



PMG -Product Marketing Guide-

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TOYOTA MOTOR CORPORATION

Global Marketing Division

Revision Record

Changed in Product Detail 1st Edition from Preliminary Edition

		(*1)	(* Rev	²⁾ ised	(*3)	
		New	Сору	Visual	Deleted	Page
IV. DRIVING PER	FORMANCE					
1. Engines	1. 1GR-FE	Х				IV-11-3
V. UTILITY & CO	MFORT					
5. Security		Х				V-51
VI. BODY STRUC	TURE					
3. Low Noise & Low Vibration Measures		х				VI-31-3
VII. SAFETY						
1. Active Safety	2. Brake Control System	Х				VII-13-4

IX. SPECIFICATIONS

1. Specifications	Х				IX-11-2
-------------------	---	--	--	--	---------

*1 : "X" mark indicates newly added information.

*2 : "X" mark indicates the portion revised.

*3 : "X" mark indicates when information is no longer valid and needs to be deleted.

CONTENTS

Model Code

Development Concept

Message from Chief EngineerC1-	8
Origin of Name	
Development StoryC10)
Product ConceptC11	
Product OverviewC12	2-14

Product Detail

I. PACKAGING

1.	Packaging	I-	1	1
----	-----------	----	---	---

II. EXTERIOR

1.	Exterior Design	II-11-5
	1. Aim of Exterior Design	
	2. Front Design	
	3. Side Design	
	4. Rear Design	
	5. Emblem / Mark	
2.	Body Colors	II-2 <u>1</u>
	1. Aim of Color Design	
	2. Exterior Colors	
3.	Lamps	II-3 <u>1</u> -2
4.	Bumpers & Moldings	II-4 <u>1</u>
5.	Outer Mirrors	II-5 <u>1</u>
6.	Windows	II-6 <u>1</u>
7.	Wipers	II-7 <u>1</u> -2

III. INTE	RIOR	
1.	Interior DesignIII-1	1-2
	1. Aim of Interior Design	
	2. Interior Design	
2.	Instrument PanelIII-2	1-3
3.	Interior ColorsIII-3	1
	1. Aim of Color Design	
	2. Interior Colors	
4.	MetersIII-4	1-2
5.	SeatsIII-5	1-6
	1. Seat Arrangement	
	2. Front Seat	
	3. Rear Seat	
	4. Seat Cover	
	5. CRS (Child Restraint System)	
6.	Interior TrimIII-6	1-5
IV. DRI	VING PERFORMANCE	
1.	Engines IV-1	1-5
New	1. 1GR-FE	
	2. Fuel System	
	3. Exhaust System	
2.	Drive TrainIV-2	1-6
	1. Automatic Transmission	
	2. Manual Transmission	
3.	SuspensionsIV-3	1
4.	Steering SystemIV-4	1-2
	1. Steering Wheel	
	0 Oteonica Owiteb	

Steering Switch Steering Gear

5. Tires & Wheels......IV-5__1

V. UTILITY & COMFORT

New

New

New

v. U			
	1.	Air Conditioning	V-11-3
	2.	Audio System	V-21-4
	3.	Storage Space	V-3 <u>1</u> -4
	4.	Door Lock System	V-41-2
		1. Wireless Door Lock	
		2. Back Door	
/	5.	Security	V-5 1
-	6.	Convenience Equipment	V-6 1-5
		1. Accessory Meter	
		2. Back Sonar	
		3. Accessory Connector	
		4. Cruise Control System	
		5. Clock	
VI. B	OD	Y STRUCTURE	
	1.	High Rigidity Body	VI-1_1-2
	2.	Rust Resistant Body	VI-21
/	3.	Low Noise & Low Vibration Measures	VI-3 1-3
-	4.	Other Features	VI-41-2
VII. S	SAF	ETY	
	1	Active Safety	VII-1 1-4
		1 Brake Mechanism	·
/		2 Brake Control System	
4	2	Passive Safety	VII-2 1-11
		1 Impact Absorbing	······ - · · ·
		2 Seathelts	
		3 SRS Airbags	
VIII.	EN\	/IRONMENT	
	1.	Environmental Consciousness	VIII-1 1-3
		1. Reduction of Global Warming Substance	· · •
		2. Recycle	

IX. SPECIFICATIONS

New	1.	Specifications	IX-1_	_1-2	2
-----	----	----------------	-------	------	---

Model Code

$\frac{\mathbf{GSJ15}}{1} \frac{\mathbf{L}}{2} - \frac{\mathbf{G}}{3} \frac{\mathbf{K}}{4} \frac{\mathbf{A}}{5} \frac{\mathbf{S}}{6} \frac{\mathbf{K}}{7} \frac{\mathbf{Y}}{8}$

5

8

	BASIC MO	DEL CODE	
1	CODE	ENGINE	DRIVE TYPE
	GSJ15	1GR-FE	4WD

GEAF	R SHIFT	TYPE

F: 6-Speed Manual, Floor

A: 5-Speed Automatic, Floor

2	STEERING WHEEL POSITION
2	L: Left-Hand Drive

6	GRADE
0	S: SR

3	MODEL NAME
	G: FJ CRUISER

7	ENGINE SPECIFICATION		
	K: Compact DOHC and EFI		

4	BODY TYPE
	K: Access Door Wagon

DESTINATION

Y: General

Development Concept

Message from the Chief EngineerC	1-8
Origin of the NameC	9
Development StoryC	10
Product ConceptC	11
Product OverviewC	12-14

Message from the Chief Engineer

Nov. 21, 2006

I wanted to create an SUV that would capture the hearts of the younger generation.

When I joined TOYOTA, I was assigned to body design, and was in charge primarily of vehicles for foreign markets beginning with the COROLLA. Then beginning in 1993, I took charge of the TACOMA pickup designed exclusively for North America, which was popular amongst the younger generation. Like the HILUX, this pickup was designed with a 4WD system as well, and was used like an SUV. In the development of the TACOMA, I had many opportunities to get to know the younger generation, and gained a firsthand knowledge of what type of functions they wanted in an SUV. With the knowledge I gained from this experience, I was able to focus on the creation of an SUV with both full-scale 4WD functions not found in conventional passenger car-based SUVs and functions necessary for play as we developed the new FJ CRUISER.

TOYOTA is proud of its LAND CRUISER, which has a well-established reputation worldwide as the king of 4WDs. I believed that by incorporating the DNA of the FJ40, which solidified the status of the LAND CRUISER, into the FJ CRUISER, we could successfully return to the origin of 4WD, which is essentially a return to freedom and nature, and achieve an SUV that can freely traverse off-road without any limitations. Based on this idea, we began developing a new SUV with an unprecedented design and a platform specialized in off-road driving that incorporates the playful spirit sought by the younger generation.

I wanted to break the existing TOYOTA concept.

The aim was to create a highly unique exterior design, a characteristic not found in existing SUVs. The base is the FJ CRUISER, which we announced at a motor show held in Detroit, U.S. Its short overall length, shape that dives towards the front, and sporty form that closely resembles a 2-door coupe due to its access door had a great visual impact. By injecting advanced and expanded DNA of the FJ40 into this FJ CRUISER, we were able to create a new styling zone that breaks through the existing image of TOYOTA.

One of the most difficult tasks was to strike a balance between styling and practical utility. When we considered utility, some were of the opinion that it would be beneficial to tilt the A pillar and slightly increase the height of the window glass, and decrease the width of the C pillar. However, in response to this, I had to reply that these ideas deviated from the idea of achieving a stylish tool for off-road enjoyment, which really typifies the goal for the younger generation, and that we had to avoid these ideas. For that reason, we prepared many sketches and prototypes until all members of the development team finally reached an agreement. Next, we drove the test vehicle around town, and confirmed the presence of both styling and utility. In order to maintain the design of the show model to the production model, the engineers from the Production Engineering Department and I thoroughly aimed for the efficiency during assembly through designing parts to gain top quality. In addition, we were especially thorough in our review of the white roof painting process, and were able to establish measures to keep the styling as exactly as we imagined.

Coexistence of functionality and fashion

Our first thought was of the need to weld together "fashion" with the "functions of an off-road tool" in order to stimulate the hearts of the younger generation. We pursued a functional and simple design as a tool-like, masculine vehicle. However, the hearts of the younger generation can not be captured emotionally by merely achieving a functional and simple design. To achieve the coexistence of these two contradictory themes, we focused on the design of the instrument panel, the area that first catches the eye when getting into the vehicle. We created an unprecedented modern image by running pipes in the horizontal direction of the panel.

For the interior, we used materials that can be easily cleaned, so that customers would feel comfortable when driving in a muddy environment. In particular, material for the rubber-like floor mats was adopted that is pleasant to the eye, and that can be easily wiped clean with water when getting dirty. We also provided grooves to pool water in the floor, making it easier to drain water. Especially, we worked hard to develop seat upholstery that was not only waterproof and water repellent, but that also had excellent ventilation characteristics. PVC (Poly Vinyl Chloride)-based materials have excellent waterproof and water repellent characteristics but tend to get hot in off-road conditions when the sunlight is strong. In addition, the ventilation of PVC-based materials isn't any better than that of fabrics. On the other hand, if we consider ventilation, fabric is of course the better choice, but we could not achieve the waterproof and water repellent characteristics we needed with existing fabric materials. In order to solve the issue of achieving these contrary themes, we decided to try adding and coating a resin film with excellent ventilation to the back of the fabric. We made various fabric prototypes coated with resin film and then repeated the tests of waterproof, water repellency, and ventilation. As a result, we successfully created the optimal seat upholstery.

