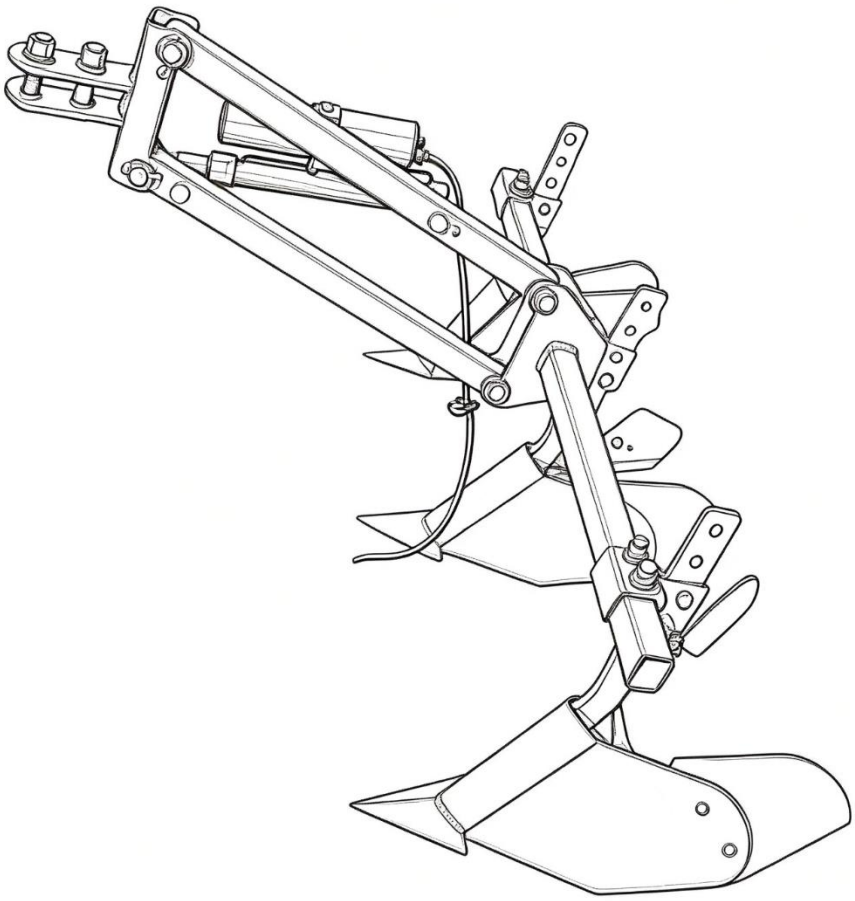
TMG-ATR50
PRODUCT MANUAL
v.2026.11.03

51" (1.3m) ATV Ridger



⚠ WARNING



Please read and understand the product manual completely before assembly
- Check the parts list to make sure all parts are received.
- Wear safety goggles or other protective gear while assembling.
- Do not return products to dealers, who are not equipped to handle returns.

Missing parts or questions about assembly?
Email: cs@tmgindustrial.com
Or visit: tmgindustrial.com

Table of Contents

1. Safety Information 2

2. Safety and Information Symbols 3

3. Product Description and Intended Use 4

4. Technical Specifications 5

5. Shipping Carton and Unpacking 5

6. Parts List 6

7. Assembly and Mounting 7

8. Adjustment - Furrow Spacing and Depth 8

9. Operating Instructions 10

10. Maintenance and Storage 11

11. Troubleshooting 12

12. Exploded View and Parts List 13

1. Safety Information

1.1 How to read the safety messages

Throughout this manual, a safety alert symbol is used together with a signal word to identify hazards. The signal word (DANGER, WARNING or CAUTION) indicates the relative severity of the hazard. Always read and obey all safety messages. The safety alert symbol means: attention — become alert — your safety is involved.

1.2 Signal words and safety alerts

DANGER: Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

Never allow any person to stand between the ATV and the implement, or in the path of the implement, while the ATV engine is running.

