CONFIDENTIAL

FORTUNER

PMG -Product Marketing Guide-

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TOYOTA MOTOR CORPORATION
Global Marketing Division

Revision Record

Changed in Product Detail 2nd Edition from 1st Edition

		(*1)	(*2) Revised		(*3)	
		New	Copy	Visual	Deleted	Page
III. INTERIOR						
1. Interior Design	2. Interior Design	X				III-1__2-5
V. UTILITY & COMFORT						
2. Audio System		X				V-2__1-2
IX. SPECIFICATIONS						
1. Specifications		X				IX-1__1-4

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*3 : “X” mark indicates when information is no longer valid and needs to be deleted.

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IV. DRIVING PERFORMANCE

V. UTILITY & COMFORT

VI. BODY STRUCTURE

VII. SAFETY

VIII. ENVIRONMENT

IX. SPECIFICATIONS

Model Code

KUN51 L - I K M S Y
1 2 3 4 5 6 7

1 BASIC MODEL CODE

CODE	DRIVE TYPE	ENGINE TYPE	WHEEL-BASE
KUN51	4WD	1KD-FTV	Short
GGN50		1GR-FE	

2 STEERING WHEEL POSITION

L: Left-Hand Drive

3 CAB TYPE

I: SUV Wagon (Thailand made for General export)

4 DECK TYPE

K: 5-Door

5 GEAR SHIFT TYPE

M: 5-Speed Manual, Floor
A: 5-Speed Automatic, Floor
P: 4-Speed Automatic, Floor

6 GRADE

S: SR

7 ENGINE SPECIFICATION

K: Compact DOHC and EFI
Y: Common-Rail Diesel

Development Concept

Message from the Chief Engineer

The below message is the inside story from the development stage. Specific information referred to may not be relative to your market.

Nov. 30, 2006

IMV project, maintaining quality and achieving an attractive vehicle price.

Everything was a new challenge.
For this development project, we developed as many common components as possible, beginning with the platform and going on through the engine, suspension, and other components. Our aim was to hold production costs to the minimum, while achieving the highest possible quality. In addition, this was our first attempt at multinational production and procurement of various components in the same countries that produce the vehicles. We had no experience, and everything was a new challenge. We pushed the development process ahead by holding meetings with technical staff in the producing countries and achieving consensus on the processes involved.

We concentrated on multinational production of consistent quality.
Even if we developed the best car possible for our normal production technologies, it would mean nothing if it could not be produced abroad. So what level of production technology could we count on? The vehicle was to be produced in several countries, and we had to use technology that would fit the greatest common denominator. To achieve that, engineering, production, and procurement departments cooperated to thoroughly discuss everything in order to ensure top quality in all manufacturing countries. Then, after the mechanical drawings were produced, engineers conferred with production personnel from each country to identify potential problems in production and solve them before the fact.

The first task we faced was finding components that cleared Toyota standards.
We had to identify where components meeting Toyota quality could be procured, and how. The problems piled higher and higher, so we formed a project team of development engineers and suppliers from many countries around Asia. They chose the appropriate time and place, including Japan, to meet, go over the mechanical drawings, and discuss parts specifications and their procurement. We devoted many more hours than usual to these meetings. Sometimes we would accept proposals by local suppliers for particular components, and we'd feed those specifications back to the development engineering process, where the design would be changed as necessary.

Exchanging of ideas and establishing consensus were key to this project.
During the development process, we sometimes wondered how far we were going, and it felt like we were making a trip in the dark where we had to feel our way blindly forward. But after many meetings and lots of idea exchanges, we were able to achieve consensus, and everyone involved came to the same mind-set. From that experience, we learned that simultaneous engineering can only succeed when numerous meetings are held with people in the producing countries.

Developing an SUV to be the flagship in the lineup.

The first attempt to create an SUV based on a pickup
The project was new in many ways – from developing the vehicle to producing and selling it in several countries. Of course, the product development was challenging. Developing an SUV and a pickup truck simultaneously was a first for TOYOTA, although development of the full size Tundra and Sequoia for USA truck market was a similar case. Speeding up development was another challenge.

Even though we say we were developing an SUV from the pickup lineup, there were still many things that had to be developed strictly from the SUV standpoint, making it difficult to shorten the production period. Fortunately, when we were developing the new models for the pickup lineup, we already knew we were going to develop an SUV; so many parts of the pickups were designed with the SUV in mind. Actually, the advanced styling of the pickup comes directly from the fact that it was designed as the basis of an SUV. With this plan, we started three months late yet still aimed for an almost simultaneous launch. The development program, even with its short lead time, still resulted in an SUV with its own special identity.

We aimed for an SUV that would open up new markets, and we made no compromises.
The SUV we developed will be introduced to markets where the SUV category is not yet firmly established, or to markets where the competition sells no 4WD SUVs. But even in these markets, consumers already have the latest information on advanced SUVs in other markets. Our aim was to build a “real SUV” with chassis frame and sufficient road clearance for it to be driven over any kind of terrain anywhere in the world.

For example, in Thailand, there’s a high-quality remodeled SUV called Sports Rider. So when thinking of new SUV markets to tap, you can’t afford to ignore the people who want that sports truck. So the people developing the new SUV model lineup decided not to use the standard logic of “if we develop this, people will buy” to meet market needs. Instead, they aimed to set the new SUV as a flagship model that would lead the series including both pickups and minivans, even while forced to cut costs at every turn. In other words, we concentrated on creating an SUV that stands at the cutting edge in terms of both technology and design.

We started with a shape that matched the trends.
Although we said we would design a pickup with conversion to SUV in mind, it still wasn’t a simple matter to create the exterior shape for the SUV. This was because, in order to present an advanced shape with sporty and tough appearance, we had to pay attention to passenger car trends, which meant moving the cab forward and creating a flowing “one-motion” shape. And, sometimes, that can be at odds with a pickup’s load-carrying personality. In the end, there was a limit to express an advanced design of SUV using the pickup’s package. But our objective was an advanced shape, so the development staff concentrated on creating a design that looks like it was made for the new SUV from the ground up, is obviously part of overall lineup, yet pursues SUV individuality.

Once you see the SUV, you’ll understand. No longer does the SUV look like something developed from another model. In reality, it was developed from the pickup, but it looks and feels entirely different, with a distinctive silhouette. In fact, many people may think “They’ve made a pickup out of that SUV,” instead of the other way round.

Inside, we focused on quality and comfort.
If we were to achieve the sense of quality and luxury we aimed for, we knew that whoever opened a door must be hit by the SUV-ness of the interior and by the luxury of its appointments. To achieve that, we made the instrument panel, which holds over from the pickup, into a chic, two-toned item, fitted sports seats in front and seats fit for luxurious passenger cars in the rear. This gave the vehicle plenty of SUV-ness and the instant recognition of luxury.

Our focus on comfort meant the vehicle had to feel open and airy. In particular, we made sure there was more than ample headroom. Take the headliner for example. The designers did their best to create a roomier cabin by "millimeter" level study. As a result, the headliner looks like it flows from front to rear in one continuous motion and, it allows a great deal of room around the head.

Our focus on livability was partly realized with the installation of a third row of seats. Even though it is not normally used, the third seats are there when the owner needs it, and it's a big selling point for mid-size SUVs. And assuming that it will carry a full passenger load as minivans, these seats are made to hold adults in comfort.

A 4WD SUV must perform off the road as well as on.
An SUV is driven mainly on surfaced roads and it should have suspension tuned to that requirement. A 4WD is driven off road a great deal, and it must have suspension for that kind of operation. A 4WD SUV is all of the above, as inconsistent as that may seem. So we had to find the suspension settings that would offer both superb on-road and superior off-road driving.

This time, we developed front suspension that would commonly be used in the pickup and SUV. But in the rear, we use a 4-link coil-spring type suspension with finely tuned shock absorbers and suspension strokes. Therefore, we were able to achieve comfortable on-road performance while boosting off-road capabilities. Of course, during the process of suspension tuning, we made utmost use of the rough surfaces at TMC's proving ground, and we also conducted tests on roads peculiar to certain countries. The test in South Africa was one of this.

We focused on low NVH appropriate for an SUV.
The levels of noise and vibration allowed in SUVs are different from those allowed in pickups. But in this case, both use the same engine and platform, so there is a limit to what can be done to help dampen vibration and noise. Nevertheless, the development team accepted the challenge of reducing them.

The team delved into our storehouse of data and know-how on noise and vibration where they studied data on causes and effective solutions that had been accumulated over the decades of developing Hilux pickups and other trucks with chassis frame, including the Land Cruiser series and the Hilux 4Runner. Measures used included optimizing the cab mount bushing and floor rigidity to achieve the ideal result.

We focused on creating a superior crash-absorbing body.
Double-cab pickups are marketed in both Europe and Australia, with their crash-absorbing bodies developed looking ahead NCAP standards in those markets.
Since this SUV has as a base a pickup derived from those double-cab pickups, we have attempted to create a vehicle that will achieve top-level performance for crash energy absorption.

We created the finest possible SUV from this new series of pickups and minivans. Furthermore, this SUV was developed aiming at a market to come for this type of vehicle or a fledgling market, it has yet to be firmly established. We developed this SUV in these conditions. This SUV is fun to drive, and it will fill the purpose of creating a completely new market. That's why we put much more passion and effort to making its quality right as an SUV than to executing myriad cost-cutting measures. We've created the most luxurious kind of vehicle in the lineup. So please make the most of the enjoyment an owner can get driving an SUV, make that appeal, and create yourself a lucrative new market.

Kaoru Hosokawa
Executive Chief Engineer

Hiroyuki Hirata
Chief Engineer
Toyota Development Center I
Product Development Group

Origin of the Name

The SUV we developed will be marketed under the name of “Fortuner.” We coined the name based on the word “fortunate,” which means to have good fortune. We feel the name fits perfectly the objective of “making it possible to own the SUV you’ve always wanted.” And we feel it is a name that will attract the main target audiences - the well-to-do and the trendsetters. We also feel that the word Fortuner has an image that is strong yet buoyant and, thus, it crosses borders very well being accepted by people in the world.

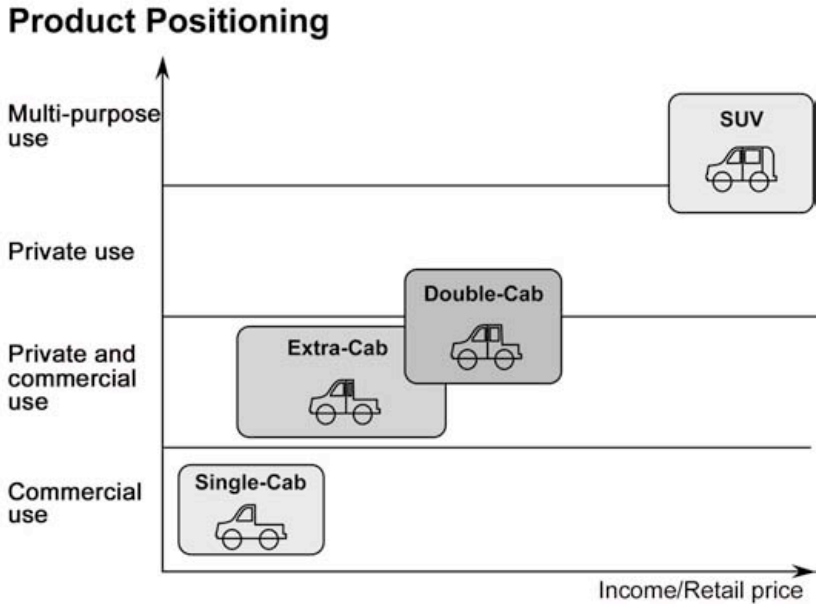
Product Concept

The below message is the inside story from the development stage. Specific information referred to may not be relative to your market.

We developed this new SUV to offer the fun and enjoyment of driving. To achieve that purpose, styling was emphasized, of course, along with a package that gives a comfortable ride and superior performance. At the same time, we used as many components from the pickups as possible, in order to develop a reasonably priced SUV. The development objective was an urban SUV for personal use that offers the basic performance and comfort of a 4WD. With this in mind, our target audiences are young couples, active families, children from affluent families, trendsetters, and people who are after the modified sports pickup Hilux. At the same time, our SUV will offer the same stylishness and muscularity as popular passenger car-based SUVs.

Sales Points

- Stylish, modern exterior design.
- Stable, dependable performance, on and off the road.
- Multi usability with three rows of seats.
- Full of advanced features.



B2F-DC-007

Product Overview

Packaging
- Sleek cabin on a high-lift frame.
- Engine far forward for spacious interior.
- Roomy driving position with good visibility can accommodate drivers up to 190 cm tall.
- Nimble handling due to small minimum turning radius.
- Ample room inside, thanks to ideal couple distance.
- Low floor and optimal hip point contribute to ease of entry and exit.

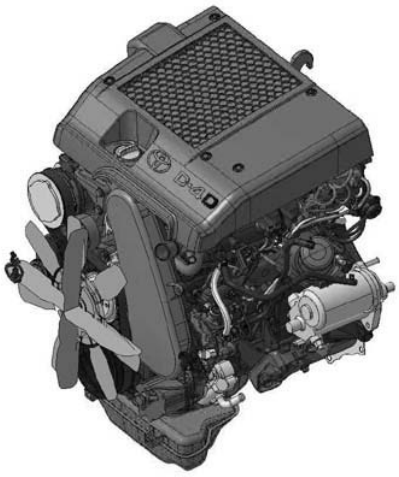
Exterior
- One focus was creating an advanced design that brings out sportiness and muscularity.
- Another focus was on beautiful proportions by moving the cab forward and creating a one-motion flowing shape.
- Pinching the body toward the front end makes the wheels look more muscular.
- Blister fenders and large tires enhance muscularity.
- Sloping the quarter pillars toward the rear makes the design look flowing and flamboyant.
- Hidden rear pillars with a wraparound back window emphasize muscularity and strength as well as making the whole rear end look wider.
- The slanted front grille and bumper with inset fog lamps enhance the sporty, muscular appearance.
- Black side steps make the side view look lean and sinewy.
- Richly metallic colors emphasizing the strong body shape and clean and impressive colors adding to an advanced sporty image are available.

Interior
- The interior is designed to look luxurious and spacious as an SUV the moment the door is opened.
- Two-tone instrument panel, one dark color and one light color, emphasizes the sense of luxury.
- The focus of the interior design was to create functionality, muscularity, an airy open feeling, passenger car luxury, and individual personality.
- Outlining on the instrument panel creates a design with unitized presence.
- Speedometer, tachometer, coolant temperature gauge and fuel gauge are round, independent dials reminiscent of a cockpit.
- The smooth one-motion flow of the headliner surface from front to back enhances the feeling of space.
- In the front are sports seats, and in the rear use seats comparable to passenger car seats.