Go anywhere! Do anything!

If you pursue a stylish short-body exterior, the interior space will be reduced. However, this vehicle is designed for a single individual or with a friend, to enjoy the off-road experience, not a car-like SUV driving with passengers in the rear seat. Based on this concept, we focused on creating a package with ample front space that were not envisioned for SUVs until now, and on ensuring the maximum amount of cargo space to answer a variety of usage scenarios.

As for the front seat, even though the overall length is shorter than the PRADO, a comfortable front space is ensured that is in line with the said model. And the rear seat can be folded to create cargo space that can easily accommodate mountain bikes or camping equipment regardless of the short overhang. This design can even store a 3-meter long item inside by using the flexible seat arrangements.

As for the performance as a tool for off-road driving, we enlarged the door handles, inside door handles, and the knobs of the air conditioner and audio, providing ease of use even with gloves on. To optimize the size, as well as design, of the handles and knobs, our staff actually operated the vehicle with bulky gloves and repeated thoroughly discussion with the design staff. With the catch phrase "Go anywhere! Do anything!", we designed this vehicle as a tool for enjoying out the off-road driving.

Sound shower to shake the body

Currently, JBL Premium Audio is available in TOYOTA brand vehicles, and this audio is excellent if the sound sense of the younger generation is not considered. However, the majority of the younger generation does not listen to classical or mellow jazzy music, but tends to favor music that makes the body a shake. Moreover, they are accustomed to loud volume music that engulfs the body like the music played at dance clubs and such. As you can understand with the growing popularity of iPod, there is no directivity in the sound. Rather, the younger generation prefers sounds transmitted directly to the brain. For the reason, I questioned myself whether or not this need could be answered with the JBL system that pursues a theater surround system, which is exactly the opposite of the sound sensibility of the younger generation. What I pursued was sound space that would wrap the entire body just like a shower and appeal to the younger generation's instinct. Thus, I challenged to develop an entirely new sound system.

First, we worked on creating a sound field where sound descends from above. We designed the world's first headliner-speaker. It means that the entire headliner (ceiling of the vehicle) becomes a part of the speakers and the diaphragm. As a result, we successfully created a sound field that is filled with sound showering from above. In addition to these ceiling speakers, we installed a full range of speakers in the front doors and tweeters in the upper instrument panel, creating a non-directional sound field. Theoretically, this sound system should meet the younger generation's expectation.

Sound is alive. So it changes significantly based on the listening environment. Moreover, vibration, a natural enemy to the audio, is constantly generated when a car is driven. Can this sound system produce the sound that the younger generation desires? To eliminate that doubt, I actually drove the test vehicle equipped with the same audio system for 3000km, and then we were finally able to create the envisioned sound space. For that reason alone, I want you to actually experience the sounds that it produces with your favorite audio unit installed.

Targeted top-level off-road performance.

Powerful driving on rough terrain. It is difficult to meet the driving performance of an SUV if a designer is not familiar with the performance required for off-road driving. Luckily, I knew the performance requirements because of my participation in the development of the TACOMA. Moreover, TOYOTA has gained the necessary know-how with the LAND CRUISER, which is highly praised for its off-road performance. We targeted a TOYOTA's top-level off-road 4WD by advancing with developments based on this experience and know-how.

In order to pursue excellent off-road performance on rough roads based on our image, we selected the V6 4-liter (1GR-FE) engine, which has earned strong reputation for its reliability and power source. We strove to achieve a top level by combining this power source with a newly developed 6-speed manual transmission and 5-speed automatic transmission. In addition, to pursue continuous off-road performance, this design ensures sufficient road gripping as well as wheel articulation and departure angles comparable to top-level off-road vehicles.

We also worked hard on the contrasting themes of riding comfort and the level of off-road performance achieved by this power source and the chassis performance. To achieve both themes, we repeated driving tests and evaluation overseas including on rough roads, on freeways, and in town aiming for compatibility between off-road performance and riding comfort.

We equipped the new FJ CRUISER with the A-TRC (Active Traction Control) system, which can be switched on and off on demand, so that the driver can challenge their personal driving skills. In addition, the simple equipment helps reduce repair costs to drive the vehicle on rough roads. For that reason, we want the driver to challenge and enjoy off-road driving to the heart without worrying about getting stuck.

Ensuring class top-level safety performance

Data has been stored on collision accidents occurring in town and on freeway. However, it is difficult to estimate what types of accidents are occurring on off-road. Due to the fact that the younger generation is the targeted customer for this new vehicle, it is important that top-level safety performance be maintained on any road conditions. With this in mind, we focused our efforts thoroughly on crash safety performance and occupant protection performance.

As for crash safety performance, the FJ CRUISER adopts a rear access door with a double door opening design, so there is no B pillar. We studied over how to develop a body structure that would absorb a side impact and reduce cabin deformation. This can be solved to a certain level by reinforcing necessary areas and increasing the rigidity. However, the weight consequently increases when the vehicle is reinforced, and this negatively impacts driving performance and fuel economy. Thus, we thoroughly analyzed where and how reinforcements should be made in order to realize the targeted impact absorption performance, excellent driving performance, and low fuel consumption, and strove to achieve a lightweight and high rigidity body structure. This body structure is designed to clear a level that will obtain an all-good evaluation with the SUV side impact standard of the U.S., which is one of the strictest in the world. The design also contributes to excellent occupant protection performance through the use of various airbags and seatbelts.

As for the visibility from the driver's seat, due to the fact that this vehicle was designed with priority on styling, I was concerned about excellent visibility from the beginning. So, when the final design was determined, we calculated data for the visibility range in all directions. I brought that data around town, drove the test vehicle with the windows covered, and then confirmed the visibility of the traffic lights across the front window, and the visibility when backing up. From this, I felt like I needed a little bit more sense of security in terms of visibility in the rear direction. So we decided to equip the vehicle with back sonar, which was also designed using the know-how from a conventional model to further reduce the price. This mass-production, low-priced sonar is just one example of TOYOTA's active approaches towards safety in the rear-direction visibility of an SUV.

New SUV that inherits the FJ40 and pursues ultimate off-road performance

In developing the new FJ CRUISER, we thoroughly focused our attention on styling and off-road performance to attract the younger generation to TOYOTA, and strove to differentiate it from car-like SUVs. In order to be able to offer the vehicle at a reasonable price for our target customers, we developed the FJ CRUISER by incorporating various ideas.

Users pursuing a car-like SUV may be somewhat dissatisfied with certain aspects. However, this vehicle has a sufficient amount of equipment and quality necessary for enjoyment as an off-road vehicle. So you should be able to approach any user wanting to enjoy off-road driving, even if that person is in a class older than the younger generation.

The FJ CRUISER was designed to break down the conventional TOYOTA concept in mind, and I am proud to say that we were able to reach that goal. The younger generation is the key to the future market, so please focus your efforts to gain maximum attention from this generation with the FJ CRUISER.

JO XO WE 5

Akio Nishimura Chief Engineer TOYOTA Development Center I Product Development Group

Origin of the Name

At the beginning of development, the FJ CRUISER was called RYU, an abbreviation of Rugged Youth Utility, as TOYOTA internal name. RYU is a familiar name, having the same pronunciation with dragon in Japanese, a fictional and powerful anima dashes up to heaven. However, we decided to change the name taking the advice that RYU is not appropriate as a vehicle name because it is an abbreviation.

Various names were raised as candidates, and related parties racked their brains. Ultimately, we decided on "FJ CRUISER", the same name as the show model. "FJ" emphasize that the vehicle is an SUV that inherits the DNA of the LAND CRUISER FJ40. "CRUISER" is also taken from the LAND CRUISER. Thus, the vehicle was named the FJ CRUISER to further strengthen the TOYOTA 4WD image.

Development Story

Target the market for the continuously expanding younger generation.

In the past several years, a global market for the younger generation has begun to emerge. Thus, in order for TOYOTA to maintain and further expand its position in future markets, TOYOTA must attract the younger generation. However, the younger generation has a strong awareness of TOYOTA as a manufacturer that provides family type vehicles. Moreover, in the SUV market there are no SUVs available with a tough image at a price that the younger generation can afford, and the age bracket of customers purchasing these SUVs is increasing. To overcome these conditions, the development of an SUV to attract the younger generation was started.

SUV that inherits and further enhances the DNA of the FJ40

Currently, there is no SUV in the TOYOTA lineup that incorporates the playful spirit sought by the younger generation, and that is available at a reasonable price that the younger generation can afford with full-scale 4WD functions for freely traversing even rigorous off-road conditions. As a result, the younger generation has moved away from TOYOTA.

Today, the younger generation is seeking an SUV that fuses a playful spirit with genuine 4WD functions for full scale off-road enjoyment. Thus, by offering an SUV that inherits and further enhances the "Tough & Rugged" DNA built by the FJ40, TOYOTA can attract the younger generation. In addition, by inheriting and further enhancing the FJ40 DNA, TOYOTA can also appeal to the older generation, which is passionate about the FJ40 even today, and should be able to further expand the market.