WARNING: Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

Crushing and pinching hazards exist at the hitch, the beam brackets and the tyne clamps. Keep hands, feet and clothing clear of these areas during assembly, adjustment and hitching.

CAUTION: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

The share points are sharp. Wear protective gloves whenever handling, cleaning, replacing or storing the tyne assemblies.

NOTE

A NOTICE is used for practices not related to physical injury. It identifies hazards that can cause machine or property damage, or shorten the service life of the equipment.

1.3 General safety rules

Before you operate

- Read this entire manual. If you do not understand any part of it, contact your dealer before operating.
- Only trained, physically capable adults may operate the ATV and this implement. Never allow children to operate or ride on the equipment.
- Do not operate while under the influence of alcohol, drugs or medication that impairs alertness.
- Inspect the implement, the mounting hardware and the ATV hitch before every use. Replace any bent, cracked or missing component before operating.
- Confirm that the ATV is rated to tow the implement and that the hitch is rated for the load.

During operation

- No riders. Never carry a passenger on the ATV or on the implement. The implement has no seat and no passenger restraint.
- Operate only from the driver's seat. Never attempt to adjust the implement while the ATV is moving.
- Keep bystanders, children and animals at least 50 ft (15 m) away from the working area.
- Reduce speed before turns, on slopes and on rough ground. Do not make sharp turns with the implement in the ground.
- Do not operate on slopes steeper than those recommended for your ATV. The implement raises the center of gravity behind the machine and increase the risk of a rearward tip-over.
- Never operate in reverse with the tynes engaged in the ground. Raise or disconnect the implement first.

- Watch for buried obstacles — stones, roots, pipes, cables and survey markers. Striking an obstacle can throw the ATV or damage the implement.

After operation and during service

- Park on level ground, set the parking brake, stop the engine, remove the key and allow all motion to stop before dismounting.
- Lower the implement to the ground before leaving the ATV.
- Disconnect the implement from the ATV before performing any maintenance that requires working underneath it.
- Use only genuine replacement parts. Substitutes may not be strong enough and could cause injury.

DANGER

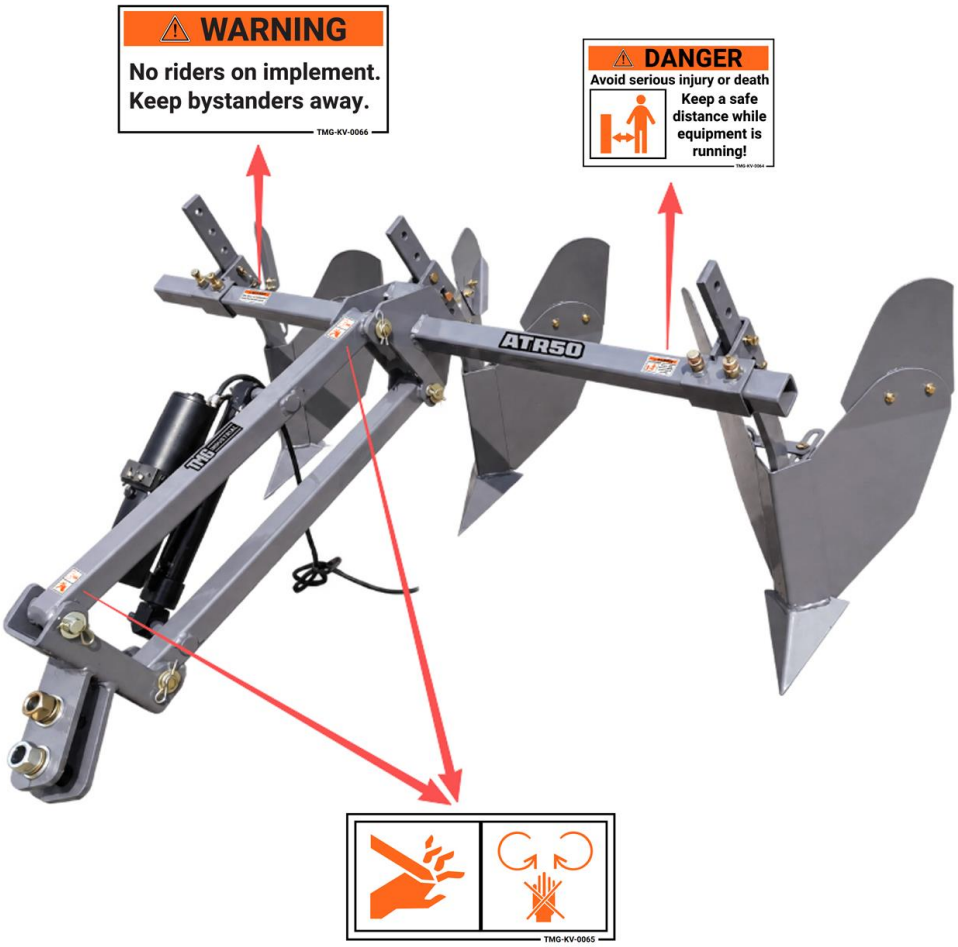
Crush hazard — rear tip-over. A towed ground-engaging implement adds weight behind the rear axle. On an ATV, excessive tongue weight or a steep incline can cause the machine to tip over backwards onto the operator. Do not exceed the tongue-weight rating of your ATV, and never operate on an incline steeper than the manufacturer's limit. Use ballast at the front of the ATV only as permitted by the ATV manufacturer.