Versatile seat arrangement
- The 60:40 split 2nd row seats have a tumble function to help ease 3rd-seat entry and exit.
- The 2nd row seats' slide function gives more leg space to 3rd row passengers.
- The 50:50 split 3rd row seats can be folded away to side to create more cargo space.
- The 3rd seats with space-up function allow adults to sit in comfort.

Driving Performance
- Full-time 4WD means excellent driving performance with no hesitation whether on- or off-road.
- Two types of engines are available: gasoline and diesel.
- The 4.0-liter 1GR-FE gasoline engine incorporates advanced VVT-i (Variable Valve Timing-intelligent) technology.
- The 3.0-liter 1KD-FTV diesel engine has a turbocharger with intercooler.
- Both engines ensure excellent acceleration and smooth response from start-up through the mid-to-high speed ranges.
- Both gasoline and diesel engines offer top-level fuel economy in its class.
- Three types of transmissions are available for the power units: 5-speed manual, and 4-speed and 5-speed automatic.
- Front double-wishbone and rear 4-link coil-spring suspensions mean excellent off road capability and comfort.

1GR-FE
B1H-DP-101 [D1AE]



1KD-FTV
B3H-DC-004 [D1AH/D1AM]

Utility & Comfort
- We aimed for top-level NVH characteristics in its class and achieved superior comfort.
- The front seats are specially designed for comfort.
- The enhanced floor rigidity and eight-point bushings supporting the body contribute to reduced vibration and noise.
- Optitron meters, a multi-information display, an in-dash CD changer and other advanced equipment are available.

Body Structure
- The newly engineered frame structure enhances rigidity.
- The lighter, more rigid body helps reduce vibration and noise, and enhances riding comfort.

Safety
- SRS (Supplemental Restraint System) airbags for the driver's and front passenger's seats.
- New ABS (Anti-lock Brake System)

Environment

- Plastic used for instrument panel, door trim, and other components is mostly of easily recycled polymers.
- Plastic components are notched for easy removal without having to loosen bolts.
- Plastic components' notches are marked so that they can be recognized at a glance.
- By adhering to European environmental standards with all cars in every country, Toyota contributes to protection of the environment.

Product Detail

I

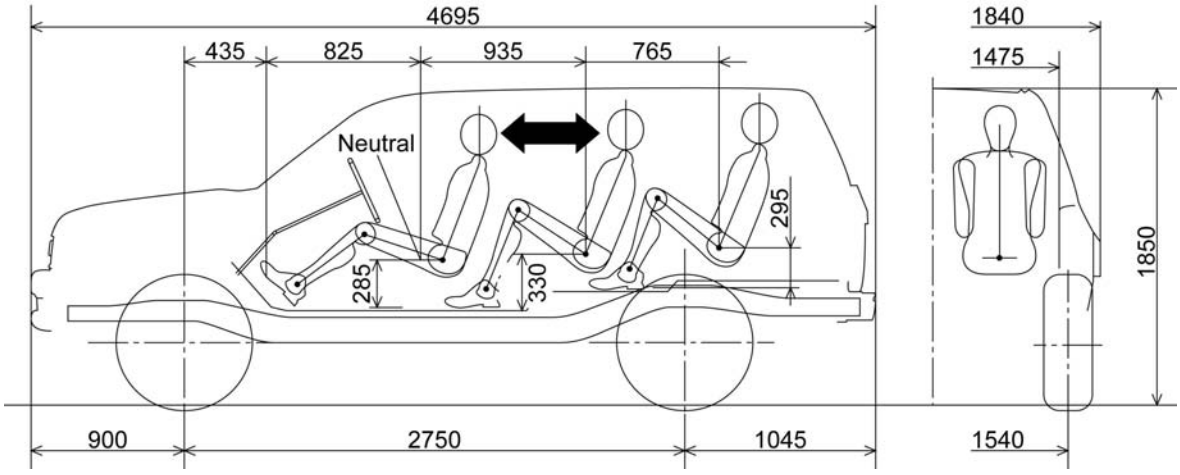
PACKAGING

I. PACKAGING

1. Packaging

FEATURES

- Comfortable passenger roominess in the rear No.2 and No.3 seats is secured.



B3F-PA-002

Product Detail

II

EXTERIOR

II. EXTERIOR

1. Exterior Design

II-1. Exterior Design

1. Aim of Exterior Design

FROM TMC

Powerful + Luxurious + Sporty

- A new advanced exterior design has been adopted to evoke a powerful and solid image, combined with the elegance and sportiness of a full-fledged SUV.

FEATURES

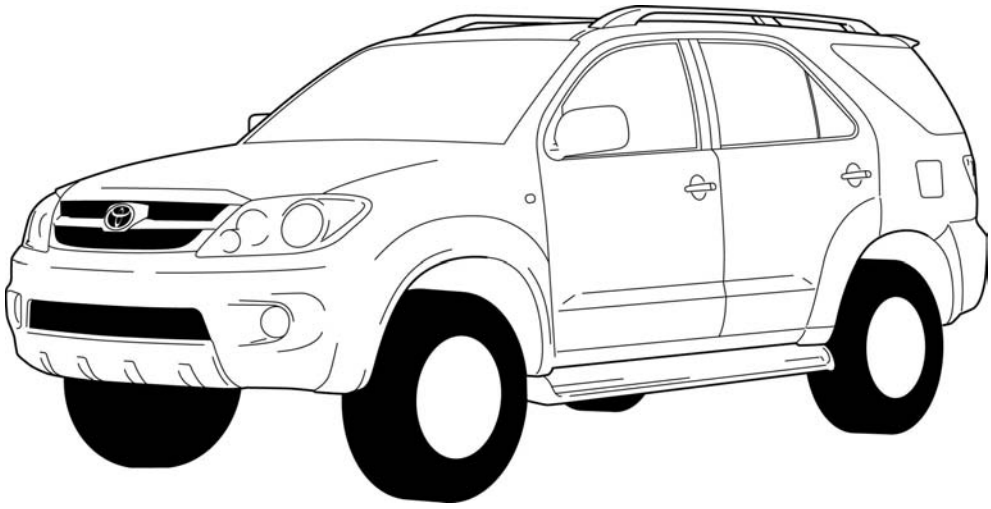
- The dyanamism of a full-fledged SUV and sophisticated flexibility in both city and resort driving are combined to creat a new style of genre.
- Appealing to the highest level of quality in the IMV series.

II-1. Exterior Design

2. Front Design

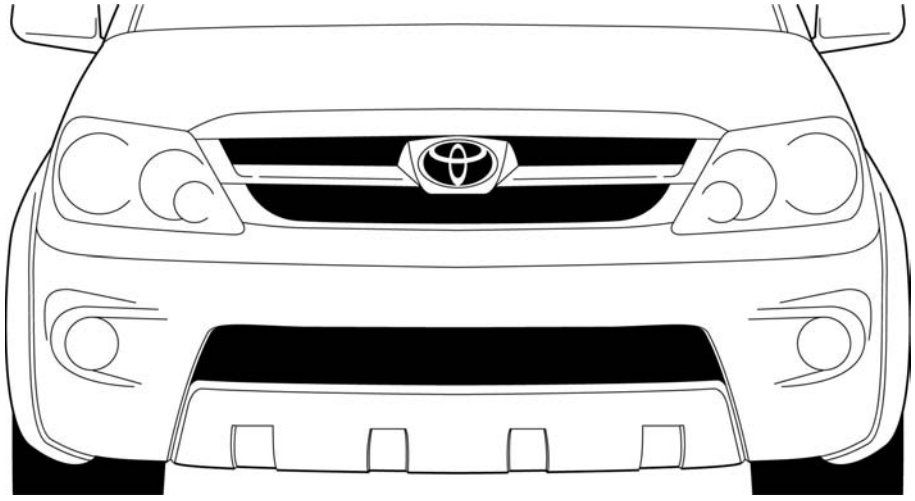
FEATURES

- A slanted front design is used to evoke dynamism.



B3F-EX-012

- The low-ride front design with a bumper extending to the sides helps highlight the vehicle's SUV-ness. A round 4-bulb headlamp and a distinctive radiator grille have been adopted to evoke a sporty and exquisite image.
- The headlamps with plane glass and an extension help enhance the luxurious feel of the front design.



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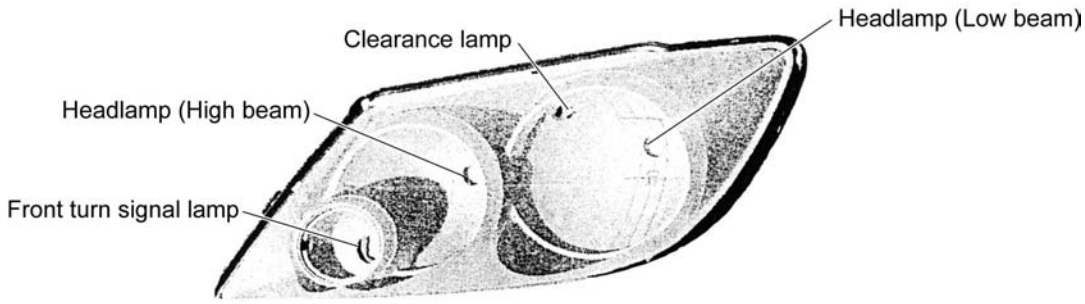
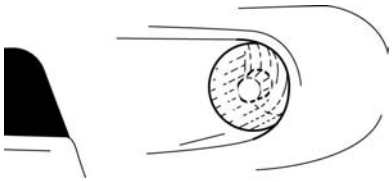


Front combination lamp

B3F-EX-017



Front fog lamp

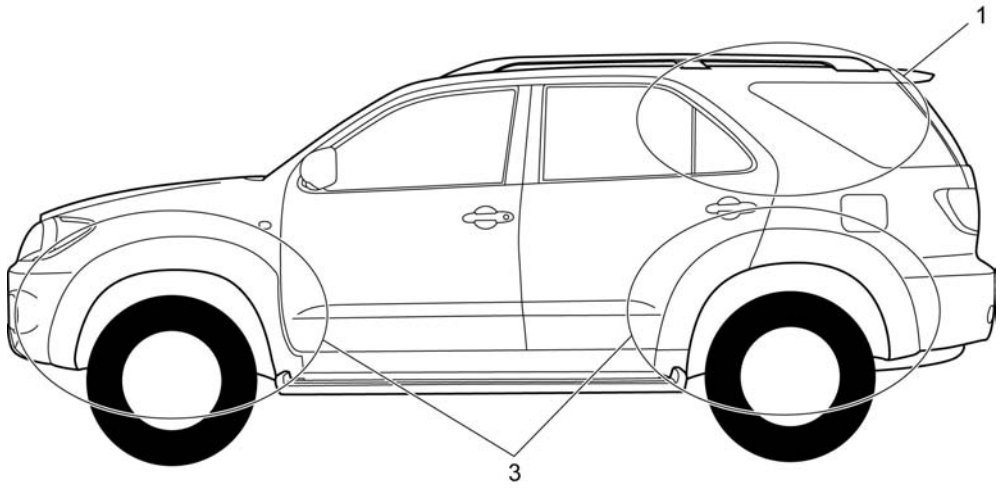
B3F-EX-018

II-1. Exterior Design

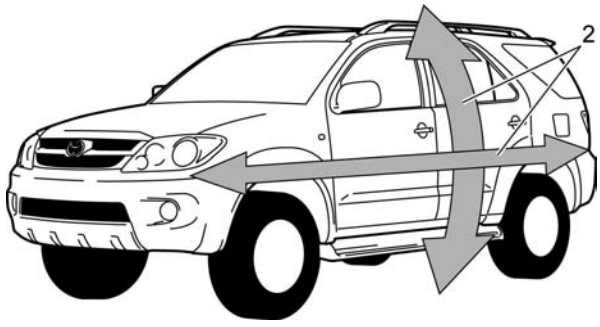
3. Side Design

FEATURES

- A slanted C-pillar is adopted to create a sporty and express forward motion image.-1
- Simple, but firm cylindrical profile, together with a clean horizontal torso from front to rear, conveys a strong, modern image.-2
- Concave-surfaced wheel flares provide a simple yet invigorating.-3



B3F-EX-001



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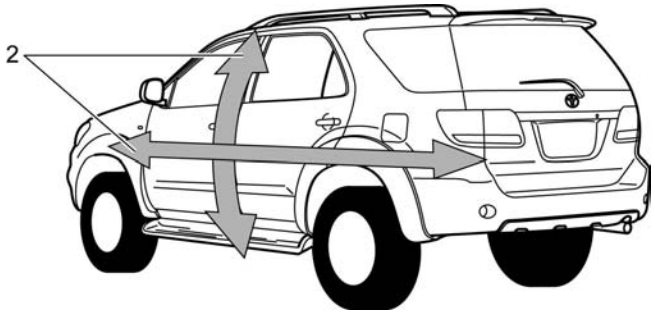
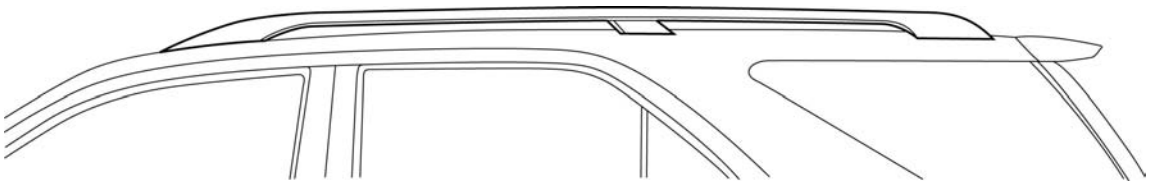


B3F-EX-007

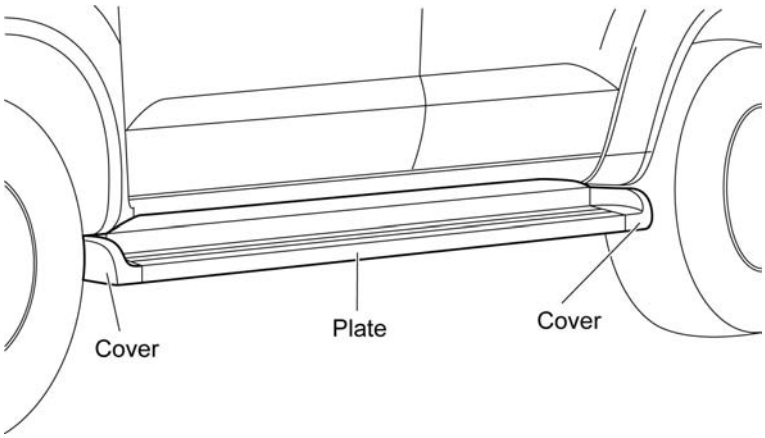
- A roof rail that provides a unitized feel with the body has been adopted.