Product Concept

Goal was to attract the younger generation to the TOYOTA brand.

From the onset of developing the FJ CRUISER, our priority for the upper body was styling, and priority for the platform was off-road performance. Our thorough efforts can be expressed with this vehicle development concept, "Rugged and Freedom". Based on this concept, in addition to inheriting the DNA of the LAND CRUISER FJ40, we focused on what we felt were the four most important areas: an exterior that portrays a tough and rugged image, sufficient cargo space, overwhelming off-road performance, and

Four Appealing Points of the FJ CRUISER

1. Modern and rugged styling

Along with a short overall length and shape that dives towards the front, a modern and rugged image is emphasized by the dual-bulb headlamps, over fender, and the grille shape that closely resembles the FJ40.

2. Sufficient space for outdoor recreational activities In addition to the instrument panel design that pursues functionality with a sporty image, an ideal

interior for outdoor recreational activities has been achieved with heater and audio dials that can be operated even while wearing bulky gloves, waterproof and water repellent seat upholstery, absorption-proof mats, fold and detach mechanism for the rear seat, and large cargo space.

 Top-level off-road performance We strove to achieve and pleasant and overwhelming off-road performance with a large wheel stroke, high ground clearance, excellent approach and departure angles, fording performance, rear differential lock, and on-demand A-TRC system.

4. Audio space that can be felt with the entire body In addition to the speakers on the instrument panel and doors, we proposed an unprecedented concept for the audio space by newly installing speakers in the ceiling.

Product Overview

PACKAGING

- Packaging with the overall length of a small-class vehicle and the overall width of a mid-class vehicle
 - > Short wheelbase, short front and rear overhangs
 - > High ground clearance in the rocker area
 - > Double door opening rear access is adopted.

Pursued packaging that specializes on styling and off-road performance as an SUV for the younger generation.

EXTERIOR

- The design theme "Modern and Rugged"
 - > Modern image with a high cabin position and round shape
 - > Distinctive styling with a reduced aspect ratio of the cabin
 - > Stylish 2-door coupe-like form with the rear access door
 - > Rugged bumper for off-road usability
 - > Front grille and headlamp area inherited from the image of the FJ40
 - > Powerful side view with thick D pillars and jutting over fenders
 - > Stable, ground-hugging image created by the tires, and a rocker area blacked out for a sense of solidity
 - > Large, grip type door handles that can be operated even while wearing bulky gloves
 - > Spare tire carrier highlighting the image of an SUV

Pursued a distinctive form not found in conventional SUVs and an exterior design that portrays high off-road performance with just one glance.

INTERIOR

- Interior thoroughly designed for ease of use for outdoor recreational activities
 - > Roominess emphasized in front for use by a single individual or with a friend
 - > Dark color scheme to camouflage dirt
 - > Rubber-like resin mats are adopted on the floor carpet and deck carpet
- Instrument panel that emphasizes a sporty image and functionality
 - > Unique instrument panel design with pipes running horizontally along the top and bottom
 - > Modern ornament design is adopted.
 - > Center cluster with metallic coating and metal panel of the same color as the body

In addition to the sporty image of an SUV, we strove to create a sense of easiness, so that users could enjoy the vehicle without concern of getting it dirty, aiming for an ideal interior for off-road driving.

DRIVING PERFORMANCE

- Excellent off-road driving capability with overwhelming power and chassis performance
 - > Powerful V6 4.0-liter (1GR-FE) engine with good fuel economy is adopted.
 - > 6-speed manual transmission and 5-speed automatic transmission are available.
 - > Double wishbone front suspension and torsion bar and coil spring rear suspension are adopted.
 - > Part-time 4WD is available for automatic transmission models, and full-time 4WD is available for manual transmission models.
 - > Enhanced off-road performance with an enlarged wheel articulation and increased ground height below the fuel tank.
 - > Excellent fording performance
 - > Differential lock is available.

By pursuing off-road performance that closely resembles that of the FJ 40, we achieved the off-road performance that answers the needs of various outdoor recreational activities.

UTILITY & COMFORT

- Thorough convenience and functionality as a tool for enjoying the outdoors
 - > Large inside door handles are adopted that can be operated even while wearing bulky gloves.
 - > Large heater controls and audio switches considering ease of operation
 - > Double door opening rear access is adopted for easy rear-seat entry and exit.
 - > Rear-seat double fold-function is adopted that can accommodate a 3-meter long item inside.
 - > Rear-seat detach function to provide even larger cargo space when needed
 - > Waterproof and water repellent seat upholstery with resin film sealed on the back side
 - > Concave grooves on the instrument panel to easily wipe away water if it gets into the deck
- Excellent storage capability
 - > Storage space with a lid is adopted in front of the meters.
 - > Pockets are adopted in the front door trim.
 - > Pockets and a bottle holder that can store a 500ml plastic bottle are adopted in the rear door trim.
 - > Cup holders that can store two XL-size cups are adopted in the front, and cup holders can store two M-size cups are adopted in the rear.
 - > Storage space without a lid is adopted in the console.
 - > Storage space is adopted in the right deck side trim.
 - > Pocket is adopted on the back of the front passenger's seat.
- 6-speaker system without a radio unit is adopted.
 - > Instrument panel speakers are available in addiction to the 6 x 9-inch front speakers.
 - > Ceiling speakers that fill the interior with sound falling from above are available.

By pursuing convenience and functionality, we have enabled the enjoyment of outdoor activities as desired. Moreover, by achieving space that allows favorite sound to be enjoyed, we have increased the fun of the ride.

SAFETY

Active Safety

- Large disc brakes with a front disc diameter of 319mm and a rear disc diameter of 312mm are adopted.
- ABS (Anti-lock Brake System) and VSC (Vehicle Stability Control) are adopted on all models as standard equipment.
- Back sonar that helps detect obstacles while backing up is adopted as standard equipment.

Passive Safety

- The following body structure measures are adopted in consideration of crash safety performance and pedestrian protection performance.
 - > Reinforced the A pillar corner area to help restrain body deformation during ODB collisions.
 - > Reinforced the top and bottom of the rear access door to help restrain body deformation during side collisions.
 - > Body structure designed to obtain an all-good evaluation with the SUV side impact standard of the U.S., which is one of the strictest in the world.
 - > Impact absorbing structures are adopted in the hood and fenders in consideration of pedestrian protection in the unlikely event of a collision.
- Occupant protection performance
 - > Dual-stage SRS airbags are adopted for both the driver's and front passenger's seats.
 - > HIP (Head Impact Protection) is adopted.
 - > CSA (Curtain Shield Airbag) is available.
 - > 3-point ELR (Emergency Locking Retractor)/ALR (Automatic Locking Retractor) are adopted for both the driver's and front passenger's seatbelts.
 - > High power pretensioner and force limiter are adopted for the driver's seatbelt.
 - > 3-point seatbelts are adopted for all rear seats.

Pursued class top-level crash safety performance in order to help ensure overall safety performance. In addition, we placed importance on helping ensuring occupant and pedestrian protection in the event of a collision.



1. PackagingI-1_1

1. Packaging

FEATURES

- The interior layout prioritizes a generous front seat area and a spacious cargo area large enough to accommodate mountain bikes or surfboards.





- A rear access door that opens 90° is adopted to allow easy rear seat entry and exit.





1.	Exterior DesignII-11-5	
	1. Aim of Exterior Design	
	2. Front Design	
	3. Side Design	
	4. Rear Design	
	5. Emblem / Mark	
2.	Body Colors	II-2 <u>1</u> -1
	1. Aim of Color Design	
	2. Exterior Colors	
3.	Lamps	II-3 <u>1</u> -2
4.	Bumpers & Moldings	II-4 <u>1</u>
5.	Outer Mirrors	II-5 <u>1</u>
6.	Windows	II-6 <u>1</u>
7.	Wipers	II-7 <u>1</u> -2

1. Exterior Design

II-1. Exterior Design

1. Aim of Exterior Design

FROM TMC

- The FJ40 design elements have been strengthened to achieve a modern, rugged feel.



U.S.A. spec. model shown (Prototype)

N3F-EX-018

*II-1. Exterior Design***2. Front Design**

FEATURES

- To inherit the tradition of the FJ40 design, the headlamps are tied in with the front grille area.
- The combination of a massive body and wide, low cabin conveys an image of strength.



U.S.A. spec. model shown (Prototype)

N3F-EX-001

II-1. Exterior Design **3. Side Design**

FEATURES

- A sweeping roofline and short front and rear overhangs create a forward-leaning single-motion silhouette. -1
- The vehicle combines a tall lower body with a slim cabin. -2



II-1. Exterior Design **4. Rear Design**

FEATURES

- The quarter windows that wrap around the backside of the vehicle and the off-center license plate evoke the tradition of the FJ40 signature design.
- The adoption of fender-mounted rear combination lamps creates a rugged look.



U.S.A. spec. model shown (Prototype) N3F-EX-003

II-1. Exterior Design 5. Emblem / Mark

FEATURES



N3F-EX-004

No.	Mark	Design	
1	Toyota mark	N3F-EX-005	
2	Toyota logo mark	N3F-EX-006	
3	Vehicle mark	RUISER N3F-EX-007	

11. EXTERIOR 2. Body Colors

II-2. Body Colors 1. Aim of Color Design

FROM TMC

- The color design is aimed to be basic and functional to fit the image of a rugged SUV.

