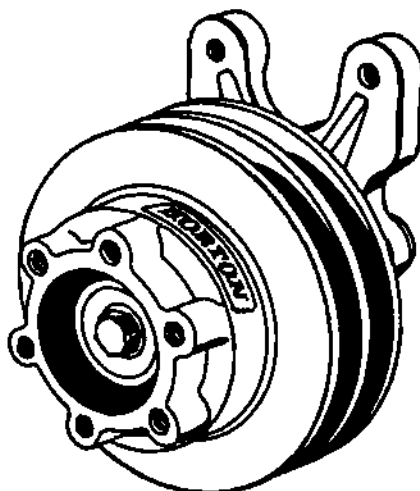




INDUSTRIES, INC.

HORTON DIRECT DRIVE HUBS INSTALLATION INSTRUCTIONS



I. INTRODUCTION

Horton Direct Drive Hubs are built to the same high quality standards as all Horton products, and may be used with viscous clutches, Horton's "HT550" Fan Clutch, or as a direct drive to the fan.

Read this manual carefully, making full use of its explanations and instructions. The "Know How" of safe continuous, trouble free operation depends on the degree of your understanding of the system and your willingness to keep all components in proper operating condition. Pay particular attention to all **NOTES**, **CAUTIONS**, and **WARNINGS** to avoid the risk of

personal injury or property damage. It is important to understand that these **NOTES**, **CAUTIONS**, and **WARNINGS** are not exhaustive. Horton can not possibly know or evaluate all conceivable methods in which service may be performed, or of the possible hazardous consequences of each method. Accordingly, anyone who uses a procedure which is not recommended by Horton must first satisfy themselves that neither their safety or the safety of the product will be jeopardized by the service method selected.

II. INSTALLATION

- A. Inspect Direct Drive Hub for signs of damage. If damaged, and damage is due to shipping, contact shipper immediately.
- B. Remove existing drive and/or fan clutch, nuts, bolts, etc. Place fan inside radiator shroud.
- C. Position Horton Direct Drive Hub in place using SAE grade 8 bolts or nuts.
- D. Tighten mounting bolts or nuts to vehicle manufacturers specifications.
- E. Replace and adjust belts.

- F. Mount fan or clutch onto Direct Drive Hub (See Fig. 1).

NOTE

Correct belt adjustment and alignment is necessary for all belt-driven components to assure longevity of component life. Over tightening of belts will shorten bearing life. Loose belts will result in excessive belt wear. Consult vehicle or equipment manufacturer, and/or engine manufacturer specifications for proper belt adjustment.

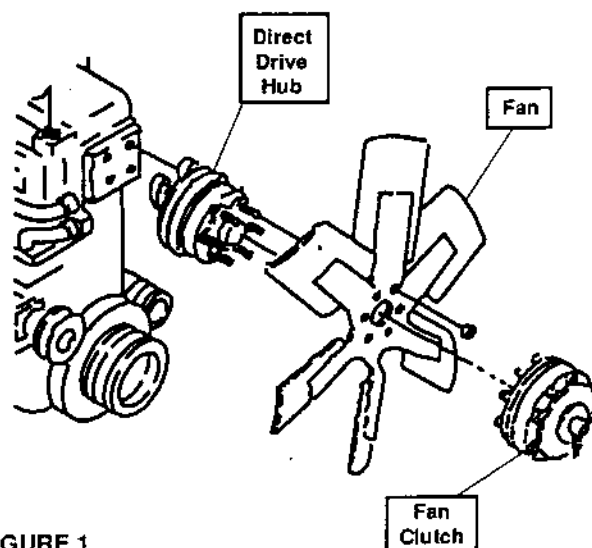


FIGURE 1

III REPLACEMENT PARTS

NOTE

Repair Kits consist of Bearings only.

- A. Remove Fan Spacer (Item 27) (See Fig. 2).
- B. Remove Cap Screw (Item 35) and Retainer Cap (Item 40) (See Fig. 2).
- C. Slide Sheave (Item 6) off Journal Bracket (Item 3) (See Fig. 2).
- D. Remove Retaining Ring (Item 81) (See Fig. 2).

