

Howard 350 Rotavator Attachments Instructions & Parts List

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350 Attachments Instructions and Parts List

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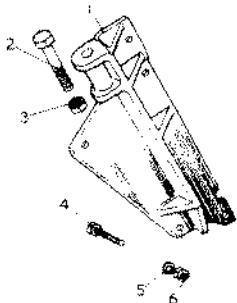
WARNING—ALWAYS STOP ENGINE BEFORE ATTEMPTING TO FIT ANY ATTACHMENT

TRAILER AND PLOUGH HITCH BRACKET

(Part No. 65517).

To fit this bracket to the '350' be sure that the engine is stopped and proceed as follows:—

- (a) Remove the rotor and shield and fit the dust covers over the rotor drive shaft stubs (see Ill. 'A').
- (b) Bolt the hitch into position as shown in diagram 'B'. Use the longer bolts provided and one of the bolts removed from the chaincase. Once fitted this hitch may be left in position as it does not interfere with other attachments.



TRAILER AND PLOUGH HITCH BRACKET

1	65517	Hitch Bracket	...	...	...	1
2	S.1110320	Bolt $\frac{1}{2}$ " UNF. x 4" long	...	...	...	1
3	S.7110010	Nut $\frac{1}{2}$ " UNF.	...	...	...	1
4	S.1404070	Setscrew $\frac{1}{4}$ " UNC. x $\frac{1}{2}$ " long, Hex. Head	...	...	...	5
5	S.8040840	Spring Washer $\frac{1}{4}$ " dia.	...	...	...	5
6	S.7204010	Nut $\frac{1}{2}$ " UNC.	...	...	...	3

Note: use 1 off— $\frac{1}{4}$ " UNC. x $\frac{1}{2}$ " long setscrew, nut and spring washer, from those removed from chaincase.

PLOUGH

Plough Kit comprising:

Plough hitch assembly (Part No. 65517) complete with five bolts.

Plough assembly.

Pivot bracket (Part No. 66332).

Front beam with weight (Part Nos. 66185/6).

Wheel extension.

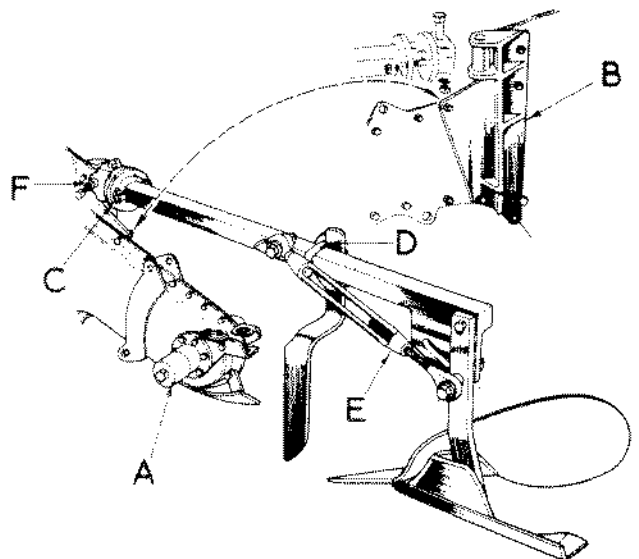
To fit the plough to the machine proceed as follows:—

- (a) Be sure engine is not running. Remove the rotor and shield and fit the dust covers over the rotor drive shaft stubs.