Roof rail

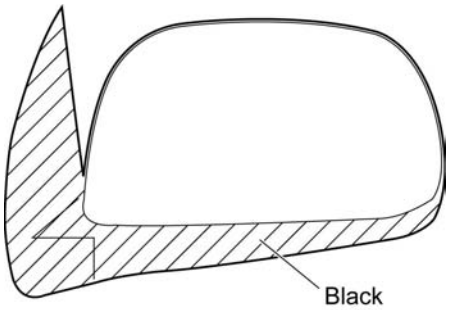
B3F-EX-010

- The newly adopted side step with a black plate creates a sharp image.



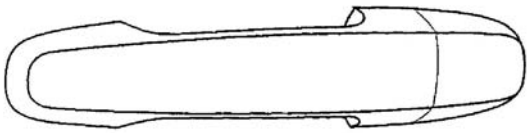
Side step

B3F-EX-011



Outer mirror (chrome-plated)

B3H-EX-018



Door handle (chrome-plated)

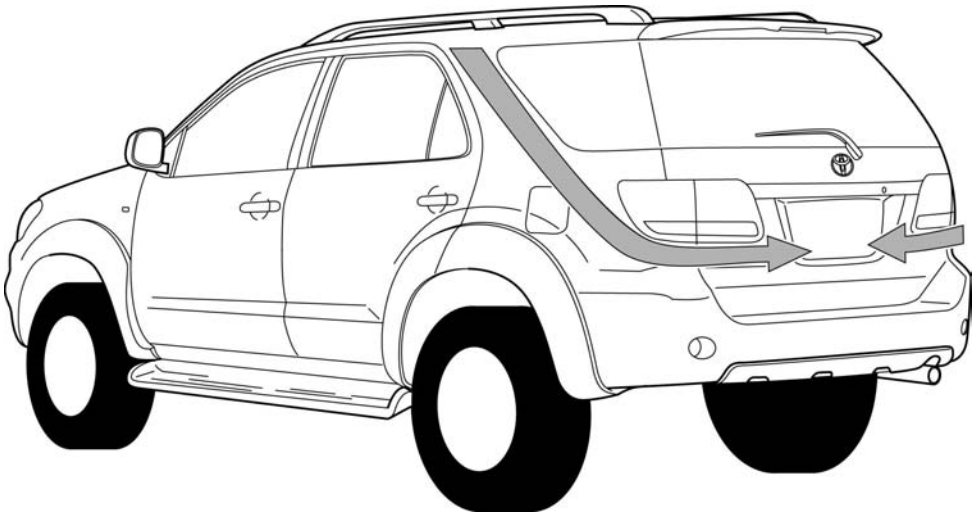
B3H-EX-019

II-1. Exterior Design

4. Rear Design

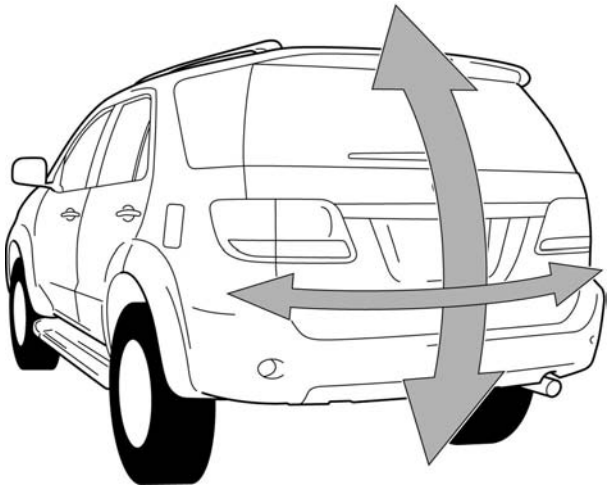
FEATURES

- A rear design with a distinctive flowing line from the C-pillar has been adopted.



B3F-EX-020

- The rear combination lamp and the license garnish are horizontal placed in line on the round, resilient back panel to create a sophisticated SUV image.
- Gaps are minimized various details around the door opening, such as the rear window, body-integrated rear bumper and rear combination lamp, creating a luxurious image.
- The overfender helps give a sense of wideness.



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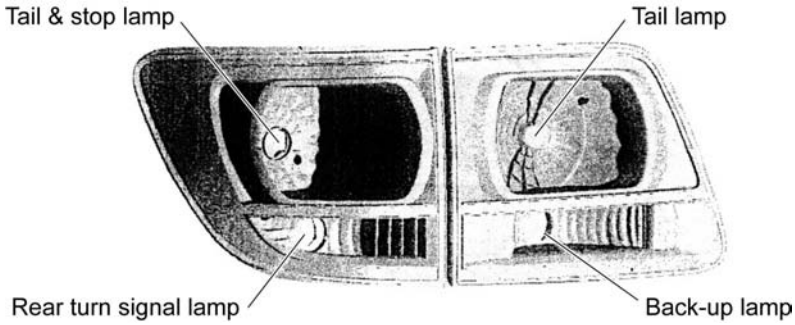
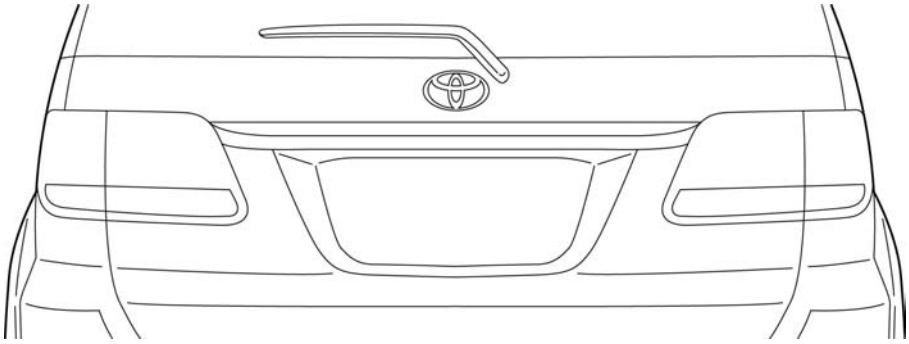


Rear combination lamp

B3F-EX-026

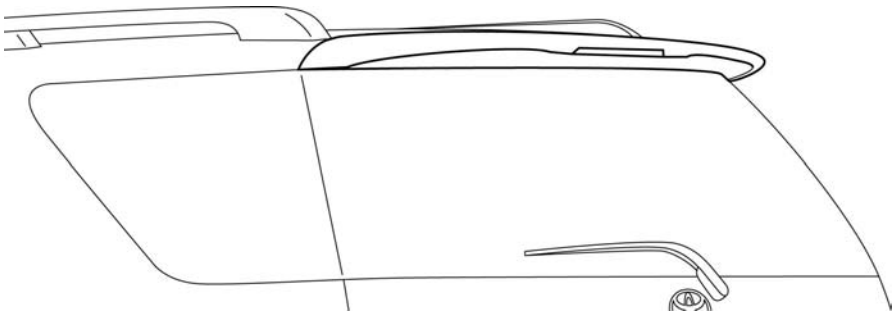
- A chrome-plated and body color back door garnish* have been available. The chrome-plated one evokes a luxurious image.



Back door garnish (chrome-plated/colored)

B3F-EX-027 [K4PC/K4PD]

- The rear spoiler with an integrated high-mount stop lamp is designed to provide a sense of continuity with the roof for boosting a sporty image.

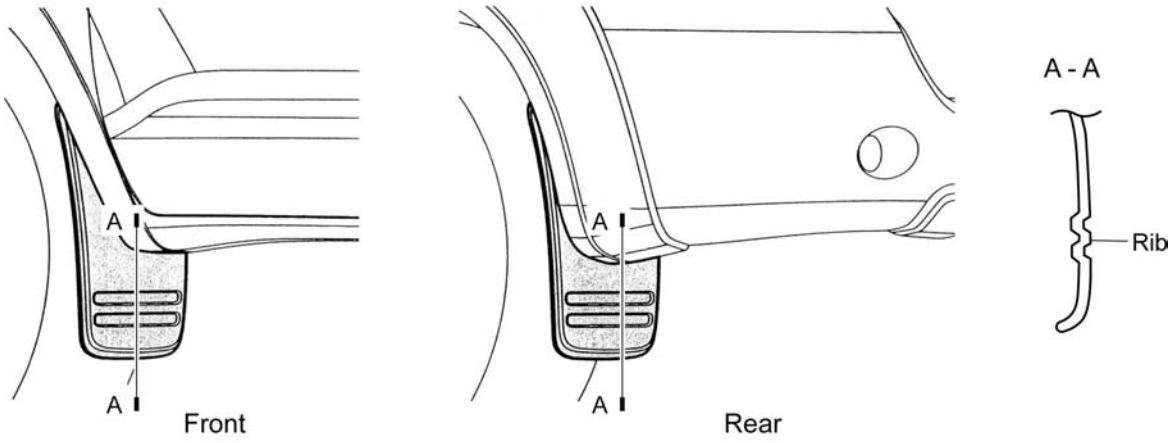


Rear spoiler

B3F-EX-028

*Please refer to the Order Guide for detailed specifications.

- The ribs are adopted to the front and rear mud guards as a styling accent.



Mud guard

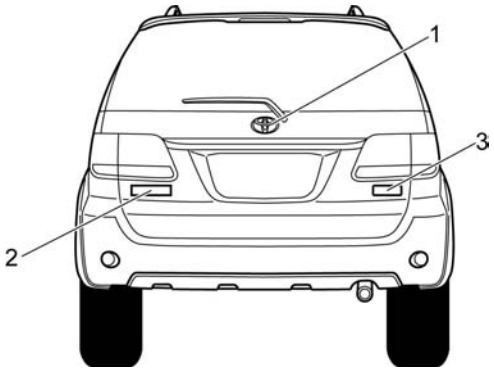
B3F-EX-061

II-1. Exterior Design

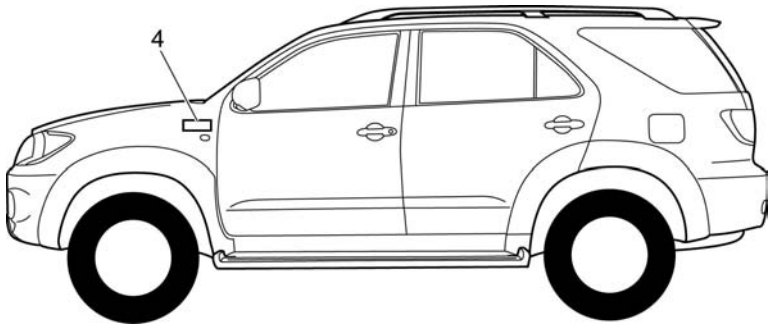
5. Emblem/Mark

FEATURES

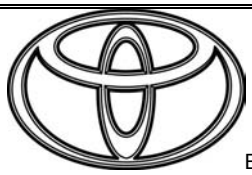
B3F-EX-033



B3F-EX-035



B3F-EX-037

No.	Mark	Design
1	Toyota mark	 B3K-EX-023
2	Vehicle mark	 B3F-EX-040
3	Grade mark	 B3F-EX-041
		 B3H-EX-058
4	Engine mark	 B3H-EX-068
		 B3H-EX-062
5	Front engine mark	 B3H-EX-069

II. EXTERIOR

2. Body Colors

II-2. Body Colors

1. Aim of Color Design

FROM TMC

- Colors that evoke a fresh, powerful design and an image of high quality and sophistication have been adopted based on the concept “PRESTIGE & SPORTY.”

II-2. Body Colors

2. Exterior Colors

FROM TMC

- Highly luxurious, exclusive colors have been adopted.

FEATURES

- The following colors have been adopted.

Color No.	Color name
040	Super White II
1C0	Silver Me.
1E9	Dk. Gray M. M.
209	Black Mc.
4P9	Grayish Brown Me.
6S3	Dk. Green M. M.

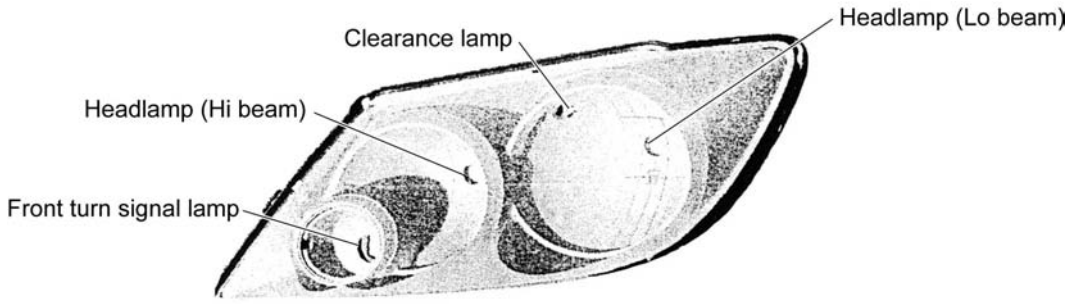
II. EXTERIOR

3. Lamps

FEATURES

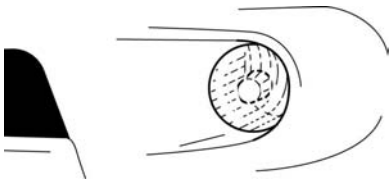
Headlamp

- The multi-reflector headlamp, the clearance lamp, and the front turn signal lamp are all integrated into a 4-bulb combination headlamp with plane glass to help create a luxurious image.