WARNING

Do not carry the implement in the raised position. Lift the tynes clear only long enough to clear an obstruction. Transport with the implement resting at its lowest practical height and at reduced speed.

2. Safety and Information Symbols

Pictogram symbols are affixed to the machine to convey key product information and operating instructions.



3. Product Description and Intended Use

The ATR50 is a three-tyne ridger (furrow opener) designed to be towed behind an ATV. Three mouldboard tynes are carried on a single horizontal hitch beam. Each tyne is clamped to the beam and can be repositioned along the beam so that the distance between adjacent share points can be set to match the crop, the row width or the drainage requirement.

3.1 Intended use

The ATR50 is intended for:

- Opening seedbed furrows and drainage channels in prepared or lightly cultivated soil;
- Ridging row crops such as potatoes, vegetables and row-planted field crops;
- Maintaining field drains, water furrows and border channels;
- Light soil loosening in orchards, vineyards, paddocks and grounds-maintenance work.

3.2 Foreseeable misuse

 **NOTICE**

The ATR50 is not designed for the following. Use in these conditions may damage the implement and will void the warranty.

- Road use, or use on any public highway;
- Towing behind a vehicle other than an ATV/UTV of adequate rating;
- Working in rock, hardpan, tree stumps or compacted gravel;
- Lifting or transporting loads — the beam is not a crane or lifting point;
- Use on slopes steeper than the limit stated in Section 8

4. Technical Specifications

Model	ATR50
Total Working Width	51" (1300 mm)
Number of Plows	3
Furrow width	adjustable 24" (600mm)
Tilling Depth Adjustment Range	6"-12" (150-300 mm)
Mounting	2 in receiver
Minimum Required Power	18HP (400cc ATV or above, 4WD recommended)
Net Weight	81 lb (37 kg)

4.1 Dimensions at a glance

Dimension	Value	Notes
Overall beam span	1.3 m / 51.2 in	End to end, excluding hitch bracket
Max. span across outer tynes	600 mm / 23.6 in	Centre-to-centre of adjacent share points
Min. span across tynes	200 mm / 7.9 in	Centre-to-centre of adjacent share points

5. Shipping Carton and Unpacking

5.1 Carton data

Description	Value
Carton dimensions (L × W × H)	1,330 × 500 × 300 mm (52 × 20 × 12 in)
Gross weight	52 kg (115 lb)
Packaging	Corrugated carton

5.2 Unpacking procedure

Position the carton on a level, firm surface with enough clear space around it to lay out the components.

Cut the banding and open the top flaps. Do not use a knife blade deeper than necessary — the tyne points and painted surfaces are close to the carton wall.

Remove the loose hardware bag first and set it aside in a tray so that small parts are not lost.