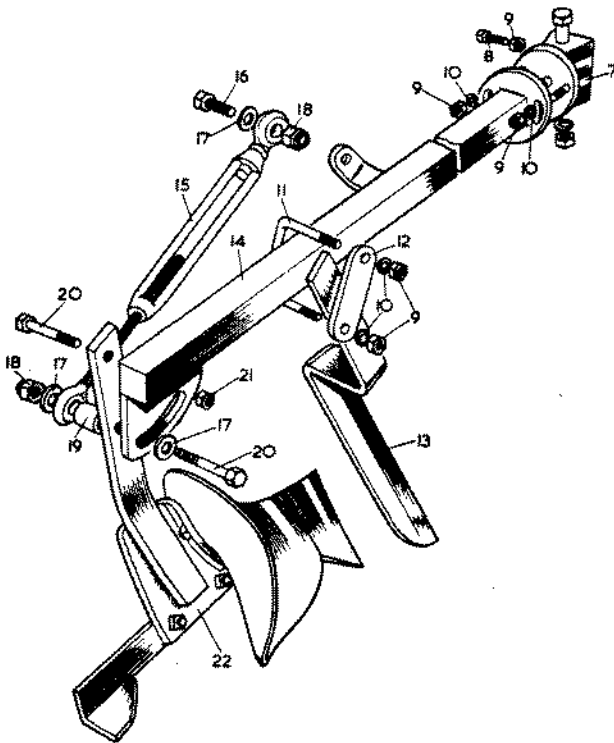
- (b) Loosen the cotter pin in the right-hand wheel hub and remove the wheel.
- (c) Fit the wheel extension (Ill. 43) to the axle exposed, push right home and tighten the cotter pin (Ill. 44).
- (d) Fit the wheel to the extension, push right home and tighten the cotter pin.
- (e) Bolt the plough hitch (Ill. 1) into position. Use the longer bolts provided and one of the bolts from the chaincase as shown in inset B. Once fitted this hitch plate may be left in position as it will not interfere with other attachments.
- (f) Remove the retaining pin (Part No. 64469) (Parts List Ill. No. 150) Insert the front weight beam (Ill. No. 49) between the engine bearers ensuring that the spacer (64392) (Parts List Ill. No. 156) fitted to the machine is in the lower of the two holes provided Push the beam over the spacer and insert the retaining pin (Part No. 64469). Ensure that the beam is fitted crank upwards.
- (g) Fit the ballast weight (Ill. No. 48) to the beam with the '350' mark upright and push it to the rear of the beam and clamp with the setscrew.

Adjustments:

- (a) To retain an upright position at work, the plough is adjusted by means of the slotted holes in the plough pivot bracket (C). The Coulters are adjusted by slackening the two nuts holding the 'U' bolt (D) Ill. 11.
- (b) Adjustment for furrow depth provided at (E) (Ill. 15).
- (c) Adjustment for draught line is provided at (F) (Ill. 8/9).



350 Attachments



PLOUGH

7	66332	Plough Pivot Bracket	...	...	...	1
8	S.1406120	Setscrew $\frac{1}{8}$ " UNC. x $1\frac{1}{2}$ " long, Hex. Head	...	...	...	1
9	S.7206010	Nut $\frac{1}{8}$ " UNC.	...	...	...	5
10	S.8061140	Spring Washer $\frac{1}{8}$ " dia.	...	...	...	4
11	66342	"U" Bolt	...	...	...	1
12	66343	Clamp Plate	...	...	...	1
13	66341	Coulter	...	...	...	1
14	66327	Plough Beam	...	...	...	1
15		Straining Screw—DAVY REF. No. 1379— $\frac{7}{16}$"	...	...	...	1
		Screw	...	...	...	1
16	S.1208130	Bolt $\frac{1}{2}$ " UNC. x $1\frac{1}{2}$ " long	...	...	...	1
17	S.8081610	Flat Washer $\frac{1}{2}$ " dia.	...	...	...	3
18	S.7208030	Nut $\frac{1}{2}$ " UNC. Philidas NUCI.	...	...	...	2
19	10317	Boss	...	...	...	1
20	S.1408220	Setscrew $\frac{1}{8}$ " UNC. x $2\frac{1}{4}$ " long, Hex. Head	...	...	...	2
21	S.7208020	Locknut $\frac{1}{2}$ " UNC.	...	...	...	1
22	66339	Plough	...	...	...	1

23-25 not allocated

SKID TINE

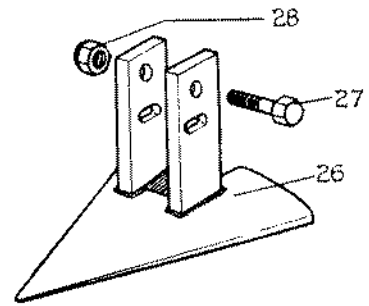
(Part No. 68488)

An additional $\frac{3}{8}$ " dia. hole, $\frac{7}{8}$ " above the bottom hole in the Depth Control Skid allows fitment of a new Skid Tine, to increase ground coverage when the machine is used for shallow cultivation. When fitting the tine, pointed end facing direction of travel, ensure that it can pivot on the retaining bolts; tighten the Philidas nuts so that the bolts do not drop out, but not so tight that the tine is pinched to the skid.