II-2. Body Colors

2. Exterior Colors

FROM TMC

- Exterior colors are adopted that emphasize the strength of the vehicle's body.
 - > Functional color: colors that convey the functionality of basic materials.
 - > Tool like color: vivid colors that convey a tough machinery image.
 - Heritage color: colors that inherit the rugged tradition of the FJ40 image, while also conveying freshness.
 - > White (color: 058)* roofs and roofs in each body color* are available. The white roofs create an image of functionality and strength.

*Please refer to the Order Guide for detailed specifications.

FEATURES

Color No.	Color name	Color category
1D4	Silver Me.	Functional color
211	Black Mc.	Functional color
058	White.	Tool-like color
5A3	Yellow	Heritage color
8T6	Blue	Tool-like color
4U0	Beige	Heritage color
3R8	Brick Red Me.	Heritage color

II. EXTERIOR **3. Lamps**

FEATURES

Headlamp and Turn Signal Lamp

- Separate reflectors are adopted for the high and low beams of the round headlamps to enhance light distribution, providing excellent night visibility.



N3F-EX-008

Rear Combination Lamp





High-mount Stop Lamp

- A slim LED (Light Emitting Diode) high-mount stop lamp is adopted.



4. Bumpers & Moldings

FEATURES

- Lightweight, resin bumpers are adopted for both the front and rear.
- Decorative, silver-painted components are adopted for the center and both sides of the bumpers.



N3F-EX-012





5. Outer Mirrors

FEATURES

- Tall, door-mounted outer mirrors are adopted to fit the vehicle's rugged look.
- An electrically adjustable outer mirror with illumination lamp is available.



11. EXTERIOR 6. Windows

FEATURES

- A glass hatch that can be opened independently is adopted on the back door to allow the cargo area to accommodate long items such as surfboards while keeping the back door closed.



N3F-EX-015

II. EXTERIOR **7. Wiper**

FEATURES

Front Wiper

- Three windshield wiper arms are adopted for the front in order to provide full coverage for the vehicle's wide windshield.
- The three-arm wiper consists of the conventional wiper module (2 wiper arms, motor and link mechanism) and an additional rod and holder.
- Diffusion-type nozzles are adopted to provide superior washing performance.



N3F-EX-016
Rear Wiper

- A retractable windshield wiper is adopted for the rear in order to allow the back door glass hatch to open and close.
- A diffusion-type washer nozzle is adopted to provide superior washing performance.



N3F-EX-017



1.	Interior Design	III-11-2
	1. Aim of Interior Design	
	2. Interior Design	
2.	Instrument Panel	III-21-3
3. Interior Colors		III-3 <u>1</u>
	1. Aim of Color Design	
	2. Interior Colors	
4.	Meters	III-41-2
5.	Seats	III-5 <u>1</u> -6
	1. Seat Arrangement	
	2. Front Seat	
	3. Rear Seat	
	4. Seat Cover	
	5. CRS (Child Restraint System)	
6.	Interior Trim	III-61-5

1. Interior Design

III-1. Interior Design
1. Aim of Interior Design

FROM TMC

- The flexible cabin space with a functional design creates a modern, rugged image.



U.S.A. spec. model shown (Prototype)

N3F-IN-034



U.S.A. spec. model shown (Prototype)

III-1. Interior Design 2. Interior Design

FEATURES

- Simple yet strong straight lines are used to achieve a horizontal form. -1
- A cubic form is adopted that combines strong horizontal and vertical lines. -2
- The fusion of flat planes and arcs creates a "Modern Rugged" feel. -3
- The use of the same body colors for the interior is filled with originality. (The use of the body colors for the door trim is optional*) -4

*Please refer to the Order Guide for detailed specifications.



2. Instrument Panel

FEATURES



U.S.A. spec. model shown (Prototype)

N3F-IN-036



U.S.A. spec. model shown (Prototype)

- To create a functional and modern, rugged image, the following features are adopted:
 - > An instrument panel framed by pipe-like upper and lower horizontals. -1
 - > The heater control panel uses the same color as the body. -2
 - > Decorative, silver molding for the right, left, and center of the instrument panel. -3
 - > Original design side defrosters. -4
 - > A large damper knob for the side register. -5



Switch and Indicator Layout



N3F-IN-031

No.	Item	No.	Item
1	Rear differential lock switch*	6	Hazard switch
2	A-TRAC (Active-TRAction Control) switch*	7	Rear defogger switch
3	Back sonar switch*	8	Passenger seatbelt warning
4	Rheostat control switch		
5	Outer mirror switch	9	Security indicator*

*Please refer to the Order Guide for detailed specifications.

3. Interior Colors

III-3. Interior Colors
1. Aim of Color Design

FROM TMC

- The color design is aimed to be basic and functional to fit the image of a rugged SUV.

III-3. Interior Colors

2. Interior Colors

FEATURES

- A functional interior color scheme is adopted to create an active, outdoor lifestyle.

Color No.	Color name
105B	Light gray
136B	Dark gray



4. Meters

FEATURES

- Round, black and white meters are adopted to match the instrument panel.
- An A-TRAC(Active-Traction Control) indicator* is available for the combination meter.
- A seatbelt warning buzzer is adopted for the driver seat.

*Please refer to the Order Guide for detailed specifications.



U.S.A. spec. model shown (Prototype) N3F-IN-038



A/T model N3F-IN-026



M/T model N3F-IN-027

III. INTERIOR 5. Seats

III-5. Seats





III-5. Seats 2. Front Seat

FEATURES

- For the driver's seat, a manual 8-way adjustable seat is adopted.
- The driver's seat has a front tilt adjuster and a vertical lifter adjuster to help the driver find a comfortable driving position regardless of their physique.



U.S.A. spec. model shown (Prototype)

N3F-IN-039



1131-111-

Front Seat Specification

Adjuster	Driver	Manual 8-way (seat slide, reclining, lifter, front tilt)		
/ lajuster	Passenger	Manual 4-way (seat slide, reclining)		
Upholstery		Fabric (water repellant, waterproof)		
Seat slide		240 mm		
Lifter		45 mm (driver seat only)		
Seat cushion front tilt		26 mm (driver seat only)		
Armrest		Driver seat only (Passenger seat: dealer option)		
Seatback pocket		Passenger seat only		

III-5. Seats 3. Rear Seat

FEATURES

- A 60:40 split seat with a double folding function is adopted in the rear seat.
- Removable seat cushions are adopted. By removing the cushions, the cargo area can be lengthened to accommodate larger cargo.



U.S.A. spec. model shown (Prototype)

N3F-IN-040



Removable seat cushions Cushion Removal

- 1.Lift the cushions.
- 2.Use the tool provided to loosen the knob.
- 3.Remove the knob by hand.

4.Remove the cushion. 5.Stow the hinges.



Cushion Installation

- Hold the hinge upright.
- Place the hinge against the cushion.
- Tighten the knob by hand.
- Use the tool provided to fully tighten the knobs to a torque of 18Nm. (Failure to tighten the knobs to the specified torque may increase the likelihood of serious injury in the event an accident.)

III-5. Seats 4. Seat Cover

FEATURES

- A water repellant and waterproof fabric is adopted for the seat covers to allow easy wipe-down of dirt and water.
- Along with using fabric for the seat covers, a "breathable" urethane film is adopted under the fabric to prevent dampness.
 - > The urethane film allows the seat to "breath", while also preventing water from soaking in.
- The seat cover stitching is treated with a water-repellent sealant to prevent water from penetrating through the seams.
- The water repellant sealant does not retain its effectiveness indefinitely.



III-5. Seats5. CRS (Child Restraint System)

FEATURES

ISO-FIX Lower Anchor

- The ISO-FIX lower anchors are adopted for the rear side seat.



N3F-IN-019

Top Tether Anchor

- The tie down, top tether anchors are adopted for the seatback.



N3F-IN-020

- The top tether anchor should not be used as a tie down hook.

6. Interior

FEATURES

Door Trim

- The armrest that runs from the front seat to the back, and the hefty, pipe-shaped door grips combine a rugged feel with enhanced functionality.



N3F-IN-021



N3F-IN-041



N3F-IN-042 U.S.A. spec. model shown (Prototype)

*Please refer to the Order Guide for detailed specifications.

Front Floor Mat

- A TPO (Thermo Plastic Olefin) molded mat is adopted for the first time for TOYOTA trucks.
- Hooks for the mat are adopted on the cross-member. These eliminate the need for holes used to attach the mat, reducing water penetration.
- The adoption of 33° floor angle for the toe board helps front passengers maintain proper sitting posture.



Ceiling Area

- The following items are adopted to the ceiling area to enhance product appeal:
 - > Ceiling speakers (exciters)
 - > A front passenger seat sun visor equipped with a vanity mirror
 - > A coat hook
 - > Side visors exclusively for use on the front windows are adopted on both sides to provide shade from light that enters from the side.







