

FOREWORD

This repair manual covers Disassembly, Inspection and Assembly procedures for the following Automatic Transmissions:

Automatic Transmission	Applicable Model
A340E	'91 Supra, '91 Cressida
A340F	'91 Truck, '91 4 runner
A340H	'91 Truck, '91 4 runner

For On-vehicle Servicing (Inspection, Adjustment, Troubleshooting, Removal and Installation) of Automatic Transmission, refer to the repair manual for the applicable vehicle model.

Pub. Name	Pub. No.
'91 Supra Repair Manual	RM198U
'91 Cressida Repair Manual	RM200U
'91 Truck Repair Manual	RM201U2
'91 4 runner Repair Manual	RM202U2

All information contained in this manual is the most up-to-date at the time of publication. However, specifications and procedures are subject to change without notice.

TOYOTA MOTOR CORPORATION

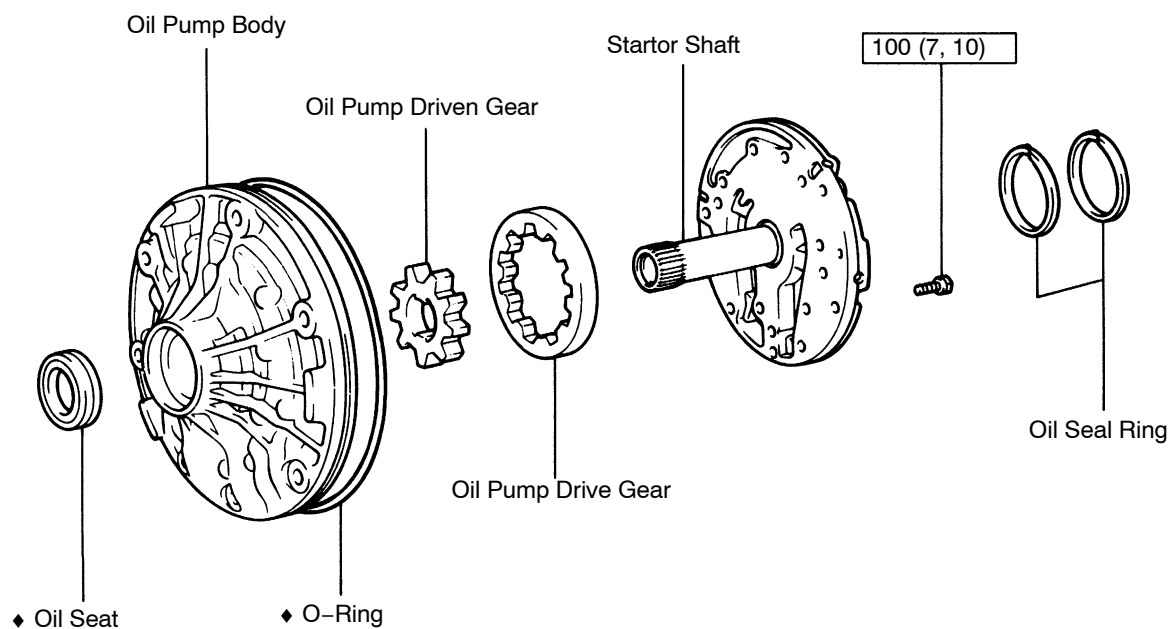
HOW TO USE THIS MANUAL

To assist you in finding your way through the manual, the Section Title and major heading are given at the top of every page.

REPAIR PROCEDURES

Most repair operations begin with an overview illustration. It identifies the components and shows how the parts fit together.

Example:



kg-cm (ft-lb, N-m) : Specified torque

♦ Non-reusable part

The procedures are presented in a step-by-step format:

- **Illustration shows *what* to do and *where* to do it.**
- **The task heading tells *what* to do.**
- **The detailed text tells *how* to perform the task and gives other information such as specifications and warnings.**

Example:

Illustration:
What to do and where

7. CHECK PISTON STROKE OF FORWARD CLUTCH
If replacing the disc, plate or flange, check the piston stroke:

Task heading: what to do

Detail text: how to do it

Using a dial indicator (long type pick or SST), measure the forward clutch piston stroke applying and releasing the compressed air (4 – 8 kg/cm² or 57 – 114 psi or 392 – 785 kPa) as shown.

SST 09350-32014 (09351-32190)

Set part No.

Component part No.

Piston stroke: 1.41 – 1.82 mm (0.0555 – 0.0717 in.)

Specification

This format provides the experienced technician with a FAST TRACK to the information needed. The upper case task heading can be read at a glance and only when necessary, the text below it provides detailed information. Important specifications and warnings always stand out in bold type.

REFERENCES

References have been kept to a minimum. However, when they are required you are given the *page* to go to.

