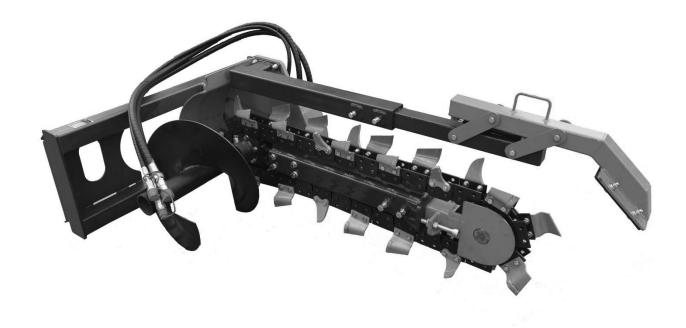


## **PRODUCT MANUAL**

# **36-IN SKID STEER TRENCHER**

**MODEL: TMG-SDT36** 





- Please read the product manual completely before assembly Check
- against the parts list to make sure all parts are received
- Wear proper safety goggles or other protective gears while in assembly

Missing parts or questions on assembly?

Please call: 1-877-761-2819 or email: cs@tmgindustrial.com

Do not return the product to dealer, they are not equipped to handle your requests

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### TO THE OWNER

### **GENERAL COMMENTS**

Congratulations for having this trencher! Your trencher was carefully designed and manufactured to give you years of dependable service. Your trencher will require some minor maintenance(such as cleaning and lubricating) to keep it in top working condition.

Be sure to observe all safety precautions and maintenance procedures as described in this manual.

#### **ABOUT THIS MANAL**

This manual has been designed to help you do a better and safer job. Read this manual carefully and become familiar with its contents. Remember, never let anyone operate this unit without reading the "Safety Precautions" and "Operation Instructions" sections of this manual. Unless noted otherwise, right and left sides are determined from the position of the skid steer operator sitting in the seat facing forward.

#### **SERVICE**

When service your trencher, pls. remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation. To facilitate parts ordering, pls. record the model No. and serial No. of the metal plate on your unit.

The trenchers are designed to be easy to use and maintain. They are operated by the skid steer auxiliary hydraulics. The trenchers mount to the toolbar or quick attach mechanism for easy mounting.

#### **BEFORE OPERATION**

- 1. The operator must read the operation manual carefully before installation, operation or maintenance. Improper operation will cause the machine damaged or the operator dead.
- 2. Read all the safe signs and safe declarations. Obey all the professional safe terms, local laws or the professional directions.
- 3. Familiar with the trencher about functions, specs and operation. Replace the to-be-damaged parts in time. Make sure all the hydraulic installations and couplings connect firmly, and all the safe signs stick on the suitable positions clearly.

#### TO THE OPERATOR

#### WARNING! PROTECT AGAINST FLYING DEBRIS



Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

- 2. Don't modify the trencher casually.
- 3. Should keep the machine on the flat ground when repair, far away from the transportation and other dangerous places.
- 4. Should use the right tools to repair.
- 5. Don't operate the machine, unless you are professional, have certificates, and familiar with its functions, specs and safe operation rules.
- 6. Must not leave the machine when the machine is running. Must stop the engine at first and then remove the key if want to leave.

These are common practices that may or may not be applicable to the products described in this manual.

### Safety at All Times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

- ▲ The operator must not use drugs or alcohol as they can change the alertness or coordination of that person while operating equipment. The operator should, if taking over-the-counter drugs, seek medical advice on whether he/she can safely operate the equipment.
- ▲ Operator should be familiar with all functions of the unit.
- Make sure all guards and shields are in place and secured before operating implement.
- ▲ Keep all persons away from equipment and work area.
- ▲ Start skid steer with steering levers and hydraulic controls in neutral.
- ▲ Operate implement and loader arms from the driver's seat only.
- ▲ Dismounting from a moving unit can cause serious injury or death.
- ▲ Do not allow anyone to stand between skid steer and implement while hooking-up to implement.
- ▲Keep hands, feet, and clothing away from power-driven parts.
- ■Watch out for objects overhead and along side such as fences, buildings, wires, trees, limbs, etc., while transporting and operating attached implement.
- ▲ Detach and store implement in an area where children normally do not play. Secure implement by using blocks and supports.

