



SINCE 1903

**SERIES 04 DIAMOND HARROW
PRODUCT MANUAL FOR
SECTIONS & SETS**

TABLE OF CONTENTS

Welcome Note	4
Safety	5
Usage Information	7
Normal Packaging	9
Assembly Instructions	10
Operating Instructions	13
Series 04 Parts Breakdown	18
Contact Information	20
Purchase Information	20

DIAMOND HARROW SECTION & SETS SERIES 04

PRODUCT MANUAL

This Product Manual must be given to the Owner of the Harrow and the Operator(s) of the Harrow and any person(s) who carry out any service work / repairs to the Harrow.

This Product Manual contains important information about the Harrow and its Intended Use, Safety, Set Up & Assembly Instructions and Operating Instructions.

Please read this Product Manual. Thank you.

Additional copies of this publication are readily available direct from Murray Agricultural Equipment.

SERIES 04 DIAMOND HARROW SECTION & SETS

Thank-you for selecting an item of equipment or service part manufactured or supplied by Murray Agricultural Equipment – building quality & value priced harrows for Australia & export markets. This product manual covers harrow sections, complete harrow sets and service parts.

Please study the information contained in this product manual. Please retain this product manual for reference and re-read it from time to time to refresh your memory. Please ensure all future operators and owners of this product study this manual or the latest edition of this manual. Additional copies of this publication or the most recent edition are readily available direct from Murray Agricultural Equipment.

Correctly assembled, operated & maintained, and used for the purpose for which it was designed, this product should provide productive service. Your attention is drawn to information contained in this manual. Following the appropriate guidelines and instructions will contribute to reliable, effective performance and maintain the manufacturer's product warranty cover.

SAFETY

“A Special note – Please read it”

- Work safely and promote safety at all times.
- Familiarize yourself, employees & contractors and other people with all and any safety warnings, marks or instructions issued, marked or affixed to this product. Work in accordance with these instructions at all times when around this product.
- This product is intended to be pulled (towed) by a tractor correctly fitted with an approved rollover protection structure. This product is NOT intended for use with an “ATV” or “Ride on Lawn Mower” or similar machine.
- Keep children away from farm machinery including this product. Do not allow children or any person or animal or item to ride or be carried by this product.
- This equipment is not intended to be used or operated, serviced or repaired by children under the age of 18 years or persons who are not medically fit.
- Children, especially young children, should be supervised to ensure that they do not play with or near this equipment. Encourage children to keep away from farm machinery including this product.
- Do Not climb on Agricultural Equipment including this product.
- You and other people must be especially aware of the dangers from moving, sharp, falling or mobile components or equipment including tractors and engines, and of the danger from mechanisms or assemblies that can be activated remotely by other people.

- Wear and use the appropriate safety clothing and equipment.
- This equipment is not intended to be used on or travel on roads or freeways.
- When transporting this product in conjunction with (connected to) a tractor or another vehicle, transport only when safe to do so and **transport speed** (not work speed) should not exceed 20 kph.
- Electrical Safety; “Look Up And Live” When near powerlines, always Look Up And Live & Look Around And Live. Contact with powerlines and other electrical wires can end in tragedy.
- Replace any safety or warning labels on this product if they become damaged, unclear or unreadable. Labels are available as a service part.

SERIES 04 DIAMOND HARROW SECTION & SETS: USAGE INFORMATION

The Murray Series 04 Diamond Harrow Section is designed to be used as a “**Medium**” Weight “Cultivation Style” Harrow pulled (towed) by a **tractor correctly fitted with an approved rollover protection structure**. In general they are suitable for prepared or semi prepared light to medium (**Not** heavy) ground. A Series 04 Diamond Harrow section may be referred to as a “Smoothing” type “Cultivation Style” Harrow. Maximum operating speed is 10 km / hour. This harrow is **Not** recommended for use on pasture; the tines and harrow frame will / may bend. For Harrows recommended for pasture, please refer to the Murray Series 20 Pasture Harrow – “Medium / Heavy Duty” and the Murray Series 05 Pastureland Harrow – “Light Duty”. The Series 04 Diamond Harrow is **Not** intended to be used as a “Heavy” weight “Cultivation” style harrow (refer to the Series 08 & 44 Stump Jump harrows & Series 48 Jumbo Cultivation harrow) or as a “Medium / Heavy Duty” style “Pasture Harrow” (refer to the Murray Series 20) or as a “Light Duty” style “Pasture Harrow” (refer to the Murray Series 05).

