b) Universal Joint Spider

The trunnions of the spiders on the front and rear propeller shafts have been reinforced. Furthermore both the arrangement and the design of the grease fitting have been modified in order to provide better access to the grease fitting when the universal joint is greased (see table).

Dimensions and Tolerances of Shaft Yoke, Needle Bearing Bushings, and Universal Joint Spider

		1st Version		2nd Version		3rd Version	
Installed in propeller shafts of Models		180, 180 D up to Chassis End No. 650 1919		180 D as from Chassis End No. 650 1920, 180 a, 190, 190 D, 190 SL, 220 a, 219, 220 S, 220 SE			
Type		I	II	I	II	I	II
Marking		1 white dot	2 white dots	1 white dot	2 white dots	1 white dot	2 white dots
Bore in shaft yoke		$\frac{22.000}{22.010}$	$\frac{22.011}{22.020}$	$\frac{26.000}{26.010}$	$\frac{26.011}{26.021}$	$\frac{28.000}{28.010}$	$\frac{28.011}{28.021}$
Needle bearing bushing	External diameter	$\frac{22.012}{22.002}$	$\frac{22.023}{22.013}$	$\frac{26.012}{26.002}$	$\frac{26.023}{26.013}$	$\frac{28.012}{28.002}$	$\frac{28.023}{28.013}$
	Internal diameter	$\frac{16.707}{16.720}$		$\frac{20.107}{20.120}$		$\frac{21.707}{21.720}$	
Trunnion ⌀ of universal joint spider		$\frac{12.700}{12.689}$		$\frac{15.100}{15.089}$		$\frac{16.700}{16.689}$	
Part No. of complete universal joint spider		120 410 01 31		120 410 01 31		180 410 03 31	
Arrangement and design of grease fitting		Grease fitting at an angle of 90° and screwed into end face of universal joint spider (Fig. 41-4/1)				Longer straight grease fitting, screwed in between two trunnions at an angle of 45° (Fig. 41-4/1)	

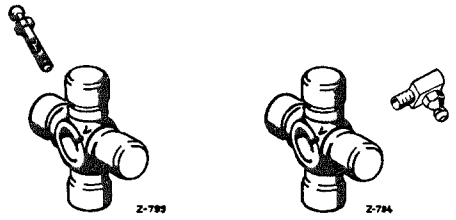

Fig. 41-4/1

Universal joint spider

3rd Version 1st and 2nd Versions

c) Self-Lubricating Universal Joints

A large number of cars of Models 180 a, 180 D, 190 D, 190 SL, 219, and 220 S and all cars of Models 180 b, 180 Db, 190 b, and 190 Db are fitted with propeller shafts with self-lubricating universal joints.