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Evaluation Report 314

Easy Auger Mover

A Co-operative Program Between
ALBERTA FARM MACHINERY RESEARCH CENTRE
PAMI
PRAIRIE AGRICULTURAL MACHINERY INSTITUTE

EASY AUGER MOVER

MANUFACTURER & DISTRIBUTOR:
E.A.M. Manufacturing Co. Ltd.
139 Lockwood Rd.
Regina, Saskatchewan
S4S 6W7

RETAIL PRICE:
$199.00 (January 1983, f.o.b. Portage la Prairie, Manitoba)

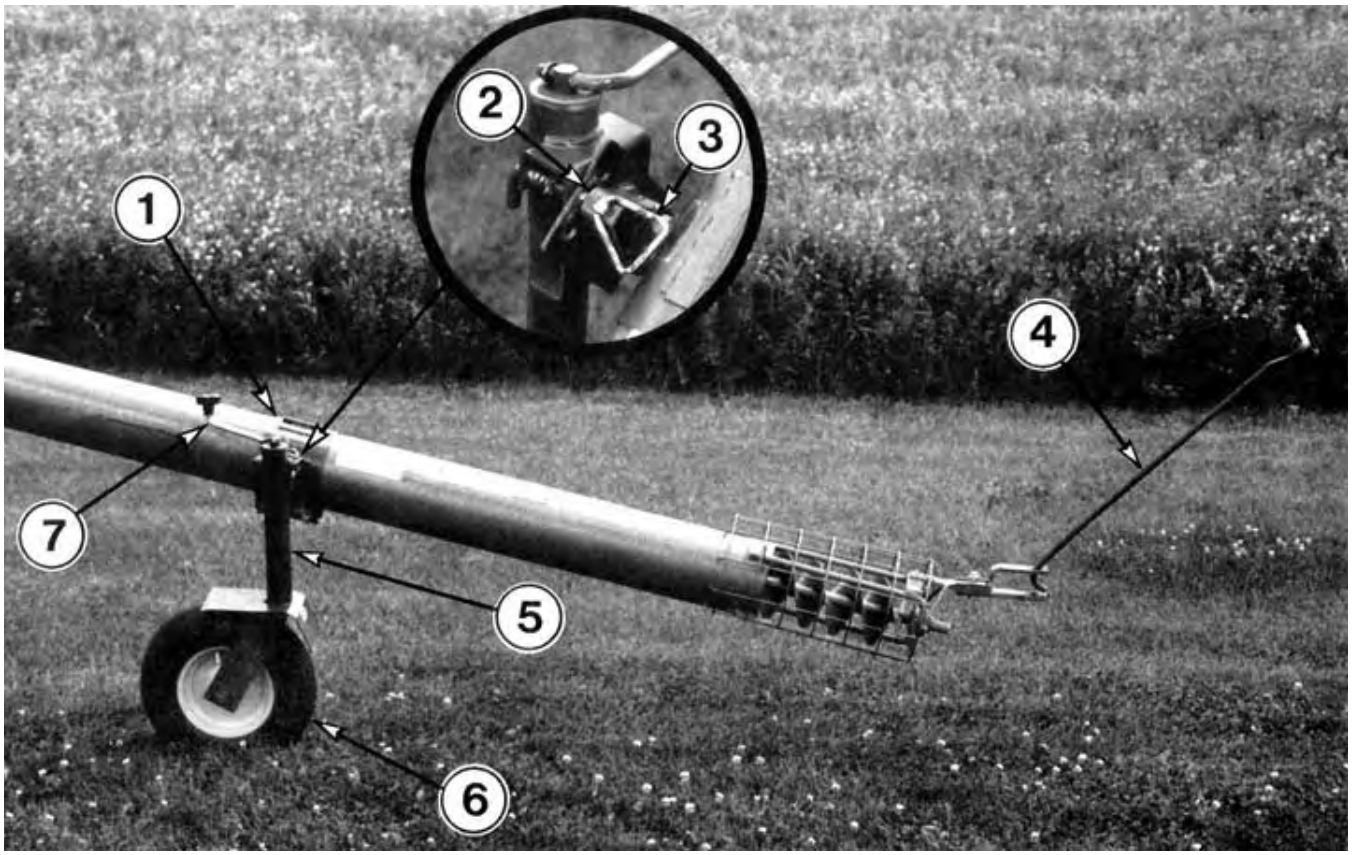

FIGURE 1. (1) Collar, (2) Angle Adjustment, (3) Connecting Pin, (4) Handle, (5) Caster Wheel Stem, (6) Caster Wheel, (7) Height Adjustment Crank.

SUMMARY AND CONCLUSIONS

Overall performance of the Easy Auger was good[1]. The mounting of this auger attachment took less than five minutes. Ease of maneuvering the auger at low elevations, with the mover was very good on pavement and gravel and good on grass. At high auger elevations, the ease of maneuvering was fair. The mover's stability was reduced when the caster wheel stem was fully extended. For best performance, the caster wheel stem had to be adjusted perpendicular to the ground; however, at several elevations this was not possible. The Easy Auger Mover was safe to operate if normal precautions were observed.

No operating instructions were provided.

Failure of the angle adjustment was the only problem that occurred during the test.

RECOMMENDATIONS

It is recommended that the manufacturer consider:

1. Modifying the caster wheel assembly to improve stability of the mover when the stem is extended.
2. Providing instructions on assembly, operation and safety.
3. Modifying the angle adjustment for the caster wheel stem, to improve its durability and range of adjustment.