SKID TINE ASSEMBLY

26	68488	Skid Tine	...	...	...	1
27	S.1205120	Bolt $\frac{5}{16}$ " UNC. x $1\frac{1}{2}$ " long	...	...	...	2
28	S.7205130	Nut $\frac{5}{16}$ " UNC. Philidas Self-locking GUCP/I	...	...	...	2

29-30 not allocated

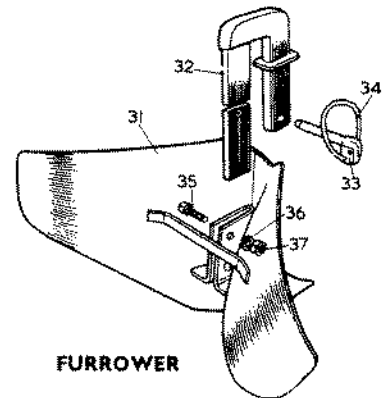


FURROWER

To fit the furrowing attachment be certain the engine is stopped and proceed as follows:—

- Remove depth control skid.
- Remove shield (Parts List Ill. No. 314 in Machine Instruction Book) by sliding out shield securing pins (64439).
- Fit Furrower into depth skid slot and retain with clip pin provided.
- Replace shield.

It is necessary to remove the shield to allow the furrower to be hooked over and into the skid slot.



FURROWER

31	14136	Furrower	...	...	...	1
32	65478	Furrower Bracket	...	...	...	1
33	PH.7059	Clip Pin	...	...	...	1
34	PH.7060	Clip Ring	...	...	...	1
35	S.1405080	Setscrew $\frac{1}{2}$ " UNC. x 1" long	...	...	...	1
36	S.8050940	Spring Washer $\frac{1}{8}$ " dia.	...	...	...	1
37	S.7205010	Nut $\frac{1}{8}$ " UNC.	...	...	...	1

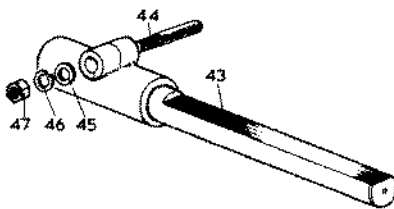
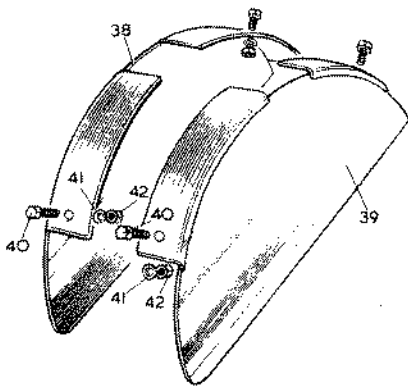
SIDE SHIELDS

When fitting side shields to the rotor shield proceed as follows:—

- Identify L. and R. shields, (Ills. 38 and 39, L. and R. respectively).
- Bolt the shield together with the flanges of the side shields on top of the main shield. It is not necessary to remove the main shield.

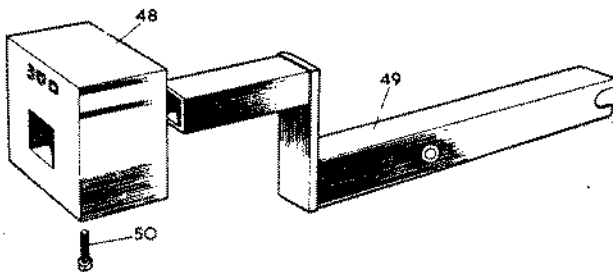
SIDE SHIELDS

38	65170	Side Shield L.H.	...	...	...	1
39	65171	Side Shield R.H.	...	...	...	1
40	S.1206500	Bolt $\frac{5}{16}$ " UNC. x $\frac{3}{4}$ " long	...	...	...	4
41	S.8050940	Spring Washer $\frac{1}{8}$ " dia.	...	...	...	4
42	S.7205010	Nut $\frac{5}{16}$ " UNC.	...	...	...	4