Lift the implement out with two people or with suitable lifting equipment. The assembly weighs approximately 52 kg (115 lb). Do not lift by the beam ends alone.

Check the contents against the packing list in Section 5. Report any shortage or transit damage to your dealer within 7 days of delivery.

WARNING

Lifting hazard. The packed implement weighs approximately 52 kg (115 lb). Use two people or mechanical lifting aids. Keep feet and hands clear of the carton base when lowering.

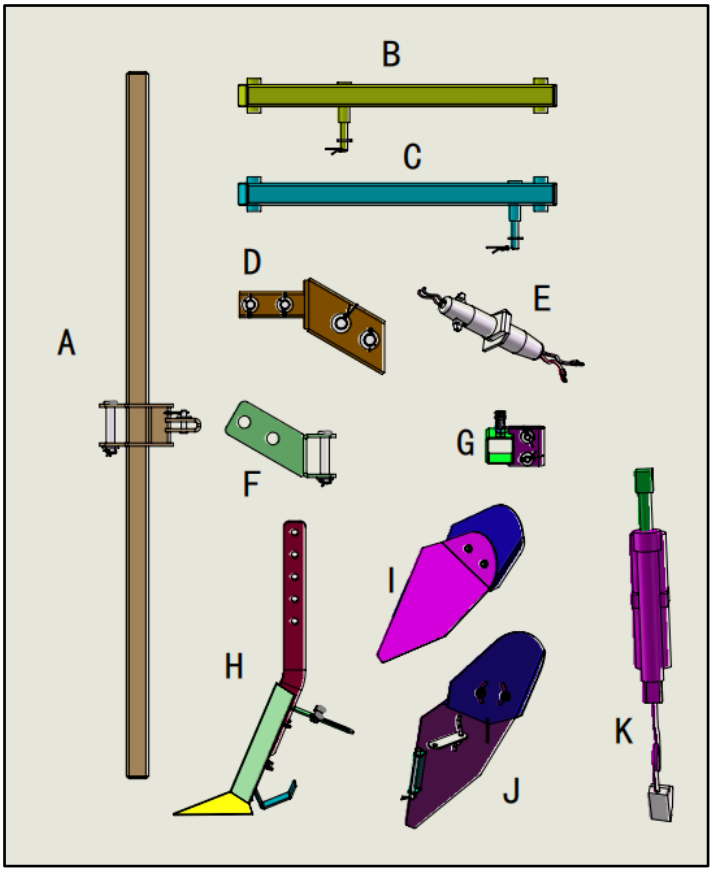
CAUTION

Sharp edges. Wear gloves when unpacking. The share points are shipped with protective caps — leave the caps on until the implement is fully assembled and ready for use.

5.3 Disposal of packaging

Recycle the corrugated carton and any steel banding in accordance with local regulations. Remove or deface all shipping labels before disposal. Keep the carton if the implement may need to be returned for service.

6. Parts List



Item	English description
A	Drawbar (traction beam)
B	Connecting rod weldment 1
C	Connecting rod weldment 2
D	Coupler weldment
E	7-pin quick-connect plug
F	Connecting head weldment
G	Connecting piece
H	Plough head (moldboard) weldment, x3
I	Left wing connecting plate, x3
J	Right wing connecting plate, x3
K	Electric linear actuator (electric push rod)

6.1 Recommended spare parts

For uninterrupted operation we recommend keeping the following on hand: two share points (Item 6), one set of beam clamps with U-bolts (Items 7 and 8) and one positioning pin (Item 9).

NOTICE

Fasteners are grade 8.8 minimum unless otherwise stated. When replacing fasteners, use the same grade and length. Do not substitute stainless fasteners in high-load joints — they have lower shear strength than the specified grade.

7. Assembly and Mounting

7.1 Before you begin — check the ATV

- Confirm the ATV's rated rear hitch capacity and maximum tongue weight in the ATV owner's manual. The tongue load of the ATR50 depends on soil conditions and working depth.
- Check that the hitch point is sound, that no welds are cracked and that all fasteners are tight.
- Inflate the ATV tires to the recommended pressure and check the rear suspension.
- Add front ballast only if the ATV manufacturer permits it, to offset rear tongue weight.

