load.
- Avoid sudden start-stop, steering and driving, and prevent load from overturning.
- Do not use the machine at wind speeds above level 6.
- Do not drive and raise boom on slope exceeds the rated slope of the machine.
- Do not replace components of different weights or specifications that are critical to stability.
- It is forbidden to use outrigger or leveling cylinder to turn the machine over. The leveling cylinder and outrigger are only used to adjust the machine to level.
- Do not exceed the rated load of the machine.



- Do not drive at high speed under boom lift conditions.
- In high-speed driving mode, only front-wheel steering can be used.
- Transport the goods as low as possible and bind the load to limit its movement.
- Always keep the tire pressure within the normal range.
- Do not raise the boom when the chassis is not horizontal (0 °).

/ Danger while driving:

- Before moving the machine, make sure the road is clear and sound the horn.
- Check the working condition of the rearview mirror.
- The steering mode can only be changed when the machine is stationary or stopped.
- It is forbidden to go downhill at high speed.
- It is forbidden to drive fast in narrow or messy areas. The vehicle speed shall be controlled during turning or sharp turning.
- Excessively steep slope or unstable surfaces shall be avoided.
- Under no circumstances should you drive on an excessively steep slope.
- Never put the machine at N gear when going downhill.

 It is forbidden to drive on slope that exceeds the rated slope of the machine.

Danger of explosion/fire:



- The battery contains acidic substance.
 Wear protective clothing and glasses
 when using battery.
- Avoid spillage or contact with the acidic substance in the battery. Neutralize spilled battery acidic substance with soda and water.
- Do not operate the machine in an explosive or flammable environment.
- Do not touch high temperature parts.
- Do not touch battery terminals with metal objects.
- Do not repair the machine near sparks,
 open flames, lighted cigarettes.
- Do not expose batteries or electrical component to water, (high-pressure spray gun or rain).

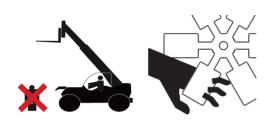
! Chemical hazard:





- Do not allow engine to operate in a closed, narrow place, which can lead to the accumulation of toxic gases.
- Do not add fuel while the engine is running, and do not allow the fuel system to work near open flames, sparks, or high temperature. The engine fuel is flammable and may cause fire and explosion.
- Do not attempt to repair or tighten any hydraulic hose or joints while the engine is running or the hydraulic system is under pressure.
- Do not check by hand for leaks, pressurized hydraulic oil may penetrate the skin. Replace with cardboard or paper. When checking the hydraulic system, wear gloves and goggles to prevent liquid splashing.

/ Danger of crushing and collision:



 When lifting and lowering the boom or before driving, check whether there are

- obstacles in the working area and whether there are any obstacles next to and under the boom.
- It is forbidden for personnel to work,
 stand or walk under the raised boom.
- When driving, non-operators must stay away from the machine.
- When driving, adjust the position of the boom to provide the best possible visibility and avoid any blind spots.
- When driving, the seat belt must be fastened.
- When driving, consider the parking distance of the machine, the influence of visibility reduction and blind spots.
- Keep away from the rotating parts on the machine and the parts that may be clamped.
- When operating the machine, please stay away from the tires, chassis, and other steering components.
- When rotating the turntable, pay attention to clarify the position of the boom and the tail of the turret.
- Make sure that the turret is fixed with a turret rotation lock before transportation.
- Make sure to unlock the turret during operation.



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Danger of uncontrolled movement:

 Never use damaged or faulty machines.

Always comply with the following rules:

- Keep a sufficient distance from the high-voltage line.
- Keep sufficient distance from generator, radar and electromagnetic field.



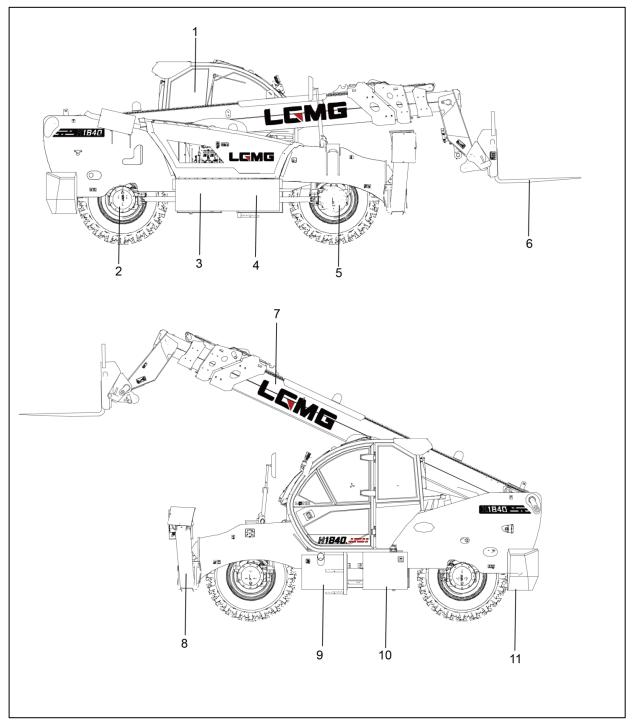
Chapter 2 Product Introduction





2.1 Legend of the whole machine

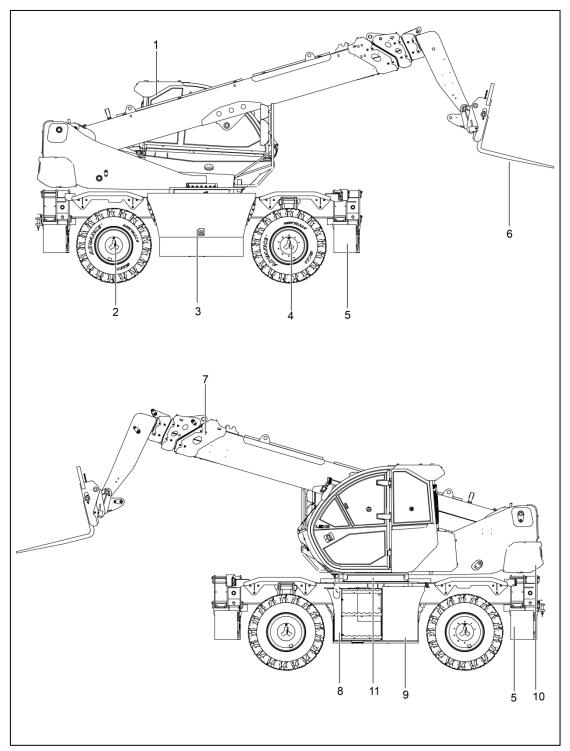
Legend of whole machine H1840



No.	Name	No.	Name
1	Cab	7	Boom
2	Rear axle	8	Outrigger mechanism
3	Engine and accessories	9	Fuel tank
4	Transmission	10	Hydraulic oil tank
5	Front axle	11	Counterweight
6	Accessory - fork		



Legend of whole machine HR2150

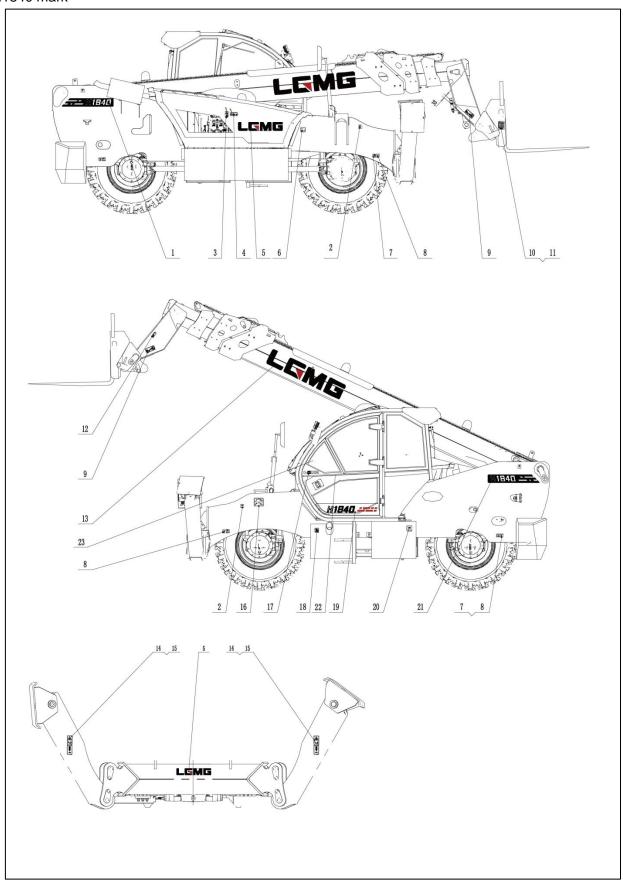


No.	Name	No.	Name
1	Cab	7	Boom
2	Rear axle	8	Fuel tank
3	Engine and accessories	9	Hydraulic oil tank
4	Front axle	10	Counterweight
5	Outrigger mechanism	11	Slewing mechanism
6	Accessory - fork		



2.2 Machine identification

H1840 mark



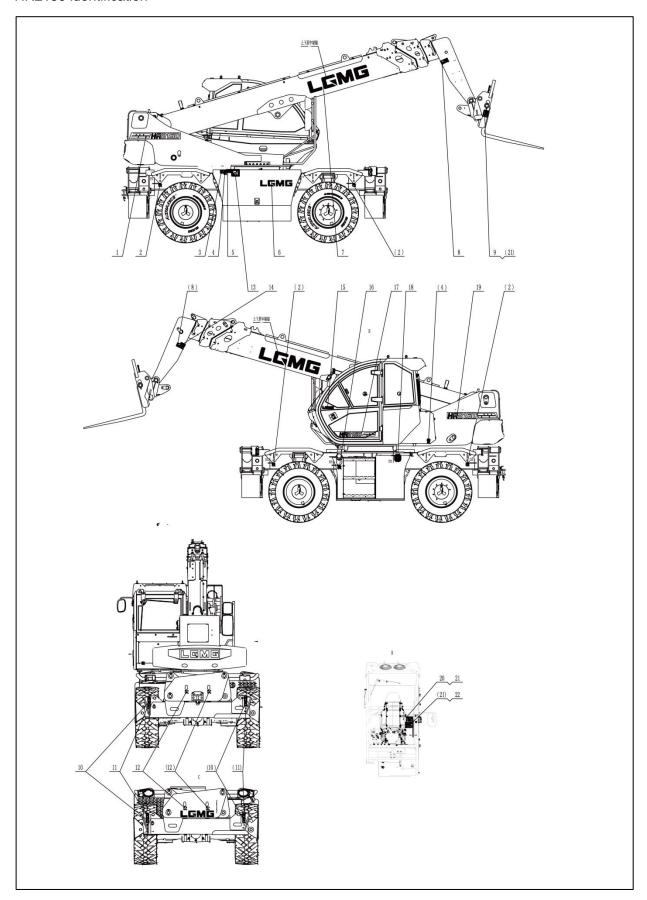
Operation Manual of Telescopic Handler

1-2534002226	2-2534000027	3-2534001442	4-2534000011	5-2534002228	6-2534002181
<u></u> H1840	3	Topical Sound		LGMG	OFF SMALLE
7-2534002232	8-2831990027	9-2534002235	10/11-2534003262	12-2534002234	13-2534002229
6500kg	9		For passed of the control of the con		
14-2534000174	15-2831992233	16-2534002248	17-2534002251	18-2534000177	19-2534002249
\]	6500kg			25/4006/77	H1840
20-2534001995	21-2534002227	22-2534003261	22-2534003266		
	H1B40	TOPOCH MANAGEM TOPOCH T	2.0CTR4008/Tb.		

