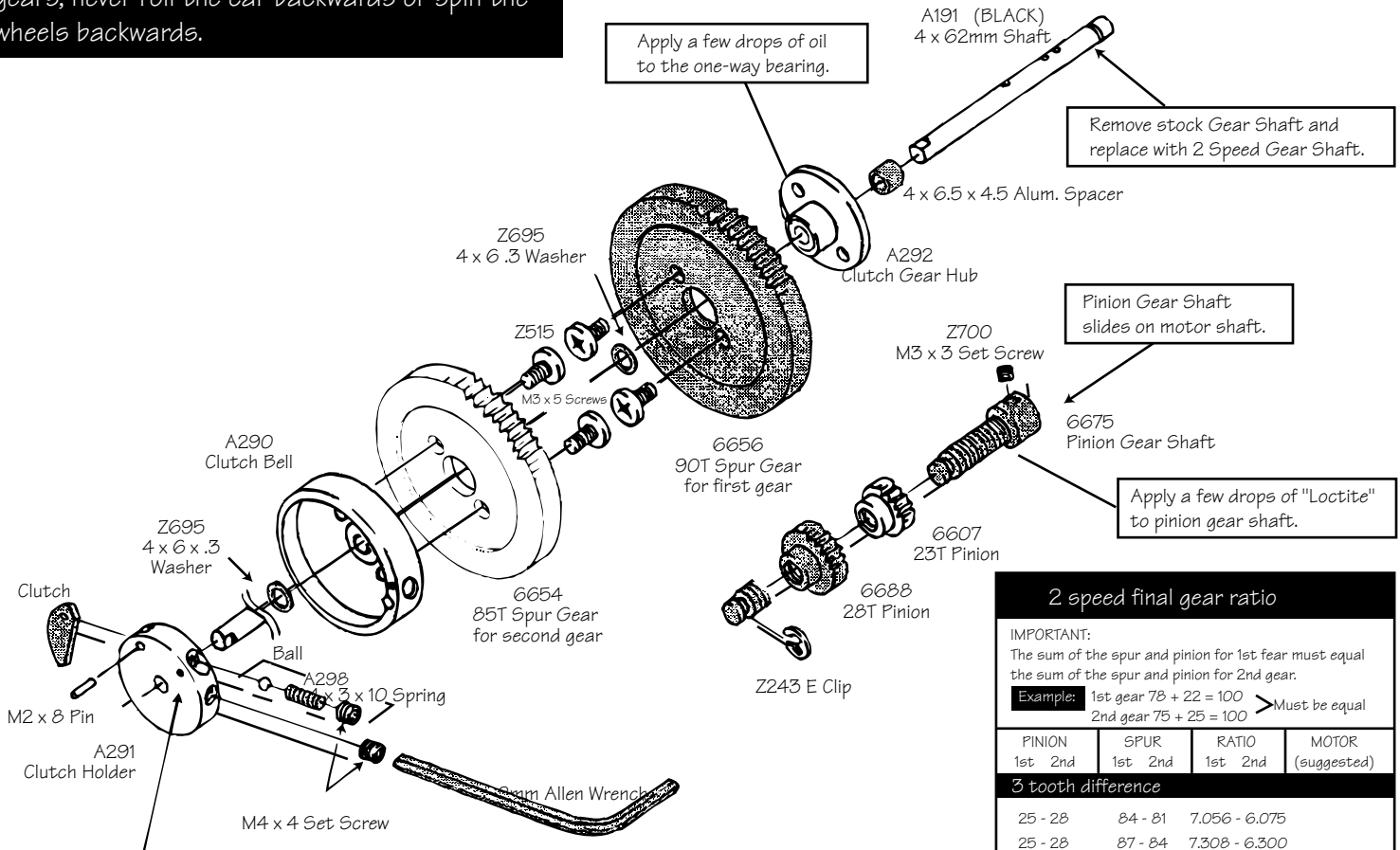


The HPI 2 speed transmission allows the RS4 to have more punch out of the corners and higher top speed. Different pinion and spur gear combinations can be used for different type motors and tracks.

WARNING: Never use a reversible speed control with a 2 speed transmission because it will damage the one-way bearing. Also, to prevent damage to the spur gears, never roll the car backwards or spin the wheels backwards.