### Look For The Safety Alert Symbol



The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

#### Be Aware of Signal Words

A Signal word designates a degree or level of hazard seriousness. The signal words are:

### A

#### DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

#### **A** WARNING

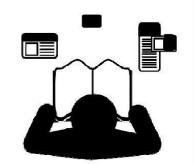
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

### **▲** CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

#### For Your Protection

▲Thoroughly read and understand the "Safety Label" section, read all instructions noted on them.



#### Avoid Underground Utilities

#### ▲ Dig Safe

Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.

▲ Be sure to ask how close you can work to the marks they positioned.

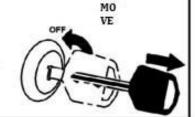


These are common practices that may or may not be applicable to the products described in this manual.

#### Shutdown and Storage

#### Before leaving operator's seat:

- Lower lift arms and put attachment flat on the ground.
- Turn off engine and engage parking brake.
- If included, raise seat bar and move controls until both lock.
- Remove key to prevent unauthorized starting.
- Use steps, grab-handles and anti-slip surfaces when getting on or off the loader.
- Detach and store implements in an area where children normally do not play. Secure implement by using blocks and supports.



RE

#### Transport Safely

- ▲Comply with state and local laws.
- A Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrains require a slower speed.
- Avoid contact with any over head utility lines or electrically charged conductors.
- ▲Always drive with load on end of loader arms low to the ground.
- Always drive straight up and down ramps with load on "uphill" side of skid steer.
- ▲ Engage parking brake when stopped on an incline.

- ▲IMPORTANT: Do not tow a load That is more than double the weight of the vehicle towing the load.
- ▲ Usetowingvehicleandtrailerofadequa tesizeandcapacity. Secure equipmen t towed on a trailer with tie downs and chains
- ▲Sudden braking can cause a towed trailer to swerve and upset. Reduce speed if towed trailer is note quipped with brakes.



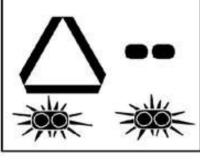






### Use Safety Lights and Devices

- ▲ Slow moving self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at pight.
- ▲Flashing warning lights and turn signals are recommended whenever driving on public roads.



#### **Practice Safe Maintenance**

- Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- Lower attached implement to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- Allow implement to cool completely before working on it.
- Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- ▲ Do not grease or oil implement while it is in operation.
- Inspect all parts. Make sure parts are in good condition & installed property.
- Remove buildup of grease, oil, or debris.
- Remove all tools and unused parts from implement before operation.









These are common practices that may or may not be applicable to the products described in this manual.

#### Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.



#### Wear Protective Equipment

- Wear protective clothing and equipment appropriate for the job. Clothing should be snug fitting without fringes and pull strings to avoid entanglement with moving parts.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earolugs.
- ▲ Operating equipment safely requires the operator's full attention. Avoid wearing radio headphones while operating mechanisms.



#### Avoid High Pressure Fluids Hazard

- Escaping fluid under pressure can penetrate the skin causing serious injury.
- Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ DO NOT DELAY. If an accident occurs, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.

#### Tire Safety

- ▲ Tire changing can be dangerous and should be preformed by trained personnel using the correct tools and equipment.
- ▲When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- When removing and installing wheels, use wheel handling equipment adequate for the weight involved.



#### Use Seat Belt and ROPS

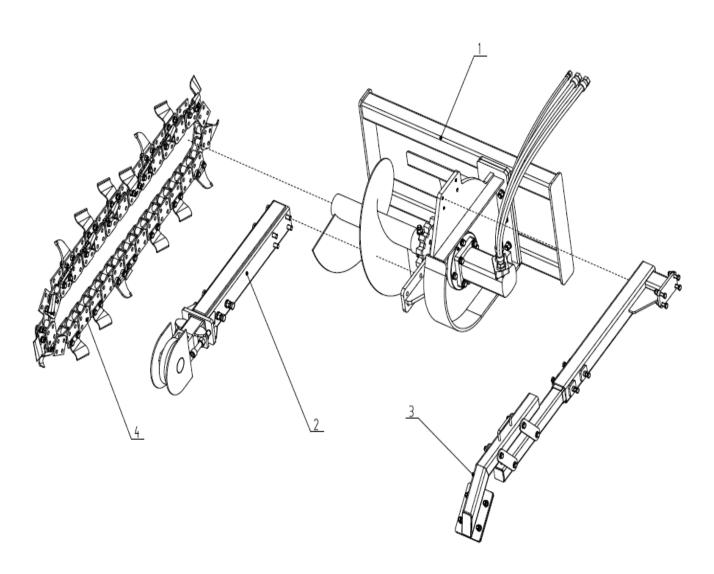
- Operate only skid steers equipped with a Roll-Over Protective Structure (ROPS) and seat belt.
- Fasten seat belt snugly and securely to help protect against serious injury or death from falling and skid steer overturn.
- Wearing protective equipment such as safety shoes, safety glasses, hard hat, and ear plugs is highly recommended.