No.	Name	No.	Name
1	Right model mark-H1840	12	Quick change instruction mark
2	Lifting mark	13	Group English LOGO-230
3	High-temperature liquid warning mark	14	Keep away from outrigger warning mark
4	Internal service warning mark	15	Outrigger load mark
5	Group English LOGO-120	16	Metal logo on the door
6	Power OFF ID	17	Service warning mark
7	Wheel load mark	18	Fuel tank mark
8	Lug sign	19	Cab model mark
9	Anti-extrusion instructions	20	Hydraulic oil mark
10	Accessory nameplate	21	Left Model Identifier-H1840
11	Rivet	22	Machine nameplate
		23	Hand brake



HR2150 identification





1-2534002685	2-2534002682	3-2534002181	4-2534001442	5-2534000011	6-2534002228
/ 	9500kg 9500kg	OFF	Topici Topici		
7-2534002229	8-2534002235	9-2534002250	10-2534000174	11-2831992683	12-2534000027
LGMG		\$100 100	\	11500kg	3
13-2534002251	14-2534002234	15-2534002248	16-2534000177	17-2534002686	18-2534001995
			SMONIT!	HR 2150	
19-2534002684	20/21-2534002231	22-2534002230			
HR2150	特倍質又成本	日本の			

No.	Name	No.	Name
1	Turret left identification	12	Lifting mark
2	Wheel load mark (9500kg)	13	Service warning mark
3	Power OFF ID	14	Quick change instruction mark
4	High-temperature liquid warning mark	15	Metal logo on the door
5	Internal service warning mark	16	Fuel tank mark
6	Group English LOGO-120	17	Cab model mark
7	Group English LOGO-230	18	Hydraulic oil mark
8	Anti-extrusion instructions	19	Turret right side identification
9	Accessory nameplate	20	Machine nameplate
10	Keep away from outrigger warning mark	21	Rivet GB827-3*5-BL2
11	Outrigger load mark (11500KG)	22	Environmental protection information label-Perkins



2.3 Machine purpose

This machine is a telescopic boom fork loading truck equipped with telescopic boom for lifting, moving and placing materials.

WARNING:

- All other uses or modifications must be approved by Lingong Heavy Machinery Co., Ltd.
- Driving on soft, unstable or messy ground is not allowed.
- It is strictly prohibited to use it in places with strong magnetic fields that exceed the maximum allowable wind speed, explosive enoadvironment, storm.

2.4 Machine parameters

H1840 Machine parameters

1. Overall performance parameters

Item	Parameter	Item	Parameter
Rated load (kg)	4000	Boom lifting time (s)	11~17.5
Total weight (kg)	12500	Boom lowering time (s)	16~23.5
Maximum working height (m)	17.5	Boom extension time (s)	15~22.5
Maximum horizontal reach (m)	13.1	Boom retraction time (s)	11~18
First gear speed (km/h)	5	Extension time of leveling cylinder (s)	6~14
Second gear speed (km/h)	12	Retraction time of leveling cylinder (s)	9~16
Third gear speed (km/h)	20	Extension time of outrigger cylinder (s)	15~23
Fourth gear speed (km/h)	30	Retraction time of outrigger cylinder (s)	11~18
First reverse gear speed (km/h)	5	Minimum turning radius (m)	4.2
Second reverse gear speed (km/h)	12	Theoretical max. gradeability (no-load, stowed)	65%
Third reverse gear speed (km/h)	20	Leftward/rightward inclination angle of frame	±9°
Max. braking distance (no-load, stowed) (20 km/h) (m)	5.5	Drive type	4WD, 4WS

2. Main dimensions

Item	Parameter	Item	Parameter
Overall length (mm)	6280	Wheelbase (mm)	3070
Overall width (mm)	2442	Track width (mm)	1960
Overall height (mm)	2677	Min. ground clearance (mm)	410

3. Engine system



Operation Manual of Telescopic Handler

Item	Parameter	Item	Parameter
Model	1104D-E44T	Rated speed (r/min)	2200
Displacement (ml)	4400	Maximum torque (Nm)	420/1400rpm
Rated power (kW)	73.5	Emission standard	EU Stage III

4. Drive chain

Item			Parameter
	Туре		AMT
Transmission	Gear		4 forward gears and 3 reverse gears
Transmission	Gear ratio	Forward gear	4.945/2.289/1.159/0.821
	Gear railo	Reverse gear	4.945/2.289/1.159
Front axle	Overall gear ratio Brake type		20.14
Front axie			Multi-disc wet brake
Rear axle	Overall gear ratio		20.14
Real axie	Brake type		Multi-disc wet brake
Wheel	Tire Model		440/80 R24
assembly	Inflation pressure (MPa)		0.5

5. Hydraulic system

Item	Parameter
Туре	Load sensitive system
Pump displacement (ml/r)	63
Maximum working pressure (MPa)	26
Steering system pressure (MPa)	19
Brake system pressure (MPa)	3.4

6. Electronic control system

	Model	6-QW-120B
Dotton/	Output voltage (V)	12
Battery	20-hour Ah	120
	Unit weight (kg)	30

7. Refilling capacity

Item	Condition	Grade	Capacity	Remarks
	Minimum	L-HV46 low		
		temperature		
	temperature>-25 °C	hydraulic oil		Pocommo
Hydraulic oil	-40 °C <minimum< td=""><td>L-HS32 ultra-low</td><td>180L</td><td rowspan="3">Recomme nded Chevron</td></minimum<>	L-HS32 ultra-low	180L	Recomme nded Chevron
Tiyuraulic oli		temperature	TOOL	
	temperature ≤-25 °C	hydraulic oil		
	Minimum air temperature	No. 10 Aviation		
	≤-40 ℃	hydraulic fluid		
	Working environment	15W-40		
	temperature -20°C ~ 40°C	1500-40		
Engine oil	Working environment	10W-30	8.5L	API CH-4
Engine oil	temperature: -25°C ~ 30°C	1000-30	0.3L	API CH-4
	Working environment	514/ 00		
	temperature: -30°C ~ 30°C	5W-30		



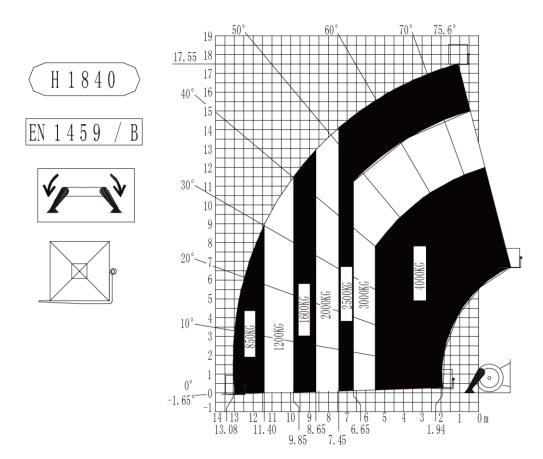
Operation Manual of Telescopic Handler

	Operation Mandar of Te			
	Working environment temperature: -35° C $\sim 20^{\circ}$ C	0W-20		
	When the ambient			
	temperature ≥4°C, use #0			
	diesel fuel			
	When the ambient			
	temperature ≥ -5°C, use			
Diesel fuel	#-10 diesel fuel		150L	
	When the ambient			
	temperature ≥ -14°C,			
	use #-20 diesel fuel			
	When the ambient			
	temperature ≥ -29°C, use			
	#-35 diesel fuel			
		The ethylene		Meet
Antifreeze		glycol content is	12.5L	ASTM Dead
		50%		D6210 standard
				Staridard

Item	Parameter	Item	Parameter
Hydraulic oil	180L (shrinkage state)	Front axle gear oil	10.6 L
Diesel fuel	150 L	Rear axle gear oil	10.6 L
Engine oil	8.5 L	Transmission gear oil	21.75 L
Antifreeze	12.5L		



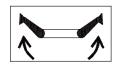
8. Range of motion



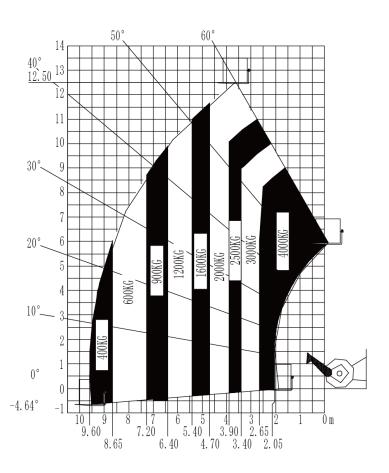




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HR2150 Machine parameters

1. Machine performance parameters

Item	Parameter	Item	Parameter
Rated load (kg)	4999	Leveling of cylinder extending (s)	8
Maximum working height (m)	20.7	Leveling of cylinder retraction (s)	7
Maximum horizontal extension (m)	18.1	Extension (s) of outrigger cylinder	10
First forward gear speed (km/h)	5	Retraction (s) of outrigger cylinder	10
Second forward gear speed (km/h)	30	Outrigger floor support cylinder extending (s)	12
First reverse gear speed (km/h)	5	Outrigger support cylinder retraction (s)	12
Second reverse gear speed (km/h)	30	Body leveling cylinder extending (s)	10
Max. braking distance (no-load, stowed) (20Km/h)(m)	3	Body leveling cylinder retraction (s)	10
Boom lift up (s)	27	Maximum gradeability	50%
Boom lower down (s)	22	Leftward/rightward inclination angle of frame	±8°
Boom extension (s)	32	Minimum turning radius (inner/outer ring) (m)	1.85/3.65
Boom retraction (s)	23	Drive type	4WD 4WS

2. Main dimensions

Item	Parameter	Item	Parameter
Overall length (mm)	6865	Track width (mm)	1955
Overall width (mm)	2465	Wheelbase (front/rear) (mm)	2750
Overall height (mm)	3156	Minimum ground clearance (mm)	390
Total weight (kg)	17100	Tire specification	445/70R 22.5

