



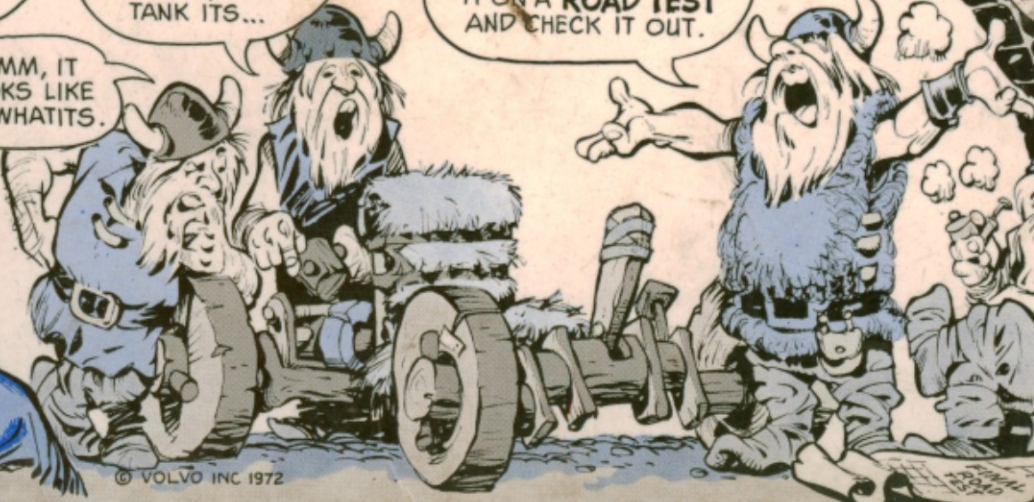
AUTOMATIC TRANSMISSION DIAGNOSTIC CHART

TAKE A CLOSER LOOK. OPEN DIS GUIDE AND FOLLOW THE EASY TEST PROCEDURE IN SOLVING YOUR TRANSMISSION PROBLEMS.

IT CAN'T BE THE WHATITS I JUST FIXED IT, AYE TANK ITS...

YUMPIN' YIMMINY! VY DON'T VE TAKE IT ON A ROAD TEST AND CHECK IT OUT.

HMM, IT LOOKS LIKE THE WHATITS.



YEAR	U.S.A. MODELS	ID PLATE NUMBER & COLOR	STALL SPEED R.P.M.	LINE PRESSURE P.S.I.		SHIFT SPEEDS M.P.H.				
				At Stall Speed	At Idle 55-60 P.S.I. Then Add With Increase of 500 R.P.M.	F — FULL THROTTLE K — KICKDOWN				
						1-2	2-3	3-2	2-1	3-1
1969	142, 144, 145	7EN LIGHT BUFF	2100	160	15-20	F 27 K 37	43 59	36 53	8 32	—
	164 EARLY 164 LATE**	5 EN DARK BLUE	1800 2100	160 200	15-20 25-30	F 30 K 39	54 70	41 62	9 32	—
1970	142, 144	7EN LIGHT BUFF	1800	160	15-20	F 27 K 37	43 59	36 53	8 32	—
	145	7EN LIGHT BUFF	1800	160	15-20	F 25 K 35	41 56	35 51	8 31	—
	164	5EN DARK BLUE	2100	200	15-20 25-40*	F 30 K 39	54 70	41 62	9 32	—
1971	142, 144, 145	13EN GREY	2100	160	15-20	F 29 K 41	48 65	— 59	— —	— 35
	142E, 144E, 145E	211 YELLOW	2550	160	15-20	F 28 K 40	49 70	— 62	— —	— 34
	164	15EN LIGHT BLUE	2100	225	15-20	F 28 K 40	49 70	— 62	— —	— 33
	1800E	9EN RED	2550	160	15-20	F 28 K 40	49 70	— 62	— —	— 34
1972	142, 144, 145	325 BRIGHT GREEN	2100	160	15-20	F 26 K 39	46 65	— 58	— —	— 31
	142E, 144E	351 ORANGE	2450	160	15-20	F 28 K 40	49 70	— 62	— —	— 34
	145E	321 GREY	2450	160	15-20	F 28 K 40	49 70	— 62	— —	— 34
	164	323 LIGHT BLUE	2100	160	15-20	F 31 K 40	56 73	— 65	— —	— 31
	164E	319 LIGHT GREEN	2200	160	15-20	F 34 K 44	60 79	— 69	— —	— 35
	1800E, 1800ES	351 ORANGE	2450	160	15-20	F 28 K 40	49 70	— 62	— —	— 34