B3F-EX-017

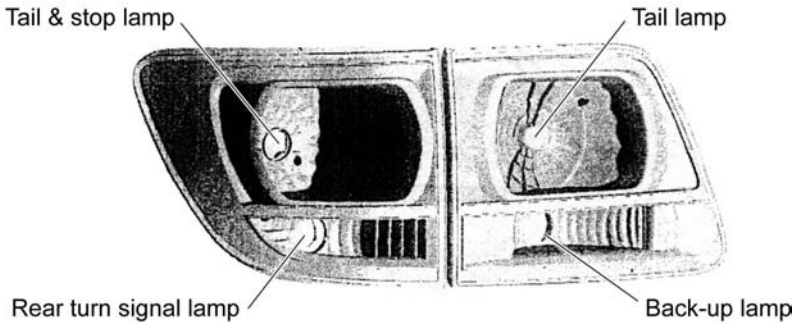
Front Fog Lamp



B3F-EX-018

Rear Combination Lamp

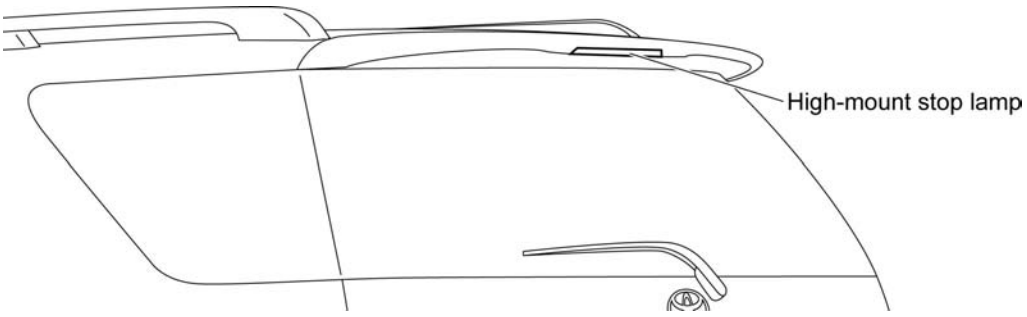
- A rear combination lamp has also been adopted for the back door to boost its luxurious image.
- A clear outer lens and inner-coating with aluminum vapor deposition have been adopted to evoke an image of high quality.



B3F-EX-026

High-mount Stop Lamp

- A thin, 6-LED type high-mount stop lamp has been adopted.



B3F-EX-043

II. EXTERIOR

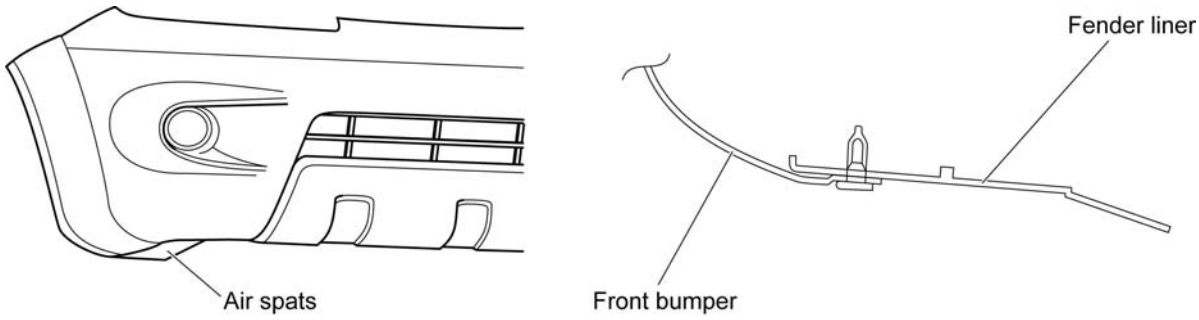
4. Bumpers & Moldings

II-4. Bumpers & Moldings

1. Front Bumper

FEATURES

- PP (Polypropylene) material with high rigidity has been adopted to make the front bumper thin and light.
- Air spats are placed on the lower end of the bumper. The air spats are integrated into the fender liner and provide excellent driving stability.



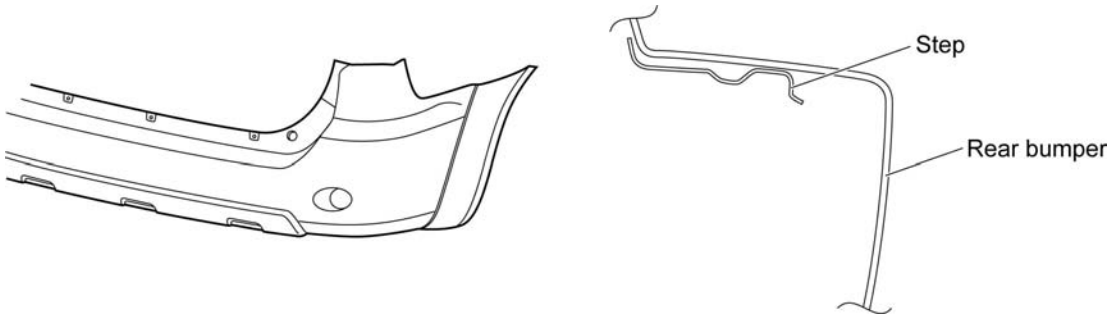
B3F-EX-300

II-4. Bumpers & Moldings

2. Rear Bumper

FEATURES

- PP (Polypropylene) material with high rigidity has been adopted to make the rear bumper thin and light.
- A step is mounted to the lower back frame of the bumper to achieve enough strength for a person to step on.



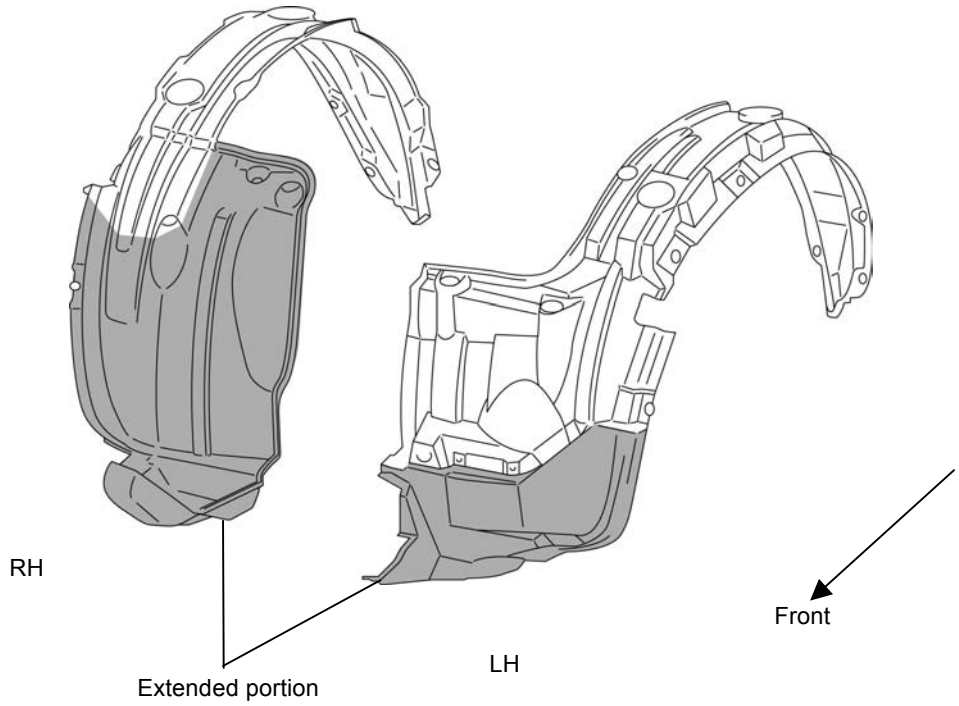
B3F-EX-048

II-4. Bumpers & Moldings

3. Fender Liner

FEATURES

- Extending the front fender liner to the bottom of the front bumper enhances vehicle appearance.



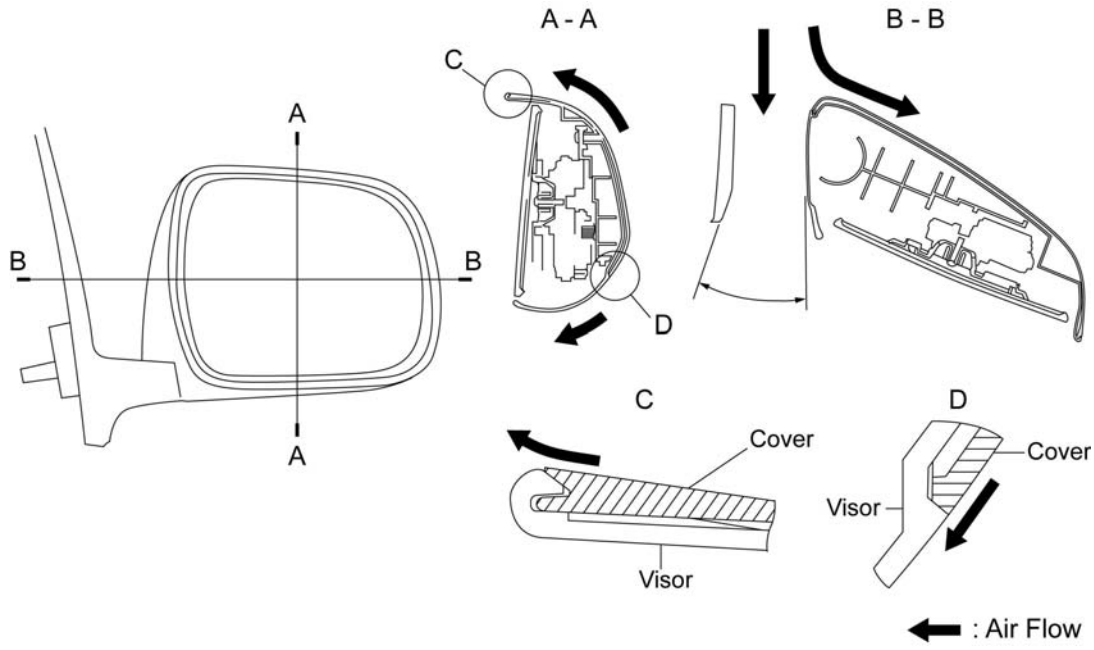
B3F-EX-200

II. EXTERIOR

5. Outer Mirrors

FEATURES

- Power-adjustable type plated outer mirrors are adopted.
- The mirror size is set as follows, resulting in sufficient visibility around the vehicle.
- Height: 144.3 mm, Width: 186.4 mm
- The following are adopted to help reduce wind noise.
- An outer mirror shape that does not interfere with air flow has been adopted.
- The outer mirror has a break line between the mirror cover and the visor on an angled portion.



B3K-EX-007 [L8AD]

II. EXTERIOR

6. Windows

FEATURES

- A power window system* has been available.
- A one-touch auto up-and-down function with jam protection* or a one-touch auto down function* is available for the driver's window.

*Please refer to the Order Guide for detailed specifications.

One-touch Auto Down Function*

- The driver's seat window automatically opens fully with two-step operation of the power window switch.
- The window stops opening with one-step operation of the power window switch to up during auto down operation.

*Please refer to the Order Guide for detailed specifications.

One-touch Auto Up-and-Down Function*

- The driver's seat window automatically opens or closes fully with two-step operation of the power window switch.
- The window stops opening during automatic operation with one-step operation of the power window switch to down during auto up operation, and one-step operation during auto down operation.

*Please refer to the Order Guide for detailed specifications.

Jam Protection Function*

- If jam is detected while the glass is moving upward (during one-touch auto up operation), the motor rotates in reverse to move the window downward and then stops. In order to close the window completely, the jam protection function is disabled from approximately 4 mm under the glass run until the full-closed line.

*Please refer to the Order Guide for detailed specifications.

Glass Stop Position

> The glass moves downward by 50 mm from the jam detection position and stops.

> If the glass is not opened 200 mm after moving downward by 50 mm, the glass lowers to 200 mm and stops.

> If the glass opens fully before moving downward by 50 mm, the glass stops at the fully opened position.

II. EXTERIOR

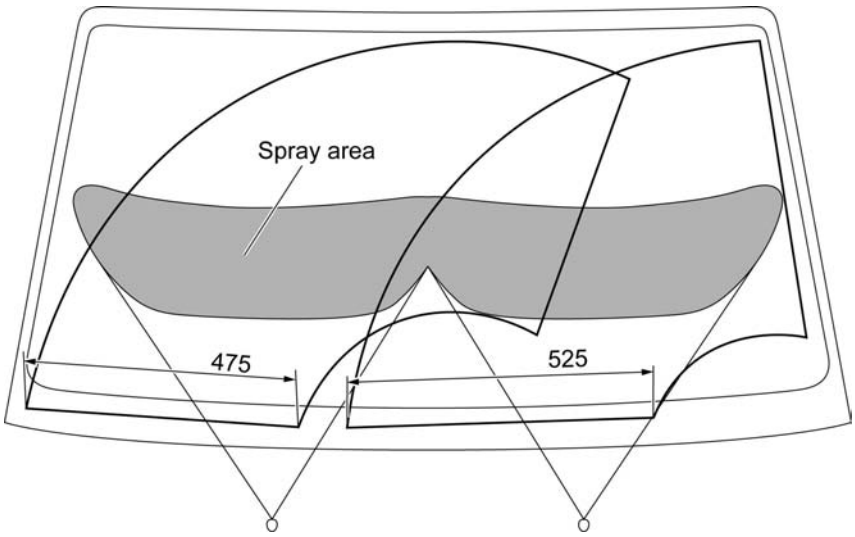
7. Wiper

FEATURES

Front Wiper

- Variable intermittent wipers* with a mist setting are available, enhancing product appeal.
- A modular type wiper that unifies the wiper motor, shaft and link has been adopted to reduce operation noise and fluctuation in the wiping angle.
- The length of the wiper blade on the driver's side is set at 525 mm while on the passenger's side at 475 mm to enlarge the wiping area, resulting in a sufficient front view.
- A spray type washer nozzle has been adopted, resulting in an efficient wiping performance.

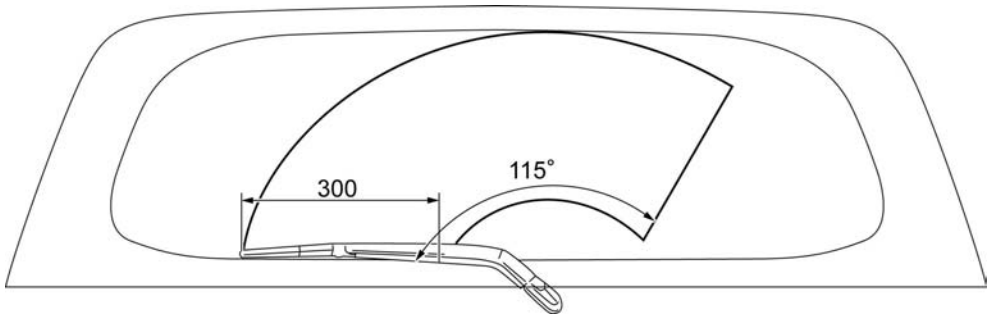
*Please refer to the Order Guide for detailed specifications.



B3H-EX-070

Rear Wiper

- A sharp-angled wiper motor with built-in link has been adopted.
- A resin wiper arm and blade have been adopted to lighten and provide an excellent, unified appearance.



B3F-EX-045

Washer Pump

- The washer pump has been lightened and has excellent water-resistant characteristics.