7.2 Assembly sequence

Lay the hitch beam (Item 1) on level ground. Position it with the drilled face upward. Support it at both ends so it cannot roll.

Fit the A-frame / hitch bracket (Item 2) to the centre of the beam. Insert the two mounting bolts, fit washers and nuts finger-tight.

Slide the three beam clamps (Item 7) onto the beam. Do not tighten yet — the clamps must remain free to move along the beam during spacing adjustment.

Attach the tyne bodies (Items 3, 4, 5) to the clamps. Fit the left-hand tyne toward one end, the right-hand tyne toward the other, and the reversible centre tyne in the middle. Fit the retaining bolts finger-tight.

Install the share points (Item 6) on each tyne and secure with the M10 retaining bolt (Item 10). Leave the protective caps on until the unit is mounted.

Set the spacing as described in Section 7, then torque all fasteners (Section 6.3).

Mount the assembly to the ATV using the hitch pin (Item 11) and secure it with the R-clip. Confirm that the pin is fully engaged and that the R-clip is through the pin.

7.3 Torque values

Fastener	Size	Torque	Notes
Beam clamp U-bolt	M12	55 – 65 N·m (40 – 48 lb·ft)	Re-check after first hour
A-frame mounting bolt	M12	55 – 65 N·m (40 – 48 lb·ft)	Grade 8.8
Share retaining bolt	M10	30 – 35 N·m (22 – 26 lb·ft)	

WARNING

Check the connection before every use. A hitch pin that is not fully engaged, or a missing R-clip, can allow the implement to separate from the ATV while moving, causing loss of control or serious injury.

8. Adjustment - Furrow Spacing and Depth

Furrow spacing is set by moving the tyne clamps along the drilled hitch beam and locking each clamp in position with a pin. Because the clamps sit directly on the beam, spacing can be changed quickly between fields or between crops without removing any component.

8.1 Setting the furrow spacing

Park on level ground, stop the ATV engine, apply the parking brake and lower the implement to the ground.

Remove the R-clip and positioning pin (Item 9) from one clamp. Support the tyne so it does not drop.

Slide the clamp along the beam to the hole position that gives the required spacing, then re-insert the pin through the clamp and the beam.

Refit the R-clip through the pin and check that the pin cannot be withdrawn by hand.

Repeat for the other clamps, moving each clamp the same number of holes so that all furrows are evenly spaced.

Confirm the spacing by measuring centre-to-centre between adjacent share points. Retighten the clamp U-bolts to the torque in Section 6.3.

8.2 Spacing reference

Setting	Furrow spacing (centre-to-centre)	Typical use
Narrowest	200 mm (7.9 in)	Close-row vegetables, drainage channels
Mid	300 – 400 mm (11.8 – 15.7 in)	General row crops
Widest	600 mm (23.6 in)	Wide-row crops, border and field drains

8.3 Working depth

Working depth is controlled by the attack angle of the tyne and by the height of the hitch point. Raise the hitch to reduce depth; lower it to increase depth. Start shallow and increase gradually - working too deep in the first pass overloads the ATV, increases tongue weight and may cause the tynes to trip or the ATV to lose traction.

Condition	Starting depth	Notes
Prepared seedbed	2 – 3 in (50 – 75 mm)	Light load; suitable for shallow furrows
Lightly cultivated soil	3 – 4 in (75 – 100 mm)	Typical ridging pass
Drainage channel	4 – 6 in (100 – 150 mm)	Reduce speed; check tongue weight
Hard or dry ground	Reduce depth by 1 in	Work after rain or after cultivation where possible

8.4 Matching the implement to the crop

- Row crops: set spacing to match the row width of the planter, then confirm by measuring the distance between adjacent share points.
- Drainage: use the widest setting and work down the slope direction so that water can run away freely.
- Inter-row cultivation: use a narrow setting and keep the tynes clear of the crop rows. Reduce speed in the first pass to confirm the tracking.