** CHASSIS 32400 ON

160 Lb = 11 Kg *TRANS SERIAL 1829 ON

THIS CHART IS ONLY A GUIDE! LIKELY ACTIONS ARE GIVEN, BUT YOU MUST THINK — ESPECIALLY WHEN THERE IS

- 1. **VERIFY THE COMPLAINT.** Road test it. If possible get the customer to show you what happens. Let customer drive.
- 2. **USE THE SLIDE RULE** to isolate the trouble. Do more road tests to save work time. If the test is 4, 5 or 6 do tests 4 through 8 completely.
- 3. **MOVE SLIDE RULE** to each fault and note down the actions if two or more faults have been found. Put SOFT pencil checks near action.
- 4. **TAKE ACTIONS IN ORDER,** top to bottom, as indicated, do TESTS 1, 3, 9, 10 & 11 using t
- 5. **CHECK FOR PROPER OPERATION.** Road te all the TESTS you did before.

PULL SLIDE TO LINE UP MARK WITH FAULT



STARTER	ENGAGEMENT	STARTING FROM REST	UPSHIFT	UPSHIFT QUALITY	DOWNSHIFT	DOWNSHIFT QUALITY	STALL SPEED	LINE PRESSURE	MISC.																														
Starter will not operate in P or N	Starter operates in all selector positions	Excessive bump on engagement of D, 1, L or R	No drive in D (Try 1 or L) Abnormal 1 or L	No drive in D, normal 1 or L	No drive in D, 2, 1, L or R	Delay in R — no engine braking in 1 or L	No 1-2 shift, or delayed	No 2-3 shift, or delayed	Full throttle take-off (Try R) Abnormal R	Full throttle take-off in 1 or L, slip and squawk or judder	Full R, slip but no engine braking in 1 or L	Full R, slip but no judder — no engine braking in L	Drag in R	Transmission upshifts too easily	No 1-2 or L-D	Above normal shift speeds	Below normal shift speeds	Slip on 1-2 shift	Slip or engine run-up on 2-3 shift	Bumpy gear shifts	Drag in Drive 2 and Drive 3	Drag on 2-3 shift	Transmission downshifts too easily	No 3-2 downshift or engine braking	No 2-1 downshift	Involuntary high speed 3-2-3-2	Slip on 3-2	Rough on 2-1	Rough on 3-2	Stall speed lower than specified	Stall speed more than 6000 r.p.m. lower than specified (see R.P.M. on back)	Stall speed high with slip and squawk in 1 (see back)	Low increase (From Normal idle, in 1)	High increase (From Normal idle, in 1)	High line pressure (From Normal idle, in 1)	Low line pressure (From Normal idle, in 1)	High line pressure (From Normal idle, in 1)	Low line pressure (From Normal idle, in 1)	No rear...