Product Detail

III

INTERIOR

III. INTERIOR

1. Interior Design

III-1. Interior Design

1. Aim of Interior Design

FROM TMC

Powerful + Luxurious + Sporty

- A new advanced interior design has been adopted to evoke a powerful and solid image, combined with the elegance and sportiness of a full-fledged SUV.

FEATURES

- The combination of its solid design and elaborate finishing touches helps create a high quality image. The roomy interior helps highlight its harmonius space.

III-1. Interior Design

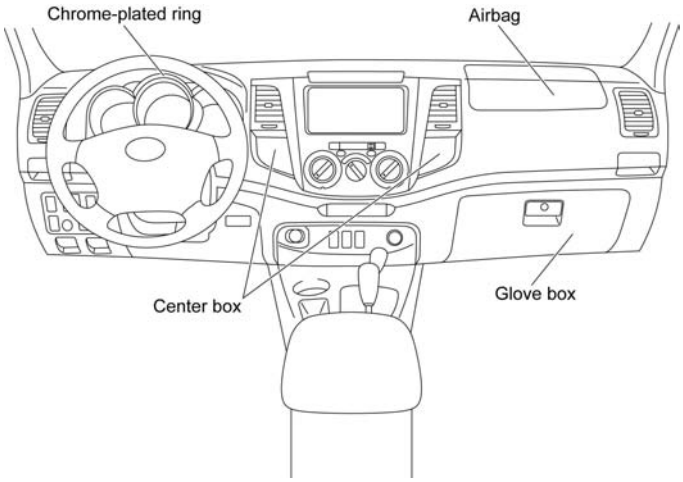
2. Interior Design

FEATURES

- Based on the theme, “Modern and Professional Gear”, this vehicle features a truly modern interior with the advanced quality and elegance needed for an SUV.

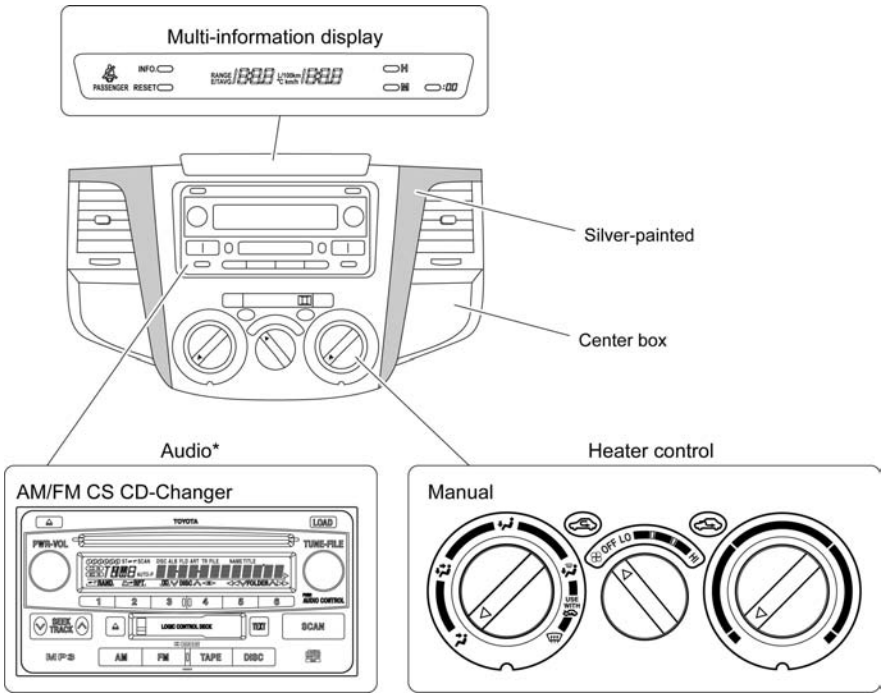
Instrument Panel

- The modern quality surface has added a fresh feeling to the stout, strong form of the instrument panel.
- The center part is decorated to convey a feeling of luxury.
- The instrument panel main surface is finished in material that expresses freshness.



B3F-IN-300

Center Cluster

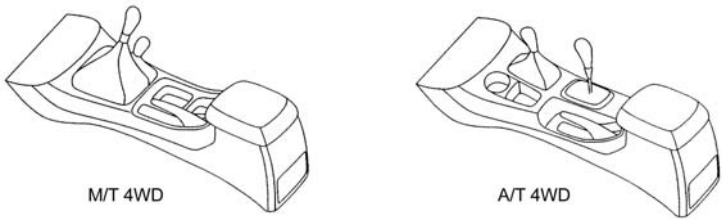


B3F-IN-301

*Please refer to the Order Guide for detailed specifications.

Console Box

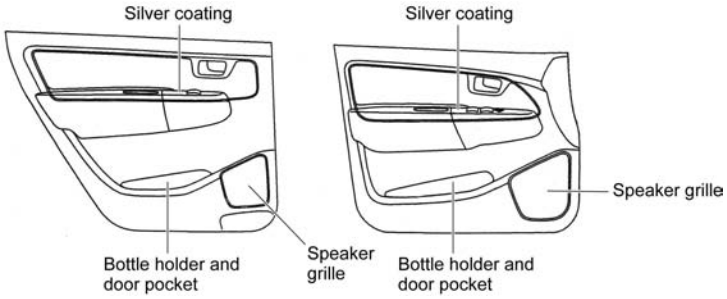
- A cup holder or pocket was added for convenience.



B3F-IN-020

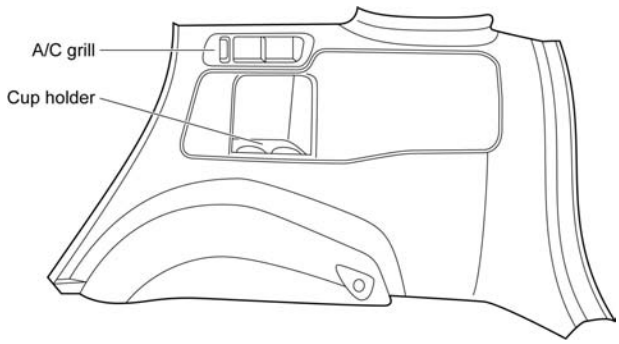
Trim

- The fabric/PVC leather* ornament and its surface grain to the solid door trim and deck side trim creates a high quality image.
- The switch base is colored in silver to offer a luxurious feel.
- Cup holders are on both deck side trim for ease of use.



Door trim

B3F-IN-031



Deck side trim

B3F-IN-032

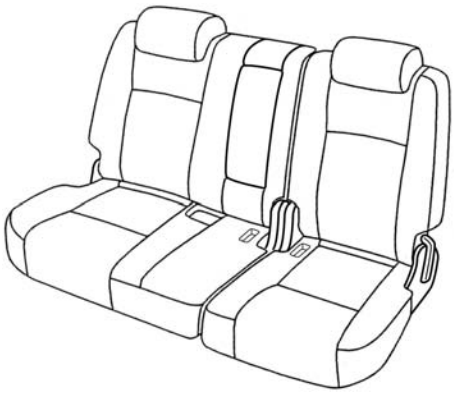
*Please refer to the Order Guide for detailed specifications.

Seat

- A sport type front seat with high holding performance is adopted.

Driver's seat

B3F-IN-013



Rear No.1 seat

B3F-IN-016

Rear No.2 seat

B3F-IN-035

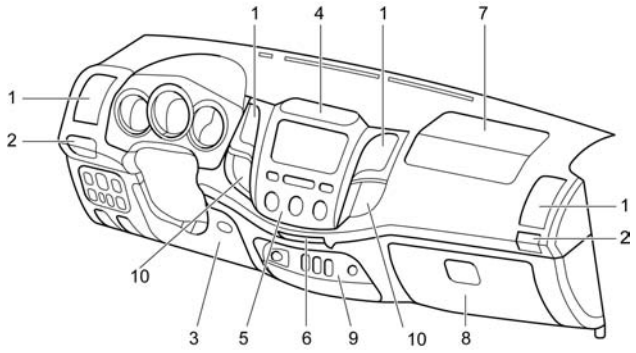
III. INTERIOR

2. Instrument Panel

FROM TMC

- An instrument panel with a car-like, sporty appearance has been adopted.

FEATURES



B3F-IN-075

No.	Item	No.	Item
1	Register	6	Ashtray
2	Drive's side: cup holder	7	Passenger airbag
	Passenger's side: cover	8	Glove box
3	Fuse cover	9	Switch base
4	Multi-information display	10	Center box
5	Heater control panel	-	-

- The following items have been adopted in the instrument panel to create a car-like, sporty appearance.
  - > Two different colors for the upper and lower sides of the instrument panel
  - > Sporty, three-dial meter with chrome-plated ring
  - > Newly designed register
  - > Heater control panel unified with center cluster
  - > Painted meter cluster
  - > Silver-painted center cluster

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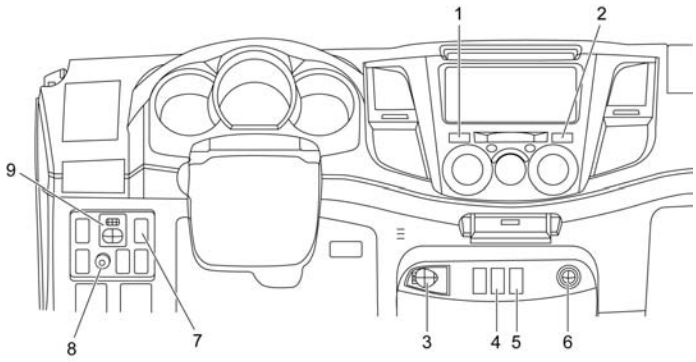
Switch Layout



B3F-IN-302

No.	Item	No.	Item
1	Air conditioner switch	6	Cigarette lighter
2	Hazard switch	7	Security indicator
3	12V socket	8	Rheostat switch
4	Rear Defogger switch	9	Outer mirror switch
5	Rear air conditioner main switch	-	-

III. INTERIOR

3. Interior Colors

III-3. Interior Colors

1. Aim of Color Design

FROM TMC

- Colors that evoke a fresh, powerful design and an image of high quality and sophistication have been adopted based on the concept “PRESTIGE & SPORTY.”

III-3. Interior Colors

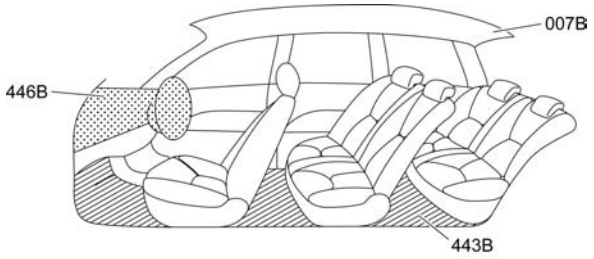
2. Interior Colors

FROM TMC

- Luxurious, two tone-based ivory has been adopted.
- A hefty and high quality material is used to create a distinctive, luxurious SUV image.

FEATURES

Color No.	Color name
007B / 443B / 446B	Ivory



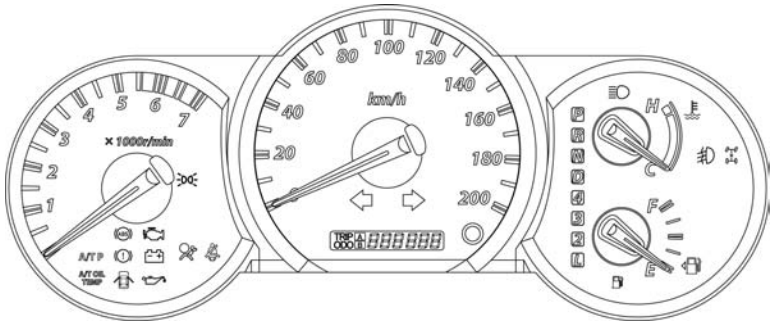
B3F-IN-047

III. INTERIOR

4. Meters

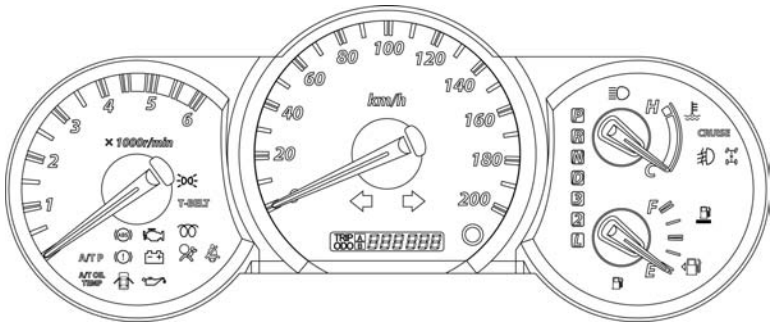
FEATURES

- An Optitron meter has been adopted.
- A transmitted illumination using LED light sources has been adopted to the indication light and dial of the meter and gauge.
- Electronic twin trip meters with liquid crystal displays have been adopted on the odometer and trip meter.
- The warning system for the fuel filter clog has been adopted in the diesel engine model.



Meter design (AT, 1GR-FE engine model)

B3F-IN-059



Meter design (AT, 1KD-FTV engine model)

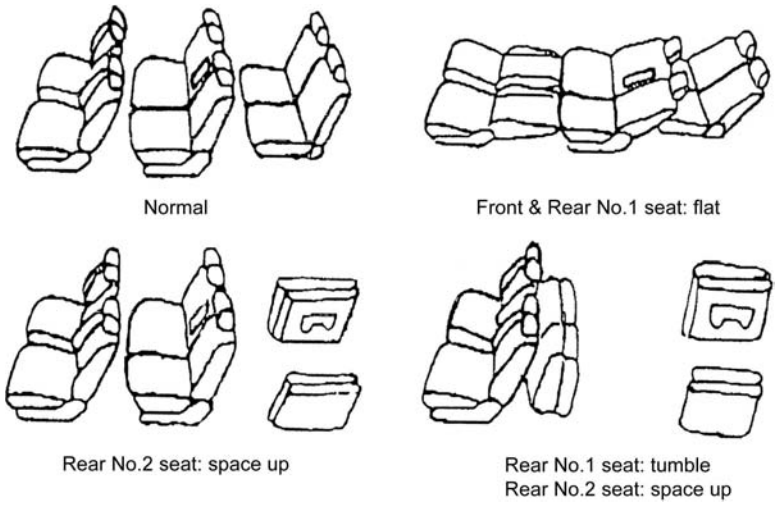
B3F-IN-055

III. INTERIOR
5. Seats

III-5. Seats
1. Seat Arrangement

FEATURES

Seat Arrangement



B3K-IN-018

III-5. Seats

2. Front Seat

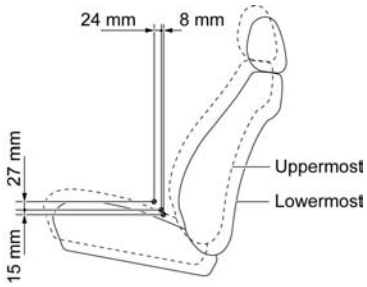
FEATURES

- Based on ergonomics, a cushion panel to support hip bones has been adopted in the driver's and front passenger's seats, offering optimal design. These seats help reduce fatigue from sitting a long time.