NOT INTENDED FOR USE WITH AN “ATV” OR “RIDE ON LAWN MOWER”

MURRAY SERIES 04 DIAMOND HARROW SECTION(S) & SETS (OR ANY OTHER MURRAY HARROW) ARE NOT TO BE ATTACHED TO / USED IN CONJUNCTION WITH OR PULLED BY AN “ATV” OR “RIDE ON LAWN MOWER” OR SIMILAR MOTIVE POWER MACHINE.

Murray Agricultural Equipment expressly prohibit the attachment to / use with or pulling by an “ATV” or “Ride On Lawn Mower” or similar form of machine regarding Series 04 Diamond Harrow Section(s) & Sets or any other Murray Harrow.

If, for whatever reason, attachment / or use in conjunction with or pulling by an “ATV” or “Ride On Mower” or similar form of machine was being considered **STOP NOW!**

DO NOT PROCEED WITH ASSEMBLY OR ATTACHMENT!

If you purchased these Harrows **brand new** contact the Murray Dealer that sold these Harrows to you or Murray Agricultural Equipment **NOW to arrange a return of these Harrows.**

SET UP INSTRUCTIONS

DANGER; Use extreme caution to prevent injury when handling or working with the tine sections (points) as the tines are very sharp. A Tine or Tines should never be assembled in any other position that the way they were designed or intended to be positioned, ie; Tines should never be assembled so some or all of the tines are positioned the other way or positioned so they are pointing upwards etc.

When assembling equipment for delivery or in preparation for field work please follow these general instructions. Always refer to the appropriate assembly drawings and / or instructions during assembly.

“Left” and “Right” are relative to a position behind the implement looking forward to the hitch point.

Assemble the implement on a solid, level surface wherever possible.

SERIES 04 DIAMOND HARROW SECTION & SETS: NORMAL PACKAGING

The following items should be included;

HARROW SECTIONS; Tine Harrow sections, if section(s) only have been specified.

“DRAG” TYPE SET;

Quantity	Description
-----------------	--------------------

- | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Series 04 “Front” Harrow Drawbar
(a “Front Drag” drawbar has a centrally located pull ring) (a “Front Lift” drawbar has 2 pull rings located each side of the centre of the bar) |
| 1 | Bundle (or stack) of the required number of Tine Harrow Sections |

ADDITIONALLY, FOR A SERIES 21 3-POINT LINKAGE “HOIST LIFT” TYPE SET;

Quantity	Description
-----------------	--------------------

- | | |
|---|----------------------------------------------------------------------------------------------------------------|
| 1 | Series 21 Hoist Frame (with 2 “pull” bolts, nuts & split pins supplied) (Use the plates welded in each corner) |
|---|----------------------------------------------------------------------------------------------------------------|

- 1 Series 04 “Rear Lift” harrow drawbar (with chains attached) (2 Section Sets are supplied with “Rear Lift” connector chains only)

SERIES 04 DIAMOND HARROW SECTIONS & SETS: ASSEMBLY INSTRUCTIONS

SAFETY TIP: Safety Glasses should be correctly worn by the person(s) removing tie-wires.

STEP 1: Remove all items of packaging, including strapping, tie-wires and shipping tags etc; from components.

STEP 2: **ASSEMBLY TIP; *We suggest you use the front harrow drawbar as an assembly guide, therefore;*** Lay out front harrow drawbar, with labels facing up, on solid level ground large enough for the harrow set. (Naturally, leave enough space for the remainder of the set.)