C ROAD TEST

1. Check that starter operates with the selector in P & N and that reversing light operates only in R. Try starter in other positions, brake on.
2. Apply brakes and, with engine at normal idle, select N-D, N-2, N-1 and N-R. Trans engagement should be felt in each position selected.
3. Check converter stall speed in 1 and R. Check for slip or clutch or squawk. (See back for speeds.)
Note: Do not stall longer than 10 seconds or trans will overheat. Cool in N.
4. With trans at normal temperature, select D. Release the brakes and accelerate with minimum throttle opening. Check for 1-2 and 2-3 shifts.
Note. At minimum throttle openings, shifts may be difficult to detect. Confirm that trans is in 3rd gear by selecting 2 or 1 (L) when a 3-2 downshift should be felt.
- 5a. Stop and restart using full throttle acceleration. Check for 1-2 and 2-3 shifts according to shift speed table, see back of slide.
 - b. At 25 m.p.h. (40 km.p.h.) in 3rd gear, depress to full throttle position. Car should downshift to 2nd gear. Repeat at 40 m.p.h. (65 km.p.h.). Car should accelerate in 3rd gear and should not downshift to 2nd
 - c. At 30 m.p.h. (50 km.p.h.) in 3rd gear, depress the accelerator kick-down position. Trans should downshift, see chart.
 - d. At 15 m.p.h. (25 km.p.h.) in 3rd gear, depress accelerator to kick-down position. Trans should downshift to 1st gear.
- 6a. Stop and restart using kickdown acceleration. Check for 1-2 and 2-3 shifts according to shift speed table, see back slide.
 - b. At 40 m.p.h. (65 km.p.h.) in 3rd gear, release accelerator and select L (1). Check for 3-2 downshift and engine braking. Check for roll-out 2-1 downshift at about 5 m.p.h. (8 km.p.h.) and engine braking.
7. Stop, and with L (1) still engaged, use full throttle to 20 m.p.h. (30 km.p.h.). Check for no slip or clutch squawk and no upshifts.
8. Stop and select R. Reverse using full throttle if possible. Check for no slip or clutch squawk. Use care!
9. Stop. Facing downhill on a grade, select P. Release brakes and check that parking pawl will hold. Re-apply the brakes before disengaging parking pawl. Repeat facing uphill. Check that selector is trapped by the gate in P.
10. Check line pressures when engine goes from normal idle to 500 R.P.M. increase and at stall speed. (See back for pressures.)
11. Only for 1971 or earlier — at just over 30 m.p.h. (50 km.p.h.), select N, switch off ignition and coast. At 30 m.p.h. switch on ignition and select D. The engine should then start through rear wheels.

EXTERNAL CHECKS WITH

1. Check fluid level.
2. Check manual linkage adj.
3. Check adjustment of down
4. Check engine idling speed
5. Check engine performanc
6. Check rear band adjustme
7. Adjust starter inhibitor sw

TRANSMISSION IN CAR, REM

8. Check front servo seals an
9. Check rear servo seals an
10. Strip governor valve and
11. Strip valve bodies and clea
12. Check rear pump for wear
13. Check front band adjustm
14. Examine parking pawl, ge
15. Remove pan and visually i

TRANSMISSION OUT OF CA

16. Examine front clutch and s
Check cup plug in driven s
17. Examine rear clutch, chec
18. Strip and examine front pu
19. Check front band for wear
20. Check rear band for wear.
21. Examine one-way clutch.
22. Examine torque converter
23. Replace torque converter
24. Check input shaft for brea

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9 5a 11 10 10 10 10 3 3 3 3 3 5c 6b 5d 5b 4 6b 6b 5c 5d 5b 4 4 4 4 4 4 5a 5a 4 4 7 8 8 8 8 8 5a 7 4 4

18 2 1 1 10 1 3 1 1 1 5 5 3 13 21 13 2 6 2 3 3 13 6 3 1 1 3 3 2 2 1 13 1 1 1 1 1 3 3
 14 6 2 11 3 4 2 2 2 23 11 11 8 17 9 13 10 8 3 3 10 10 10 13 2 2 2 2 2 2 10 10
 5 6 11 11 4 6 6 21 8 11 20 8 11 2 2 11 11 11 10 3 3 3 3 3 3 11 11
 13 13 18 11 3 3 16 17 19 19 13 13 17 11 10 17 6 11 11 11 13 13
 22 11 18 11 11 17 19 17 17 11 8 19 11 19 11 9 17 16 16 8 8
 23 12 17 16 17 19 11 17 16 20 17

YEAR	U.S.A. MODELS	ID PLATE NUMBER & COLOR	STALL SPEED R.P.M.	LINE PRESSURE P.S.I.		1-2
				At Stall Speed	At Idle 55-60 P.S.I. Then Add With Increase of 500 R.P.M.	
1973	142E, 144E	351 ORANGE	2450	160	15-20	F 28 K 37
	142E, 145E 45E	321 GREY	2550	160	15-20	F 28 K 37
	164E	319 LIGHT GREEN	2200	160	15-20	F 34 K 40
	1800ES	351 ORANGE	2450	160	15-20	F 28 K 37

160 Lb = 11 Kg