Driver's seat

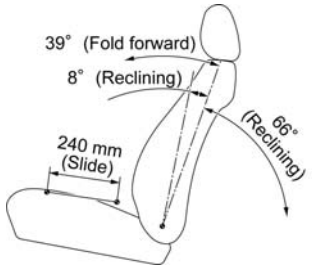
B3F-IN-013

- A lifter that can adjust the driving position without changing posture has been adopted on driver's seat. In addition, the lifter can move the seat cushion and seatback simultaneously.



B3K-IN-010

- The front seats can be reclined as follows:
  > Adjustable angle: 74° (front: 8° and rear: 66° from neutral position)
  > Forward down angle: 39° (from neutral position)
- A seat slide that is adjustable up to 240 mm has been adopted.



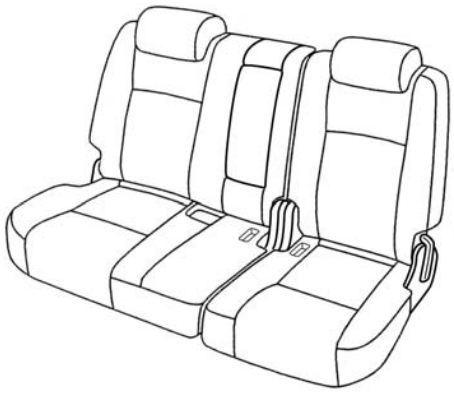
B3K-IN-011

III-5. Seats

3. Rear No.1 Seat

FEATURES

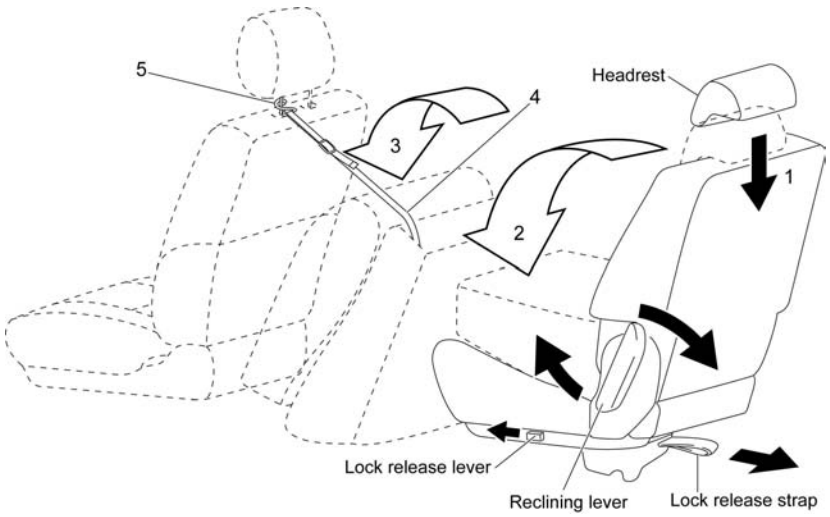
- A 60:40 split seat with tumble and slide functions has been adopted in the rear NO.1 seat.
- The seat can be tumbled with the headrest equipped at any sliding position.
- An undercover is used to create a high quality image.



B3F-IN-016

Tumble Function

- 1. Lower the headrest to the lowest position.
- 2. Operate the reclining lever to fold the seatback forward.
- 3. Operate the lock release lever or strap to tumble the seat.
- 4. Take out the seat-fixing band from the seat storage pocket.
- 5. Hang the hook onto the headrest stay of the front seat.



B3F-IN-084

III-5. Seats

4. Rear No.2 Seat

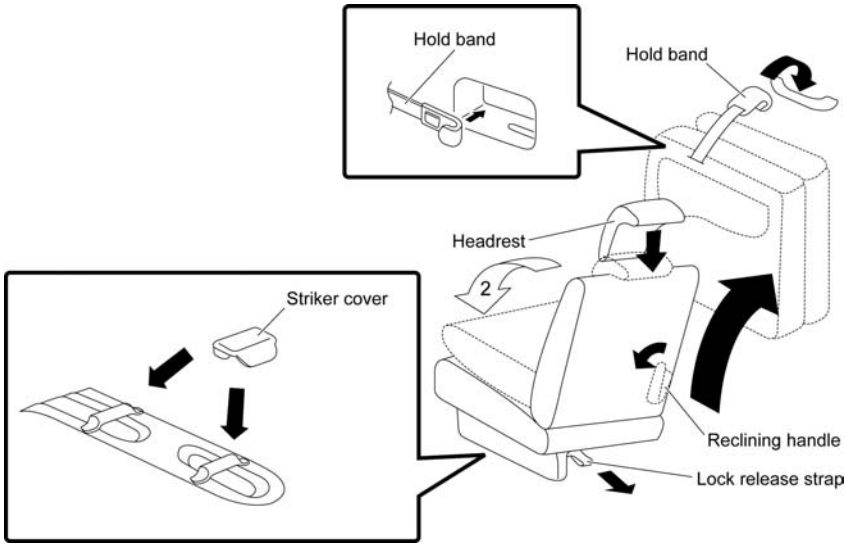
FEATURES

- The space up seat has been adopted as the rear No.2 seat.
- The seat can be reclined to 18° (2° X 9-steps).
- A saddle-shaped headrest has been adopted, resulting in an excellent rear view.

B3F-IN-035

Space Up Function

- 1. Lower the headrest to the lowest position.
- 2. Operate the reclining handle to fold the seatback forward.
- 3. Operate the lock release strap to release the lock.
- 4. Fold up the seat to the window side.
- 5. Fix the hold band to the assist grip and then store the leg.
  - > The hold band can be stored when not in use.
  - > Covers to hide the strikers when the seat is folded up have been adopted.



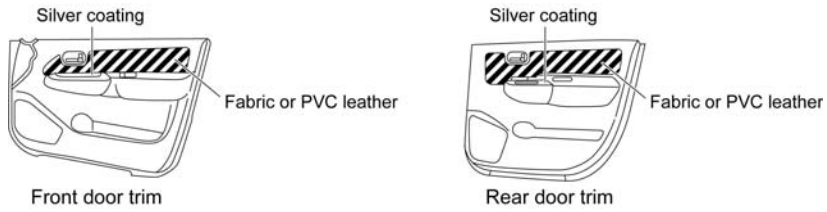
B3F-IN-062

III. INTERIOR

6. Interior Trim

FEATURES

- The following parts have been adopted to create the interior with an image of high quality.
  - > Pillar garnish with full trim
  - > Resin-molded door trim with full trim
  - > Resin-molded quarter trim
  - > Resin-molded back door trim
  - > Resin-molded back door scuff plate
  - > Silver coating on the power window switch base of the door trim
  - > Fabric or PVC leather on the door trim ornament *



B3F-IN-064 [N2BD/N2BF]

*Please refer to the Order Guide for detailed specifications.

Product Detail

IV

DRIVING PERFORMANCE

IV. DRIVING PERFORMANCE

1. Engines

IV-1. Engines

1. 1GR-FE V6 4.0L DOHC 24-valve VVT-i (Variable Valve Timing-intelligent)

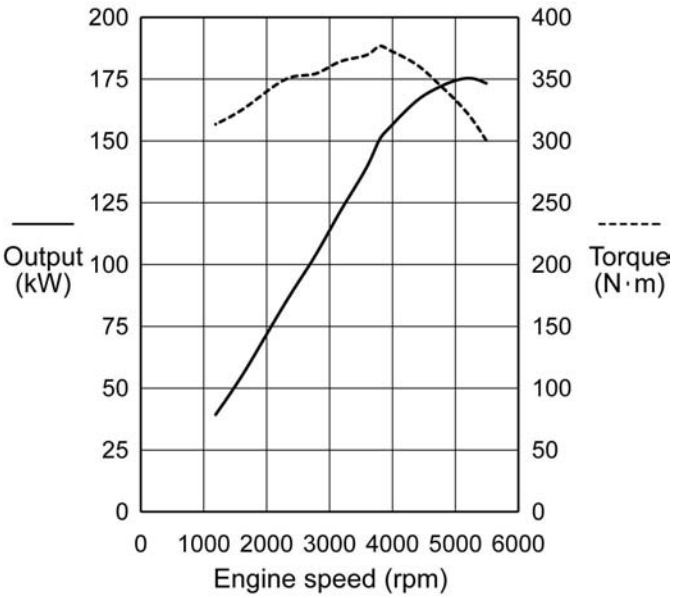
FEATURES

- Aiming to strengthen the attractiveness of the product, a new advanced V6 engine which would even be passable to next generations is adopted. The engine, which is a successor to the 5VZ-FE, is lightweight, compact, and quiet. It also has high performance and excellent fuel efficiency. Moreover, the new engine can meet the needs for higher serviceability and strengthened emission gas regulations.

B3H-DP-101 [D1AE]

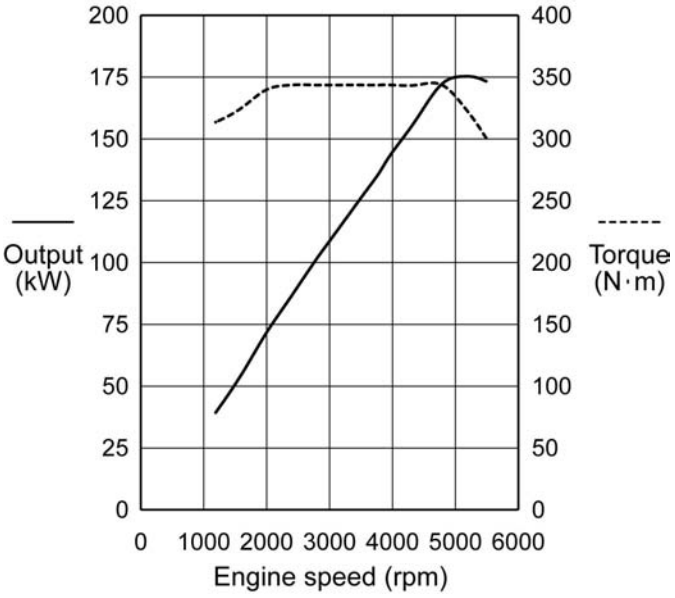
Specifications

No. of cyls. & arrangement			6-cylinders, V type
Valve mechanism			24-valve, DOHC with VVT-i
Combustion chamber			Pentroof type
Intake system			Normal aspiration
Displacement	(cm^3)		3956
Bore x stroke	(mm)		94.0 x 95.0
Compression ratio			10.0 : 1
Fuel system			EFI
Max. output	(kW/rpm)		175 / 5200
Max. torque	(Nm/rpm)	AT	376 / 3800
		MT	343 / 2400 - 4800



Engine performance curve (AT)

B3H-DP-071



Engine performance curve (MT)

B3H-DP-104

- 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.
- To realize top class performance, displacement volume is increased and advanced technologies are adopted. In addition, frictions of various components are reduced to help realize excellent fuel efficiency.
- The engine provides a pleasant sound while offering the quietness appropriate for a high-quality.

Engine Cover

- An V bank cover is adopted to refine the appearance of the engine room.

IV-1. Engines

2. 1KD-FTV L4 3.0L DOHC 16-valve

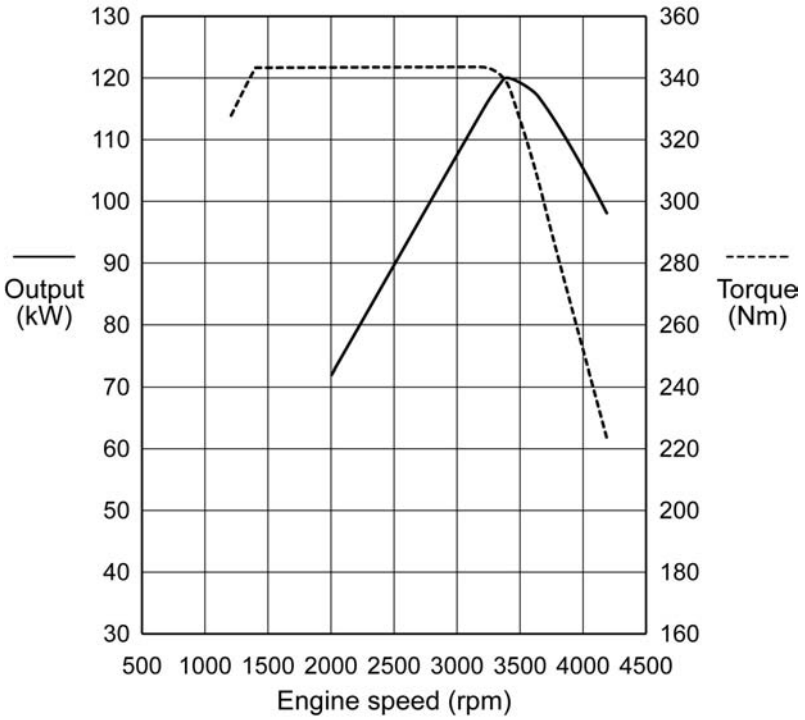
FEATURES

- The 1KD-FTV (3.0 L) diesel engine was adopted to aim for the top-level fuel efficiency of the class and provide the feeling of smooth and responsive acceleration from start until reaching the medium or high-speed range.
- A variable nozzle turbocharger and swirl control valve are adopted in the 1KD-FTV (3.0 L) diesel engine with intercooler to achieve for the top-level output and torque of the class.

B3H-DC-004

Specifications

No. of cyls. & arrangement		4-cylinders, In-line
Valve mechanism		16-valve, DOHC
Combustion system		Direct injection type
Exhaust system		Variable nozzle turbo
Intake system		With intercooler / with SCV
Displacement	(cm^3)	2982
Bore x stroke	(mm)	96.0 x 103.0
Compression ratio		17.9 : 1
Fuel system		Common rail type
Max. output	(kW/rpm)	120 / 3400
Max. torque	(Nm/rpm)	343 / 1400 – 3200



Engine performance curve

B3H-DP-092

Common rail Type Fuel Injection System

- The electronically controlled common rail injection system consists of a supply pump, injectors, and the common rail as well as the high-pressure piping connecting these components.
- Fuel injection is controlled by maintaining specified pressure in the common rail using the supply pump and by activating the injector control valve through the EDU (Electronic Driving Unit).
- The system helps the engine to run at its best by using sensors to detect its conditions and by using a microcomputer to comprehensively control the common rail pressure, injection timing and volume.
- The high control flexibility helps to reduce NOxs, particulates and enhance output as well as fuel efficiency, while contributing to a reduction in combustion noise.