STEP 3: Carefully, place the individual tine harrow sections with their tines downwards so that they line up with the front harrow drawbar and the tine harrow “front hooks” correspond with their respective drawbar ring sets.

STEP 4: Assemble the end ring of each ring set to its tine harrow “front hook”.

If you are assembling a “Hoist Lift” type set, using a Series 21 Hoist Frame, please continue with Steps 5 - 7. If not, please refer to sections; Special Notes & Operating Instructions.

STEP 5: Place the Series 21 Hoist Frame over * the assembled Front Lift Harrow Drawbar and Harrow sections with the 3-point linkage mount pins facing towards the Front Lift harrow drawbar.

* Alternatively, the Hoist Frame may be fitted to the tractor's 3-point linkage system prior to attaching the harrow set and then, with care, the harrow connected to the Hoist Frame.

The Hoist Frame is fitted with Category I and Category II lower link pins and top holes. A Category I top pin is supplied. Please use a bush (not supplied) to convert the category I top pin to category II or use a category II pin (not supplied). Use the 3 supplied lynch clips for the top and lower fittings to ensure these areas do not become disassembled.

STEP 6: Disassemble the 2 pull bolts located in each corner of the front of the hoist frame and position the front lift harrow drawbar so that each of the 2 front pull rings are between the two mount plates located at each front corner of the hoist frame. With the bolt heads underneath, assemble the pull bolts through the bottom and top one hole plates with the pull rings in between the plates and secure with the nuts and steel split pins supplied. When the harrow is fully assembled bend the split pin's legs to avoid the nuts becoming undone.

STEP 7: "Rear Lift Drawbar"; (Not applicable to **2 section** sets)
Fit the rear lift drawbar on to the rear of the hoist frame by placing the 2 pull rings on the drawbar over the hoist's 2 outside rear lifting hooks (located on each rear corner of the hoist frame). Attach each of

the harrow's rear lift chains on the rear lift drawbar (one per each harrow section) to their respective weld-on lift hooks on the rear rail of each harrow section.

2 section sets feature "rear lift connector" chains only (no rear lift drawbar is required). Place each of the harrow's rear lift connector chains over each of the outside rear lifting hooks of the Series 21 Hoist Frame (located on each rear corner of the hoist frame). Then attach the end link to their respective weld-on lift hooks on the rear rail of each harrow section.

ASSEMBLY TIP; Use the last link of each rear lift chain to attach to the weld-on rear lift hook of a harrow section.

We recommend, wherever possible, that the "rear lift chains" are **not** in tension while the harrow is in operation on the ground. By having the lift chains "loose" it assists in the correct operation of the harrow set and reduces the wear on the chain itself. Adjustment of the tractor's 3-point linkage fittings may assist in complying with this recommendation

SPECIAL NOTES:

If the harrow set is **not** required to be "taken apart" we generally recommend that all or some of the couplings, links, harrow hooks etc, be closed up. This includes the two Series 21 rear lifting hooks. Safety Glasses should be correctly worn by the person(s) hammering the couplings, links, harrow hooks etc closed. For a permanent situation welding of these closed up components may be considered. Please ensure the

person who is carrying out any welding work is qualified as a welder if this step is undertaken. Ensure all safety procedures are adhered to during welding.

Please dispose of any packaging and shipping items thoughtfully. Thank you.

SERIES 04 DIAMOND HARROW SECTIONS & SETS: OPERATING INSTRUCTIONS

Recommended maximum working speed is **10 kph**. For better results, and to safeguard the implement, do not operate the harrow above this speed. Operation at a speed greater than 10 kph will result in premature wear and damage to the harrow and may void manufacturer's product warranty.

For a "hoist lift" type set we recommend, wherever possible, that the harrow's "rear lift chains" are **not in tension** when the harrow is in operation on the ground. For further details please refer to Step 7 of the set up instructions in this manual.

Replace any safety or warning labels on this product if they become damaged, unclear or unreadable. Labels are available as a service part.