SPECIFICATIONS

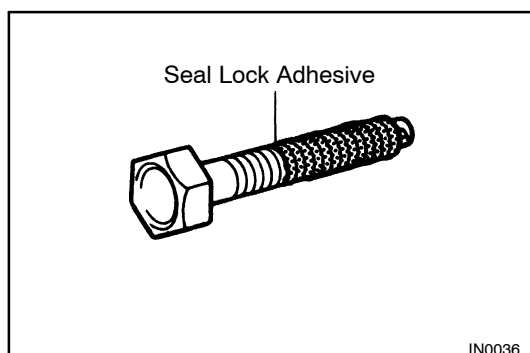
Specifications are presented in bold type throughout the text in the applicable step. You never have to leave the procedure to look up your specs. All specifications are also found in Appendix A, specifications for quick reference.

CAUTIONS, NOTICES, HINTS:

- **CAUTIONS** are presented in bold type, and indicate there is a possibility of injury to you or other people.
- **NOTICES** are also presented in bold type, and indicate the possibility of damage to the components being repaired.
- **HINTS** are separated from the text but do not appear in bold. They provide additional information to help you efficiently perform the repair.

GENERAL REPAIR INSTRUCTIONS

1. **Use fender, seat and floor covers to keep the vehicle clean and prevent damage.**
2. **During disassembly, keep parts in order to facilitate reassembly.**
3. **Observe the following:**
 - (a) Before performing electrical work, disconnect the negative cable from the battery terminal.
 - (b) If it is necessary to disconnect the battery for inspection or repair, always disconnect the cable from the negative (-) terminal which is grounded to the vehicle body.
 - (c) To prevent damage to the battery terminal post, loosen the terminal nut and raise the cable straight up without twisting it or prying it.
 - (d) Clean the battery terminal posts and cable terminals with a shop rag. Do not scrape them with a file or other abrasive object.
 - (e) Install the cable terminal to the battery post with the nut loose, and tighten the nut after installation. Do not use a hammer or such to tap the terminal onto the post.
 - (f) Be sure the cover for the positive (+) terminals are properly in place.
4. **Check hoses and wiring connectors to make sure that they are secure and correct.**
5. **Non-reusable parts**
 - (a) Always replace cotter pins, gaskets, O-rings and oil seals etc. with new ones.
 - (b) Non-reusable parts are indicated in the component illustrations by the "♦" symbol.
6. **Precoated parts**
Precoated parts are the bolts and nuts, which have been coated with a seal lock adhesive at the factory.
 - (a) If a precoated part is retightened, loosened or caused to move in any way, it must be recoated with the specified adhesive.
 - (b) Recoating of precoated parts
 - (1) Clean off the old adhesive from the bolt, nut or installation part threads.
 - (2) Dry with compressed air.
 - (3) Apply the specified seal lock adhesive to the bolt or nut threads.
 - (c) Precoated parts are indicated in the component illustrations by the "★" symbol.



7. **When necessary, use a sealer on gaskets to prevent leaks.**
8. **Carefully observe all specifications for bolt tightening torques. Always use a torque wrench.**
9. **Use of special service tools (SST) and special service materials (SSM) may be required, depending on the nature of the repair. Be sure to use SST and SSM where specified and follow the proper work procedure. A list of SST and SSM can be found at the back of this manual.**
10. **When replacing fuses, be sure the new fuse has the correct amperage rating. DO NOT exceed the fuse amp rating or use one of a lower rating.**
11. **Care must be taken when jacking up and supporting the vehicle. Be sure to lift and support the vehicle at the proper locations.**
 - (a) If the vehicle is to be jacked up only at the front or rear end, be sure to block the wheels in order to ensure safety.
 - (b) After the vehicle is jacked up, be sure to support it on stands. It is extremely dangerous to do any work on the vehicle raised on jack alone, even for a small job that can be finished quickly.

ABBREVIATIONS USED IN THIS MANUAL

ADD	Automatic Disconnecting Differential
A/T ATM	Automatic Transmission
ATF	Automatic Transmission Fluid
B ₀	Overdrive Brake
B ₁	Second Coast Brake
B ₂	Second Brake
B ₃	First and Reverse Brake
C ₀	Overdrive Clutch
C ₁	Forward Clutch
C ₂	Direct Clutch
D	Disc
Ex.	Except
MP	Multipurpose
O/D	Overdrive
P	Plate
SSM	Special Service Materials
SST	Special Service Tools
w/	With
w/o	Without

DESCRIPTION

General

The A340E is a 4-speed, Electronic Controlled Transmission (hereafter called ECT) developed for use with high-performance engine. A lock-up mechanism is built into the torque converter.