Senior Engineer: G.M. Omichinski

Project Engineer: C.W. Bolton

THE MANUFACTURER STATES THAT:

With regard to recommendation number:

1. A stabilizer bar has been added to improve stability.
2. Assembly instructions are provided with all machines.
3. Modifications have been made to allow proper adjustment of the caster wheel stem at any auger angle.

GENERAL DESCRIPTION

The Easy Auger Mover (FIGURE 1) is a portable auger attachment enabling an operator to maneuver an auger without lifting the auger inlet. It mounts near the auger inlet and consists of a bolt-on collar, caster wheel, caster wheel stem, and a handle. The auger inlet is raised off the ground by extending the caster wheel stem with the height adjustment crank. The angle of the caster wheel stem is adjustable to suit different auger elevations.

Detailed specifications are given in Appendix I.

SCOPE OF TEST

The Easy Auger Mover was mounted to a 7 in (180 mm) diameter, 40 ft (12 m)[2] Brandt grain auger. The attachment was evaluated for ease of assembly, ease of operation and adjustment, operator safety, suitability of operator manual, and performance. The auger and attachment were maneuvered on a variety of ground surfaces and slopes. In addition the auger and attachment were transported over gravel and paved highways for a distance of 12 mi (20 km).

[1] *See Rating Table, Appendix II*

[2] *A conversion table is given in Appendix III.*

RESULTS AND DISCUSSION

EASE OF ASSEMBLY

It took one man less than five minutes to attach the Easy Auger Mover to an auger. Two bolts held the collar to the tube of the auger and a spring loaded pin fastened the caster wheel assembly to the collar.

EASE OF OPERATION AND ADJUSTMENT

Maneuverability: The Easy Auger Mover provided convenient maneuvering of a grain auger on grassy, gravel and paved surfaces.

The collar was mounted 5 feet (1.5 m) from the lower end of the auger. At minimum auger elevation, the auger inlet had to be lifted by hand to place the caster wheel into operating position. At maximum auger elevation and with the caster wheel stem fully extended, the caster wheel could not reach the ground. It was possible to place the collar at different locations along the auger tube to eliminate these problems.

When operating the Easy Auger Mover, best results were achieved with the caster wheel stem perpendicular to the ground and fully retracted. Only five positions were available on the angle adjustment to suit different auger elevations. Fully extending the caster wheel stem required 75 turns on the height adjustment crank. The caster wheel stem was not rigidly supported when fully extended and did not allow the caster wheel to swivel smoothly. This made operation more difficult. It is recommended that the manufacturer modify the system to improve stability of the mover when the caster wheel stem is extended.

Transporting: Installing the Easy Auger Mover on the grain auger, did not affect the transporting characteristics of the auger. The caster wheel was easily raised into transport position (FIGURE 2) or removed and placed into the tow vehicle along with the handle.

FIGURE 2. Transport position.

OPERATOR SAFETY

The Easy Auger Mover was safe to operate if normal precautions were followed with regard to power lines and steep slopes.

OPERATOR MANUAL

No operating instructions were provided. It is recommended that the manufacturer provide a small operator manual to include operating and safety instructions.

DURABILITY RESULTS

The only durability problem that occurred with the Easy Auger Mover during the test, was failure of the angle adjustment (FIGURE 3). It is recommended that the manufacturer modify this adjustment to improve its strength and durability.

The intent of the test was to evaluate the overall performance. An extended durability evaluation was not conducted.

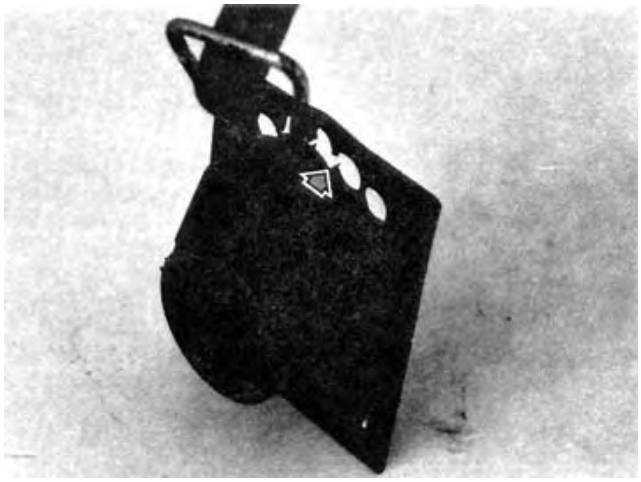

FIGURE 3. Angle adjustment failure.

APPENDIX I
SPECIFICATIONS

MAKE:	Easy Auger Mover
MODEL:	Single Unit
SERIAL NUMBER:	102
MASS:	40 lb (18 kg)
CASTER WHEEL:	
-- tire size	4.80 x 4.00 - 8, 4-ply
COLLAR:	
-- material thickness	0.14 in (3.5 mm)
-- diameter	7 in (180 mm)
CASTER WHEEL STEM:	
-- retracted	14 in (365 mm)
-- extended	25 in (635 mm)
HANDLE:	
-- diameter	0.6 in (15 mm)
-- length	33 in (840 mm)
LUBRICATION POINTS:	One

APPENDIX II
MACHINE RATINGS

The following rating scale is used in Machinery Institute Evaluation Reports:

Excellent	Fair
Very Good	Poor
Good	Unsatisfactory

APPENDIX III
CONVERSION TABLE

foot (ft) x 0.305	= metre (m)
inches (in) x 25.4	= millimetres (mm)
miles/hour (mph) x 1.61	= kilometre/hour (km/h)

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