Inspect this product prior to use. Ensure that all couplings, rings, hooks etc are correctly assembled / attached. Replace any parts (couplings, rings, tines etc) on this product if they become worn or unserviceable.

Safety Glasses should be correctly worn by the person(s) hammering couplings, links, harrow hooks etc.

Murray Agricultural Equipment does **not** recommend the adding of extra weight to their harrow sets, harrow sections or harrow drawbars.

NEVER GET UNDERNEATH A HARROW; Safe work practice directs that operators and other persons never get underneath a Harrow Section or Harrow Set or components of a Harrow at any time while attempting to clear or clean the Harrow of weed matter or any other material or blockage and when carrying out maintenance or at any other time whether the Harrow Section or Set or components of a Harrow are attached to a 3 point Linkage Lift frame or a drag type set. Failure to do so will / may result in death or serious injury.

NO RIDING ON A HARROW; Owners and Operators must ensure that no person(s) or animals ride or are carried etc on Murray Harrows. Failure to do so will / may result in death or serious injury.

SERIES 21 HOIST FRAME – POINT LINKAGE FRAME; (Where supplied)

NO RIDING ON A HOIST FRAME; Owners and Operators must ensure that no person(s) or animals ride or are carried etc on the Murray Series 21 Hoist Frame or a Murray Harrow. Failure to do so will / may result in death or serious injury.

NO CARRYING OF ITEMS ON A HOIST FRAME; Owners and Operators must ensure that no item(s) apart from one Murray Harrow Set designed to attach to a Murray Series 21

Hoist Frame is placed or carried on a Hoist Frame. The Murray Series 21 3 Point Linkage Hoist Frame is designed to carry, when correctly attached, one Murray Harrow set only. It is **not** intended to be used at a load carrying device or a material handling lifting device or a pulling / pushing device. Failure to do so will / may result in death or serious injury.

Murray Series 21 Hoist Frames must never have their maximum lifting capacity exceeded at any time. Exceeding a Murray Series 21 Hoist Frame's maximum lifting capacity at any time will / may result in damage to the Hoist Frame and property & equipment etc and will / may result in death or serious injury to person(s) and animals. Safe work practice directs that operators and other persons never get underneath, nearby or on top of a Murray Hoist Frame. Ensure all people have their feet, arms and body clear of Harrows and Hoist Frame when the Harrows & Frame are being raised, lowered and during field work & transport. Failure to do so will / may result in death or serious injury.

STAND CLEAR OF "PINCH POINTS"; Owners and Operators must ensure no person(s) or animal(s) are permitted to stand within or be allowed to be nearby a "Pinch Point". A Pinch Point maybe an area between the front of a Hoist Frame & Harrow Front Lift Drawbar and the rear of a tractor when the Hoist Frame is connected to a tractor.

A Pinch Point maybe an area between a Harrow Set and the rear of a tractor when the Harrow Set is NOT connected to a tractor and the tractor is being reversed so as to enable the Harrow Set to be attached to the tractor. A Pinch Point maybe an area between the tractor's rear tyres and a drag

type Harrow Front Drawbar when the tractor and attached Harrow Set is turning a corner.

Operating Instructions for Towing Vehicles;

This equipment is not intended to be used on or travel on roads or freeways. When transporting this product in conjunction with (connected to) a tractor or another vehicle, transport only when safe to do so and **transport speed** (not work speed) should not exceed 20 kph.

When towing equipment combinations, the maximum equipment combination ground speed shall be limited to the lowest specified ground speed of any of the towed machines.

The maximum travel speed is that specified in the operator's manual(s), Speed Identification Symbol (S I S), or information sign of towed equipment, or the limit of the road conditions, **whichever is the lesser**.

GENERAL

Additional copies of this publication are readily available. Please contact Murray Agricultural Equipment.