NOTICE

After changing spacing, make one slow test pass over 30 – 50 ft (10 – 15 m) and check that the furrows are straight and evenly spaced before working the whole field.

CAUTION

Adjust only when stopped. Never reach toward the tynes, clamps or pins while the ATV engine is running or while the implement is in motion. Wear gloves when handling the share points.

NOTICE

Do not move the clamps beyond the outermost drilled holes. Operating with a clamp overhanging the beam end concentrates stress and can crack the beam.

8.5 Quick reference - adjustment and setting card

Parameter	Range / setting	How to change
Furrow spacing	7.9 – 23.6 in (200 – 600 mm)	Move clamps along beam, lock with pin
Spacing increment	approx. 3.9 in (100 mm)	One pin hole
Working depth	2 – 6 in (50 – 150 mm)	Adjust hitch height / tyne attack angle
Working speed	3 – 5 mph (5 – 8 km/h)	ATV throttle and gear range
Max. slope	15° (never across the slope)	Choose a different route
Beam clamp torque	40 – 48 lb·ft (55 – 65 N·m)	Torque wrench, M12 U-bolt
Share bolt torque	22 – 26 lb·ft (30 – 35 N·m)	Torque wrench, M10 bolt

9. Operating Instructions

9.1 Pre-operation checklist

	Check
☐	All fasteners tight to the specified torque; no missing pins or R-clips
☐	Beam clamps seated on the beam and pins fully engaged
☐	Share points sharp, correctly fitted and secured
☐	Hitch pin fully engaged, R-clip fitted
☐	ATV tires at correct pressure; hitch and rear axle sound
☐	Working area clear of bystanders, animals and obstructions
☐	Protective caps removed from share points

9.2 Working the ground

1. Lower the implement to the ground at the start of the run and engage the ATV in low range.
2. Increase speed gradually to the recommended working speed of 3 – 5 mph (5 – 8 km/h).
3. Keep the ATV in a straight line. Steer gently — abrupt steering with the tynes in the ground can bend the beam or damage the clamps.
4. At the end of each run, raise the implement before turning. Make turns on the headland, not in the furrow.
5. If the implement starts to plug with soil or trash, stop, stop the engine and clear it by hand with gloves on.

9.3 Slopes

 **DANGER**

Slope hazard. Ground-engaging implements can cause the ATV to tip rearward on an incline or to slide sideways on a wet or loose slope. Do not operate on slopes steeper than the limit stated in your ATV owner's manual, and never exceed 15° with this implement regardless of the ATV rating. Work directly up and down the slope — never across it.

9.4 Transport

- Transport only with the implement at its lowest practical setting, at reduced speed.
- Use the ATV's hazard warning lights if fitted and permitted by local law.
- Do not transport on public roads. This implement is not equipped with lights, reflectors or a transport lock and is not intended for highway use.
- For long-distance transport, load the implement on a trailer and secure it with rated straps at two points on the beam.

10. Maintenance and Storage

10.1 Maintenance schedule

Interval	Task
Before each use	Inspect share points, pins, R-clips and clamps; check torque; confirm hitch connection
After each use	Clean soil and trash from the tynes and beam; dry and oil bare metal
Every 10 hours	Re-torque clamp U-bolts and A-frame bolts; check beam for cracks or bending
Annually / pre-season	Full inspection; replace worn share points; repaint damaged areas; inspect welds

10.2 Replacing a share point

1. Park on level ground, stop the engine and lower the implement.
2. Put on protective gloves.
3. Remove the M10 retaining bolt and nut.
4. Drive the worn point off with a soft-faced mallet — do not use a steel hammer on the point edge.
5. Fit the new point, insert the retaining bolt and torque to 30 – 35 N·m (22 – 26 lb·ft).
6. Check that the new point sits flush against the tyne body with no gap.