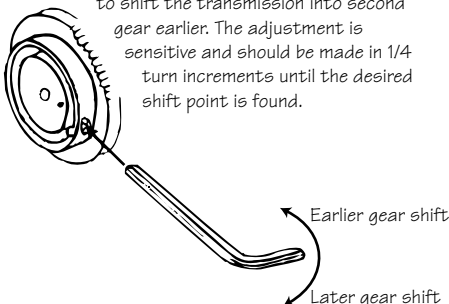


The black dot must point to the outside of the car. If the Clutch Holder is installed backwards, the transmission won't shift and you will hear a clicking sound when driving.

adjusting the shift point

The shift point can be adjusted to optimize the transmission for each track. Disconnect the battery pack before making any adjustments.

TO ADJUST: Rotate the spur gear until the hole in the clutch bell is aligned with the adjustment set screw in the clutch holder. Turn the set screw clockwise to shift the transmission into second gear later. Turn the set screw counter-clockwise to shift the transmission into second gear earlier. The adjustment is sensitive and should be made in 1/4 turn increments until the desired shift point is found.



2 SPEED OPTION PARTS

Part #	Description	Retail Price
6675	Pinion Gear Shaft	\$7.00
6605	19T / 21T Pinion set	\$16.00
6606	20T / 22T Pinion set	\$16.00
6607	23T / 25T Pinion set	\$16.00
6608	24T / 26T Pinion set	\$16.00
6650	75T Spur Gear (48 pitch)	\$4.00
6651	78T Spur Gear (48 pitch)	\$4.00
6652	81T Spur Gear (48 pitch)	\$4.00
6653	83T Spur Gear (48 pitch)	\$4.00
6654	85T Spur Gear (48 pitch)	\$4.00
6655	87T Spur Gear (48 pitch)	\$4.00
6656	90T Spur Gear (48 pitch)	\$4.00
6661	84T Spur Gear (48 pitch)	\$4.00
6688	28T Pinion Gear	\$6.00
A191	Gear Shaft	\$5.00
A298	2 Speed Maintenance Kit	\$4.00
Z243	E - Ring E 3	\$1.00
Z515	Binder Screw M3 x 5 (Black)	\$1.00
Z695	Washer 4 x 6 x .03 (Silver)	\$1.00
Z700	Set Screw M3 x 3 (Black)	\$2.00

2 speed final gear ratio

IMPORTANT:
The sum of the spur and pinion for 1st gear must equal the sum of the spur and pinion for 2nd gear.
Example: 1st gear 78 + 22 = 100 > Must be equal
2nd gear 75 + 25 = 100

PINION	SPUR	RATIO	MOTOR
1st 2nd	1st 2nd	1st 2nd	(suggested)
3 tooth difference			
25 - 28	84 - 81	7.056 - 6.075	Stock
25 - 28	87 - 84	7.308 - 6.300	
25 - 28	90 - 87	7.560 - 6.525	
23 - 26	87 - 84	7.943 - 6.785	Modifieds
23 - 26	90 - 87	8.217 - 7.027	
22 - 25	87 - 84	8.305 - 7.056	15 - 18 Turn
22 - 25	90 - 87	8.591 - 7.308	Modifieds
21 - 24	90 - 87	9.000 - 7.612	Modifieds
20 - 23	90 - 87	9.450 - 7.943	
19 - 22	90 - 87	9.947 - 8.305	
4 tooth difference			
24 - 28	85 - 81	7.438 - 6.075	15 - 18 Turn Modifieds
24 - 28	87 - 83	7.612 - 6.225	
22 - 26	87 - 83	8.305 - 6.704	Modifieds
23 - 28	90 - 85	8.217 - 6.375	
21 - 26	90 - 85	9.000 - 6.865	15 - 18 Turn Modifieds
20 - 25	90 - 85	9.450 - 7.140	11 - 14 Turn
19 - 24	90 - 85	9.947 - 7.438	Modifieds
5 tooth difference			
22 - 28	87 - 81	8.305 - 6.075	15 - 18 Turn Modifieds
22 - 28	90 - 84	8.591 - 6.300	
20 - 26	90 - 84	9.450 - 6.785	11 - 14 Turn Modifieds
19 - 25	90 - 84	9.947 - 7.056	
6 tooth difference			
21 - 28	90 - 83	9.000 - 6.255	15 - 18 Turn Modifieds
19 - 28	90 - 81	9.947 - 6.075	
19 - 26	90 - 83	9.947 - 6.704	Modifieds
21 - 28	90 - 83	9.000 - 6.255	