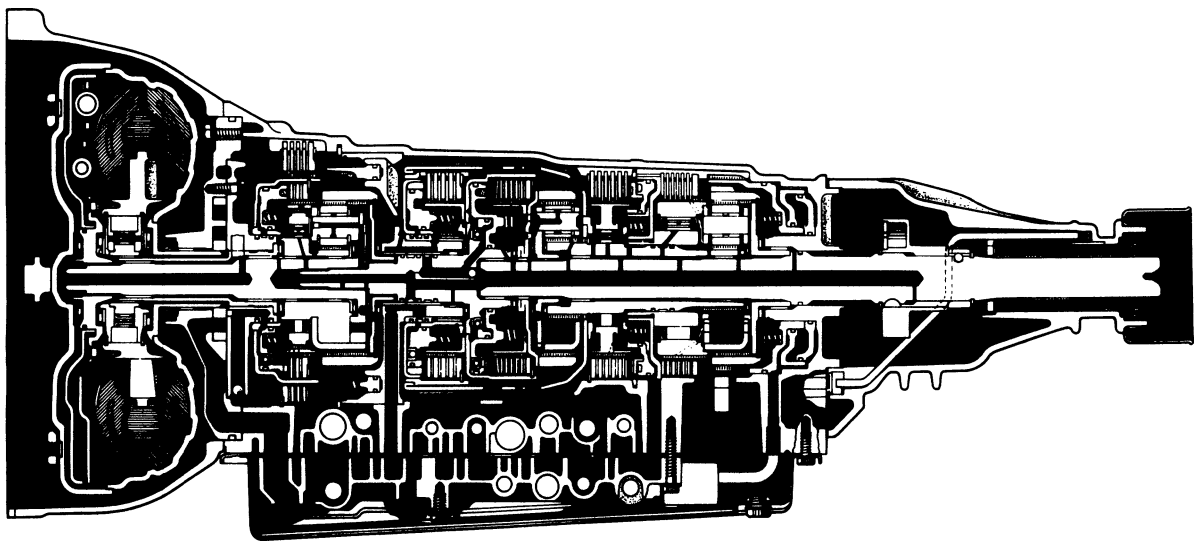
The A340F automatic transmission is a 4-speed automatic transmission with mechanically controlled 4WD transfer, developed with the aim of producing an easy-driving 4WD vehicle. The transmission section has fundamentally the same construction as the A340E automatic transmission.

The A340H automatic transmission is a 4-speed automatic transmission with electronically controlled 4Wd transfer, developed with the aim of producing an easy driving 4WD vehicle.

The transfer section consists of planetary gears, hydraulic clutches and hydraulic brake. The operation of these is fully controlled by the Engine & ECT ECU.

The A340E, A340F and A340H automatic transmissions are mainly composed of the torque converter, the overdrive (hereafter called O/D) planetary gear unit, 3-speed planetary gear unit, the hydraulic control system and the electronic control system.

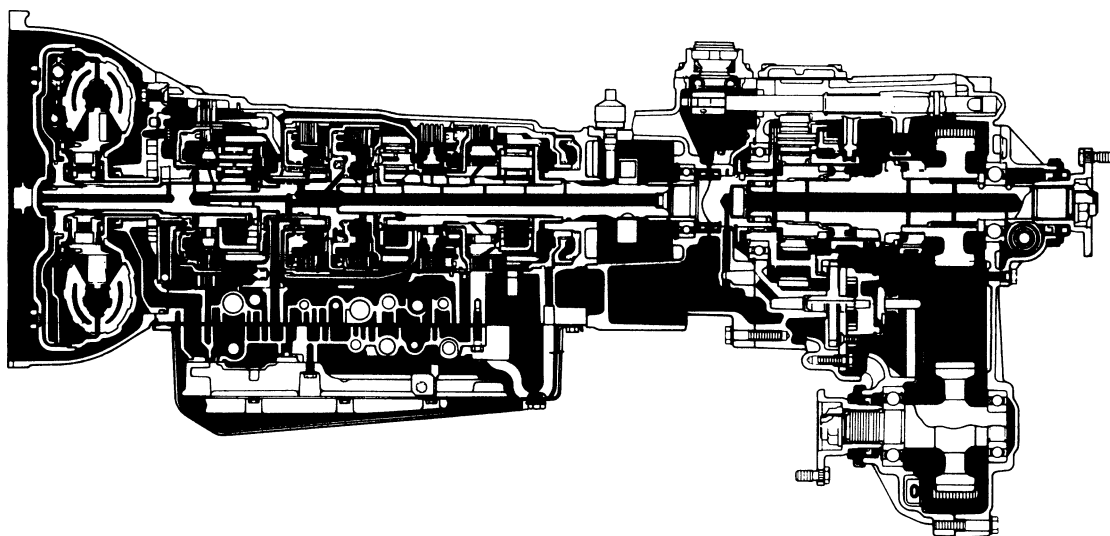
Sectional View
(A340E)



AT4366

Sectional View

(A340F)



