

X351 DPV 1.7 Puma.

MANUAL FREE WHEELING HUBS



LAND ROVER

FITTING INSTRUCTIONS

988C

HUB BODY ASSEMBLY

(5008 Series I, II, IA & II88" models
 Consists of:- Bearing 969-A4
 Wire circlip 973-A4
 Snap ring 4-26-4033113
 Drive gear 974-A2

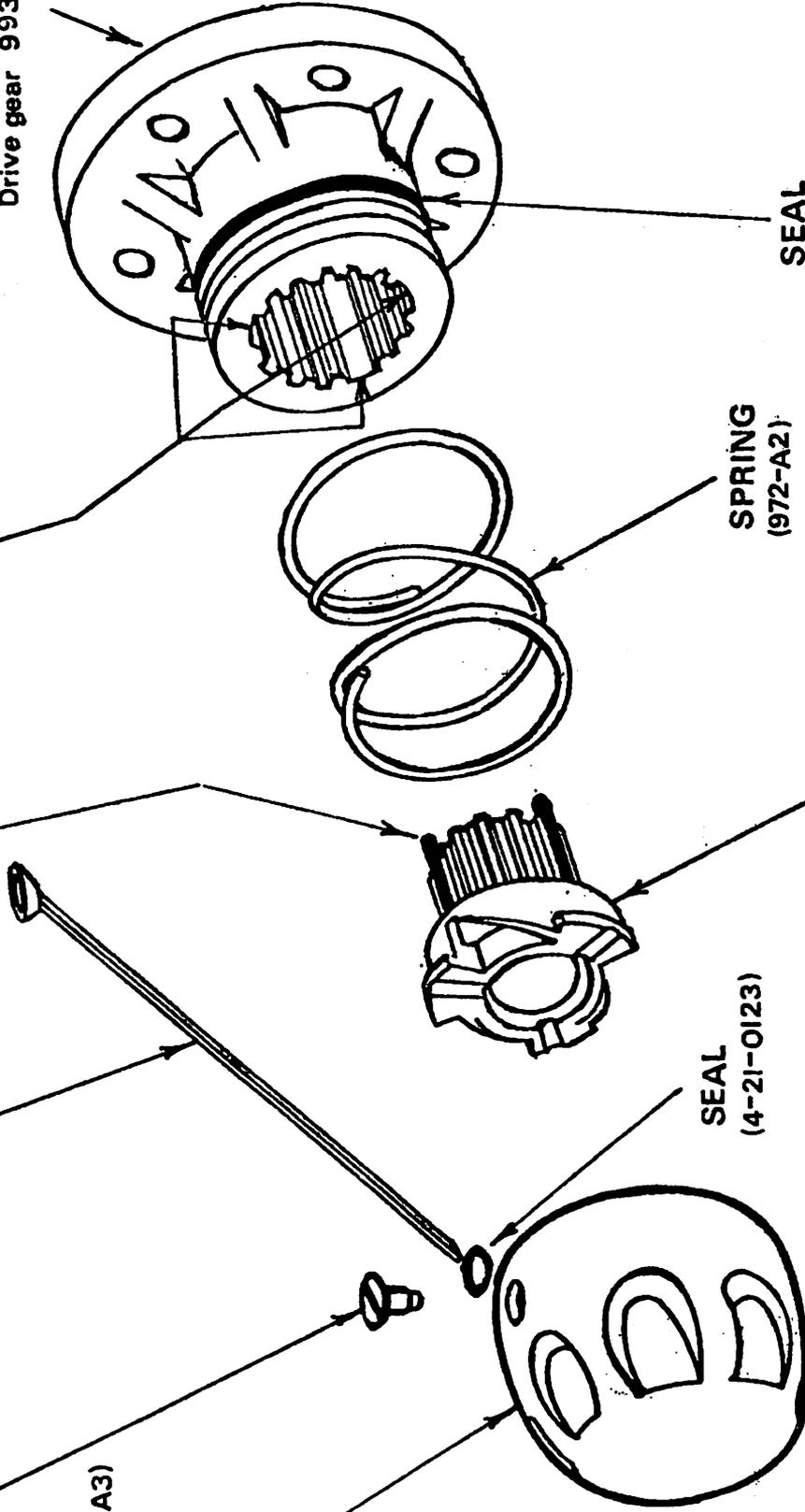
5009 Series III 109" models
 Consists of: Bearing 969-A4
 Wire circlip 973-A4
 Snap ring 4-26-4033113
 Drive gear 993-A4)