10.3 Sharpening

Share points may be re-sharpened with a file or grinder, following the original bevel angle. Sharpen from the top face only. Do not overheat the point — keep it cool to the touch. Replace the point when the width has worn back by more than 10 mm (0.4 in) or when the bevel can no longer be restored.

10.4 Storage

- Clean the implement thoroughly and remove all soil, which holds moisture.
- Coat share points, pins and bare metal with a light film of oil or grease.
- Store indoors or under cover, on a pallet or stand so that the tynes do not rest on the ground.
- Leave the protective caps on the share points during storage.
- Do not stack heavy items on the beam.

CAUTION

Never leave the implement standing on its tynes. It can topple and strike a person.

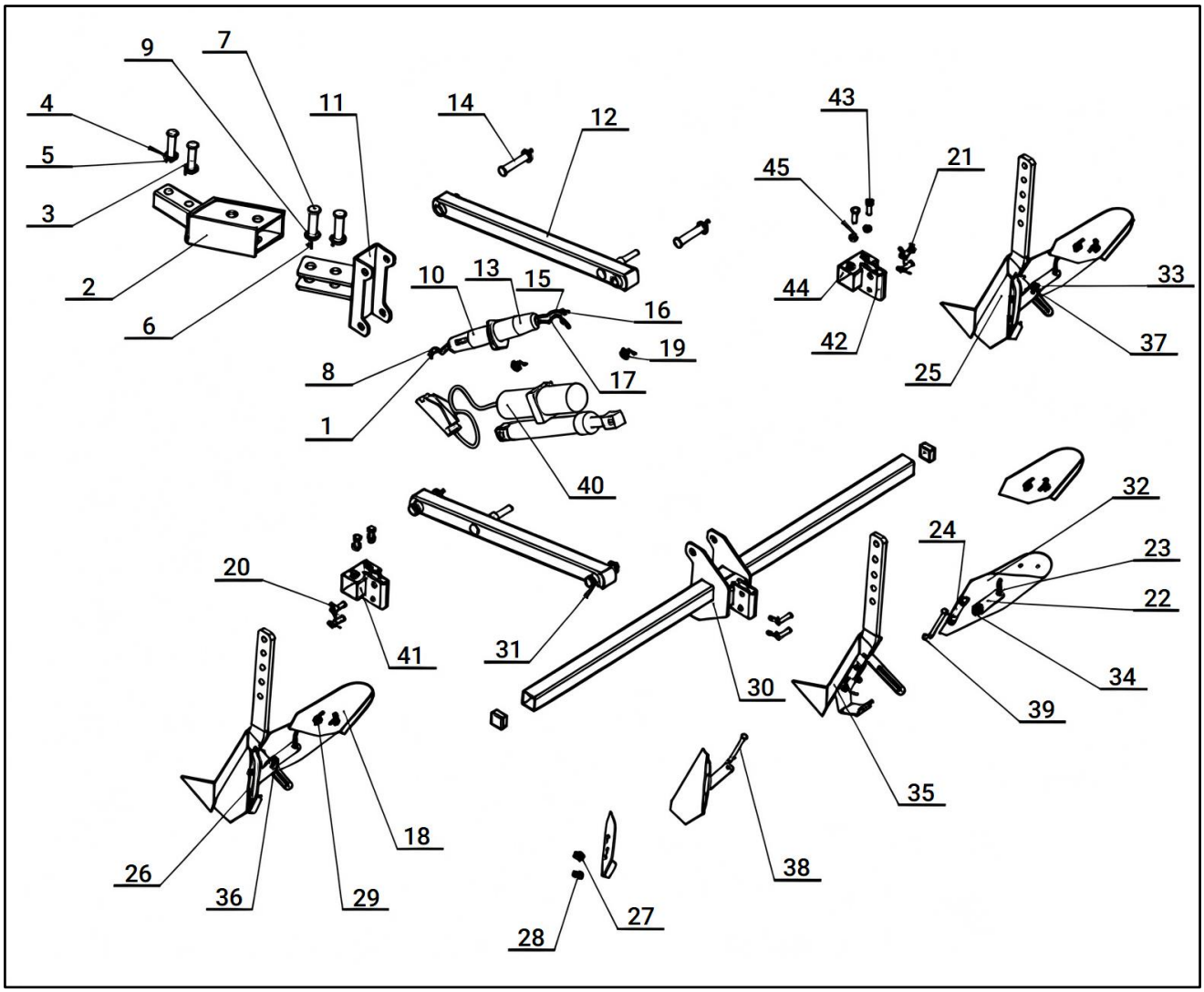
11. Troubleshooting

Symptom	Probable cause	Remedy
Implement digs in too deep; ATV labors	Hitch too low; attack angle too steep	Raise the hitch point; reduce working depth; reduce speed
Implement rides on top of the soil	Hitch too high; soil too hard or dry	Lower the hitch; work after rain or after light cultivation; check that points are sharp
Furrows uneven or drifting	Clamps not all moved by the same number of holes; loose U-bolts	Reset all clamps to equal hole positions; re-torque U-bolts
Beam bends or cracks at clamp	Clamp overhanging the beam end; striking a buried obstacle; overloading	Move clamps inward to drilled holes only; replace the beam; reduce depth and speed
Implement separates from ATV	Hitch pin not fully engaged; missing R-clip; wrong pin size	Refit the correct pin and R-clip; check every time before use
Excessive vibration or noise	Worn or loose share point; loose clamp	Replace the point; re-torque clamps
Soil builds up on the mouldboard	Wet or sticky soil; paint worn through	Work when soil is drier; clean and repaint; apply a light oil film