#### Keep Riders Off Machinery

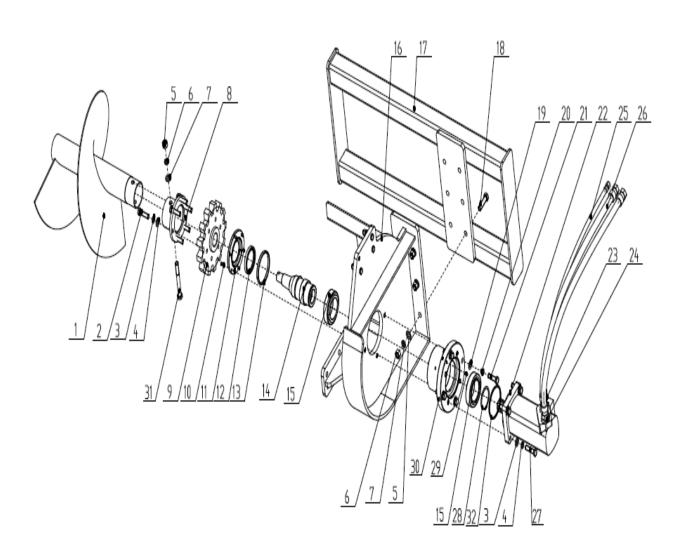
- ▲Never carry riders or use Machinery as a person lift.
- ▲ Riders obstruct operator's view.
- ▲Riders could be struck by foreign objects or thrown from the machine.
- ▲Never allow children to operate equipment.





1-1 TRENCHER ASSEMBLY

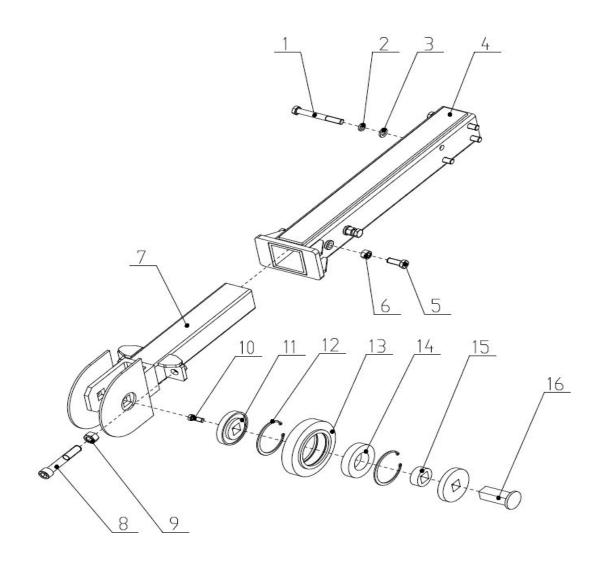
S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
1	0207361-01	MOUNTING FRAME ASSEMBLY	1	
2	0207361-02	PADDLE ASSEMBLY	1	
3	0207361-03	CHAIN TENSION ASSEMBLY	1	
4	0207361-04	CHAIN ASSEMBLY	1	