3. Engine system

Item	Parameter	Item	Parameter
Model	1104D-E44TA	Rated speed (r/min)	2200
Displacement (ml)	4400	Maximum torque/speed (N · m)/(r/min)	558/1400
Rated power (kW)	106	Emission standard	EU Stage III

4. Hydraulic system

Item	Parameter
Туре	Load sensitive system
Travel pump displacement (ml/r)	78
Travel motor displacement (ml/r)	110
Working pump displacement (ml/r)	60



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Maximum working pressure (MPa)	29
Steering system pressure (MPa)	19
Brake system pressure (MPa)	3.4

5. Electronic control system

	Model	6-QW-120B
Pottony	Output voltage (V)	12
Battery	20-hour Ah	240
	Unit weight (kg)	30

6. Drive chain

Item			Parameter	
	Туре		Manual	
Transfer	Gear		2 forward gears and 2 reverse gears	
box	Gear ratio	D gear	4.286/1.359	
		R gear	4.286/1.359	
Front axle	Overall gear ratio		20.14	
	Overall gear ratio		20.14	
Rear axle	Brake type		Multi-disc wet brake	
	Inflation pressure (MPa)		0.75	

7. Fill capacity

Item	Condition	Grade	Capacity	Remarks
Hydraulic oil	Minimum temperature>-25 ℃	L-HV46 low temperature	260L	Recomme nded Chevron
		hydraulic oil		
	-40 °C <minimum td="" temperature="" °c<="" ≤-25=""><td>L-HS32 ultra-low</td></minimum>	L-HS32 ultra-low		
Trydradiic oii		temperature		
		hydraulic oil		
	Minimum air temperature	No. 10 Aviation		
	≤-40 ℃	hydraulic fluid		
	Working environment temperature: -20°C ~ 40°C	15W-40		API CH-4
Engine oil	Working environment temperature: -25°C ~ 30°C	10W-30	8.5L	
Engine oil	Working environment temperature: -30°C ~ 30°C	5W-30	0.SL	
	Working environment temperature: -35° ~ 20°	0W-20		
Diesel fuel	When the ambient temperature ≥4°C, use #0 diesel fuel		170L	

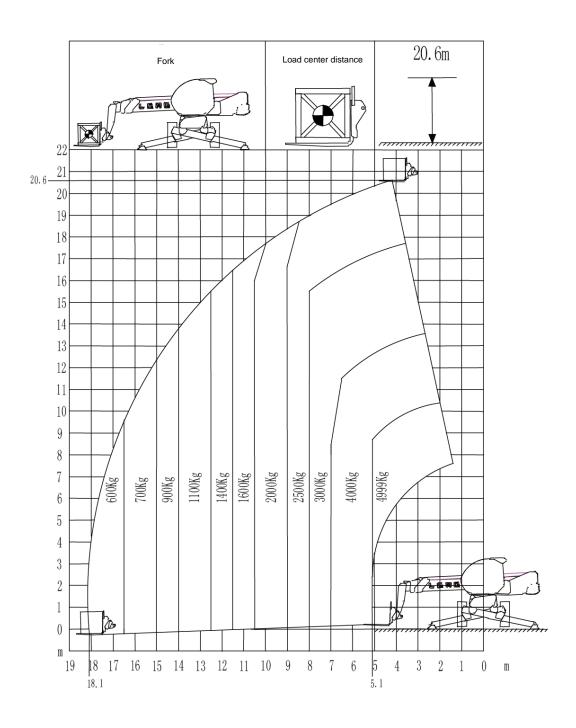
Operation Manual of Telescopic Handler

	When the ambient temperature ≥ -5°C, use #-10 diesel fuel			
	When the ambient temperature ≥ -14°C, use #-20 diesel fuel			
	When the ambient temperature ≥ -29°C, use #-35 diesel fuel			
Antifreeze		The ethylene glycol content is 50%	12.5L	Meet ASTM D6210 standard

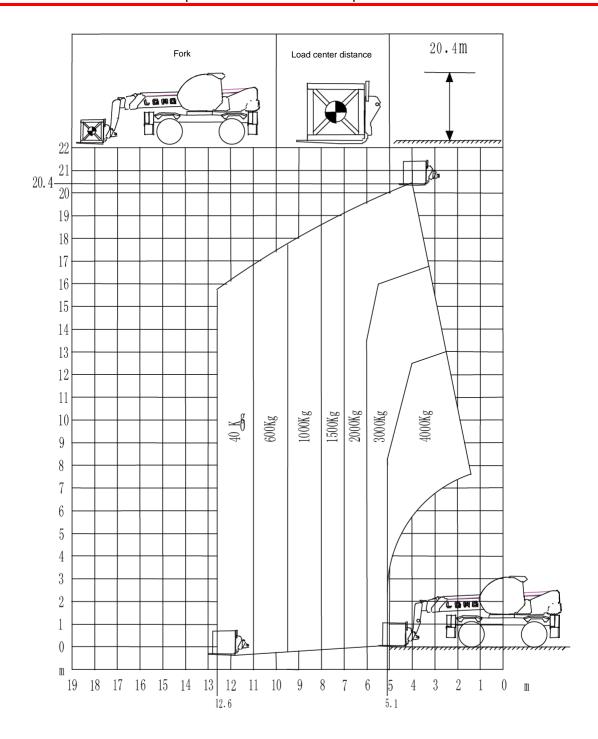
Item	Parameter	Item	Parameter
Hydraulic oil	260L (contracted state)	Front axle gear oil	10.6 L
Diesel fuel	170 L	Rear axle gear oil	10.6 L
Engine oil	8.5 L	Transmission gear oil	4 L
Engine Antifreeze	12.5L		



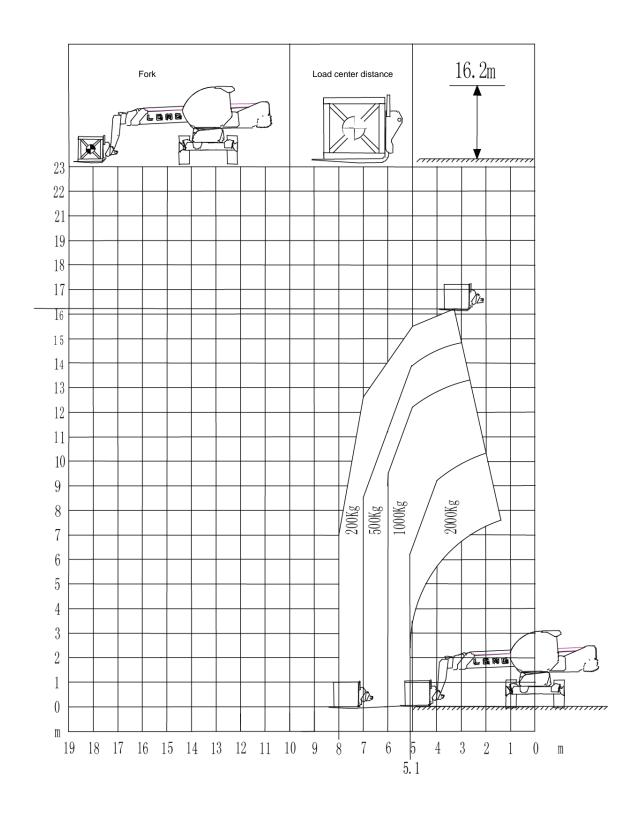
8. Range of motion















Chapter 3 Use of Vehicles







Fig. 3.1.1 Door Lock



Fig.3.1.2 Door switch

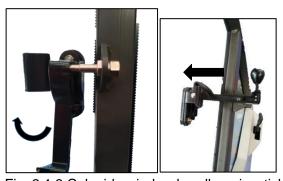


Fig. 3.1.3 Cab side window handle or joystick



Fig. 3.1.4 Side window sucker

3.1 Operation of doors

door is closed!

WARNING: Never drive before the

3.1.1 Use Door switch from outside the vehicle

Open the door: the door is in a non-locked state, and the door can be opened by pulling the handle outwards; If the door is locked, insert the key, turn it 180 degrees clockwise, and then pull the handle outward to open the door.

Close the door: just close the door.

Lock the door: after closing the door, insert the key, rotate it by 180 degrees counterclockwise and withdraw the key. After locked, the door cannot be opened by pulling the outer handle.

3.1.2 Use the door switch from the inside of the car

Open the door: pull the door handle backward and then push the door outward to open the door.

Close the door: close the door directly.

3.1.3 Door Side window

Open the side window: first lift the handle backward, turn on the locking switch, and then lift the handle horizontally to open the side window outward.

If it is necessary to fully open the side window: the opening side window can be rotated by 180 ° so that the Side window glass is adsorbed on the rear Side window suction cup.



Project	Parameter	
Seat width	566mm	
Seat height	1039mm	
Fore-and-aft		
adjustment	76mm	
travel		
Backrest	Forward tilt 20°	
angle	Back tilt 15°	
adjustment	Dack till 15	
Driver weight		
adjustment	45~145kg	
range		
Floating	+40mm	
travel	±40111111	

Table 3.2.1

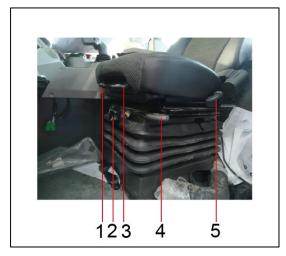


Fig.3.2.1 Seat

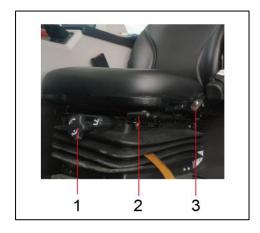


Fig.3.2.2 Seat (if equipped)

Project	Parameter	
Seat width	529mm	
Seat height	830mm	
Fore-and-aft	, 90mm	
adjustment	±80mm	

CAUTION: This operation shall be carried out while the vehicle is stationary. Recover from fully open position: gently press the suction cup to disengage the side window glass.

CAUTION: When leaving the vehicle,

make sure that the doors and windows of the vehicle are closed and locked. Valuables should be carried with you and not placed in the cab.

3.2 Cab interior device

3.2.1 Seat

- 1. See Table 3.2.1 on the left for the main parameters of the seat
- 2. Seat adjustment operation method:
- 1) Seat cushion inclination adjustment: move the adjusting handle 1 upward, apply a downward force to the front end of the seat cushion, lower the front end of the seat cushion to the required position, and release the handle.
- 2) Damping effect adjustment: according to the driver's weight and road conditions, rotate handle or joystick 2 to adjust to a suitable position.
- 3) Adjustment of front and rear slip of seat cushion: lift up the slide rail joystick 3, adjust the seat cushion to the required position, and release the slide rail joystick.
- 4) Fore-and-aft adjustment of the seat: lift up the slide rail joystick 4, adjust the seat to the required position, and release the slide rail joystick.



travel		
Backrest	Forward tilt 27.5 °	
angle	D = -1, +11+ 40 F 0	
adjustment	Back tilt 12.5 °	
Driver weight		
adjustment	45~130kg	
range		
Floating	+45mm	
travel	±45IIIII	

Table 3.2.2

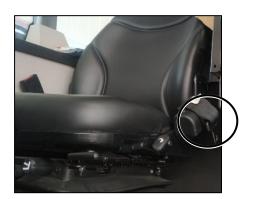


Fig.3.2.2-1 Seat belt

5) Backrest angle adjustment: move the adjusting handle 5 upward, adjust to the required position, and loosen the handle.