ATV rear lifts when raising the implement	Tongue weight too high; front ballast insufficient	Reduce working depth; add front ballast only as permitted by the ATV manufacturer; check hitch height

NOTICE

If a fault cannot be corrected using this table, stop using the implement and contact your dealer. Do not weld, straighten or modify structural components — heat and cold-working reduce the strength of the beam and can cause sudden failure.

12. Exploded View and Parts List



No.	Description	Specification	Qty
1	Connector		1
2	Mounting Head		1
3	Pin Shaft (Cotter Pin)	16×75 mm	2
4	Pin Shaft	20×80 mm	2
5	B-Type Pin (Hairpin Pin)	3×70 mm	4
6	Connecting Rod		2
7	Pin	16×90 mm	2
8	Flat Washer	M16	2
9	B-Type Pin (Hairpin Pin)	2.5×55 mm	2
10	Electric Linear Actuator		1
11	7-Pin Quick-Connect Plug	(Male plug / Female socket)	1
12	Power Cable	Positive (with ø6 terminal)	1
13	Power Cable	Negative (with ø6 terminal)	1
14	Power Cable	Positive	1
15	Power Cable	Negative	1
16	Flat Washer	ø12	2

No.	Description	Specification	Qty
17	B-Type Pin (Hairpin Pin)	2.5×55 mm	2
18	Pin Shaft	16×90 mm	2
19	Flat Washer	M16	2
20	B-Type Pin (Hairpin Pin)	2.5×55 mm	2
21	Drawbar (Traction Beam)		1
22	Plow Head Connector		1
23	Hex Nut	M10×30	4
24	Hex Nut	M10	4
25	Pin	10×35 mm	6
26	B-Type Pin (Hairpin Pin	2×40 mm	6
27	Plow Head Weldment		3
28	Left Wing Weldment		3
29	Right Wing Weldment		3
30	Left Rear Wing		3
31	Right Rear Wing		3
32	Pin	8×100 mm	6
33	B-Type Pin (Hairpin Pin)	1×26 mm	6
34	Hex Bolt	8×25 mm	3
35	Hex Nut	M8	3
36	Flat Washer	M8	3
37	Spring Washer	M8	3
38	Flange Bolt	M6×16	12
39	Flat Washer	M6	12
40	Flange Nut	M6	12
41	Plastic Plug	33×33 mm	2

WARRANTY INFORMATION:

Please refer to our website for detailed warranty conditions and coverage.
For the most up-to-date and comprehensive warranty information, visit **www.tmgindustrial.com**