1-2 MOUNTING FRAME ASSEMBLY

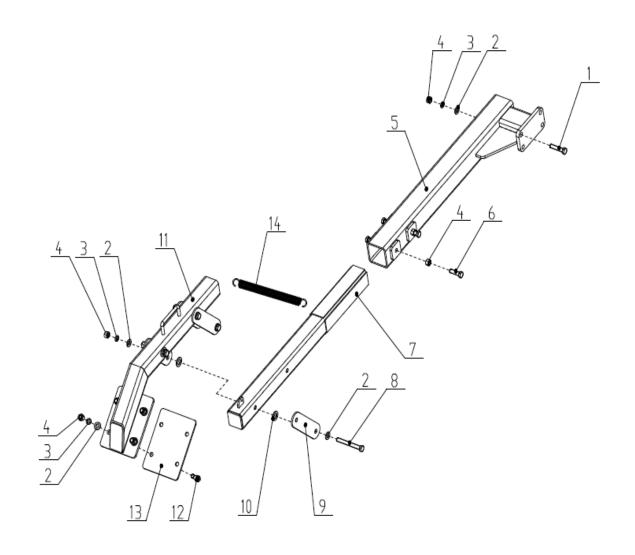
S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
1	020736I-01-01	ROTATION AUGER	1	
2	0207361-01-02	BOLT M14x55	6	GB5783
3	020736I-01-03	FLAT WASHER D14	6	GB97.1
4	0207361-01-04	SPRING WASHER D14	6	GB93
5	0207361-01-05	NUT M16	7	
6	0207361-01-06	SPRING WASHER D16	7	
7	0207361-01-07	FLAT WASHER D16	7	
8	0207361-01-08	CONNECTION BUSH	1	
9	0207361-01-09	CHAIN WHEEL	1	
10	0207361-01-10	HEXAGON SOCKET COUNTERSUNK HEAD SCREW M6x16	6	GB2673
11	0207361-01-11	END COVER	1	
12	0207361-01-12	SEALING RING	1	
13	020736I-01-13	SPACE BUSH	1	
14	0207361-01-14	DRIVING SHAFT	1	
15	020736I-01-15	BEARING	2	
16	0207361-01-16	MOUNTING FRAME	1	

S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
17	0207361-01-17	REAR MOUNTING BRACKET	1	
18	0207361-01-18	HEXAGON HEAD BOLT M16x60	6	GB5783
19	0207361-01-19	FLAT WASHER D16	4	
20	0207361-01-20	SPRING WASHER D16	4	
21	0207361-01-21	HEXAGON HEAD BOLT M16x50	4	
22	0207361-01-22	MOTOR	1	MOTOR USED SEALS
23	0207361-01-23	END THROUGH	1	
24	0207361-01-24	END THROUGH	2	
25	0207361-01-25	DISCHARGE OIL PIPE	1	
26	0207361-01-26	MAIN OIL PIPE	2	
27	0207361-01-27	HEXAGON HEAD BOLT M14x55	4	
28	0207361-01-28	ELASTIC SHAFT CLAMP	1	
29	0207361-01-29	GREASE NIPPLE	1	
30	0207361-01-30	BEARING SEAT	1	
31	0207361-01-31	BOLT M16x130	1	
32	020736I-01-32	O SEALING RING	1	