- E. Fully supporting Sheave (Item 6), press Bearings (Item 4) and Spacers (Item 44) out of sheave (See Fig. 2).
- F. Fully supporting Sheave (Item 6), press new Bearings (Item 4) and Spacers (Item 44) into place.
- G. Install Retaining Ring (Item 81).
- H. Slide Sheave (Item 6) onto Journal Bracket (Item 3).
- I. Install Retainer Cap (Item 40) and tighten Cap Screw (Item 35) to 105-110 ft. lbs.
- J. Replace Fan Spacer (Item 27).

WARNING

Special attention should be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

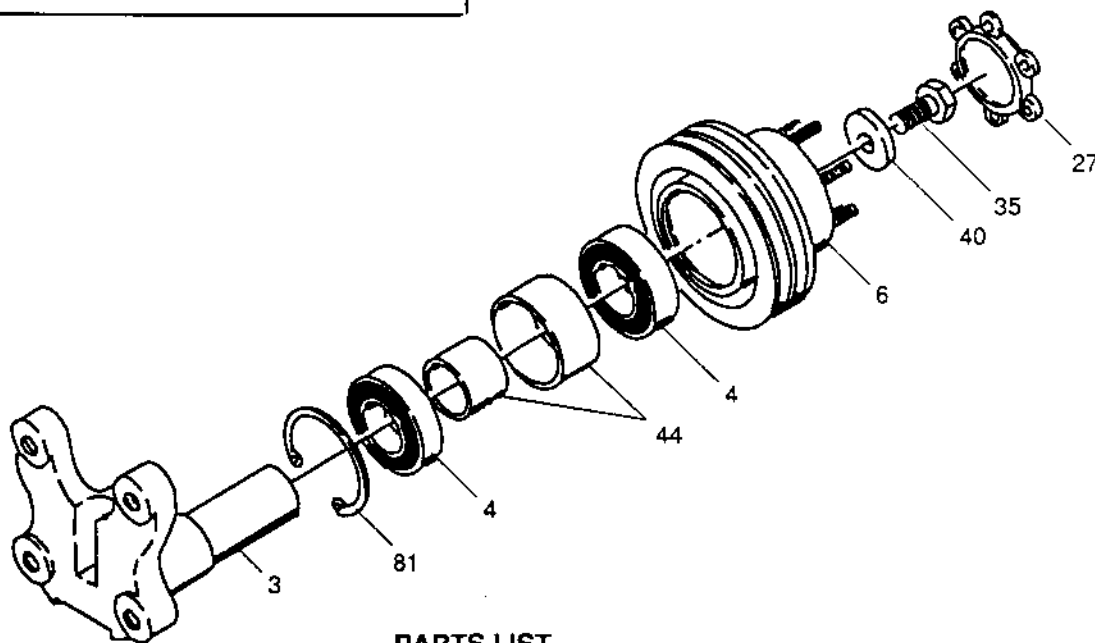


FIGURE 2

PARTS LIST

ITEM	DESCRIPTION	QTY.
3	Journal Brakcet	1
4	Bearing	2
6	Sheave	1
27	Spacer Fan	1

ITEM	DESCRIPTION	QTY
35	Hex. Head Cap Screw	1
40	Cap-Retainer	1
44	Spacer (matched set)	1
81	Retaining Ring	1

PARTNUMBERS BY MODEL NUMBER

Model No.	Item 3	Item 4	Item 6	Item 27	Item 35	Item 40	Item 44	Item 81	Repair Kit No.
991900	13487	188	13488		2212	13385		470	994241
991901	13487	188	13607		2212	13385		470	994241
991902	12251	241	12250	13424	2212	12505	12242	1074	994242
991903	12251	241	13473		2212	12505	12242	1074	994242
991904	13651	241	13473		2212	12505	12242	1074	994242
991905	13686	241	13612	13424	2212	12505	12574	1074	994242
991906	12251	241	13174	13424	2212	12505	12242	1074	994242
991907	13686	241	13610	13424	2212	12505	12574	1074	994242
991908	12251	241	12256	13424	2212	12505	12242	1074	994242
991910	13653	241	13659	13424	2212	12505		1074	994242
991911	13653	241	13654	13424	2212	12505		1074	994242
991915	13534	241	13536	13424	2212	12505	12243	1074	994242
991916	13550	241	13551	13424	2212	12505	12242	1074	994242
991917	13460	241	13461	13424	2212	12505	12243	1074	994242
991918	13460	241	13462	13424	2212	12505	12243	1074	994242

NOTE

Repair Kits consist of Bearings only.

