

## The Type 915 Transmission

One of the most significant changes to the 1972 911 series is a transmission similar in concept, but different from earlier Porsche designs. It is distinguished to the casual observer by a revised shift pattern (conventional 4-speed “H” pattern, and optional 5th off to upper right), and from under the car it looks larger than the earlier series. In fact, it is substantially larger to the extent that the rear body section was recontoured to accommodate it, and in the process structurally much improved, an added bonus for ‘72.

The 915 does not have a tunnel type case, but a 3-piece design which is a departure from longstanding Porsche tradition. The pressure cast light alloy housing is divided into a differential housing, a transmission housing, and a shift housing. The whole assembly has increased torque capacity, and should provide adequate capacity for future years. There are numerous detail changes from previous designs, most of which allow for easier adjustment and assembly of the internal parts. First and second gear synchronizers are larger than 3rd, 4th, & 5th, and larger than in earlier designs. The input shaft splines have been reduced from 24 to 20 and are an SAE specification.

The traditional ring and pinion ratio of 7:31 is retained, with 7:27 (Sportomatic) and 7:37 as optional. Although the 2.4 engines establish a new high for torque and flexibility, it is interesting to note that the ‘72 standard ratios are shorter than before. Although the 4-speed is recommended as adequate, there is substantial justification for the 5-speed, for an enthusiast.

Figure 1, below, lists the standard production 2.4 ratios for all T, E & S models, with previous 2.2 ratios shown for comparison. Overall ratios are in parenthesis.

SPEED	4-SPEED TRANSMISSION	
	1972	1971
First	11/35 (3.182)	11/34 (3.091)
Second	18/32 (1.778)	19/31 (1.632)
Third	24/27 (1.125)	25/26 (1.040)
Fourth	28/23 (.821)	29/22 (.759)
Fifth		

SPEED	5-SPEED TRANSMISSION	
	1972	1971
First	11/35 (3.182)	11/34 (3.091)
Second	18/33 (1.834)	18/32 (1.778)
Third	23/29 (1.261)	23/28 (1.217)
Fourth	26/25 (.962)	27/25 (.926)
Fifth	29/22 (.759)	29/22 (.759)

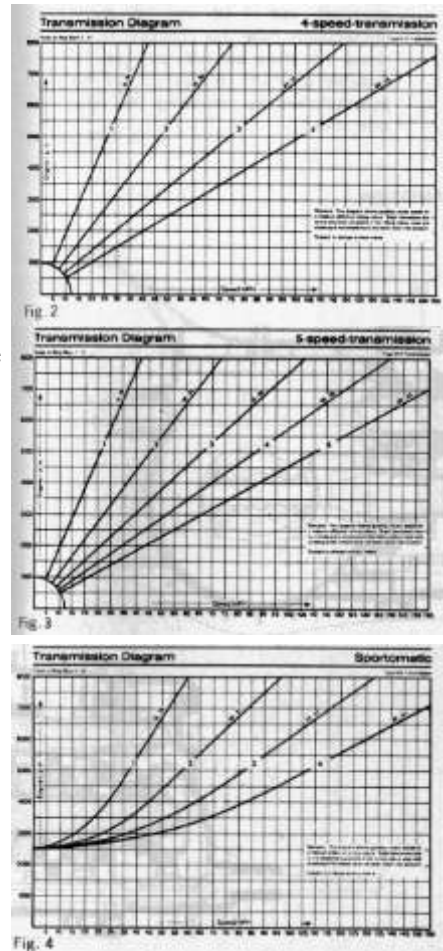
Fig. 1

The diagrams for the 915 4-speed and 915 5-speed transmissions are Figures 2 and 3, respectively.

The type 925 designation is given to the new Sportomatic counterpart of the 915. Any enthusiast who has not driven a 925 Sportomatic should do it! It is super-smooth, quick, flexible and a joy in traffic, and a winner for autocrossing and gymkanas. Figure 4 is the 925 diagram.

[Figure 5](#) shows all the standard and optional ratios for the 915 transmission and their application to 1st thru 5th speed positions.

The non-standard ratio gears are available from the Porsche factory racing department and not yet available in optional production transmissions, as in previous years. As of March 1972 the only first gear sets available are 14/37 and 14/31 at a cost of 540 DM per set, ex-factory; all other ratios are available at a cost of 290 DM per set, ex-factory. (Approximately 3.1 DM = \$1.00 + duty 15% and freight)



Non-standard 915 gear sets are identified by teeth ratio and gear position (1st, 2nd, 3rd, 4th, 5th) rather than by part number, as of this writing.

Figure 6 is a sectional drawing of the 5-speed type 915 transmission and shows the position of the five gear sets. In the previous 911 and 912 5-speed transmissions (type 901, 902) second gear was integral with the main (input) shaft, and necessitated changing this shaft to the 904 type shaft before the second gear ratio could be changed. This has been changed in the type 915 so that first gear is integral with the main shaft, thus making second thru fifth ratios easily changed. If a 915 first gear

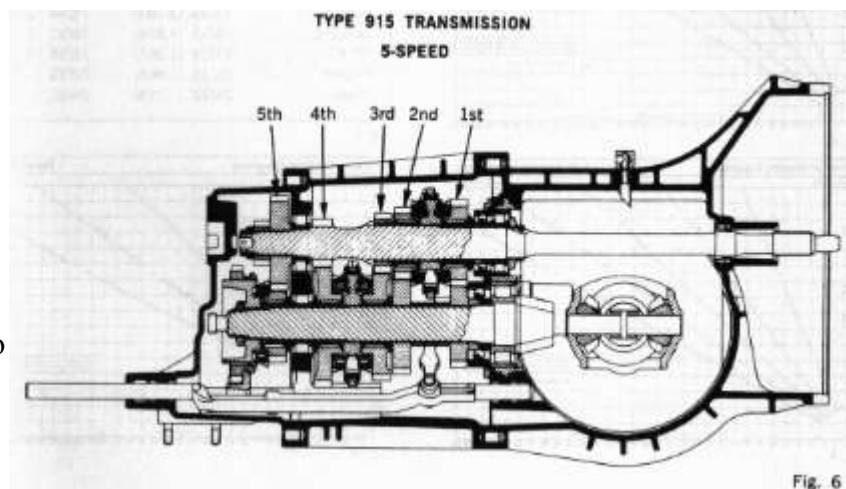


Fig. 6

is changed, the shaft is part of the gear set, thus explaining the relatively higher cost.

A 915 4-speed is the same as a 5-speed, except that a spacer on the shaft is substituted for fifth gear, and the associated shift fork, linkage, etc, is omitted.

Experience to date has provided the following, worthy of note:

1. When replacing a speedometer cable, care must be used to obtain perfect engagement before tightening, or the drive gear will be easily forced past its retaining snap ring and back into the transmission (a nightmare!)
2. As with all Porsche transmissions, do not overfill; a 1/2" below the filler plug is best. Overfilling will cause oil seal failure, loss of oil and resultant transmission failure.
3. The front main oil seal is installed as per Figures 6 & 7. This is backwards from intuition and requires transmission disassembly for replacement (This is to be changed in future production).
4. The snap ring retaining the pinion bearing outer race has been replaced by a shoulder machined into the differential housing, as of about March '72 production. Any owner experiencing difficulty in shifting into or especially out of 4th and 5th gear should immediately have this checked. It is understood that there are only 257 cars with this possible difficulty. Inspection can be easily accomplished by removing the differential side cover.

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