Seat (if equipped)

As shown in Fig 3.2.2

- 1. See Table 3.2.2 on the left for the main parameters of the seat.
- 2. Seat adjustment operation method:
- Damping effect adjustment: according to the driver's weight and road conditions, rotate the handle or joystick 1 to adjust to a suitable position.
- 2) Fore-and-aft adjustment of the seat: lift up the slide rail joystick 2, adjust the seat to the required position, and release the slide rail joystick.
- 3) Backrest angle adjustment: move the adjusting joystick 3 upward, adjust it to the required position, and loosen it.

3.2.2 Seat belt

- 1) Sit on the seat correctly.
- 2) Check whether the seat belt is twisted or not.
- 3) Place the seat belt at the hip horizontal position.
- 4) Tie the seat belt and check whether it is locked or not.
- 5) Adjust the Seat belt to fit your body shape. Do not squeeze your hips or relax too much.
- 6) Release the Seat belt: press the red button lock catch, and then pull out the Seat belt.

DANGER: In any case, if the seat belt is defective (fixing, locking, cutting, tearing, etc.), telescopic handler shall not





Fig.3.2.3 Key switch



Fig.3.2.4 Emergency stop button

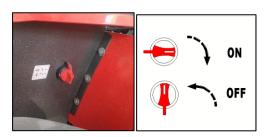


Fig.3.2.5 DC power switch

be used. The seat belt should be repaired or replaced immediately.

3.2.3 Key switch

Model	H1840	HR2150	
Rotation position	Purpose	Purpose	Remarks
Р	Initial position	Initial position	
	Engine off,		
0	instrument	/	
	lamp on		
I	Driving position	Engine off, instrument lamp on, driving position	
II	/	/	
III	Starting engine	Starting engine	Automatic reset to drive gear

3.2.4 Emergency stop button

Once a dangerous situation occurs, press the button and the engine will stop immediately.

Reset the emergency stop button before restarting the vehicle, otherwise it cannot be started.



be sure to be prepared for the sudden stop of all hydraulic actions.

3.2.5 DC Power Switch

The power master switch is located on the front side of the hood. (Currently closed)

Horizontal position means connected

Vertical position indicates disconnected





DC power switch (HR2150)

DANGER: The power switch shall be disconnected during circuit inspection or welding.

CAUTION: When the machine is deactivated for a long time, please turn off the power master switch to avoid accidents. Don't turn off the power master switch until the engine stops working and the key switch is placed in P position.



3.2.6 Instrument panel

H1840 Instrument panel:

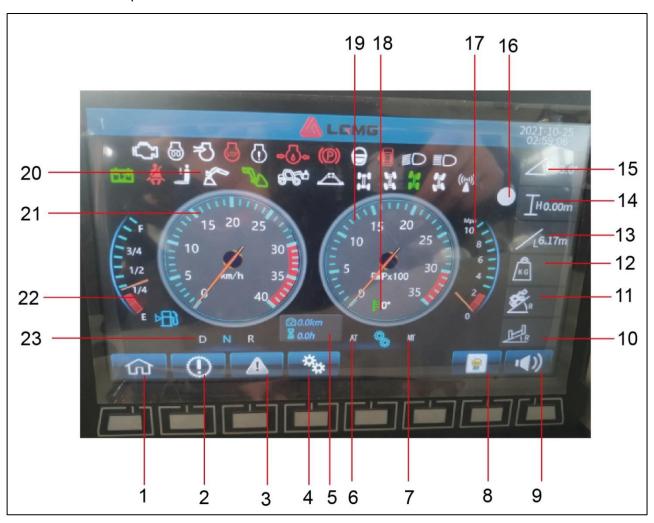


Fig.3.2.6 Display Instrument

No.	Name	No.	Name
1	Setting	13	Left and right inclination angle of vehicle
2	Engine system (if equipped)	14	Front and rear inclination angle of vehicle
3	Transmission system	15	Boom extension length
4	Boom system (if equipped)	16	Boom height
5	Usage time and total mileage	17	Boom derricking angle
6	Automatic gear display	18	Brake system pressure
7	Fault alarm/Historical fault query	19	Engine speed
8	Manual gear display	20	Alarm symbol
9	Screen brightness adjustment	21	Driving speed
10	ECU port status (if equipped)	22	Fuel level
11	Voice/mute	23	Gear display
12	Accessory weight	24	



HR2150 Instrument panel



No.	Name	No.	Name	
1	Return to Main Interface	13	Boom extension length	
2	Vehicle information query	14	Boom height	
3	Fault alarm/Historical fault query	15	Boom derricking angle	
4	Complete machine settings	16	Enable button Indicator	
5	Usage time and total mileage	17	Brake system pressure	
6	Automatic gear display (if equipped)	18	Cooling system temperature	
7	Manual gear display (if equipped)	19	19 Engine speed	
8	Screen brightness adjustment	20	Alarm symbol	
9	Voice/mute	21	Driving speed	
10	Left and right inclination angle of vehicle	22	Fuel level	
11	Front and rear inclination angle of vehicle		Gear display	
12	Accessory weight	24		

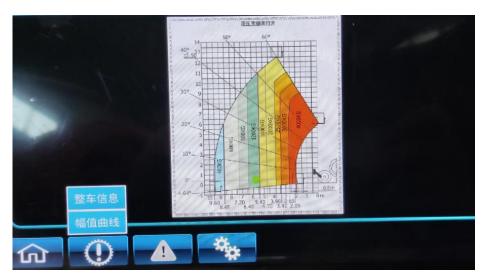


1. Back to main interface button

Press the back to main interface button to return to the main interface:

2. Machine information query button

Press the machine information query button to display complete machine information/amplitude curve Amplitude curve (when the hydraulic outrigger is not open):



When using the machine, please operate within the range allowed by the amplitude curve.

 Λ

Tip-over danger: The rated load shown on the amplitude curve is based on the

fact that the machine is on a fixed level ground and the goods on the fork are evenly arranged; Tire pressure is normal and the vehicle is in good working condition.

3. Fault alarm/historical fault query button

Press fault alarm/historical fault query button to display fault alarm/historical faults Current fault display:





4. Machine setting button

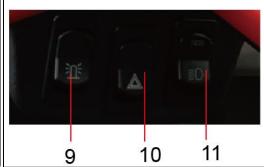
Press the machine setting button to set other options such as date modification, parameter setting, function query, and port query.





3.2.7 Rocker switch and symbol







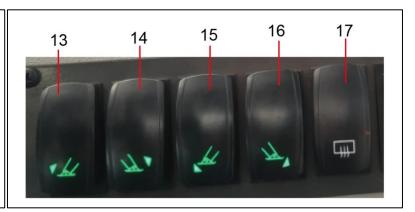


Fig.3.2.7 Rocker switch

		rig.5.2.7 Nocker switch	
Name	Stat us	Function	Remarks
Front working	0	Front working lamp function disabled	
lamp Switch	1	Front working lamp function enabled	Front working lamp drive
Rear window	2	Rear window wiper function on	
wiper spray	0	Function disabled	
switch	1	Rear window spray function on	Automatic reset
Side window	2	Side window wiper function on	
wiper spray	0	Function disabled	
switch	1	Side window spray function on	Automatic reset
Top window	2	Top window wiper function on	
wiper spray	0	Function disabled	
switch	1	Top window spray function enabled	Automatic reset
Rear working	0	Rear working lamp function disabled	
lamp switch	1	Rear working lamp function enabled	Rear working lamp drive.
Rocker switch	0	Function disabled	
of outline lamp	1	Function enabled	
Rocker switch	0	Function disabled	
of platform	1	Function enabled	
	Front working lamp switch Rear window wiper spray switch Side window wiper spray switch Top window wiper spray switch Rear working lamp switch Rocker switch of outline lamp Rocker switch	Front working lamp switch 1 Rear window 2 wiper spray 0 switch 1 Side window 2 wiper spray 0 switch 1 Top window 2 wiper spray 0 switch 1 Top window 2 wiper spray 0 switch 1 Rear working 1 Rear working 1 Rocker switch 0 of outline lamp 1 Rocker switch 0	NameStat usFunctionFront working lamp switch0Front working lamp function disabledRear window



Operation Manual of Telescopic Handler

			Operation Manual of Telescopic Handi	eı
No.	Name	Stat us	Function	Remarks
	switching			
	Manual/Auto	1	Automatic gear engaged	
8	rocker switch (if equipped)	2	Manual gear engaged	
	Warning dome	0	Function disabled	
9	light switch	1	Function enabled	
10	Warning light	0	Function disabled	
10	switch	1	Function enabled	
		2	Outline light on	
11	Light switch	0	Function disabled	
		1	Low beam on	
	Slewing	0	Function disabled	
12	prohibition switch (If equipped)	1	Function enabled	The slewing function is prohibited
	Left front	0	Function disabled	
13	outrigger switch (If equipped)	1	Function enabled	Left front outrigger function enabled
	Right front	0	Function disabled	
14	outrigger switch (If equipped)	1	Function enabled	Right front outrigger function enabled
	Left rear	0	Function disabled	
15	outrigger switch (If equipped)	1	Function enabled	The left rear outrigger function is enabled.
	Right rear	0	Function disabled	
16	outrigger switch (If equipped)	1	Function enabled	The right rear outrigger function is enabled.
17	Front window	0	Function disabled	
17	glass heating	1	Function enabled	

Symbol and description

Symbol diagram	Description	Description
+	Left turn light	When left steering or hazard warning switch is activated, it is always on or flashing
	Engine fault lamp	Light up red when Engine Fault alarm
	Engine preheating	Engine light up yellow when preheating
₹	Air cleaner blockage alarm	When the A/C filter element is blocked, the indicator lights up red and the main filter element needs to be cleaned or replaced. (Refer to maintenance manual for replacement instructions)



Operation Manual of Telescopic Handler

_		T Wallaal of Telegoople Flandiel
STOP	Engine stopped	Indicate when engine stops
	Engine fault indication	illuminate when the engine reports a fault
\$\bar{\bar{\bar{\bar{\bar{\bar{\bar{	Oil pressure alarm	Engine oil pressure failure
(P)	Parking indication	Lights up when the parking brake is engaged
	Door open indication	The indicator lights up when the door is not fully closed
	Low beam	Low beam on indication
	High beam	High beam on indication
→	Right turn light	When right steering or hazard warning switch is activated, it is always on or flashing
	Seat belt indication	When the seat belt is not tied, the indicator lights up
1	Passenger departure indication	Determine if there are occupants on the cab seat After the alarm is given, the vehicle cannot move. The enable button needs be pressed before it resumes.
	Hook mode	The indicator will be on if the hook mode is enabled.
€ ©\$*	Cage mode	The indicator will be on if the cage mode is enabled.
$\mathcal{D}_{\mathcal{O}}$	Fork mode	When the fork mode is enabled, the indicator lights up
<u></u>	Outrigger touchdown	Indication of outrigger touchdown
	Front and rear axle centering	Indication of front and rear axle centering
Z	4WS	Indication of 4WS mode enabled
	Crab	Crab mode enable indication
	2WS	2WS mode enable indication
	Battery power loss indication	It lights up when the battery voltage is lower than 9 V
(((~))	Wireless handle connection indicator light	This indicator light goes on when the wireless handle is connected
	Water-in-fuel indicator light	This indicator light goes on when the water content in the fuel filter is high, indicating that water draining is required



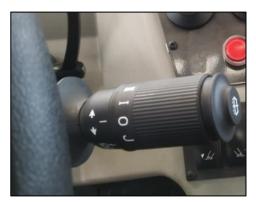


Fig.3.2.8 Combination switch knob



Fig.3.2.9 Front windshield spray switch

3.2.8 Combination switch

3.2.8.1 Turn signal lamp

Pull the combination switch knob upward to turn on the right turn light; Pull the combination switch knob down to turn on the left turn light.