For assembly these three
pins must line up with the
three oversize slots in
 hub body

RETAINING STRIP
 (985-A2)

SCREW (968-A3)

**HUB
 COVER (966-A3)**



SEAL
 (4-21-0383)

SPRING
 (972-A2)

SEAL
 (4-21-0123)

ACTUATOR ASSEMBLY
 (5007 Consists of:-
 Actuator 967-A1
 Inner spring 971-A3
 Clutch ring 970-A2)

(Numbers refer to Fairey Winches Ltd. part numbers)

Fig 1. EXPLODED VIEW OF FREEWHEELING HUB

Tick off each fitting stage as it is completed

—Check the contents of the kit against the list below.

Name	Fairey Winches Part Number	Number in Kit
Free-Wheeling Hub Unit	961 ¹	2
	987 ²	2
Gasket	901-A3	2
Shakeproof Washer	975-A4	12
Warning Label	976-A4	1
Roll Pin ($\frac{1}{8}$ " diameter x 1" long)	5018-A4 ¹	2
Roll Pin ($\frac{5}{32}$ " diameter x $1\frac{1}{8}$ " long)	986-A4 ²	2
'O' Ring Seal	4-21-0123	2
Retaining Strip Removal Tool	5026-A4	1
'88" Models. Series I, II, IIA and III only		
'109" Models. Series I, II and IIA only		
'109" Models. Series III and 1 Ton only		
'110" Forward Control.		

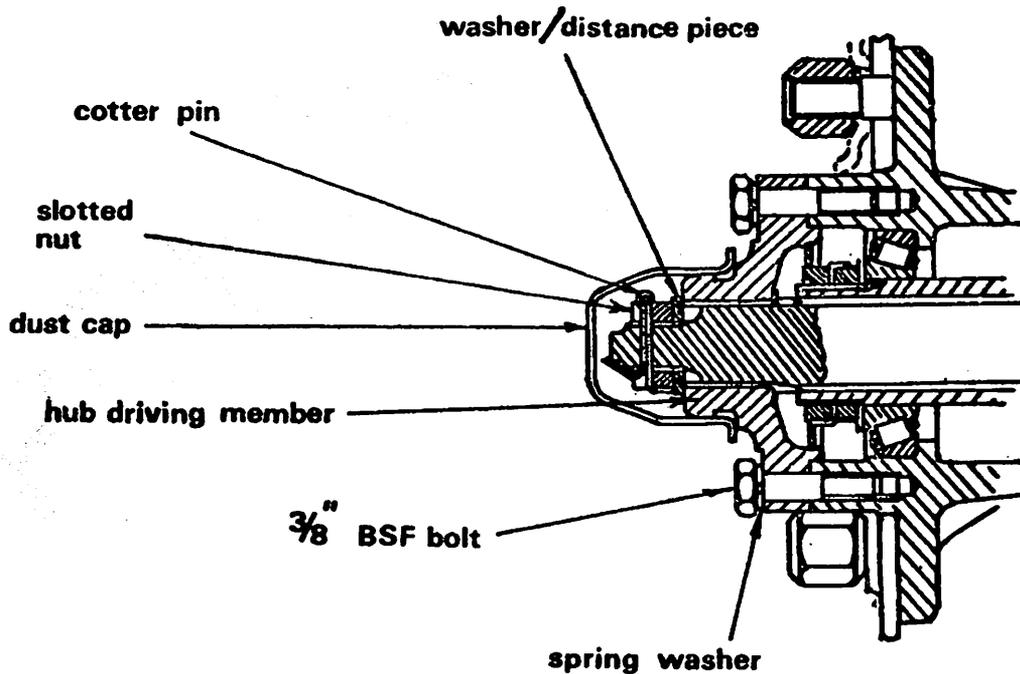


FIG. 2. SECTION VIEW OF FRONT HUB

- Remove the dust cap from the front stub axle (see. fig. 2).

Series I, II, IIA and III 88" Models only

- Remove the cotter pin, the slotted nut and the plain washer (see fig. 2). Discard the cotter pin.

Series III 109" Models only

- Remove the cotter pin and the slotted nut. Discard the cotter pin.

All Models

- Slacken the 6 bolts $\frac{3}{8}$ " BSF which secure the hub driving member on one side.
- Jack up the vehicle at the front on this side.
- Remove the 6 bolts $\frac{3}{8}$ " BSF and spring washers which hold the hub driving member in place.