Engine Cover

- The resin engine cover with a cutting edge design serves as an intercooler core protector and aims to reduce noise.

IV-1. Engines

3. Engine Mount

FEATURES

Front and Rear Engine Mount

- A mount rubber has been optimized to reduce vibration and noise, and to enhance ride comfort.

IV-1. Engines

4. Cooling System

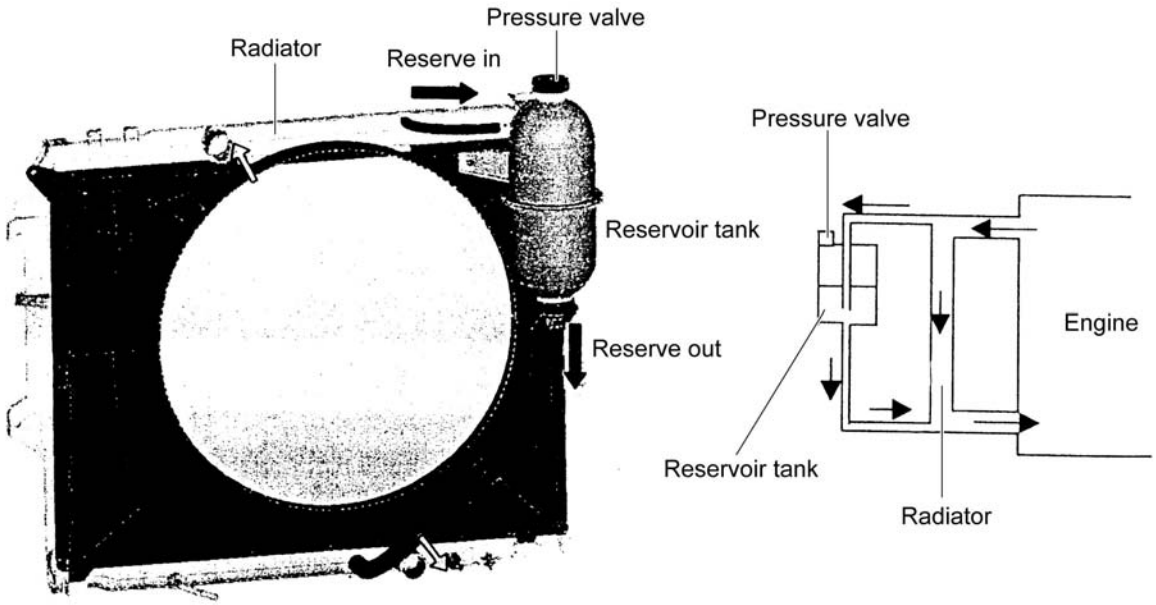
FEATURES

Radiator

- In accordance with an increased engine output, the radiator has been enlarged, resulting in efficient cooling performance.

Radiator Reservoir Tank (1KD-FTV only)

- A radiator reservoir tank of pressurized type has been adopted. With this adoption, the pressure in the cooling system has been increased to 108 kPa to provide reliable cooling performance.



B3H-DP-002

IV-1. Engines

5. Intake System

FEATURES

Air Cleaner

- The air cleaner volume has been increased to reduce air intake noise.
- The cyclone type pre-cleaner has been adopted to the upstream side of the air cleaner, preventing dust from entering the engine. (1GR-FE only)
- The cyclone type air cleaner has been adopted to prevent dust from entering the engine. (1KD-FTV only)

Air Cleaner Inlet

- The air cleaner inlet has been installed inside of the fender and position and direction of the inlet port have been optimized to prevent water and dust from entering.

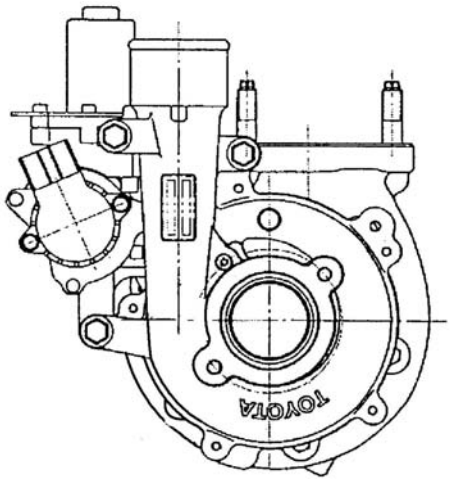
IV-1. Engines

6. Turbocharger

FEATURES

1KD-FTV

- A variable nozzle vane has been used on the circumference of the turbine to adjust the flow speed and pressure of the exhaust gas that flows into the turbine. Accordingly, the balance between the exhaust back pressure and boost pressure based on the engine demand has been optimized.
- The DC motor is used to operate the variable nozzle vane to help achieve an effective controllability and pressure-charging effectiveness.



B3H-DP-042

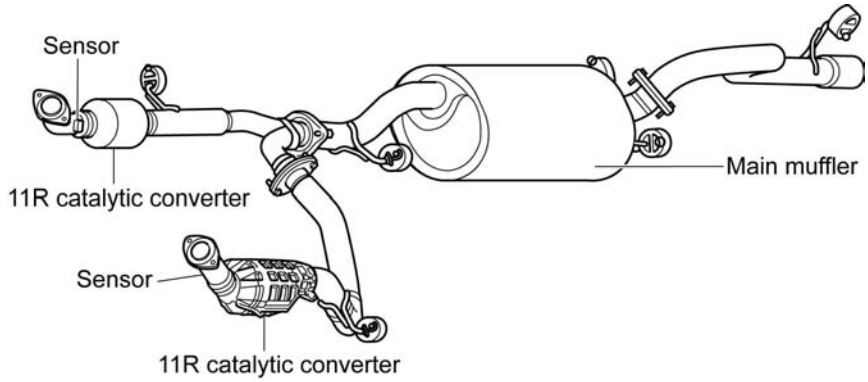
IV-1. Engines

7. Exhaust System

FEATURES

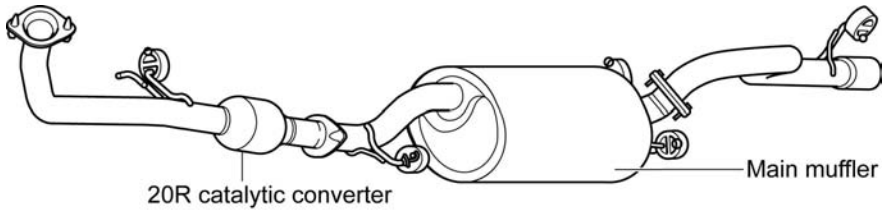
Exhaust Pipe

- A muffler with large capacity has been adopted to help eliminate noise.
- A straight exhaust system is used to reduce noise and vibration.
- A ball joint has been installed just below the exhaust manifold to reduce noise and vibration.
- For durability, the straight exhaust system and ball joint were adopted. These contribute to restraining vibration and amplitude of the exhaust pipes.
- Stainless steel exhaust pipes and muffler have been adopted to help maintain corrosion resistance.



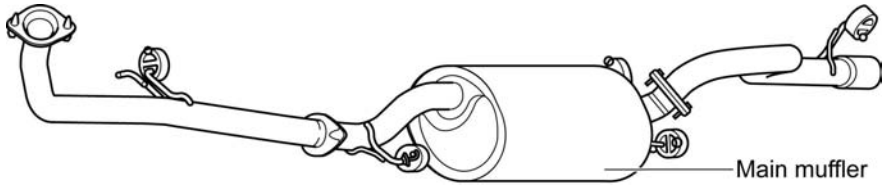
1GR-FE

B3F-DP-013



1KD-FTV (STEP III)*

B3F-DP-004



1KD-FTV (STEP I)*

B3F-DP-014

*Please refer to the Order Guide for detailed specifications.

IV-1. Engines

8. Fuel System

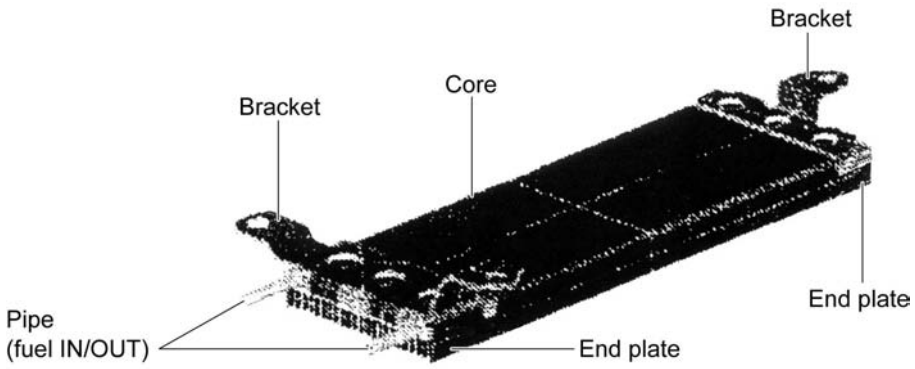
FEATURES

Charcoal Canister (1GR-FE only)

- Chosen for its efficient absorption, charcoal is used in this canister. The charcoal canister with the optimized opening pressure characteristics for adjusting the differential pressure with the fuel tank pressure was adopted.

Diesel Fuel Cooler (1KD-FTV only)

- To deal with an increased fuel temperature due to an increased engine output (increased fuel injection pressure), an all-aluminum fuel cooler that cool the return fuel has been developed and adopted in the way of under floor fuel pipe.
- The cooler core has been extrusion-molded with aluminum, and the fuel paths and the cooling fin have been integrated in the core.



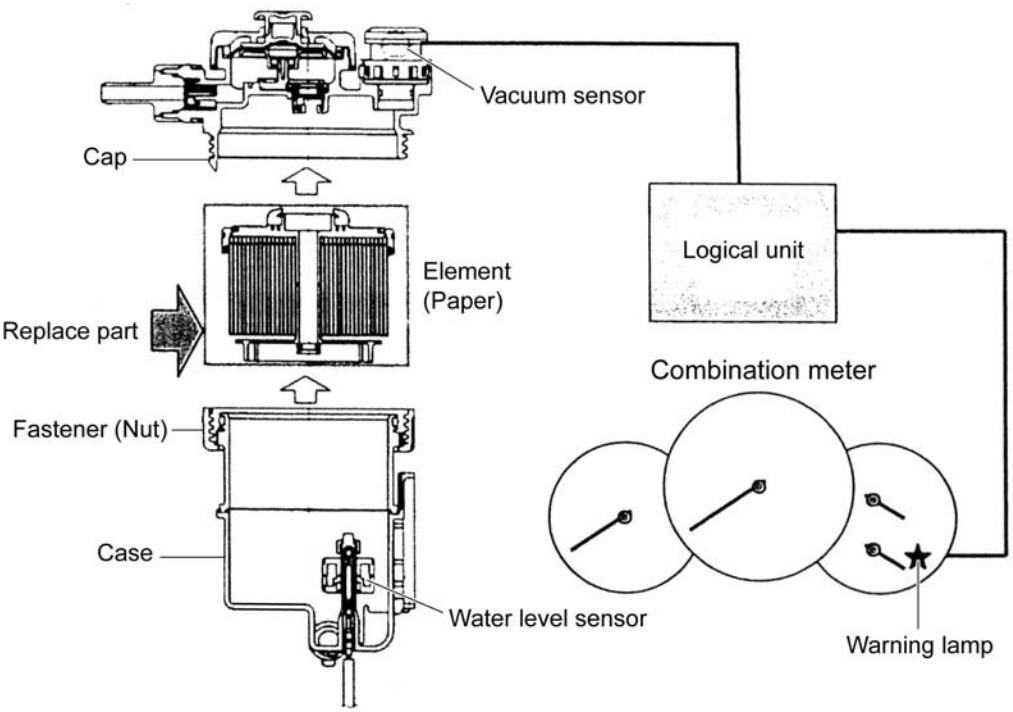
B3H-DP-004

Fuel Tank

- A resin fuel tank with a capacity of 65 liters has been adopted.
- The shape flexibility of the resin tank has been utilized to efficiently ensure fuel capacity.
- The hydrofluoric polyethylene layers have been created on inner surface of the resin tank to help prevent fuel penetration. (1GR-FE only)

Fuel Filter (1KD-FTV only)

- A newly developed fuel filter for the common rail diesel engine has been adopted.
- Development of a new fuel system indicator, and a fuel filter which does not require periodical replacement, contributes to less running cost.
  - > An element with high efficiency filter paper has been used.
  - > Resin filter body has been adopted.
  - > Fuel warning system has been adopted. The warning lamp is used in common with fuel sedimenter warning. The system provides two types of warning.
    Warning lamp “blink”: Fuel sedimenter warning
    Warning lamp “on”: Fuel system abnormal



Fuel warning system

B3H-DP-005

IV. DRIVING PERFORMANCE

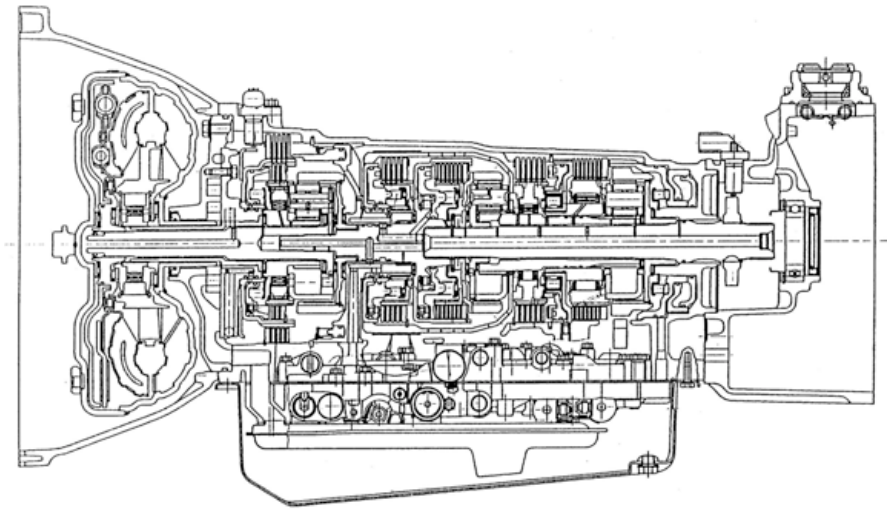
2. Drive Train

IV-2. Drive Train

1. Automatic Transmission

FEATURES

Cross Section



1KD-FTV X A340F

B3H-DP-014

Automatic Transmission Specifications

Engine type		1GR-FE	1KD-FTV
Automatic transmission type		A750F (4WD)	A340F (4WD)
Gear ratio	1st	3.520	2.804
	2nd	2.042	1.531
	3rd	1.400	1.000
	4th	1.000	0.705
	5th	0.716	-
	Reverse	3.224	2.393
Fluid type		Toyota Genuine ATF WS	Toyota Genuine ATF Type T-IV
Fluid capacity Liters		10.4	10.1

4-Speed Automatic Transmission

Line Pressure Optimal Control

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

5-Speed Automatic Transmission

- A futuristic front-engine-rear-drive 5-speed automatic transmission (A750F) is adopted to the model equipped with the 1GR-FE V6 4 liter engine in order to realize the following 5 items:
  - > (1) Excellent performance
  - > (2) Excellent fuel efficiency
  - > (3) More lightweight and compact
  - > (4) Smooth shifting
  - > (5) Lower noise level

ATF (Automatic Transmission Fluid) Type T-IV (4-Speed Automatic Transmission)

- Toyota Genuine ATF Type T-IV chosen for efficient friction characteristics, has been adopted for a smooth driving and effective shifting.