3.2.8.2 Headlamps

Press the rocker switch of the front working lamp, the middle on-position of the combination knob is the low beam, move the combination switch knob forward in the middle position to turn on the high beam, move the combination switch knob backward to turn on the instant beam, and release the joystick for the automatic reset of the low beam.

3.2.8.3 Wiper switch

Rotate the combination switch and select the required wiper swing gear.

0-closed position

J-Wiper intermittent gear

I-Wiper slow gear

II-Wiper fast gear

NOTE: Do not add ordinary water or other washing liquid into the washer fluid filler, and must add washer fluid for professional windshield washing.

3.2.8.4 Front windshield spray switch

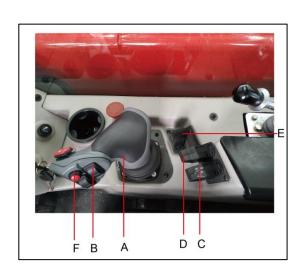


Fig.3.2.10 Hydraulic joystick

Press the front windshield spray switch located at the end of the combination switch knob, then the front windshield sprays water, and the wiper works for 1-2 turns.

3.2.9 Enable switch

CAUTION: It is necessary to press the enable switch (F) for 1 second before boom luffing, boom extension and retraction, fork leveling, left and right outrigger, and frame adjustment. There will be a warning tone, and the white indicator on the control panel will turn green. If there is no action within 20s, you need to press the enable key again.

3.2.10 Hydraulic joystick

- A. Boom lifting and fork tilting controllers
- B. Boom extension and retraction control pulley
- C. Left outrigger controller (H1840)
- C. Outrigger horizontal telescopic controller (HR2150)
- D. Right outrigger controller (H1840)
- D. Outrigger vertical telescopic controller (HR2150)
- E. Vehicle tilt correction controller
- F. Enable switch

Boom lifting (luffing)

Press the Enable switch and the White indicator will turn green.

1) Move the controller A backward and the



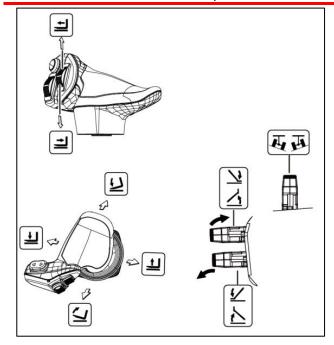


Fig. 3.2.11 Schematic diagram of manipulation

boom will rise

Move the controller A forward and the boom will drop

CAUTION: When the outrigger is not opened, the maximum derricking angle of the boom is 60 degrees.

Fork leveling

Press the Enable switch and the White indicator will turn green.

- Move controller A to the left, then the fork tilts backwards
- Move controller A to the right, then the fork tilts forward

Boom extension and retraction

Press the Enable switch and the White indicator will turn green.

- 1) Roll up pulley B, then the boom will extend
- 2) Roll down pulley B, then the boom retractsOutrigger operation

Press the Enable switch and the White indicator will turn green.

H1840:

- Outrigger extending: move the controller
 CD down
- Outrigger retraction: move the controllerCD up

HR2150:

When operating on one or more outriggers, press the rocker switch to enable corresponding outrigger function .



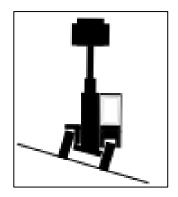


Fig.3.2.12 Tilt correction



1. Enable switch

Turret rotation Joystick; Located on the left side of
 the seat

Fig.3.2.13 Turret Rotation Joystick

- Outrigger horizontal extension: move
 controller C downwards
- Outrigger horizontal retraction: move controller C upwards
- Outrigger vertical extension: move controller D downwards
- 4) Outrigger vertical retraction: move controllerD upwards



extended, the outrigger can be
extended, but cannot be retracted;
When the boom is retracted, the
outrigger can be retracted after the
derricking angle is less than 60 degree.

Tilt correction of vehicle

Press the Enable switch and the White indicator will turn green.

- Move the joystick E to the left to tilt the telescopic handler to the left.
- Move the joystick E to the right to tilt the telescopic handler to the right.



be carried out when the derricking angle of the boom is less than 30 °.

Turret rotation (if equipped)

Press the enable switch, move the joystick control handle to the left, and the turret rotates to the left; Press the enable switch, move the joystick to the right, and turn the turret to the



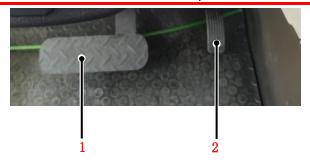


Fig.3.2.14

1. Brake pedal 2. Accelerator pedal



Fig.3.2.15 D Gear/N Gear/R Gear



Steering wheel 2. Gear switch 3. Horn
 Fig.3.2.16 gear switch

right.

When the Turret drives the vehicle in the slewing state, always pay attention to the forward direction of the vehicle.

3.2.11 Accelerator pedal

Accelerator pedal control Engine speed.

3.2.12 Service brake pedal

The Service brake pedal acts on the front and rear wheels by boosting the hydraulic Brake system to slow and stop the Telescopic handler.

3.2.13 D-gear/N gear/R gear

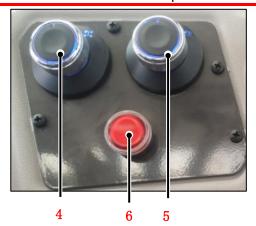
- D gear: press the front of the switch (position
 A).
- 2) N gear: middle position (position B).
- 3) R gear: press the rear of the switch (position
- C), and the reversing lamp and reversing alarm sound to indicate that the vehicle is reversing.

CAUTION: When gear from D gear to R gear or from R gear to D gear, switch gears to N gear and pause briefly. During gear switching, the vehicle shall be kept stationary and the brake pedal to the bottom.

3.2.14 Variable speed gear switch

CAUTION: The gear shall be carefully selected according to the nature of the work performed. Improper selection will cause the transmission fluid temperature to rise rapidly, which may lead to serious damage to the





- 4. Steering mode selector switch
- 5. Driving mode selector switch
- 6. Override button

Fig.3.2.17 selector switch

transmission.

H1840 Telescopic handler fitted with four gears In general, we recommend that you use the following gears according to the nature of your work.

- On the road: Start at 3rd gear, if the road conditions and status permit, then rise to 4th gear. In hilly areas, if conditions and road conditions permit, you can start in 2nd gear and then in 3rd gear.
- When the trailer is on the road: start in 2nd gear and shift to 3rd gear if road conditions and conditions permit.
- Carrying earth: 1st gear.
- Loading fertilizer, etc.: 2nd gear.

CAUTION: When increasing or decreasing gears, reduce gears step by

step and increase gears step by step.

HR2150 Telescopic handler equipped with two gears

- When driving on the road for a long distance without load, select 2nd gear.
- When going uphill, select 1st gear.
- When shifting gears, place the right joystick on N gear, step on the brake pedal, and switch from the first gear to the second.



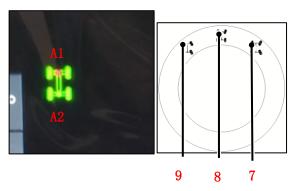


Fig.3.2.18 Steering Mode Switch

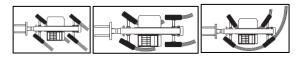


Fig.3.2.18-1 Steering Diagram

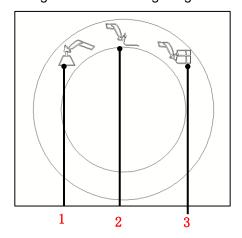


Fig.3.2.18-2 Driving Mode Selector Switch

3.2.15 Steering mode

1. Steering positioning indicator As shown in Fig.3.2.18:

These lights come on to indicate the location of the wheel relative to the body. Lamp A1 is used for the front wheel and lamp A2 is used for the rear wheel.

2. Positioning control of the wheel As shown in Fig.3.2.17:

Turn steering mode selector switch 3 to position 7 (4WS). Turn the antifreeze and align the rear wheels until light A2 comes on.

Turn steering mode selector switch 3 to position 8 (2WS). Turn the antifreeze and align the front wheels until light A1 comes on.

3. Steering shift switch

As shown in Fig.3.2.18:

- 9: Front/rear drive wheel steering direction is the same (Crab).
- 8: 2WS.
- 7: Front/rear drive wheel steering direction is opposite (4WS).

3.2.16 Driving mode

- 1. Hook mode: can be used with crane.
- 2. Handling mode: applicable to fork and adjustable accessory and bucket on fork.
- 3. Platform mode: reserved.

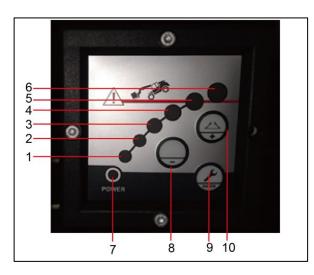


Fig.3.2.19 Longitudinal Stability Limit and Alarm

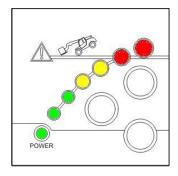


Fig.3.2.20

3.2.17 Longitudinal stability limit and alarm (if equipped)

The machine is equipped with a longitudinal torque monitoring device to measure the longitudinal stability of the vehicle. The reduction calibration of the monitoring device is carried out in the rear wheel alignment when the machine is stationary on the horizontal ground.