Series I, II, IIA and III 88" Models only

- Remove the hub driving member.

Series III 109" Models only

- Remove the hub driving member. In the end of the hub driving member will be found a distance piece. Retain both these items.

All Models

- Remove any traces of the old gasket from the joint face.
- Check whether there is any end float on the wheel bearings. If there is, refer to the Land Rover Manual for adjustment procedure.
- Spread a smear of grease onto the joint face of the wheel and fit a new gasket, from the kit, onto this face.
- Take a Free-Wheeling Hub Unit from the kit and remove the screw.

Note: When the retaining strip (see fig. 1) is pulled out, internal spring pressure will cause the hub unit to fly apart. Therefore, when pulling out the strip, keep the hub cover and the hub body assembly pressed together and then slowly ease them apart.

- Pull out the retaining strip to dismantle the hub using the tool provided.
- Select the hub body assembly (see fig. 1), lightly oil the bearing in the hub using EP 90 oil.

- Slide the hub body assembly onto the vehicle stub axle.
- Turn the body to line up the 6 bolt holes.
- Using the original 6 bolts and 6 new shakeproof washers, secure the hub body assembly to the vehicle and fully tighten the bolts.
- Refit the original plain washers/distance piece.
- Refit the slotted nut and tighten to 15 ft. lbs. torque.
- If necessary, unscrew the nut a little to nearest position to allow the insertion of the roll pin.

Series I, II, IIA and III 88" Models only

- Tap the 1" long roll pin into place until the ends are about level with the surface of the nut.

Series III 109" Models only

- Tap the 1 $\frac{3}{8}$ " long roll pin into place until it is about 1.5 mm (1/16") below the outside of the nut.

All Models

- Smear some EP 90 oil onto the cam face and spline of the actuator assembly (see fig. 1), and onto the oil seal on the hub body.
- Fit the spring onto the actuator assembly and fit them into the hub cover.
- Turn the cover relative to the actuator assembly until the actuator and spring reaches the peak of the cam and clicks into place.
- locate the 3 pins on the actuator assembly and line them up with the 3 oversize slots in the hub body (see fig. 1).
- Gently fit the hub cover/actuator assembly onto the hub body, taking great care not to damage the 'O' ring seal. If solid resistance is felt it means the pins and slots are not quite aligned, and the hub cover should be rocked slightly. Under no circumstances must the cover be forced on.
- Fit the small 'O' ring seal into the counterbore in the outside of the hub cover.
- Pushing the hub cover into place on the hub body, feed the retaining strip into the angled hole in the cover until the head of the strip fits into the counterbore in the hub cover.
- Fit the screw into the hole in the hub cover, and tighten to seal into the head of the retaining strip.

- Put the vehicle in 4 wheel drive.
- Turn the hub cover fully clockwise, and turn the wheel slowly. The wheel should lock solid.
- Turn the hub cover fully anticlockwise, and rock the wheel gently. The wheel should become free.
- If the hub works correctly, lower the jack under the wheel and repeat the fitting procedure on the other front wheel.

Note: When testing the second Free-Wheeling Hub, engage 4 x 4 mode on the first hub

- Finally, check that all the bolts are fully tightened.
- Fit the warning label in the cab, where it can be easily seen.

This completes fitting the hub.

MAINTENANCE

The hubs are lubricated by oil from the Universal Joint Housings. Before using the hubs check that the oil levels in the Housings are correct.

Important

To ensure correct lubrication, run the vehicle for about 20 miles in every 500 miles with the Free-Wheeling Hubs in the 4 x 4 position.

USING THE HUBS

(a) Hubs in '4 x 2' position (Economy Driving).

Do not engage four wheel drive whilst vehicle is moving. Engagement will immediately accelerate the front transmission from rest to road speed, and could cause damage. Because your front wheels are not connected to the transmission, there is no point in selecting four wheel drive; furthermore, all the low ratio torque would be applied to the rear wheels only, possibly causing damage.

(b) Hubs in '4 x 4' position (Four Wheel Driving).

Your front wheels are connected to the transmission, and as long as they are kept in the fixed position, you can select four wheel drive whenever required.

REMOVING THE HUBS

- Turn the hub to '4 x 4'.
- Remove the screw.
- Using the tool provided, gently lift the clockwise side of the sealing lip on the retaining strip clear of the counterbore. At the same time, push the cover onto the hub, turn the cover anticlockwise and pull the retaining strip clockwise.

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