Deck Side

- The following items are adopted to enhance convenience and product appeal:
 - > A storage tray on the wheel house (right-hand side only) -1
 - > A storage box (right-hand side only) -2
 - > Cargo net hooks and multi-purpose grocery bag hooks -3
 - > A rear passenger seat armrest -4
 - > A jack cover (left-hand side only) -5



Right-hand side deck



Left-hand side deck

Product Detail

DRIVING PERFORMANCE

New

1.	EnginesIV-1	1-5
	1. 1GR-FE	
	2. Fuel System	
	3. Exhaust System	
2.	Drive TrainIV-2	1-6
	1. Automatic Transmission	
	2. Manual Transmission	
3.	SuspensionsIV-3	1
4.	Steering SystemIV-4	1-2
	1. Steering Wheel	
	2. Steering Switch	
	3. Steering Gear	
5.	Tires & WheelsIV-5	1

IV. DRIVING PERFORMANCE

1. Engines

IV-1. Engines

1. 1GR-FE

FEATURES

- An advanced, new V6 4-liter built to the standards of the next generation is adopted. The engine is light and compact, while also achieving high performance, excellent fuel economy and quietness. It also meets higher serviceability demands as well as more stringent emissions standards.

Lightweight and Compact

- A lightweight and compact design is realized by many changes. An aluminum cylinder block and serpentine belt are adopted; the system is simplified; the number of the parts is reduced; and some parts materials are changed to resin.

High Performance and Fuel Efficiency

- To realize top class performance at a practical level, displacement volume is increased and advanced technologies are adopted. In addition, friction of various components are reduced to help realize excellent fuel efficiency.

Quietness

- The engine provides a pleasant sound while offering the quietness appropriate for a high-quality SUV.

Engine type		1GR-FE	
No. of cyls. & arrange	ement	6-cylinder, V type	
Valve mechanisr	n	24-Valve DOHC, chain drive (with VVT-i)	
Combustion cham	ber	Pentroof type	
Manifolds		Cross-flow	
Fuel system		EFI	
Displacement	cm ³	3956	
Bore X Stroke	mm	94.0 x 95.0	
Compression ratio		10.0 : 1	
Max. output (EEC)	kW / rpm	179 / 5200	
Max. torque (EEC) Nm / rpm		376 / 3700	

Engine Specifications



Reducing Friction Loss

- In an aim to reduce friction, high rigidity and high tensile steel is adopted for the crankshaft, allowing the crank pin and crank journal clearance to be reduced. Balance weights are optimally located and a torsion damper is adopted to reduce vibration and noise.
- Weight reduction of the piston, reduction of the piston ring tension, and the resin coating of the piston skirt contributes to the reduction of friction and noise.

VVT-i (Variable Valve Timing-intelligent) and ETCS-i (Electronic Throttle Control System-intelligent)

- 1GR-FE engine adopts the VVT-i system and ETCS-i. These control functions help to realize excellent engine performance, fuel efficiency, and reduced emissions.

Intake Air Chamber (Surge Tank) & ACIS (Acoustic Control Induction System)

- A resin intake air chamber is adopted to reduce weight.
- The ACIS switches the length of the intake manifold in two stages based on the engine speed and throttle valve opening angle. As a result, the engine performance is increased in the middle to high speed range.
- A lightweight electronic throttle is adopted.
- The adopted DIS (Direct Ignition System) eliminates the distributor and high-tension-cords, helping to reduce voltage loss and electromagnetic noise.
- A newly designed 12-hole type fuel injector is adopted, making the fuel into finer particles.
- The V bank cover is set to enhance the appearance. In addition, sound absorbing material is installed on the underside of the cover to enhance quietness.



N3F-DP-010

- The bandwidth of the knock sensor is widened, improving knock control.

IV-1. Engines 2. Fuel System

FEATURES

Fuel Tank

- The fuel tank walls are made of multiple layers of resin. (6 layers, 4 resin types)
- A fuel drain mark is adopted on the bottom of the fuel tank to indicate where tools should be positioned when draining fuel from the tank in preparation for a tank replacement. This helps ensure that fuel is fully drained from the tank.



Fuel Cap

- An ergonomic, handle-shaped fuel cap is adopted to reduce the amount of physical effort required to open and close the fuel tank.

IV-1. Engines 3. Exhaust System

FEATURES

Exhaust Pipe

- An exhaust sound muffler is adopted that combines impressive sound at low speeds and a racy sound at high speeds.
- Ball joints are adopted at the connecting area between the front and center pipes as vibration-dampers to enhance NV (Noise and Vibration) performance.
- 3 way catalysts are adopted for both the left and right sides of the front pipe.



3 way catalytic converter

N3F-DP-021

<u>2. Drive Train</u>

IV-2. Drive Train

1. Automatic Transmission

FEATURES

5-Speed Automatic Transmission

- A 5-speed automatic transmission (A750F) is adopted in order to realize the following 4 factors:
 - > (1) Excellent performance
 - > (2) Excellent fuel efficiency
 - > (3) Smooth shifting
 - > (4) Lower noise level

Automatic Transmission Specifications

Engine type		1GR-FE	
Automatic transmission type		A750F (4WD)	
	1st	3.520	
	2nd	2.042	
Gear ratio	3rd	1.400	
	4th	1.000	
	5th	0.716	
	Reverse	3.224	
Fluid type		Toyota Genuine ATF WS	
Fluid capacity Liter		10.7	

Line Pressure Optimal Control

- The ECU operates the newly employed linear solenoid (SLT) in the valve body of the automatic transmission to optimize the line pressure based on the information from the engine. Accordingly, the line pressure can be finely controlled based on the engine output and driving status, thus reducing the shock when shifting.

TOYOTA Genuine ATF (Automatic Transmission Fluid) WS

- The adoption of TOYOTA Genuine ATF WS, and automatic transmission fluid with low viscosity across its potential operating range, reduces ATF WS resistance and enhances fuel economy. At the high-temperature end, the newly adopted ATF WS maintains a viscosity similar to that of the previous ATF Type T-IV, enhancing the durability of the automatic transmission.

ATF Level Detection Mechanism

- The oil filler tube and oil level gauge are removed in accordance with the adoption of the ATF level detection mechanism. As a result, it is possible to prevent contaminated oil and over- or under-filling of ATF, keeping ATF free from maintenance.

AI (Artificial Intelligence)- SHIFT Control

- Newly adopted the AI-SHIFT control realizes comfortable driving by automatically switching the shifting pattern according to road conditions and driver's intent.



JL-PT-002

Road Condition Support Control

- Newly adopted road condition support control realizes comfortable driving by supporting optimal up- and down-shifts in accordance with road conditions.



Gate-Type Shift Lever

- A gate-type shift lever is adopted, enhancing sporty, high quality image.
- The shift lever is available in black type* or silver painted type*.



*Please refer to the Order Guide for detailed specifications.

IV-2. Drive Train

2. Manual Transmission

FEATURES

6-Speed Manual Transmission

- A 6-speed manual transmission is adopted.
- An output reduction system is adopted to make it small and light, and also to reduce the force required for operating the transmission.
- In addition to output reduction, a triple synchronized mechanism is adopted for 1st and 3rd gears, contributing to further reduction in force needed to operate the transmission.
- Lever synchro is adopted for reverse gear, resulting in less force necessary to operate the transmission in reverse.

Major	Spe	cific	ation
-------	-----	-------	-------

Engi	ne type	1GR-FE	
Trans	axle type	RA61F (4WD)	
Geart	rain type	Output reduction	
Gear n	nesh type	All gear constant mesh	
	1st	4.171	
	2nd	2.190	
	3rd	1.488	
Gear Ratio	4th	1.193	
	5th	1.000	
	6th	0.799	
	Reverse	3.607	
	1st	Triple-cone	
	2nd	Triple-cone	
	3rd	Triple-cone	
Synchromesh type	4th	Single-cone	
	5th	Single-cone	
	6th	Single-cone	
	Reverse	Lever type	
Oil (Capacity Lit	er 1.8	
Oil V	iscosity	SAE 75W-90	
Shift	pattern	$\begin{array}{c c} R & 1 & 3 & 5 \\ \hline \\ \hline \\ \hline \\ \\ R & 1 & 3 & 5 \\ \hline \\ \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	

Major Features

Adoption of The Output Reduction System

- Realizing a lightweight and compact design.
 - > By adopting the output reduction system, each shift gear is made smaller and lighter than those under the input reduction system.
- Reduction of the energy required for shifting
 - > By adopting the output reduction system, the force required for shifting is reduced.



J2T-DP-006



Adoption of The Oil Separator

- An oil separator with high sealing capability and a transmission case with an oil tank structure is adopted to enhance the rate of conveyed power.

Adoption of A Hub Sleeve

- Two types of teeth with different shapes are adopted to the hub sleeve to distribute the synchronization and engagement functions respectively, resulting in a smooth shift feeling.

Adoption of A Large Type Sound Insulating Cover

- A large type sound insulating cover is adopted to the upper part of the transmission to help reduce gear noise and rattling sound.

Adoption of The Triple-cone Synchronizer to The 1st, 2nd, and 3rd Gear

- A triple-cone synchromesh mechanism is adopted to the 1st, 2nd, and 3rd gear to significantly reduce the energy required for shifting.

Adoption of The Constant Mesh Style Reverse Gear

- By adopting the constant mesh type reverse gear, the locking of the gear during reverse shifting is resolved.