WARNING: Longitudinal stability

limit and alarm are directly related to the stability of the machine. It is not allowed to modify or calibrate without permission. If you need to modify or calibrate, please contact our service personnel.

No.	Description
1	Green indicator light is on, with no
	sound
2	Green indicator light is on, with no
	sound
3	The yellow indicator light is on,
	the alarm makes intermittent
	sound, and the vehicle is nearly
	overloaded
4	The yellow indicator light is on,
	the alarm makes intermittent
	sound, and the vehicle is nearly
	overloaded
5	The red indicator light is on, and
	the alarm makes a continuous
	sound
	Vehicle overloaded
6	The red indicator light is on, and
	the alarm makes a continuous





Fig.3.2.21



Fig.3.2.22

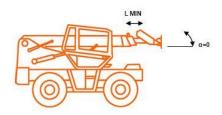


Fig.3.2.23

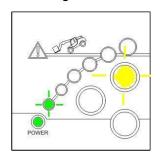


Fig.3.2.24

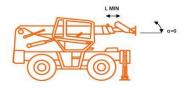


Fig.3.2.25

	sound
	Vehicle overloaded
7	Power indicator
8	Backspace key
9	Multiply key/Indicator of outrigger
	in proper position
10	OK button

Debugging instructions:

P. Chillip	OK button	

1. Enter debugging mode

- Before powering on and starting, press and hold the OK button, and turn on the key switch.
 At this time, all Indicators will be on. As shown in Fig.3.2.20.
- 2) At this time, enter the password quickly. Assume that the password is 321, that is, press

3 times from top to bottom, press 2 times
, and then press 1 time . After
pressing, except that the power indicator is on,
the second red indicator light counting from top

3) Press one time at this time, then the first red indicator on the top flashes, as shown in Fig.3.2.22. Then press the OK button and restart the power supply to start debugging.

to bottom starts to flash. As shown in Fig.3.2.21



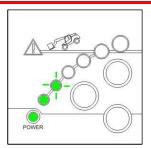


Fig.3.2.26

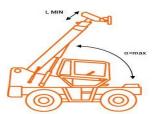


Fig.3.2.27

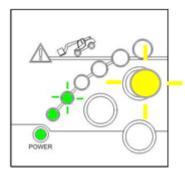


Fig.3.2.28

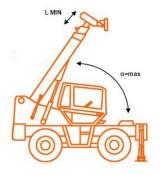


Fig.3.2.29

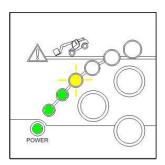


Fig.3.2.30

2. No-load calibration

- 1) In the first step, it is necessary to make the telescopic handler reach the state as shown in Fig. 3.2.23, that is, the boom is in the state of horizontal full retraction and not supporting the outrigger. Press once to OK button. The indicator changes to the state as shown in Fig.3.2.24, and the indicator of outrigger in proper position indicator is flashing.
- 2) In the second step, it is necessary to make the telescopic handler reach the state as shown in Fig.3.2.25, that is, the boom is fully retracted horizontally and supported by the outrigger. Press once to OK button. The Indicator changes to the state as shown in Fig.3.2.26.
- 3) In the third step, it is necessary to make the Telescopic handler reach the state as shown in Fig. 3.2.27, i.e., the boom is fully retracted at the maximum rising angle and the Outrigger is not supported. Press once to OK button. The indicator changes to the state as shown in Fig.3.2.28. The indicator of outrigger in proper position is flashing.
- 4) In the fourth step, it needs to make the telescopic handler reach the state as shown in Fig.3.2.29, that is, the boom is fully retracted at the maximum angle and the support outrigger is open. Press OK button once. The Indicator becomes as shown in Fig.3.2.30.



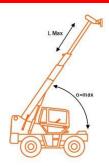


Fig.3.2.31

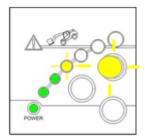


Fig.3.2.32

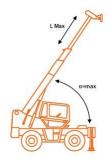


Fig.3.2.33

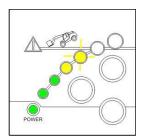


Fig.3.2.34

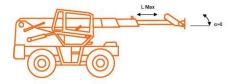


Fig.3.2.35

- 5) In the fifth step, it is necessary to make the telescopic handler as showed as it is in Fig.3.2.31, that is, the boom is fully extended at the maximum angle with outrigger back. Press OK button once. The indicator changes to the state as shown in Fig.3.2.32. The indicator of outrigger in proper position is flashing.
- 6) Step 6: Make the telescopic handler reach the state as shown in Fig.3.2.33. That is, the boom is fully extended at the maximum angle with outrigger landing to ground. Press OK button once. The indicator changes to the state as shown in Fig.3.2.34.
- 7) Step 7: make the telescopic handler reach the state as shown in Fig.3.2.35, that is, the boom is in the state of full horizontal extension and not supporting the outrigger. Press once to OK button. The indicator changes to the state as shown in Fig.3.2.36. The indicator of outrigger in proper position is flashing.
- 8) Step 8: Make the Telescopic handler reach the state as shown in Fig.3.2.37, that is, the Boom is fully extended at a horizontal angle and the support is Outrigger. Press once to OK button. The Indicator changes to the state as shown in Fig.3.2.38.

At this time, no-load calibration has been completed.



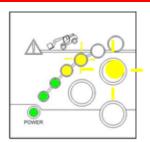


Fig.3.2.36

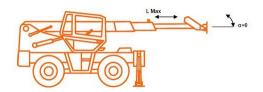


Fig.3.2.37

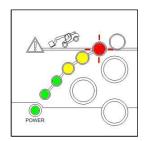


Fig.3.2.38

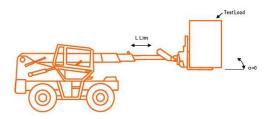


Fig.3.2.39

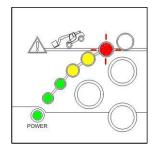


Fig.3.2.40

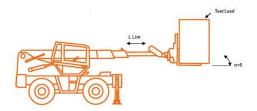


Fig.3.2.41

3. Loading correction

9) Step 9, it is necessary to make the telescopic handler reach the state as shown in Fig.3.2.39, that is, the boom is at a horizontal angle and the outrigger is not supported. The extension length is the limit length that the weight can extend. Press once to OK button. The indicator gets into the state as shown in Fig.3.2.40. The indicator of outrigger in proper position is flashing.

10) Step 10, it is necessary to make the telescopic handler reach the state as shown in Fig.3.2.41, that is, the boom is at a horizontal angle and supporting outriggers are supported. The extension length is the limit length that can be extended according to the weight. Press OK button once. The indicator changes to the state as shown in Fig.3.2.42.

At this time, press the OK button once to save the parameters. Power on again, exit the debugging mode and enter the working mode.



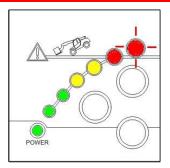


Fig.3.2.42

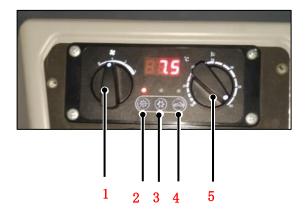


Fig.3.2.43 Air conditioning panel



Fig.3.2.44 Parking brake handle

3.2.18 Air Conditioner

- 1. Air volume knob: rotating to the right will increase the air volume.
- 2. Heating switch: press the button and the indicator will light up, indicating that the heating mode is on
- 3. Cold air switch: press the button and the indicator will light up, indicating that the cold air mode is on
- 4. External circulation: press the button and the indicator lights up, indicating that the external circulation is on
- 5. Temperature adjustment knob: increase the temperature by rotating the knob to the right.

DTC	Description		
ER1	Overvoltage (voltage> 32 V):		
	check the generator supply circuit		
ER2	Undervoltage (voltage <18 V):		
	check the generator supply circuit		
ER3	System pressure fault: check the		
	pressure switch circuit and system		
	pressure		
ER4	Defrost sensor open or short		
	circuit		
ER5	Return air temperature sensor		
	open circuit or Short circuit		

3.2.19 Parking brake handle

The Parking brake handle is on the right side of the seat. Pull up the parking handle to braking state, lower the handle and release the brake.

Instrument panel displays brake system pressure, and alarm when the system pressure is lower than 2.0MPa.



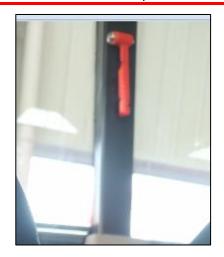
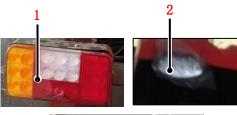


Fig.3.2.45 Emergency hammer





1. Rear combination lamp 2. Cab rear working lamp 3. Front combination lamp

Fig.3.3.1 Working lamp

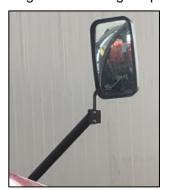


Fig.3.3.2 Rearview mirror



✓ WARNING: Do not start the

vehicle until the parking brake signal lamp goes out!

3.2.20 Emergency Hammer

It is located on the right side window of the cab and used in case of emergency.

3.3 Cab exterior device

3.3.1 Working lamp

- Rear combination lamp (including indicator, brake lamp, tail lamp and fog lamp)
- 2. Cab rear working lamp
- Front combination lamp (including indicator, low beam, high beam and side lights)

3.3.2 Rearview mirror

One on the left and one on the right

Before driving, adjust the rearview mirror to the appropriate angle

3.3.3 Towing pin and hook

The device is located at the rear of the telescopic handler and is used to connect the trailer and the fixed points when the vehicle is transported.

Check the condition of the trailer (tire condition and pressure, electrical connection, Hydraulic hose, Brake system, etc.) before using the trailer.

CAUTION: Do not tow trailers or accessories with unsatisfactory



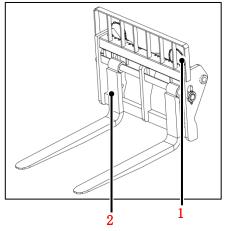
Fig.3.3.3 Towing pin and hook



Fig.3.3.4 Washer fluid filler



Fig.3.3.5 Hood assembly



1. Limit bar 2. Fork Fig.3.3.6 Fork assembly

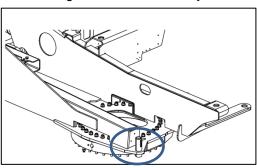


Fig.3.3.7 Turret rotation lock pin

working conditions. The use of trailer in severe conditions may affect the steering and braking of the forklift, thus affecting safety.

3.3.4 Washer fluid filler

Open the washer fluid filler cap and fill the glass water, and the washer fluid level cannot be less than 1/4.

3.3.5 Hood assembly



Please open the cover when repairing or maintaining the engine system and transmission system.