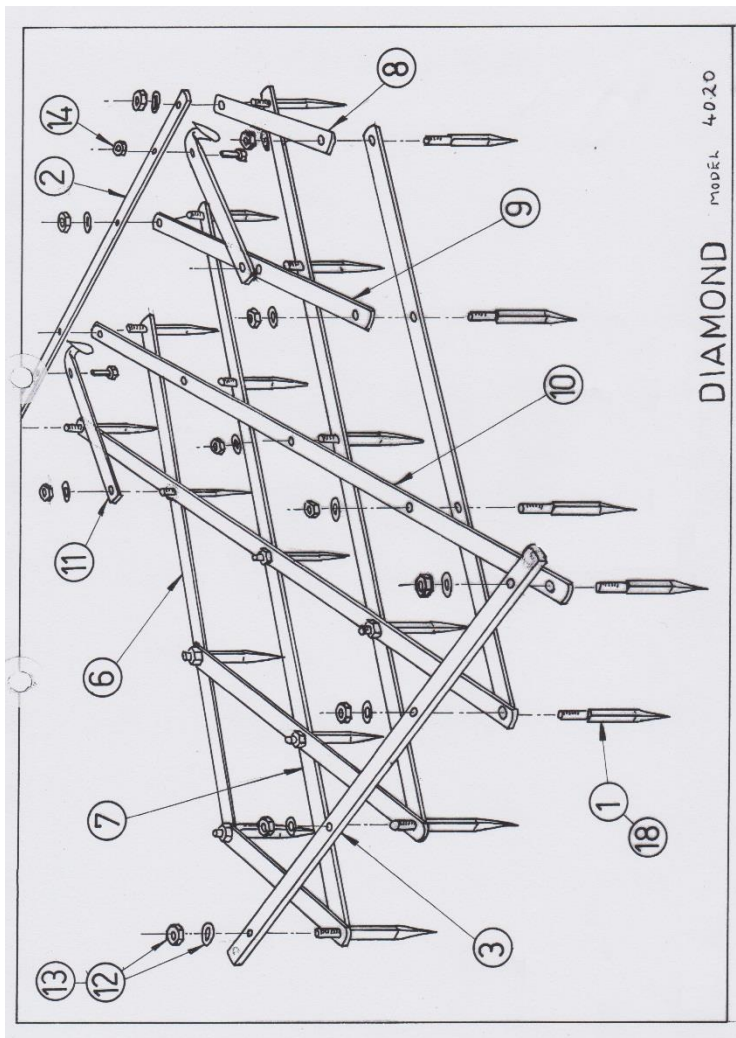
We do not recommend the adding of any extra weight to this harrow.

If you require assistance in any way with a Murray Series 04 Diamond Harrow Section & Set please contact your dealer, area distributor (where applicable) or Murray Agricultural Equipment.

Information contained herein is from data available at time of publishing. Due to a policy of continual product research and evaluation, Hugh Murray & Son Pty Ltd trading as Murray Agricultural Equipment reserves the right to change specifications without notice and without obligation.
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NOTES

SERIES 04 DIAMOND HARROW SECTION: PARTS BREAKDOWN



Ref No.	Part No.	Description
1	104009	5/8" Tine Only
2	104006	Front Rail Only
3	104010	Rear Rail Only
4	102028	Rear Lift Hook (Not Shown) only on Model 4003 Lift Type Section
6	104005	4 Hole Rail
7	104004	5 Hole Rail
8	104003	2 Hole Brace
9	104002	3 Hole Brace
10	104001	5 Hole Brace
11	104008	Front Hook Only
12	190570	5/8" Spring Washer
13	190230	5/8" Nut
14	190204	3/8" x 1" Bolt & Nut
18	104014	5/8" Tine c/w Ref No 12 & 13

Please see your local dealer for any spare part requirements.

**MURRAY AGRICULTURAL EQUIPMENT CONTACT
INFORMATION:**

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Murray Agricultural Equipment.
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CUSTOMER PURCHASE INFORMATION:

Date of Purchase:

Dealer Purchased From:

Model No.:

The above information will help us to service any warranty
claims.