Adoption of The Reverse Warning Sound

- A reverse warning sound is adopted to inform the driver when reverse gear is selected. The warning alarm beeps once immediately after shifting to reverse.

IV. DRIVING PERFORMANCE **3. Suspensions**

FEATURES

Front Suspension

- A high-mounted, double wishbone suspension is adopted for superior handling stability and ride comfort.
- The adoption of large tires raises vehicle height and contributes to excellent off-road capabilities.

Rear Suspension

- A 4-link suspension with a lateral rod is adopted.
- To achieve a high level of balance between handling stability, ride comfort, and off-road capability, the following modifications are adopted:
 - > The characteristics of the stabilizer springs are optimized.
 - > Vehicle height is raised by using large tires.

IV. DRIVING PERFORMANCE 4. Steering System

IV-4. Steering System

1. Steering Wheel

FEATURES

- A 3-spoke, urethane* and leather*steering wheel are available.



*Please refer to the Order Guide for detailed specifications.

[G1BD]

IV-4. Steering System **2. Steering Gear**

FEATURES

- Rack-and-pinion hydraulic power steering is adopted.
- A variable gear ratio steering rack is adopted. By providing moderate response in the steering center and quick response around the end position, the steering rack allows for stability at high speeds and reduced steering effort at low speeds.



N3F-DP-007
IV. DRIVING PERFORMANCE **5. Tires & Wheels**

FEATURES

- A 16-inch aluminum wheel is adopted.
- A tire with a tread pattern suitable for off-road driving is adopted.

Tire size		265/75 R16 116S	
Disawhaal	Size	16" X 7.0J	
DISC WHEEL	Material	Aluminum	
Off set		15 mm (0.6 in.)	
Wheel design		NJF-DP-018 [G4AH]	



1	Air Conditioning	V-1 1-3
••		
2.	Audio System	V-2 <u>1</u> -4
3.	Storage Space	V-31-4
4.	Door Lock System	V-41-2
	1. Wireless Door Lock	
	2. Back Door	
5.	Security	V-5 <u>1</u>
5. 6.	Security Convenience Equipment	V-5 <u>1</u> V-6 <u>1</u> -5
5. 6.	Security Convenience Equipment 1. Accessory Meter	V-51 V-61-5
5. 6.	Security Convenience Equipment 1. Accessory Meter 2. Back Sonar	V-51 V-61-5
5. 6.	Security Convenience Equipment 1. Accessory Meter 2. Back Sonar 3. Accessory Connector	V-51 V-61-5

New

5. Clock

V. UTILITY & COMFORT

V. UTILITY & COMFORT **1. Air Conditioning**

FEATURES

- A highly efficient, compact and lightweight RS (Revolutionary Slim) evaporator and an SFA (Straight Flow Aluminum) heater core are adopted for the AC unit.
- A highly efficient, compact and lightweight MF4 (Multi-flow 4) condenser is adopted.
- An air filter and a rear foot duct are adopted to enhance cabin comfort.

Air Conditioning Control

- An electric, manual heater control panel is adopted.
- Large switches and knobs are adopted for the control panel to enhance ease-of-use and operability.



U.S.A. spec. model shown (Prototype)



Fresh or recirculate mode switch

N3F-UC-022

V. UTILITY & COMFORT 1. Air Conditioning V-1__1/3

Rear DEF Control

- A temperature- and speed-sensing, timer-controlled defogger is adopted for the rear window to reduce fog-up.
- On conventional systems, the rear defroster runs for a fixed period of 15 minutes when the "Rear DEF switch" is turned ON. However, rear DEF control automatically adjusts the defroster on-time to a maximum of 240 minutes, depending on the outside temperature. Increased on-time becomes available when the outside temperature falls below 0 and vehicle speed reaches 60 km/h.

Side Register

- A cross-fin side register is adopted.
- A large damper knob is adopted for the side register to enhance operability and maintain unity of design.



V. UTILITY & COMFORT 1. Air Conditioning V-1_2/3

Front Air Outlets and Front Air Volume Ratio



Air flow	A	В	С	D
Vent	Center	Side	Lower	Defroster
Face 🕻	0	0	×	×
B/L 🗱	0	0	0	×
Foot +	×	0	0	0
F/D 👬	×	0	0	0
DEF 🐨	×	0	×	0

O indicates air flow. Its size represents air volume. $\,\times\,$ indicates no air flow. B/L: Bi-level F/D: Foot and defroster

N3F-UC-004

V. UTILITY & COMFORT 1. Air Conditioning V-1__3/3

v. utility & comfort 2. Audio System

FEATURES

- 6-speaker system without audio is adopted.

Ceiling Speakers

- A set of (excite) ceiling speakers are adopted behind the front seats.
- The system adopts NXT® speakers that use the ceiling itself as a diaphragm. These ceiling speakers complement the conventional doors speakers, creating a broad sound dispersion pattern and a listening-room-like acoustic environment.
- Ceiling speakers provide the following benefits:
 - > By propagating sound from the ceiling, a natural acoustic environment with broad sound dispersion is achieved.
 - > By using the ceiling itself as a speaker diaphragm, the NXT® ceiling speakers possess omni-directional performance characteristics that spread sound out evenly across the entire listening environment.
 - > The NXT® ceiling speakers are 52% thinner than conventional speakers. This allows the speakers to be positioned further behind the ceiling panel, eliminating speaker protrusion into the cabin and achieving a flat ceiling profile.

V. UTILITY & COMFORT 2. Audio System V-2_1/4



 $NXT^{\circledast}: NXT^{\circledast}: NXT^{*}$ and SurfaceSoundTM are registered trademarks of New Transducers Limited, United Kingdom. All patent rights reserved.

V. UTILITY & COMFORT 2. Audio System V-2_2/4

Auxiliary Jack

- An auxiliary jack is adopted in the lower center cluster panel to allow portable audio devices to be played through the system's speakers.



N3F-UC-026

V. UTILITY & COMFORT 2. Audio System V-2_3/4

Speaker Layout



N3F-UC-025

Speaker Specifications

Location		Speaker	Size	Input Rating/Max.
1	Front door	Full range	6 X 9 in.	20 W/40 W
2	Instrument panel	Tweeter	6.5 cm	20 W/40 W
3	Headliner	Exciter	-	20 W/40 W

V. UTILITY & COMFORT 2. Audio System V-2_4/4

v. utility & comfort 3. Storage Space

FEATURES

Upper Box

- A covered, upper storage box is adopted for the instrument panel on the driver's side behind the steering wheel. To enhance product appeal, the box is equipped with a push-button opener.



N3F-UC-010

V. UTILITY & COMFORT 3. Storage Space V-3_1/4

Center Console

- The following items are adopted for the center console to enhance operability and product appeal:
 - > Two cup holders -1
 - > Two cup holder inserts : adapters that allow the cup holders to accommodate smaller cups. -2
 - > Console box -3
 - > Removable rubber mat: installed inside the console box, the mat can be used as a partition or as a rear seat cup holder. -4



N3F-UC-030

V. UTILITY & COMFORT 3. Storage Space V-3_2/4

Deck Mat

- Bank raising parts are adopted between the rear seat and deck mat to facilitate loading when the rear seat is folded forward.
- The deck mat is made of TPO (Thermo Plastic Olefin) and has a sloped surface to allow easy cleaning.





V. UTILITY & COMFORT 3. Storage Space V-3_3/4

Door Trim

- The following items are adopted for the door trim to enhance operability and product appeal:
 - > Plastic bottle beverage holder -1
 - > Door pocket -2



V. UTILITY & COMFORT 3. Storage Space V-3_4/4

v. utility & comfort 4. Door Lock System

V-4. Door Lock System

1. Wireless Door Lock

FEATURES

- A key-integrated wireless transmitter is adopted.
- A radio wave certification ID is positioned on the transmitter cover so that it can be seen easily.



V. UTILITY & COMFORT 4. Door Lock System V-4_1/2

V-4. Door Lock System

2. Back Door

FEATURES

An electric back door key cylinder is adopted to help prevent theft. The key cylinder can be used to lock and unlock the door glass hatch.



 Back door lock Grass hatch unlock: To open the glass hatch, turn to lock side and hold the key in the cyclinder for 0.8 second or more.

N3F-UC-015

V. UTILITY & COMFORT 4. Door Lock System V-4_2/2

v. utility & comfort 5. Security

FEATURES

Engine Immobilizer System

- An engine immobilizer system is adopted that prevents the engine from being started without the correct key, helping prevent vehicle theft.
- The engine immobilizer system compares an ID code registered in the key's transponder chip with an ID code registered in the transponder key ECU. If the codes match, the immobilizer is deactivated and a start authorization signal is sent to the engine ECU. Engine start is enabled if the signal is communicated normally.

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V. UTILITY & COMFORT 5. Security V-5_1/1

6. Convenience Equipment

V-6. Convenience Equipment

1. Accessory Meter

FEATURES

- A inclinometer, compass and outside temperature indicator are available for the accessory meter*. Both the inclinometer and compass are analogue, in keeping with the vehicle's rugged spirit.
 - > Compass: a cross coil is used to allow the analogue, directional dial to rotate. -1
 - > Outside temperature indicator: shows the results computed by the A/C ECU. -2
 - > Inclinometer: a float-type tiltmeter is adopted. -3



N3F-UC-016

*Please refer to the Order Guide for detailed specifications.