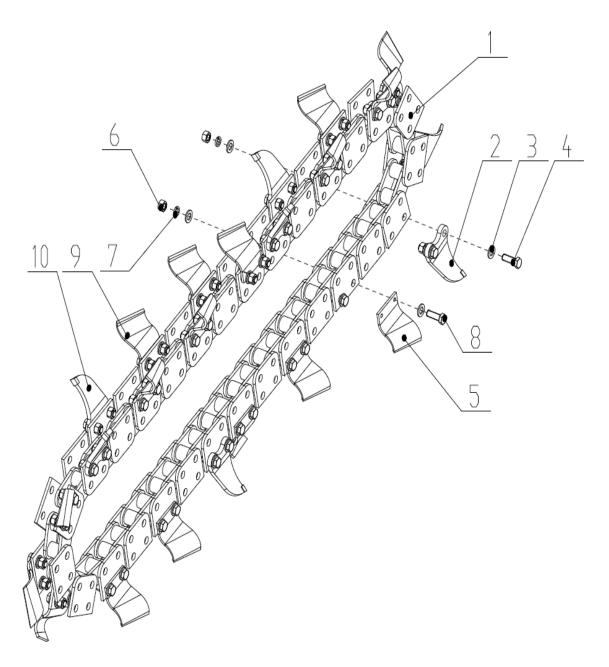
1-3 MOUNTING FRAME ASSEMBLY

S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
1	020736I-02-01	BOLT M16x130	4	GB5783
2	0207361-02-02	SPRING WASHER D16	4	GB93
3	0207361-02-03	FLAT WASHER D16	4	GB97.1
4	0207361-02-04	CHAIN TENSION SET	1	
5	0207361-02-05	BOLT M16x40	4	GB5783
6	0207361-02-06	NUT M16	4	GB6170
7	0207361-02-07	MOVABLE SET	1	
8	0207361-02-08	HEXAGON SOCKET HEAD M20x130	2	GB70
9	0207361-02-09	NUT M20	2	GB6170
10	020736I-02-10	BOLT M12x30	1	GB5783
11	0207361-02-11	PIN	2	
12	0207361-02-12	ELASTIC HOLE CLIP	1	
13	0207361-02-13	TENSION WHEEL	1	
14	0207361-02-14	BEARING	1	
15	0207361-02-15	SQUARE BUSH	1	
16	020736I-02-16	SQUARE SHAFT	1	



1-4 SOIL BLADE ASSEMBLY

S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
1	0207361-03-01	BOLT M12x55	4	
2	0207361-03-02	FLAT WASHER D12	4	
3	0207361-03-02	SPRING WASHER D12	4	
4	0207361-03-04	NUT M12	4	
5	0207361-03-05	SOIL COLLECTION FRAME	1	
6	0207361-03-06	BOLT M12x40	4	GB5783
7	0207361-03-07	TELESCOPIC INNER FRAME	1	
8	0207361-03-08	BOLT M12x100	4	
9	0207361-03-09	CONNECITONING ROD	4	
10	0207361-03-10	FLAT WASHER D16	4	
11	0207361-03-11	SOIL COLLECTION FRAME	1	
12	0207361-03-12	BOLT M12x35	4	
13	0207361-03-13	NYLON PLATE	1	
14	0207361-03-13	SPRING	1	



1-5 CHAIN ASSEMBLY

S/N	PART NO.	PART DESCRIPTION	QTYS	NOTE
1	020736I-04-01	CHAIN	58KNOTS	
2	0207361-04-02	RIGHT ALLOY TOOTH	4	
3	0207361-04-02	FLAT WASHER D12	64	GB97.1
4	0207361-04-04	BOLT M12x40	8	GB5783
5	0207361-04-05	LEFT COMMONG TOOTH	11	
6	0207361-04-06	NUT M12	58	GB5783
7	0207361-04-07	SPRING WASHER D12	58	GB93
8	0207361-04-08	BOLT M12x35	42	GB5783
9	0207361-04-09	RIGHT COMMONG TOOTH	10	
10	0207361-04-10	LEFT ALLOY TOOTH	4	

### **OPERATION INSTRUCTIONS**

The trencher can dig a trench with 900mm depth and 200mm width. Attach the trencher to the toolbar or quick attach mechanism of your skid steer loader.

#### RAISING OR LOWERING THE TRENCHER

raise or lower the trencher by raising or lowering the skid steer loader arms through their appropriate skid steer controls.

#### **TILTING THE TRENCHER**

Tilt the trencher up or down by tilting the toolbar or attachment plate back or forward through its skid steer controls. We recommend a 60 degrees angle for general trenching as measured from the ground level(the horizon).

#### STARTING AND STOPPING THE TRENCHER

Power to the trencher is supplied by oil from the skid steer auxiliary hydraulic system, which passes through the hydraulic hoses and into the trencher's hydraulic motor. The trencher itself has no one on or off control, but is operated by the skid steer auxiliary hydraulic control mechanism. To start the trencher, engage the auxiliary hydraulics. To stop the trencher, disengage the auxiliary hydraulics.

#### TRENCHER SPEED CONTROL

The power of the trencher is supplied by the skid steer's auxiliary hydraulics. Trencher speed and power are determined by the flow of oil coming out of the auxiliary system, which in turn is dependent upon skid steer engine speed. To increase trencher speed, increase skid steer engine speed, on the contrary, to decrease trencher speed, decrease skid steer loader speed.

When first starting a trench throttle down the skid steer engine to half throttle. This will reduce the shock to the skid steer and trencher when the digging teeth first contact the ground. Once the trench is started, set the engine back to the full throttle. For the general use, operate the trencher with skid steer engine at full throttle to provide maximum power to the auxiliary hydraulics.