EXTENSION AXLE ASSEMBLY

43	64481	Extension Axle	...	...	...	2
44	64466	Cotter Pin	...	...	...	2
45	S.8061210	Flat Washer $\frac{1}{2}$ " dia.	...	...	...	2
46	S.8061140	Spring Washer $\frac{1}{2}$ " dia.	...	...	...	2
47	S.7106010	Nut $\frac{1}{2}$ " UNF.	...	...	...	2



FRONT WEIGHT ASSEMBLY

48	66185	Weight	...	...	...	1
49	66186	Weight Beam	...	...	...	1
50	S.1406120	Setscrew $\frac{1}{4}$ " UNC. x $1\frac{1}{2}$ " long, Hex. Head	...	...	...	1

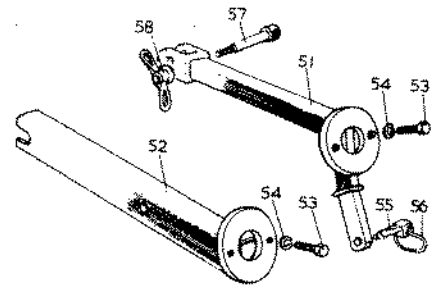
TOOLBAR FRONT OR REAR FITTING

For rear fitting be sure engine is stopped then :-

- Remove rotor and shields.
- Fit dust caps (Parts List Ill. No. 184) to rotor drive shafts.
- Remove depth control skid and insert rear toolbar adaptor into skid socket, locate with clip pin provided.
- Insert bolt and screw on wing nut at front end of adaptor.
- Couple 'A' frame of tool bar to adaptor bracket at pivot plates.
- Assemble transverse beams of tool bar *under* the 'A' frame.
- Adjust clamps and stalks, etc., to suit row widths.

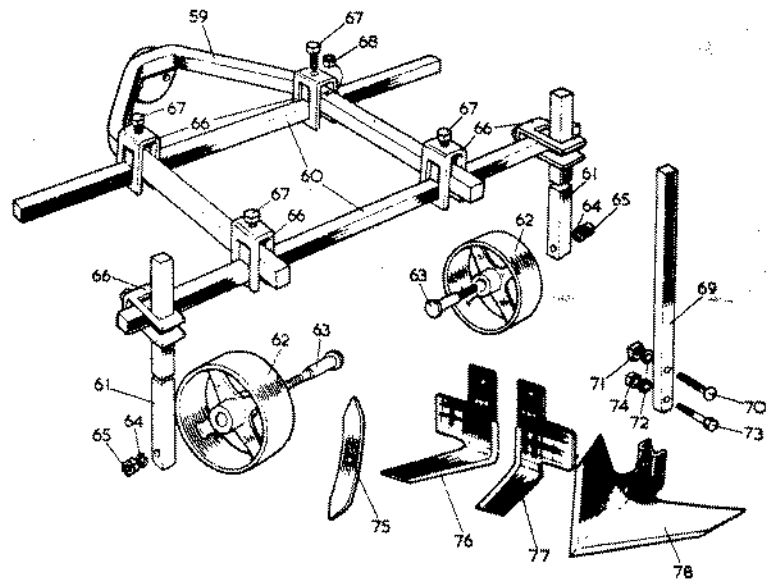
For front fitting:

- Assemble front toolbar adaptor as (N) plough section.
- Fit toolbar frame to adaptor as rear fitting instructions.