V. UTILITY & COMFORT 6. Convenience Equipment V-6_1/5

V-6. Convenience Equipment

2. Back Sonar

FEATURES

- The back sonar system uses ultrasonic sensors to detect objects at the rear of the vehicle. An buzzer is used to inform the driver of the position and distance of objects relative to the vehicle.
- The buzzer sounds as follows to indicate that an obstacle has been detected:

Detecting distance	Buzzer OFF	Buzzer ON
0 – 50 cm	0	Continuously
50 – 100 cm	75 msec.	75 msec.
100 – 150 cm	225 msec.	75 msec.

V. UTILITY & COMFORT 6. Convenience Equipment V-6_2/5

V-6. Convenience Equipment

3. Accessory Connector

FEATURES

- A 12V DC accessory socket is adopted on the center lower panel close to the auxiliary jack to provide a convenient power source for portable audio devices.



N3F-UC-017

V. UTILITY & COMFORT 6. Convenience Equipment V-6_3/5

V. UTILITY & COMFORT 6. Convenience Equipment V-6_4/5

V-6. Convenience Equipment

4. Cruise Control System

FEATURES

- A cruise control system is adopted.
- The cruise control system is a speed controlling unit that regulates driving speed automatically without requiring that the accelerator be depressed when driving at a constant speed on a highway or other roadways.

V-6. Convenience Equipment

5. Clock

FEATURES

- Larger characters are used for the clock to reflect the vehicle's rugged spirit.



V. UTILITY & COMFORT 6. Convenience Equipment V-6_5/5

Product Detail

BODY STRUCTURE

1.	High Rigidity Body	VI-1_	_1-2
2.	Rust Resistant Body	VI-2_	_1
3.	Low Noise & Low Vibration Measures	VI-3_	_1-3
4.	Other Features	VI-4_	_1-2

New

vi. BODY STRUCTURE **1. High Rigidity Body**

FEATURES

- A light, highly rigid body structure is achieved by adopting high tensile steel sheets.



- Excellent driving stability is achieved by adopting a front suspension member bracket that attaches to the frame No.3 cross member. -1
- Along with the adoption of a thick steel plate for the side rail, the adoption of rear inner channel reinforcement to the rear portion achieves a highly rigid frame. -2
- The effectiveness of the shock absorbers is enhanced by positioning the installation point of the rear shock absorber mounting bracket farther toward the exterior of the side rail. -3



VI. BODY STRUCTURE 2. Rust-resistant Body

FEATURES

- Rust-resistant steel panels are adopted for the following parts:

No.	Portion	No.	Portion
1	Hood outer, inner	6	Wheel house outer, inner
2	Cowl inner, cowl reinforcement	7	Roof panel
3	Fender panel	8	Front door outer, inner
4	Side member outer	9	Access door outer, inner
5	Pillar reinforcement under part,	10	Back door outer, inner
,	rocker reinforcement		

- BH (Bake Hardening) steel panels are adopted for the following parts:

No.	Portion
1	Hood outer
3	Fender panel
8	Front door outer



3. Low Noise & Low Vibration Measures

FEATURES

- Wind noise is reduced by adopting the following items:
 - > (1) Foam materials
 - > (2) 2-layer side door seal
 - > (3) Fender side protector
 - > (4) Windshield flash mount molding





- A shock and sound absorbing tibia pad (floor pad) is adopted for the front passenger's side.



- Noise reduction is achieved by adopting the following items:
 - > 1: A 10mm-thick felt is adopted for the inner cowl side trim.
 - > 2: A 10mm-thick felt is adopted for the front door trim, rear door trim and deck side trim. A lower seal is adopted for the front door.
 - > 3: EPT SEALER™ (foamed rubber seal) is adopted around the entire quarter glass.
 - > Urethane base materials are used as sound absorbing material on the cabin headliner. In addition, 40mm-thick felt is adopted for the back surface of the headliner.





- Thick, sound damping sheets are adopted for the suspension arm supports to enhance rigidity and provide a quieter ride.

VI. BODY STRUCTURE 4. Other Features

FEATURES

- A rugged feel is achieved by designing body gaps of each section as follows:



1	Hood - Fender	5.5 mm
2	Fender - Front door	5.5 mm
3	Front door - Rear door	5 mm
4	Rear door - Quarter panel	6 mm
5	Roof rail portion	5.7 mm
6	B-pillar frame portion	6 mm
7	Back door - Quarter panel	6.5 mm
8	Back door - Roof	9.5 mm



- Exterior parts below are adopted to express a uniqueness of design.

N3F-BO-010

No.	Part name	Material	Color
1	Hood bulge	Resin (ABS ^{*1})	Body color
2	Cowl louver	Steel plate	Body color
3	Window upper molding	Steel plate	White
4	Front pillar upper garnish	Steel plate	Body color
5	Front pillar lower garnish	Steel plate	Body color
6	Front over fender	Resin (TSOP* ²)	Black
7	Rocker molding	Resin (TSOP* ²)	Black
8	Front door cladding	Resin (TSOP* ²)	Black
9	Rear door cladding	Resin (TSOP* ²)	Black
10	Rear over fender	Resin (TSOP* ²)	Black
11	Roof side molding	Resin (PVC* ³)	White*/Body color*

*¹: Acrylonitrile Butadiene Styrene copolymer

*²: Toyota Super Olefin Polymer

*³: Polyvinyl chloride

*Please refer to the Order Guide for detailed specifications.



1.	Active SafetyVII-11-4
	1. Brake Mechanism
	2. Brake Control System
2.	Passive SafetyVII-2_1-11
	1. Impact Absorbing
	2. Seatbelts

3. SRS Airbags

New

VII. SAFETY

VII. SAFETY 1. Active Safety

VII-1. Active Safety

1. Brake Mechanism

FEATURES

Front Brake

- 16-inch disc brakes are adopted for the front brakes.
- Opposed type 4-piston brake calipers are adopted.
- 16-inch ventilated disc rotors are adopted for effective heat dissipation.



VII. SAFETY 1. Active Safety VII-1_1/4

Rear Brake

- 15-inch disc brakes are adopted for the rear brakes.
- 15-inch ventilated disc rotors are adopted.



Parking Brake

- A 210mm-diameter duo-servo type parking brake is adopted.
- An offset type parking brake lever is adopted that achieves a combination of optimal operability and console space.

VII. SAFETY 1. Active Safety VII-1_2/4

VII-1. Active Safety 2. Brake Control System

FEATURES

 ABS (Anti-lock Brake System) with EBD (Electronic Brake Force Distribution), Brake Assist, VSC (Vehicle Stability Control), TRC (Traction Control) and A-TRAC (Active TRAction Control)* are available.

X: Stan	dard OP: Optional
ABS with EBD, Brake assist	х
VSC	Х
TRC	Х
A-TRAC*	OP*1

1: Only for the models with a rear differential lock system

ABS with EBD

 The ABS with EBD consists of: an ABS which prevents the wheels from being locked when braking, and the EBD which distributes braking force to the front/rear wheels in accordance with vehicle conditions. The EBD allows for reduction in braking force when the vehicle is loaded and helps ensure excellent braking performance.

Brake Assist

- If the brake pedal is suddenly depressed while driving at high speed, Brake Assist helps the driver with braking by generating a larger braking force.

vsc

- The VSC system helps ensure stability by automatically adjusting engine output and the braking force of each wheel when the vehicle experiences oversteers or understeers during cornering.

TRC

- The TRC system supports the stability of the vehicle by controlling wheel spin when starting or accelerating on slippery roads, as well as maintaining appropriate driving force during straight-line acceleration.

*Please refer to the Order Guide for detailed specifications.

VII. SAFETY 1. Active Safety VII-1___3/4

A-TRAC

- The A-TRAC system* helps ensure excellent LSD (Limited Slip Differential) functionality by controlling brake pressure to slipping wheels when running off road in the 4WD mode. This allows the drive force that would have been lost due to acceleration slip to be distributed among the vehicle's four wheels. The LSD function allows for off road traction performance, enhanced escape performance in mud, and acceleration on split road surfaces which have a low coefficient of friction on one side of either or both of front and rear drive wheels.

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Deleted:

- When the transfer L4 mode is selected, operate A-TRAC by pressing the switch. Except for the transfer L4 mode, TRC control operates normally.



Hydraulic Brake Booster

- A hydraulic brake booster is adopted. This is the unit of the brake booster function, master cylinder function, the skid control ECU and actuators. The skid control ECU and actuators control VSC, A-TRAC, ABS with EBD, and brake assist control.

*Please refer to the Order Guide for detailed specifications.

VII. SAFETY 1. Active Safety VII-1_4/4

vil. safety 2. Passive Safety

VII-2. Passive Safety

1. Impact Absorbing

FEATURES

Body

- By optimizing the positioning of the reinforcements below, rigidity is achieved through the joining of each frame member.
 - > 1: An inner reinforcement is adopted at the corner to provide strength at the A pillar.
 - > 2: An outer rail reinforcement is adopted between the A and C pillars.
 - > 3: The inner panel is lengthen to the lower end of the rocker and they are joined by plates.
 - > 4: The cross-section of the rocker is optimized.
 - > 5: The reinforcement of the C pillar extends to the rocker cross-section.
 - > 6: A reinforcement is adopted for mounting of the rear seatbelt
 - > 7: An extension that joins the roof reinforcement and side member is adopted.