#### **OPERATION INSTRUCTIONS**

#### AUGER HEIGHT

The auger is fixed to the trencher mainframe and has no separate adjustment. To raise the auger, raise the trencher as previously described. This will raise the auger to leave the dirt or spoil closer to the trench.

#### CHAIN TENSION ADJUSTMENT

When trenching, the digging chain tension should be adjusted to let the chain is as loose as possible, without jumping off the sprocket or Idler wheel. In the left of the trencher arm end, should have an adjustment bolt with a jam nut, to tighten the chain, need rotate the adjustment bolt to the proper position, and turn the standard nut to the adjustment bolt, will push the boom out and thus tighten the chain. To loosen the chain, just use the opposite method.

#### NOTE 1:

It is common for your trencher to need its digging chain tightened after the first 10 to 20 minutes of operation as the chain and sprocket seat themselves.

#### NOTE 2:

Don't trench stones or hard soils, to prevent damage to the digging teeth of the trencher. If the digging teeth wear severely, should replace them timely, to ensure the normal work.

CAUTION!



Never work on, or make adjustments to any part of the trencher while the unit is running. You could get caught in the digging teeth which could cause severe injury or death.



WARNING! Check the prospective trenching area for hidden utility lines before operating the trencher. Contacting a utility line with the trencher could cause electrocution resulting in death. Call all utility companies and have them plot out all their lines first. If you damage a utility line, shut off the equipment at once and contact the affected utility immediately.

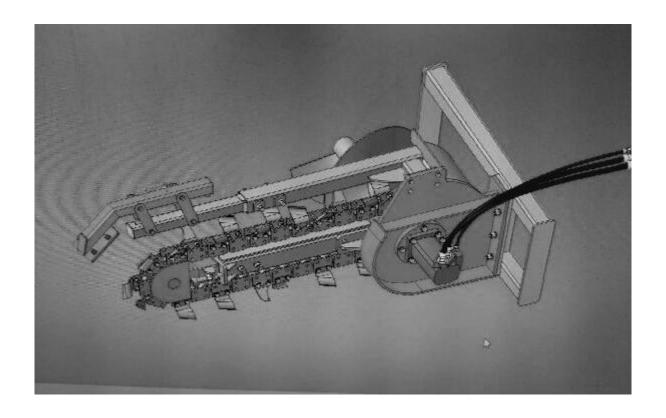
### **MAINTENANCE INSTRUCTIONS**

- 1. Always keep the clean hydraulic oil, keep the hose joint clean, if the hydraulic oil is mixed with dirt, it will possibly cause the whole operation system abnormally.
- 2. Daily check all hydraulic lines, make sure the connection of the hydraulic line good, the pipe without distortion, wear, cracking, no loose joint to leak.
- 3. Daily inspect the trencher oil level, and refuel timely.
- 4. Daily inspect all parts of the machine, make sure all the parts are connected stably and reliably.
- 5. If the paint off or damage, repaint timely, to prevent rust.

### STORAGE INSTRUCTIONS

- 1. Clean all the debris, all mud, dirt and grease.
- 2. Inspect the unit for bent, loose, cracked, damaged or missing parts, Order any parts required, and make the necessary repairs to avoid delays when starting next season.
- 3. Tighten all loose nuts, bolts, screws and hydraulic connections.
- 4. Touch up all the unpainted and exposed areas with paint to prevent rust.
- 5. Replace security labels and tags if damaged, or in unreadable condition.
- 6. Connect the hydraulic couplers together or use the oil nuts to block the hydraulic hoses.
- 7. Check the motor for proper lubricant level.
- 8. Coat the digging chain with a thin covering of oil. Operate chain for a short period to work the oil into the pins.
- 9. Should put the device in the dry non-corrosive place. If in nude outside, will shorten its life.

## **SPECIFICATIONS**



MODEL	TMG-SDT36
TOTAL LENGTH (MM)	1990
TOTAL WIDTH (MM)	1200
TOTAL HEIGHT (MM)	767
TOTAL WEIGHT (KGS)	350
@65°TRENCHIGN DEPTH (MM)	900
TRENCHING WIDTH (MM)	200
SYSTEM FLOW (L/MIN)	80-110
MAX. PRESSURE (MPA)	21