TOOLBAR

51	67589	Rear Toolbar Adaptor	...	...	...	1
52*	64942	Front Toolbar Adaptor	...	...	...	1
53	S.1206100	Bolt $\frac{1}{2}$ " UNC. x $1\frac{1}{2}$ " long	...	...	...	2
54	S.8061140	Spring Washer $\frac{1}{2}$ " dia.	...	...	...	2
55	PH.7059	Clip Pin	...	...	...	1
56	PH.7060	Clip Ring	...	...	...	1
57	67592	Securing Pin	...	...	...	1
58	S.7106060	Wing Nut $\frac{1}{2}$ " UNF.—Utility Cycle Product Model No. 2	...	...	...	1
	69190	Tool Frame Assembly	...	...	...	1
		comprising :-				
59	69195	Arms and Flange	...	...	...	1
60	69194	Crossbar	...	...	...	2
61	69191	Wheel Stalk	...	...	...	2
62	69193	Wheel	...	...	...	2
63	69192	Wheel Spindle	...	...	...	2
64	S.8061140	Spring Washer $\frac{1}{2}$ " dia.	...	...	...	2
65	S.7506010	Nut $\frac{1}{2}$ " BSF.	...	...	...	2



17314		Clamp Assembly	...	...	...	11
		comprising :-				
66	17312	Clamp	...	...	...	11
67	S.1308090	Setscrew $\frac{1}{4}$ " UNF. x $1\frac{1}{2}$ " long, Hex. Head	...	...	...	11
68	S.7108010	Nut $\frac{1}{2}$ " UNF.	...	...	...	11
	69198	Hoe and Stalk Assembly	...	...	...	1
		comprising :-				
69	69209	Stalk	...	...	...	4
70	S.5605110	Coach Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{4}$ " long, Cup Square	...	...	...	4
71	S.7605160	Square Nut $\frac{3}{8}$ " BSW.	...	...	...	4
72	S.8050940	Spring Washer $\frac{1}{2}$ " dia.	...	...	...	4
75	69199	Point—1" Close Youle P/2507/1" D1.	...	...	...	4

* The front toolbar adaptor is required to operate Tarpen hedge-trimmers and allied cable-driven equipment.

350 Attachments

69200	Pistol Hoe and Stalk Assembly R.H. ...	2
	comprising:—	
69 69209	Stalk ...	2
70 S.5605110	Coach Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{2}$ " long, Cup Square ...	2
71 S.7605160	Square Nut $\frac{3}{8}$ " BSW. ...	2
72 S.8050940	Spring Washer $\frac{3}{8}$ " dia. ...	4
73 S.1605110	Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{2}$ " long ...	2
74 S.7605010	Nut $\frac{3}{8}$ " BSW. ...	2
76 69187	Pistol Hoe R.H.—Close Youle—SH/2702/4 $\frac{1}{2}$ /D1. ...	2
69201	Pistol Hoe and Stalk Assembly L.H. ...	2
	comprising:—	
69 69209	Stalk ...	2
70 S.5605110	Coach Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{2}$ " long, Cup Square ...	2
71 S.7605160	Square Nut $\frac{3}{8}$ " BSW. ...	2
72 S.8050940	Spring Washer $\frac{3}{8}$ " dia. ...	4
73 S.1605110	Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{2}$ " long ...	2
74 S.7605010	Nut $\frac{3}{8}$ " BSW. ...	2
77 69188	Pistol Hoe L.H.—Close Youle—SH.2702/4 $\frac{1}{2}$ /D1 ...	2
69202	Ducksfoot Hoe and Stalk Assembly ...	1
	comprising:—	
69 69188	Stalk ...	1
70 S.5605110	Coach Bolt $\frac{3}{8}$ " BSW. x $1\frac{1}{2}$ " long, Cup Square ...	1
71 S.7605160	Square Nut $\frac{3}{8}$ " BSW. ...	1
72 S.8050940	Spring Washer $\frac{3}{8}$ " dia. ...	1
78 68765	Ducksfoot Hoe—Close Youle CY/135/6" ...	1