3.3.6 Fork assembly

Adjust the fork spacing to an appropriate distance when using.

DANGER: No people shall be allowed on the fork!

3.3.7 Turret rotation lock pin (if equipped)

Make sure that the turret is fixed with a turret rotation lock before transportation.

Make sure to unlock the turret during operation.



3.3.8 Wireless joystick-HR2150 only



No.	Name	Function description	
		Turn on and connect the wireless controller, flip up the enable	
		button and move the joystick upward at the same time, and	
	The extension/retraction of	the boom will extend; Move the Joystick down at the same	
1	the control boom Handle	time, and the boom will retract. At the same time, move the	
	of the turret rotation	joystick to the left, and the turret rotates to the left; At the	
		same time, move the joystick to the right, and the turret	
		rotates to the right;	
2 Display screen	Display screen	Display the machine status information (alarm code; Engine	
	speed; Controller power, etc.)		
Joystick for controlling the 3 lifting/lowering of the boom	Open and connect the wireless controller, toggle the enable		
	button upward and move the joystick upward at the same		
	time, the boom will rise; Move the joystick down at the same		
	DOOM	time, and the boom will drop.	
4 Power switch	Controller power switch, it is open vertically and closed		
4	Fower Switch	horizontally.	
5	Connection button	Long press the button for about 3 seconds to connect the	
		controller to the whole machine	
6	Reserved		



Operation Manual of Telescopic Handler

7	Reserved	
8	Manually adjust the engine speed toggle switch	Continuously lift the toggle switch to increase the engine speed; When the speed increases, the increase of engine sound can be obviously detected. Continue to move the toggle switch downward to reduce the engine speed
9	Reserved	
10	GSS button	
11	Reserved	
12	Enable toggle switch	When using the joystick function, you need to toggle the enable toggle switch
13	Reserved	
14	Reserved	

Turn on and connect the wireless controller

Press the wireless connection rocker switch located in the cab. As shown in the below figure:



The rotating controller power switch (4) is in the vertical position, and the controller power is turned on.

Screw out the GSS button (10) and press the connection button (5) for about three seconds to connect the controller.

After use, restore the controller and cab rocker switch to the original state, and charge the battery if necessary.





Chapter 4 Operating Instructions





4.1 Precautions

- 1) Perform routine maintenance.
- Ensure that the lights, indicator and windshield wipers are working properly.
- Ensure that the rearview mirror is in good condition, clean and adjusted correctly.
- 4) Make sure the horn works properly.
- 5) When entering and leaving the driver's seat, always face the vehicle and keep 3 contact points (hands and feet) on the steps and armrests.
- Do not use headphones to listen to radio or music during operation.
- Do not operate the machine when oil is stuck on your hands or feet.
- Under no circumstances can the seat be adjusted while the vehicle is moving.
- It is forbidden to extend an arm or leg or any part of the body out of the cab.
- 10) Seat belt must be worn.
- It shall be forbidden to carry people on the telescopic handler or in the cab.
- 12) No person shall be close to the working area of the telescopic handler or pass under the boom load.
- 13) Before lifting or removing the load, ensure that the ground under the wheels and the outrigger is stable and firm.

Never pile up goods on uneven ground,
 otherwise it may tip over.

4.2 Inspection before

operation

4.2.1 Basic principles

- Inspection and routine maintenance before performing the operation are side window's responsibilities.
- 2) The pre-operation inspection is a very intuitive inspection process, which is performed by the side window before each job change. The purpose of the inspection is to find out if there is an obvious problem with the machine before the side window is used.
- 3) Inspection before operation can also be used to determine whether routine maintenance procedures are required. Side window can only perform routine maintenance items specified in this manual.
- Please refer to the list on the next page and check each item.
- 5) If damage or any unauthorized change from the factory state is found, mark the machine and stop using it.
- 6) Only qualified maintenance personnel can repair the machine. After the maintenance, perform the inspection before operation again.



7) According to the manufacturer's regulations and the requirements listed in the manual, regular maintenance inspections shall be performed by qualified maintenance personnel.

4.2.2 Inspection before operation

- Ensure that the manual is complete, easy to read, and kept in the file box on the platform.
 To replace any manual, please contact the service personnel of LGMG.
- 2) Ensure that all labels are clear, legible and properly located. Please see the "Label" section. To replace the labels, please contact the service personnel of LGMG.
- 3) Please refer to the "Maintenance" section to check if the hydraulic oil leaks; check if the oil level is appropriate, and add hydraulic oil as needed.
- Check if the battery fluid leaks and the wiring is firm.
- 5) Please refer to the 'maintenance' section to check whether the engine oil leaks and whether the oil level is appropriate, and add oil as needed.
- 6) Check whether the engine fuel leaks and whether the fuel level is appropriate. When the fuel level is low, please add fuel in time.
- 7) Check the engine indicator, if the indicator is

- on, immediately make sure the engine is off, and mark the machine. Contact service personnel for troubleshooting.
- 8) Refer to the "maintenance" section, check whether the engine coolant leaks and whether the lithium-based grease is appropriate, and add coolant as required.
- 9) Inspect the following parts for damage, improper installation, loose or missing parts and unauthorized alteration:
 - Electrical plugs, wiring and cables
 - Joystick, rocker switch
 - Inclination sensor, long angle sensor,
 pressure sensor
 - Display screen, alarm indicator, flashing light, horn
 - Valve block, hose, hydraulic connector, cylinder, motor, reducer
 - Fuel tank and hydraulic oil tank
 - Boom slider lubrication, tire pressure, slewing bearing
 - Front axle, rear axle
 - Outrigger
 - Engine and its accessories
 - Rearview mirror
 - Fork and other attachments
 - Nuts, bolts and other fasteners

Inspect the entire machine to check:



- the welds or structural parts for cracks
- the machine for dent or damage
- Serious rust, corrosion or oxidation

Ensure the integrity of all structural parts and other key components. All relevant fasteners and pins are in the correct position and tightened.

After completing the inspection, ensure that the

4.3 Workplace inspection

hood is properly positioned and locked.

4.3.1 Basic principles

- Workplace inspection can help side window judge whether the workplace can ensure the safe operation of the machine. The side window shall first perform this work before moving the machine to the workplace.
- 2) It is the duty of the side window to understand and remember hazardous matters in the workplace, which can be noted and avoided when moving, installing and operating the machine.

4.3.2 Workplace Inspection

Be careful and avoid the following dangerous situations:

- Steep slope or cave
- Protrusions, ground barriers or debris
- Inclined surface
- Unfirm or smooth surface
- Obstacles in the air and high voltage

wires

- Surface support insufficient to withstand all the load forces exerted by the machine
- Instantaneous wind speed
- The temperature and humidity of the operating environment exceeding the temperature and humidity requirements.
- Unauthorized personnel appear
- Other possible unsafe situations

4.4 Startup

4.4.1 Safety precautions

- Only when the side window is sitting in the cab, adjusting and fastening the seat belt can the fork loading be started or operated the telescopic handler.
- 2) Do not start telescopic handler by pushing or pulling. This operation may cause serious damage to the transmission. If necessary, the transmission must be in neutral when the traction fork is loaded in an N gear.
- 3) If starting with an emergency battery, please use a battery with the same characteristics, first disconnect the power switch, and follow the battery polarity when connecting. Connect the positive terminal first and then the negative terminal.
- 4) Check the closing and locking of the hood.
- 5) Check if the D gear / N gear / reverse selector



is in N gear

4.4.2 Start-up

- 1) Place the gear selector in the N gear.
- Turn the key switch, start the electrical system and preheat (automatically preheat).
- 3) Check whether the symbol of the control panel is normal. If not, troubleshoot the problem before starting the machine.
- 4) Check whether the fuel level on the indicator is normal, and if it is not normal, add fuel. Set the key switch to P gear when adding fuel.
- 5) Turn the key switch to gear III, start the engine, and reset the key switch to the driving gear.

 Run the engine at idle speed for 3 to 5 minutes and run the engine at idle speed in cold weather for at least 5 minutes. The engagement time of the starter motor shall not exceed 15 seconds. If the engine does not start successfully, wait 2 minutes before starting again.
- If the meter display is incorrect, stop the internal combustion engine and perform the necessary operations immediately.

4.5 Driving

4.5.1 Safety precautions

- Do not perform operations beyond the telescopic handler or fork capacity.
- Retract the boom, and lower the fork to 300mm level from the ground. (Transport location)

- Only load balanced and properly secured load to avoid the risk of load falling off.
- When loading, the driving speed of the telescopic handler shall not exceed 12 Km/h.
- 5) When the vehicle is running, it is forbidden to operate the boom.
- It is forbidden to change the steering mode when driving.
- It is forbidden to change the forward/reverse mode when driving.
- 8) When braking, apply the brake and do not suddenly brake.
- 9) Never drive on ditch edges or steep slopes.
- Drive slowly on wet, slippery or uneven terrain.
- 11) Ensure that the service brake is working properly.

4.5.2 Driving

- 1) Retract and lower the boom.
- 2) Select the appropriate gear.
- 3) Select a suitable steering mode. Before changing the steering mode, set the wheel to the center. For more information about the wheel centering, see 3.2.15 steering mode.
- 4) Press the horn before driving to remind others that the vehicle is about to start.
- 5) Release the parking brake.
- 6) Select the forward/reverse mode, accelerate slowly, and use the lights and rearview mirror reasonably according to the driving direction.



4.5.3 Braking

CAUTION:

- When the vehicle is stopped, the hand brake valve joystick must be pulled down!
- Do not start the vehicle until the parking brake symbol goes out!
- In some cases, the braking force of the parking brake may not be sufficient to park a fully-loaded vehicle on an uphill/downhill road, so when parking on a hill, the wheel shall be chocked.

To stop the vehicle smoothly, follow the following steps:

- When the car is running, loosen the accelerator pedal first and reduce the speed.
- Gently press the brake pedal to stop the vehicle when it is about to approach the parking place.
- 3) After the car is stopped steadily, put the gear selector in neutral position, and then pull down the parking brake handle to make it in braking state.

When braking, pay attention to the following matters:

When braking, if there is no emergency,
 avoid stepping on the brake pedal to the end

- quickly and violently and without loosening it.

 Excessive braking may cause personal injury or damage to the whole vehicle parts.
- 2) When driving, if the low hydraulic pressure alarm symbol of the brake system is on, stop the vehicle immediately to find out the cause and eliminate it.

4.6 Parking

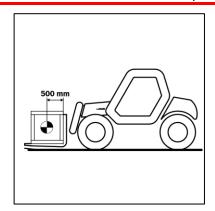
- Park the telescopic handler on level ground and pull up the parking brake.
- 2) Place the gear selector in the N gear.
- Fully retract the boom and lower the fork to the ground.
- 4) Close the light switch.
- 5) After the machine works for a long time, the engine shall be idled for several minutes to reduce the temperature of the cooling system.
- Turn off the engine, remove the key and lock the door.