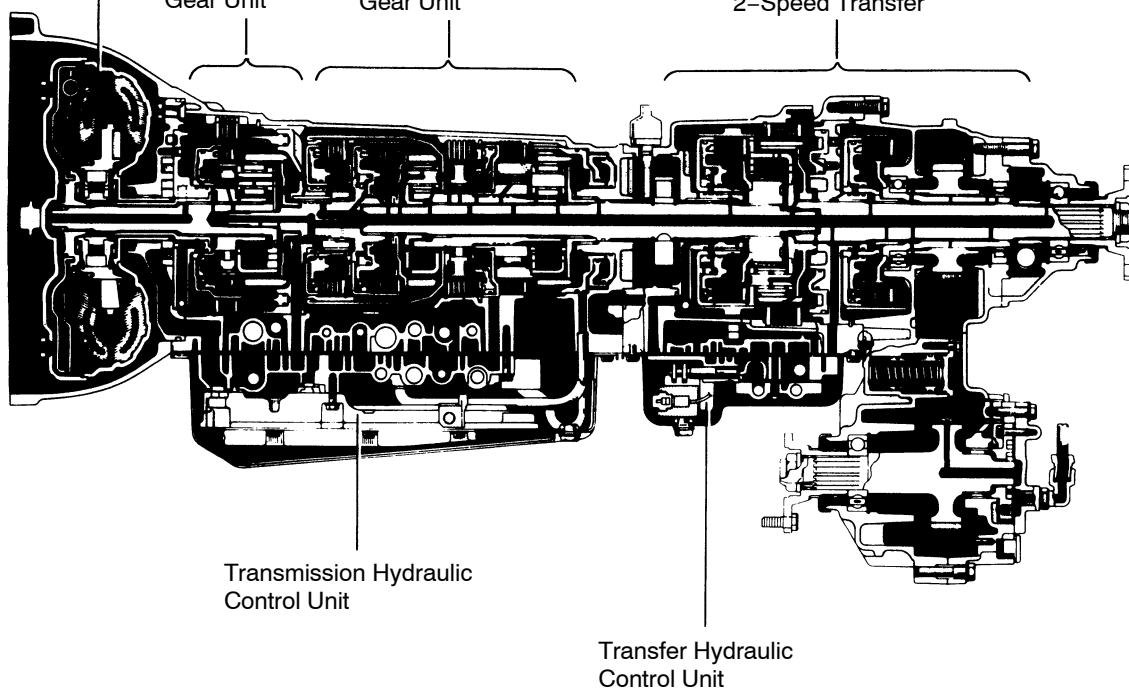
(A340H)

Torque Converter with
Lock-Up Clutch

O/D Planetary
Gear Unit

3-Speed Planetary
Gear Unit

2-Speed Transfer



General Specifications

Type of Transmission			A340E
Type of Engine			7M-GE, 7M-GTE, 3VZ-E
Torque Converter	Stall Torque Ratio		Truck : C & C 2.0 : 1 Others 2.1 : 1
	Lock-Up Mechanism		Equipped
Gear Ratio	1st Gear		2.804
	2nd Gear		1.531
	3rd Gear		1.000
	O/D Gear		0.705
	Reverse Gear		2.393
Plates (Disc/Plate)	C ₀	O/D Direct Clutch	2/2
	C ₁	Forward Clutch	5/5
	C ₂	Direct Clutch	4/4
	B ₂	2nd Brake	5/5
	B ₃	1st & Reverse Brake	6/6
	B ₀	O/D Brake	4/3
Second Coast Brake Band Width			mm (in.)
			40 (1.57)
ATF	Type		ATF DEXRON® II
	Capacity liters (US qts, Imp. qts)	Total	7.2 (7.6, 6.3)
		Drain and Refill	1.6 (1.7, 1.4)

General Specifications (Cont'd)

Type of Transmission			A340F
Type of Engine			22R-E
Torque Converter	Stall Torque Ratio		2.3 : 1
	Lock-Up Mechanism		Equipped
Gear Ratio	1st Gear		2.804
	2nd Gear		1.531
	3rd Gear		1.000
	O/D Gear		0.705
	Reverse Gear		2.393
Plates (Disc/Plate)	C ₀	O/D Direct Clutch	2/2
	C ₁	Forward Clutch	5/5
	C ₂	Direct Clutch	4/4
	B ₂	2nd Brake	5/5
	B ₃	1st & Reverse Brake	6/6
	B ₀	O/D Brake	4/3
Second Coast Brake Band Width mm (in.)			40 (1.57)
ATF	Type		ATF DEXRON® II
	Capacity liters (US qts, Imp. qts)	Total	7.6 (8.0, 6.7)
		Drain and Refill	1.6 (1.7, 1.4)



You are seeing a 10 page preview of the actual PDF File. To view the complete pdf file please click the button

Download This Manual