79-80 not allocated

WATER PUMP

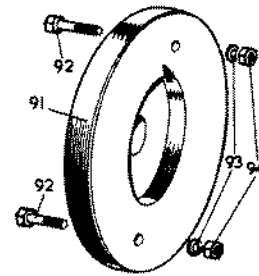
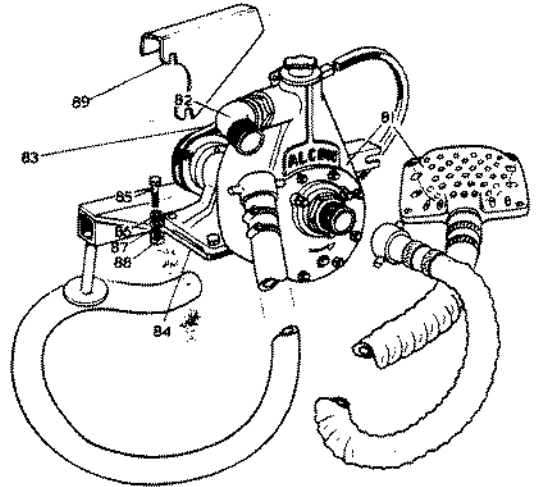
To fit proceed as follows:—

- Remove belt guard (Parts List III. No. 84).
- Ensure spacer (Parts List III. No. 120) is in the top hole, remove bolt to position as necessary.
- Remove retaining pin (Parts List III. No. 114). Slide mounting bracket (III. No. 84) between engine support beams and locate the slot in the end of the beam over the spacer.
- Refit retaining pin and locate into beam in hole provided.
- Remove quick release screw from clutch bracket and swing the operating arm clear to allow belt to be fitted.
- Fit belt from pumps to pulley using the larger pulley on the clutch assembly. If machine drive belt is being used on this pulley either move it to the other pulley or remove it completely.
- Adjust the belt by moving the pump forward on the plate—using the four securing bolts and the slotted base plate.
- Refix the clutch arm, and replace the quick release screw.
- The pump will require priming. Unscrew the knurled cap on top of the body—fill with water—replace cap and start up. Be sure there is an airtight joint on pipe at suction side.

PUMP

81	Pump—Alcon $1\frac{1}{2}$ " Mk. III complete with 20 ft. Suction and 20 ft. Delivery Hose and Fittings ...	1
82 B.2034160	Elbow— $1\frac{1}{2}$ " BSP.—Crane No. 152 (M/F) ...	1
83 B.4006330	'V' Belt—Fenner Alpha 335 ...	1
84 64946	Pump Adaptor ...	1
85 S.1106130	Bolt $\frac{1}{2}$ " UNF. x $1\frac{1}{2}$ " long ...	4
86 S.8061210	Flat Washer $\frac{1}{2}$ " dia. ...	4
87 S.8061140	Spring Washer $\frac{1}{2}$ " dia. ...	4
88 S.7106010	Nut $\frac{1}{2}$ " UNF. ...	4
89 67635	Pump Belt Guard for home market only ...	1

90 not allocated



WHEEL WEIGHT ASSEMBLY

91	64958	Wheel Weight ...	2
92	S.1106240	Bolt $\frac{1}{2}$ " UNF. x 3" long ...	4
93	S.8061140	Spring Washer $\frac{1}{2}$ " dia. ...	4
94	S.7106010	Nut $\frac{1}{2}$ " UNF. ...	4

23" ROTOR KIT

L. and R. rotor extensions, Part No. 64451 (Parts List III. No. 187).
Long draw bolt, Part No. 64450 (Parts List III. No. 173).
23" shield assembly, Part No. 64455 (Parts List III. No. 314).

Assemble the kit as follows:—

- Remove depth skid.
- Remove shield by sliding out securing pins (64439).
- Remove draw bolt (Parts List III. No. 173) from existing 16" rotor.
- Fit rotor extensions. Ensure that the L. and R. hand extensions have been properly identified with cutting edge of blades leading. The pins on the rotor extensions locate in holes on the end flanges of the standard rotor and cannot be incorrectly fitted. (See Fig. A Machine Instruction Book).
- Fit the long drawbolt from the right-hand side of the machine ensuring that a drawbolt washer (64430) (Parts List III. No. 174) is fitted at each end and tighten securely.
- Fit 23" rotor shield using the original LONG securing pin. Replace the short pin at the forward end with the long securing pin provided in the kit. Transfer the depth control handle assembly (Parts List III. No. 318) from the 16" shield by unscrewing the wing nut and bolt.
- Refit the depth skid. Start engine and test.

Do not work on rotor section with engine running.

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