4.7 Loading

4.7.1 Quality and center of gravity of load

 Before carrying the cargo, you must know its quality and center of gravity.





 The load chart is applicable to load with a distance of fork 500mm from the longitudinal position of the center of gravity.

! It is forbidden to move the weight

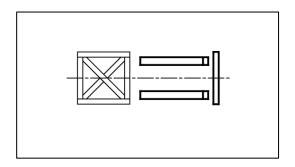
beyond the load specified on the telescopic handler load sheet.

/! DANGER: for loads with moving center of gravity (such as liquid), the change of center of gravity shall be

When picking up and placing goods on the ground or at high altitude, always pay attention to the lateral stability and longitudinal stability of the

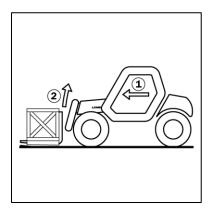
vehicle and the alarm device. 4.7.2 Cargo on the ground

considered.

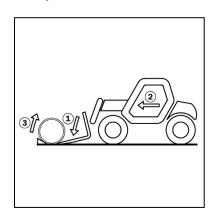


 Retract and lower the boom so that the fork is in the horizontal position, and adjust the distance between the two forks according to the load.

Never use a single fork to lift the cargo.



2) Move the telescopic handler forward slowly and lift the boom slightly to the transport position. Tilt the fork backwards to ensure cargo stability.



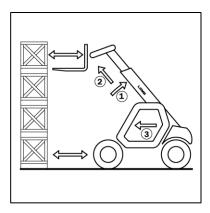
3) For the non-pallet load, tilt the fork forward before lifting the load, and then insert the fork under the load (prevent the load from moving if necessary).

4.7.3 Take the goods in the air

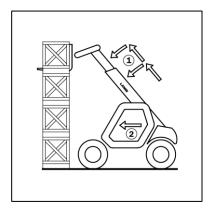
Before raising the boom, check whether the lateral position of the telescopic handler is horizontal.



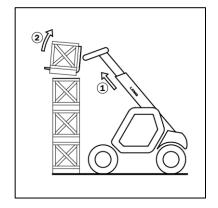
Pickup



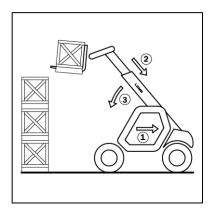
- Lift and extend the boom until the fork is level with the load, if necessary, slowly move the telescopic handler forward.
- 2) A certain distance should always be kept between the load and the telescopic handler and the shorter boom should be extended as far as possible.



3) Insert the fork into the bottom of the load by alternately telescoping the boom or moving the telescopic handler forward (if necessary), then pull up the parking brake and put the D/R gear selector in N gear.



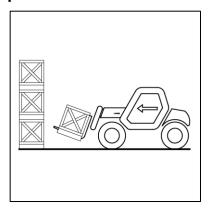
- 4) Raise the load slightly and tilt the fork backward to stabilize the load.
- If the load is too heavy, the load shall be returned to its original position.



6) Move the vehicle backwards (if necessary), retract and lower the boom to bring the goods into the transport position.

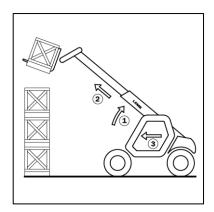
Release

Before raising the boom, check whether the lateral position of the telescopic handler is horizontal.

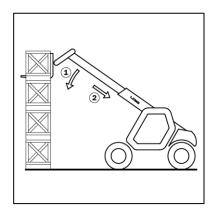




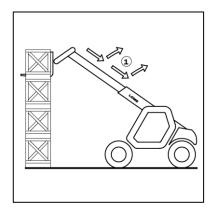
- Drive the machine to the place for loading up goods.
- Pull up the parking brake and push the D/R gear selector to the N gear.



 Lift and extend the boom until the fork is above the release position, and if necessary, move the vehicle forward.



 Keep the Load in a horizontal position.
 Placing the goods by lowering and retracting the Boom,

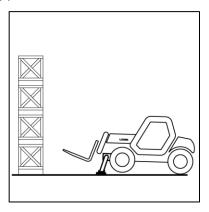


5) Retract the Fork to the transport position by

retracting and lowering the boom. (Move the vehicle backwards if necessary)

4.7.4 Outrigger use

Raise the Outrigger when the Fork is in the shipping position



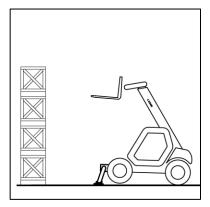
- The vehicle shall be provided at a sufficient distance from the position where the goods are taken and placed.
- Pull up the Parking brake and place the D/R gear in the N gear.
- Raise the outrigger, keep the front wheels away from the ground, and level the body.
- 4) Pick up or release freight.



WARNING: Always maintain a

horizontal stable row when raising the outrigger and lifting the boom.

Raise the outrigger in the raised state of the boom





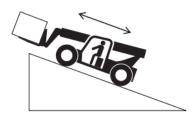
- Keep the boom up and retract the boom completely.
- Pull up the Parking brake and place the D/R gear in the N gear.
- Raise the outrigger slowly and the lateral position must remain stable.
- 4) Pick up or release freight.

4.8 Operate on slope

To maintain sufficient traction and braking performance, follow the instructions below when driving on the slope:

- When going uphill: the fork shall go up the ramp in the upward direction regardless of no-load or load.
- 2) Downhill: if it is no-load, the fork goes downhill along the downward direction of the ramp; If there is a load, the fork goes downhill in the upward direction of the ramp.





CAUTION: When going downhill, downshift to a lower gear, use service brake if necessary to maintain low

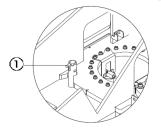
speed.

CAUTION: If the vehicle must be parked on the slope, the wheel needs to be chocked.

4.9 Machine transportation lifting instructions

Observe and obey

- The driver shall be responsible for ensuring that the machine is properly secured and that the appropriate trailer is selected in accordance with local traffic regulations.
- Only personnel qualified for lifting operation above the ground can lift the machine.
- The trailer for transportation shall be parked on the level ground.
- When loading the machine, the transport vehicle shall be fixed to prevent movement.
- 5) Ensure that the vehicle capacity, loading surface, chain and belt are sufficient to support the weight of the machine. See "nameplate" for the machine weight.



Turret rotation lock pin

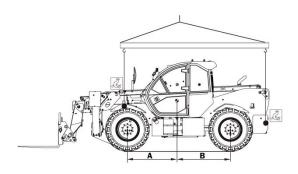
6) Ensure that the turret has been fixed with turret rotation lock before transportation, as shown in the figure. Make sure to unlock the



turret during operation.

Lift the machine

- Only qualified lifting and sling assembly persons can assemble the sling and lift the machine.
- 2) Ensure that the lifting capacity, belt or rope of the crane is sufficient to support the weight of the machine. See "nameplate" for the machine weight.
- Fully lower and retract the arm lever, and remove all moving parts and items on the machine.
- 4) Fasten the turret with the turret rotation lock.
- Only connect the sling to the specified lifting point on the machine.
- Adjust the sling to avoid damage to the machine and keep the machine at horizontal level.



Taking H1840 as an example for the whole vehicle, and the center of gravity position of telescopic handler is shown in the following table:

Model A B

H1840	1625mm	1445mm
HR2150	1455mm	1295mm

Lift the vehicle slowly by the hook connected to the fastening points provided.

Transport machine

CAUTION: Ensure that the platform

has sufficient size and load capacity for transporting the telescopic handler. And check whether the pressure of the contact surface between the platform and the telescopic handler is within the allowable range.

CAUTION: For telescopic handler equipped with turbocharged engine, block the exhaust port to avoid engine rotation.

Loading vehicle

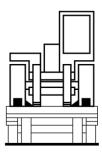


- The tires of the transport vehicle will be secured with wedge.
- Secure the loading ramp in order to obtain the smallest possible angle to lift the vehicle.
- Load vehicles parallel to the platform.
- Stop the telescopic handler.

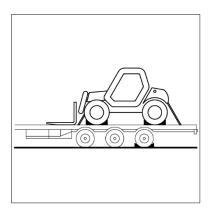


Fixed vehicle

 Secure the wedge to the platform at the front and rear of each tire.



 At the same time, fix the wedge to the platform on the inside of each tire.



- Fix the telescopic handler on the platform
 with a strong enough rope. At the front,
 connect the rope to the telescopic
 handler fastening point (lifting point) and at
 the rear to the telescopic handler towing pin.
- Tighten the rope.

4.10 Use of safety support

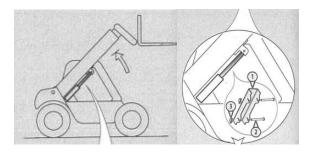
Safety support instructions

Boom safety support



The telescopic handler is equipped with safety support, which must be installed on the lift cylinder connecting rod when working in the area below the boom.

The installation of safety support





- 1) Fully raise the boom.
- Fit the safety support on the lift cylinder connecting rod and secure it with axis pin.
- 3) Slowly lower the boom and stop before



coming into contact with the safety support.

Remove the safety support

- 1) Fully raise the boom.
- 2) Remove the axis pin.
- 3) Put the safety support back in place.

4.11 The car is not in use for a long time

______ Description:

The following operations are to prevent the vehicle telescopic handler from being damaged when it is not in use for a long time.

Cleaning of telescopic handler

- Check and repair any parts where there may be leakage of fuel, oil, water or air.
- Clean the dust on the telescopic handler paint finish and make up the paint if necessary.
- Ensure that all cylinders are in the retracted position.
- Release the pressure in the hydraulic circuit.
- Close the telescopic handler.

Component protection

- Drain and replace the coolant.
- Let the engine run the engine at idle speed for a few minutes and then turn off.
- Replace engine oil and oil filter.
- Add a protection product to the engine oil.

- Run the engine for a short time to circulate the oil and coolant within the engine.
- Once the battery is fully charged, disconnect the battery and store it in a warm room.
- If necessary, place the crane telescopic handler on the axle frame to make the tire not contact the ground, and then release the parking brake.
- Protect the non-retracted and retracted cylinders from corrosion.
- Wrap up the tires.
- Cover the vehicle with a tarpaulin.

When the telescopic handler is put back into use

- Reinstall and reconnect the battery.
- Remove the protective device from the cylinder.
- Perform routine maintenance.
- Depress the parking brake and remove the axle carrier axle bracket.
- Drain and replace the fuel, then replace the fuel filter.
- Use the starter to turn the internal combustion engine to increase the oil pressure.
- Fully lubricate the telescopic handler.
- Before starting the telescopic handler, ensure that the area is well ventilated.
- Run all hydraulic movements, preferably to the limit position.