VII. SAFETY 2. Passive Safety VII-2_1/11


VII. SAFETY 2. Passive Safety VII-2_2/11

Frame

- The cab mounting No. 2 bracket is enlarged to allow the tires to make contact as well as disperse energy from impact in the event of a collision.
- A front inner channel reinforcement is adopted in the side rail inner front channel to allow the side rail to deform in a controlled manner.
- A frame auxiliary cross member is adopted for the front portion of the side rail to protect the radiator in the event of a collision.



VII. SAFETY 2. Passive Safety VII-2_3/11

- A deformable, vertical-frame hood is adopted to help reduce injury to pedestrians in the event of a collision.



- An energy-absorbing bracket is adopted for the fender in order to help reduce impact in the event of a pedestrian collision.



VII. SAFETY 2. Passive Safety VII-2_4/11

- A resin cowl louver is adopted to absorb impact energy and also help reduce potential head injuries to pedestrians in the event of a collision.



N3F-SA-018

VII. SAFETY 2. Passive Safety VII-2_5/11

Head Impact Protection Structure

- A lattice-shaped energy absorbing material made of resin is available for the roof side rail. In addition, aluminum energy absorbing materials are available in the upper parts of the rear door and center pillar for vehicles with curtain shield airbags*.



*Please refer to the Order Guide for detailed specifications.

VII. SAFETY 2. Passive Safety VII-2_6/11

VII-2. Passive Safety

2. Seatbelts

FEATURES

Front Seatbelt

- An adjustable anchor and a 3-point type ELR (Emergency Locking Retractor) seatbelt is adopted for both the driver's and passenger's seats to ensure occupant restraint performance. (The passenger's seatbelt also includes an ALR (Automatic Locking Retractor) function.) In addition, a high-power pretensioner and a force limiter are installed for both the driver's and passenger's seatbelts in consideration of initial restraint and chest region impact.
- An adjustable shoulder anchor in the garnish is installed for the driver and passenger, and a driver's side seatbelt tension reducer is adopted for comfort when fastening seatbelts.
- A non-contact type switch in the seatbelt inner buckle is adopted for the advanced air bag. (driver seat only)

VII. SAFETY 2. Passive Safety VII-2_7/11

Rear Seatbelt

- A 3-point type ELR/ALR seatbelt is adopted for all of the rear seats to ensure passenger restraint performance. The center seatbelt is built into the seat.
- The belt buckles are designed to be stored in a pocket in the seat to allow for the rear seat double folding function.



N3F-SA-007

VII. SAFETY 2. Passive Safety VII-2_8/11

VII-2. Passive Safety

3. SRS Airbags

FEATURES

SRS Front Airbags

- SRS (Supplemental Restraint System) dual-stage front airbags are adopted for the driver and front passenger seats.
- SRS front airbag is provided as a supplement to the seatbelt in order to help protect the head and chest of the driver and front passenger in the unlikely event of a frontal collision.

SRS Side and Curtain Shield Airbags

- SRS side airbags* and SRS curtain shield airbags* are available.
- When a side collision is detected, the SRS curtain shield airbag deploys to cover the area around the front and rear side windows. The SRS curtain shield airbag reduces the force of impact to the head area in the event of a collision.

*Please refer to the Order Guide for detailed specifications.

VII. SAFETY 2. Passive Safety VII-2_9/11



VII. SAFETY 2. Passive Safety VII-2_10/11



VII. SAFETY 2. Passive Safety VII-2_11/11



- 1. Environmental Consciousness......VIII-1_1-3
 - 1. Reduction of Global Warming Substance
 - 2. Recycle

VIII. ENVIRONMENT

1. Environmental Consciousness

VIII-1. Environmental Consciousness

1. Reduction of Global Warming Substance

FEATURES

Air Conditioning System

- An environmentally friendly chrome-free substrate treatment is adopted for the evaporator.
- Lead pollution is minimized by using aluminum in the heater core materials.
- The use of 100% polyester materials in the clean air filter facilitates easy waste disposal and is environmentally friendly.

VIII-1. Environmental Consciousness

2. Recycle

FEATURES

- TSOP (TOYOTA Super Olefin Polymer) or TPO (TOYOTA Plastic Olefin), materials with excellent recyclability, are adopted throughout the interior and exterior.



N3F-EN-001









1. SpecificationsIX-1_1-2

GSJ1	15L-	GKA	SKY
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GSJ15L-GKFSKY

	Length	mm	4670	4670
Overall	Width	mm	1905	1905
	Height*1	mm	1830	1830
Wheel Base		mm	2690	2690
Trood	Front	mm	1605	1605
Treau	Rear	mm	1605	1605
Effective	Front	mm	1050	1050
Head Room	Rear	mm	1025	1025
Effective	Front	mm	1065	1065
Leg Room	Rear	mm	795	795
Shoulder	Front	mm	1484	1484
Room	Rear	mm	1370	1370
Overbang	Front	mm	865	865
Overnang	Rear	mm	1115	1115
Min. Running Groun	nd Clearance	mm	245	245
Angle of Approach		degrees	34	34
Angle of Departure		degrees	31	31
	Front	kg	1052	1052
Curve Weight	Rear	kg	896	894
	Total	kg	1948	1946
Gross Axle Weight	Front	kg	1180	1180
Rating	Rear	kg	1380	1380
Gross Vehicle Weig	ht Rating	kg	2525	2525
	Capacity	m³	0.99	0.99
Cargo Space	Cargo floor to ground	mm	754	754
	Cargo Height	mm	1010, min. 998 - max. 1021	1010, min. 998 - max. 1021
	Cargo Length	mm	796, min. 646 - max. 947	796, min. 646 - max. 947
	Cargo Width	mm	1229, min. 1087 - max. 1370	1229, min. 1087 - max. 1370
Fuel Tank Capacity		L	72	72

Major Dimensions & Vehicle Weights

*1: Unladen Vehicle

Performance

Max. Speed		km/h	175	175
Max. Cruising Speed	t	km/h	140	140
Acceleration	0 to 60 mph	sec.	7.9	8.1
	0 to 400 m	sec.	16.4	16.2
	1st Gear	km/h	Hi: 58/Lo: 22	IX. SPECIFICATIONS IX 1/4

			GSJ15L-GKASKY	GSJ15L-GKFSKY
Max. Permissible Speed	2nd Gear	km/h	Hi: 101/Lo: 38	Hi: 93/Lo: 35
	3rd Gear	km/h	Hi: 148/Lo: 56	Hi: 138/Lo: 53
	4th Gear	km/h	Hi: 175/Lo: 80	Hi: 172/Lo: 66
	5th Gear	km/h	Hi: 175/Lo: 110	Hi: 175/Lo: 80
	6th Gear	km/h	-	Hi: 175/Lo: 100
Turning Diameter (Outside Front)	Wall to Wall	m	12.7	12.7
	Curb to Curb	m	12.4	12.4

GSJ15L-GKASKY

GSJ15L-GKFSKY

Engine

Engine Type		1GR-FE	1GR-FE
No. of Cyls. & Arrangement		6-Cylinders, V-type	6-Cylinders, V-type
Valve Mechanism		24-valve DOHC with VVT-i	24-valve DOHC with VVT-i
Bore x Stroke	mm	94.0 x 95.0	94.0 x 95.0
Displacement	cm ³	3956	3956
Compression Ratio		10.0 : 1	10.0 : 1
Fuel System		EFI	EFI
Reserch Octane No.	RON	95 or Higher	95 or Higher
Max. Output (EEC)	kW/ rpm	179/5200	179/5200
Max. Torque (EEC)	Nm / rpm	376/3800	376/3800

Engine Electrical

Battery Capacity (5HR)	Voltage & Amp.hr.	12 - 64	12 - 864
Alternator Output	Watts	1200	1200
Starter Output	kW	2.0	2.0

Chassis

Transmission Type		A750F (AT)	RA61F (MT)	
	1st		3.520	4.171
	2nd		2.042	2.190
	3rd		1.400	1.488
Transmission Gear Ratio	4th		1.000	1.193
	5th		0.716	1.000
	6th		-	0.799
	Reverse		3.224	3.607
Transfer Gear Ratio H4/L4		H4/L4	1.000/2.566	1.000/2.566
Differential Gear Ratio (Front / Rear)		3.727/3.727	3.909/3.909	
Differential Ring Gear Size (Front / Rear) in.		8"/8"	8"/8"	
Front			Ventilated Disc	Ventilated Disc
Блаке туре	Rear		Ventilated Disc	Ventilated Disc
Suspension Type	Front		Double Wishbone	Double Wishbone
	Rear		4-Link with Lateral Rod	4-Link with Lateral Rod
Stabilizer Bar (Front/Rear)		Standard/Standard	Standard/Standard	
Steering Gear Type		Rack & Pinion	Rack & Pinion	
Steering Gear Ratio		17.2	17.2	

IX. SPECIFICATIONS IX__3/4

	GSJ15L-GKASKY	GSJ15L-GKFSKY
Lock to Lock	3.0	3.0
Power Steering Type	Hydraulic Type	Hydraulic Type