- A. Remove Fan Spacer (Item 27) (See Fig. 3).
- B. Remove Cap Screw (Item 35) and Retainer Cap (Item 40) (See Fig. 3).
- C. Slide Sheave (Item 6) off Journal Bracket (Item 3) (See Fig. 3).
- D. Displace Spacer (Item 18) and using a drift placed on the inner race of outer Bearing (Item 4), tap bearing out while working drift around inner bearing race.
- E. Remove Spacer (Item 18) (See Fig. 3).
- F. Remove Retaining Ring (Item 18) (See Fig. 3).

- G. Fully supporting Sheave (Item 6), press inner Bearing (Item 4) out of sheave.
- H. Fully supporting Sheave (Item 6), press new inner Bearing (Item 4) into sheave.
- I. Install Retaining Ring (Item 81).

NOTE:

Retaining Ring (Item 81) has a beveled surface. Make sure flat surface is against bearing and that retaining ring is properly seated in retaining ring groove.

- J. Install Spacer (Item 18).
- K. Fully supporting Sheave (Item 6), press new outer Bearing (Item 4) into place.
- L. Slide Sheave (Item 6) onto Journal Bracket (Item 3).
- M. Install Retainer Cap (Item 40) and tighten Cap Screw (Item 35) to 100-110 ft. lbs.
- N. Replace Fan Spacer (Item 27).

WARNING:

Special attention should always be exercised when working with retaining rings. Always wear safety goggles when working with spring or tension loaded fasteners or devices.

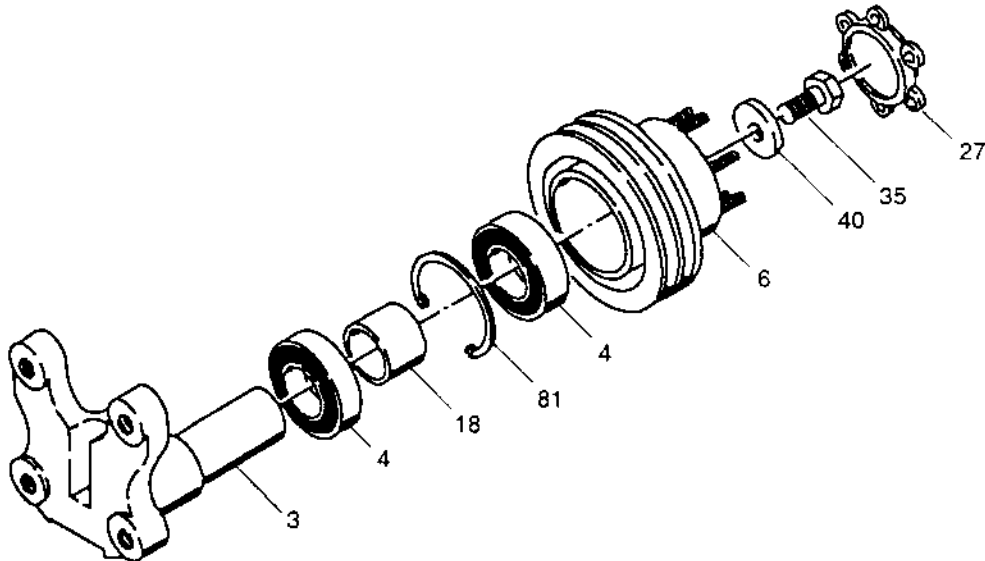


FIGURE 3

PARTS LIST

ITEM	DESCRIPTION	QTY.
3	Journal Bracket	1
4	Bearing	2
6	Sheave	1
18	Spacer	1

ITEM	DESCRIPTION	QTY.
27	Spacer-Fan	1
35	Hex. Head Cap Screw	1
40	Cap-Retainer	1
81	Retaining Ring	1

PARTNUMBERSBYMODELNUMBER

ModelNo.	Item3	Item4	Item6	Item18	Item27	Item35	Item40	Item81	RepairKitNo.
991909	12504	241	12502	12503	12506	2212	12505	1074	994242
991912	12258	241	12257	12281	12282	2212	12505	1074	994242
991913	13257	102	13256	13258		2212	13259	776	994240
991914	13383	188	13382	13384		2212	13385	470	994241

In accordance with Horton's established policy of constant product improvement, the specifications contained in this manual are subject to change without notice. Technical data listed in this manual are based on the latest information available at the time of printing and are subject to also change without notice.

**FOR FURTHER ASSISTANCE, CALL
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