ATF WS (5-Speed Automatic Transmission)

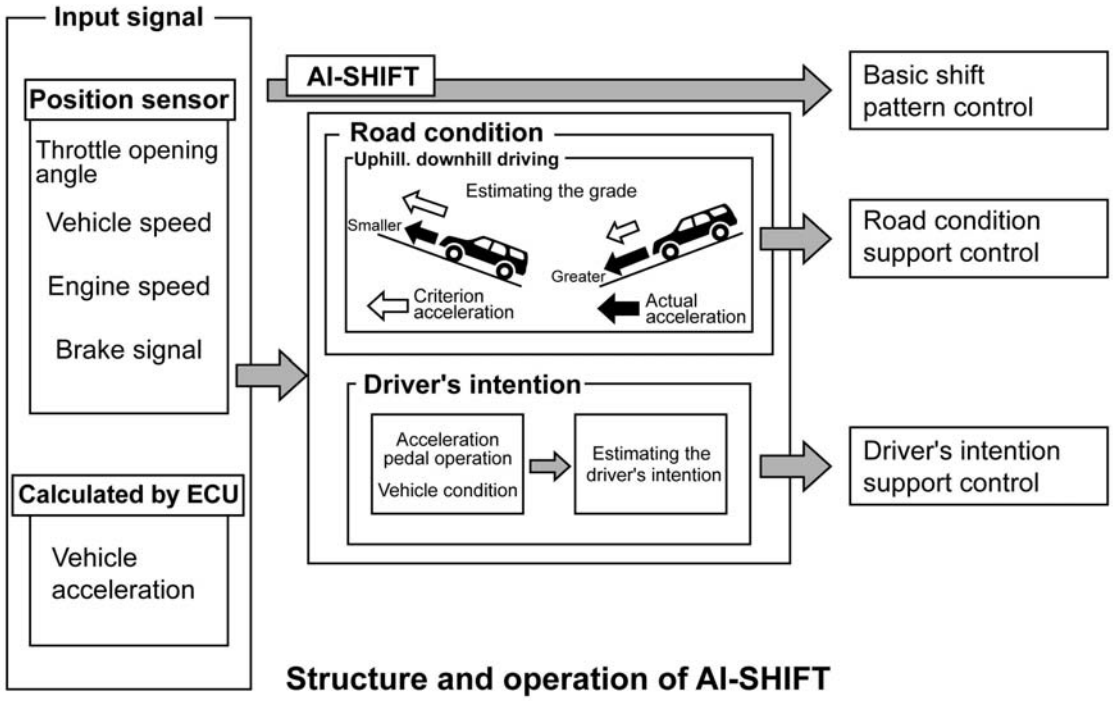
- The Toyota Genuine ATF WS with reduced viscosity in the practical operating range is adopted to lower the resistance of the ATF and enhance fuel economy. At the high-temperature end, its viscosity is similar to that of the Toyota Genuine ATF Type T-IV to ensure the durability of the automatic transmission.

ATF Level Detection Mechanism (5-Speed Automatic Transmission)

- 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 (5-Speed Automatic Transmission)

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



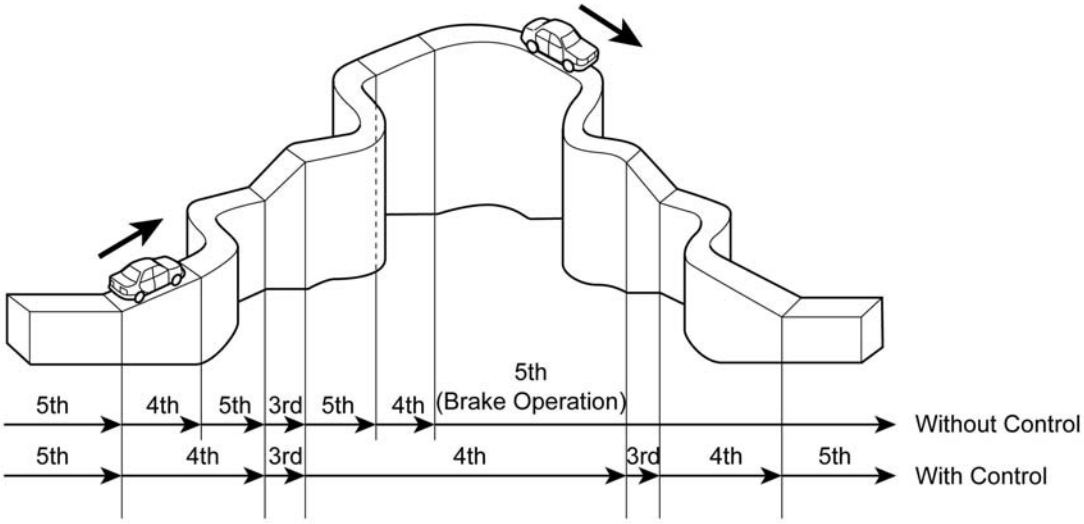
Structure and operation of AI-SHIFT

AI (Artificial Intelligence)- SHIFT control

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.



Road condition support control

N2T-DP-019

Driver's Intention Support Control

- Newly adopted driver's intention support control realizes comfortable feeling shifting pattern which is well-suited for each driver by switching according not to the driver's operation but to the estimation of the driver's intent based on the accelerator pedal operation and vehicle conditions.

Automatic Transmission Shift

- The gate-type shift lever has been adopted, providing a high quality and sporty image.

IV-2. Drive Train

2. Manual Transmission

FEATURES

5-Speed Manual Transmission (R150F and R151F)

- A synchromesh has been adopted to the reverse gear to prevent gear grating noise when reverse shifting and enhance the operationality.
- The load characteristics of control system have been optimized for a feeling of smooth shifting.
- To reduce the operating force, 1st triple cone type synchromesh has been adopted in addition to 2nd.

Manual Transmission Specifications

Engine type		1GR-FE	1KD-FTV
Manual transmission type		R150F (4WD)	R151F (4WD)
Gear ratio	1st	3.830	4.313
	2nd	2.062	2.330
	3rd	1.436	
	4th	1.000	
	5th	0.838	
	Reverse	4.220	
Oil viscosity		SAE 75W-90	

IV-2. Drive Train

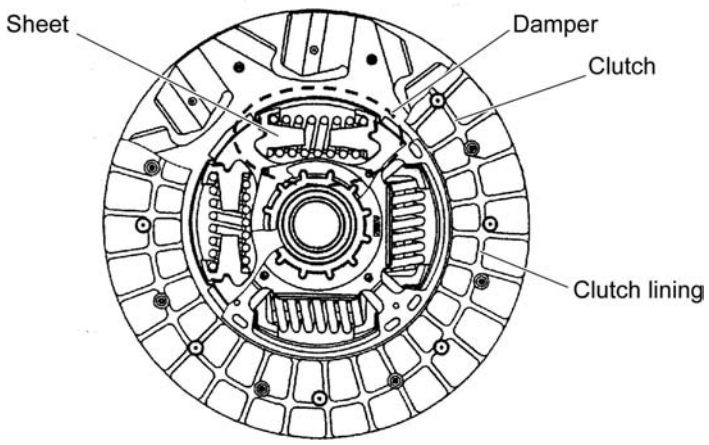
3. Clutch System

FEATURES

- A new structure has been adopted for the clutch disc and clutch master cylinder.

Clutch Disc

- The lightweight sheet and a sheet side face retention mechanism by a protrusion on the hub contribute to reduced damper wear.
- The torsion springs and friction washers are located on the outermost circumference of the clutch disc, contributing to optimum torsional characteristics and reduced noise and vibration.



B3H-DP-019

Master Cylinder (1KD-FTV only)

- The material of the master cylinder body has been changed to resin to lighten the master cylinder. With this change, the following has been adopted.
  - > 1. Plunger type master cylinder
  - > 2. Resin body
  - > 3. Ultrasonic welded union
  - > 4. Resin clevis damper

Clutch Pedal

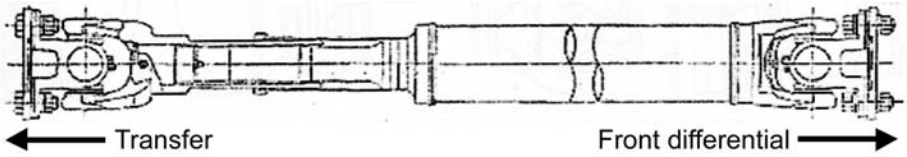
- A clutch pedal with turn over mechanism has been adopted to help reduce clutch pedal effort.

IV-2. Drive Train

4. Propeller Shaft

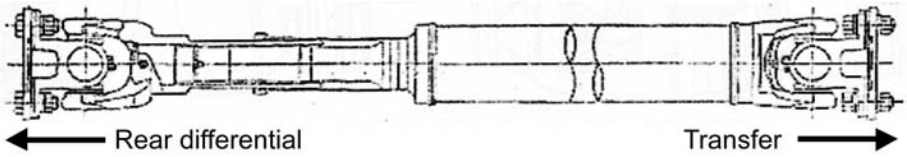
FEATURES

- The pitch of the fastening bolt for the propeller shaft has become 66 x 66 mm in order to be compatible with high torque engines.



Front propeller shaft

B3H-DP-046



Rear propeller shaft

B3F-DP-006

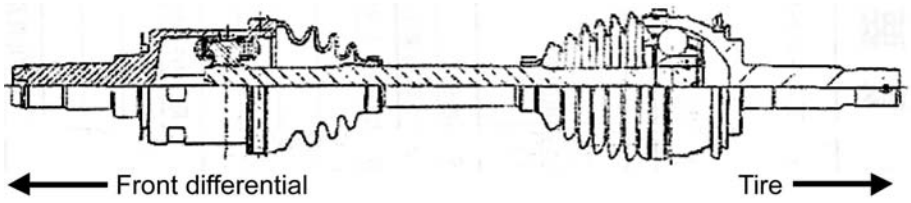
IV-2. Drive Train

5. Drive Shaft

FEATURES

4WD Models Only

- A high capacity drive shaft has been adopted.
- A flexible double roller tripod type CVJ (Constant-Velocity Joint) has been adopted on the joint on the front differential side to help reduce NVH (Noise, Vibration, and Harshness) from high torque engines.
- A Rzeppa type CVJ has been adopted on the joint on the tire side.



B3H-DP-048

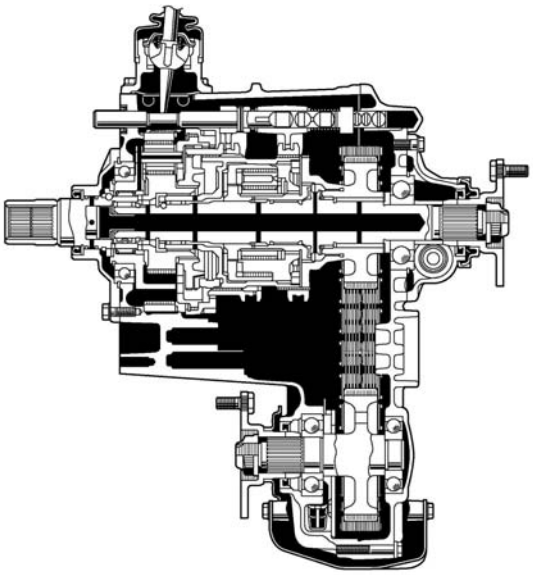
IV-2. Drive Train

6. Transfer

FEATURES

4WD Models Only

- A VF4B full-time transfer has been adopted.
  - > Torsen LSD (Torque sensing Limited Slip Differential) which distributes uneven torque to the front and rear wheels has been adopted for the center differential to provide excellent stability and controllability, and traction performance.
  - > A transfer with high-torque capacity has been adopted. High-strength materials are used for the input and output shafts.
  - > The contact surface between the transfer and the transmission has been broadened to provide excellent power plant rigidity.
  - > The enlarged switching mechanism and the unified pitching help provide high lever usability.

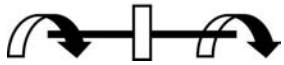
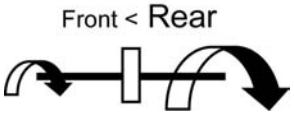


B3F-DP-002

Torsen LSD

- Torsen LSD is a torque sensing LSD. that generates torque to limit the differential action in proportion to the driving torque.
- Torsen LSD automatically and quickly changes the front/rear torque distribution ratio in accordance with the driving conditions to help prevent the wheels from slipping.
- The above characteristics contribute to the following performances:
  - > Vehicle stability (when accelerating or driving at high speeds where the vehicle is likely to become unstable)
  - > Steering response (at the beginning of a turn)
  - > Turning performance and understeer reduction (when accelerating while turning)

Driving Torque Distribution Ratio

Differential rotation	Driving condition		Front/rear distribution ratio	Torque bias ratio*1
Front = Rear 	Acceleration while driving straight		40 : 60	1.5
	Deceleration while driving straight		40 : 60	1.5
Front > Rear 	Acceleration while turning		29 : 71	2.4
	Deceleration while turning		58 : 42	1.4
Front < Rear 	Rear slip or different sized tires	Acceleration	53 : 47	1.2
		Deceleration	28 : 72	2.6

*1: Torque bias ratio = high torque/low torque

IV. DRIVING PERFORMANCE

3. Suspensions

IV-3. Suspensions

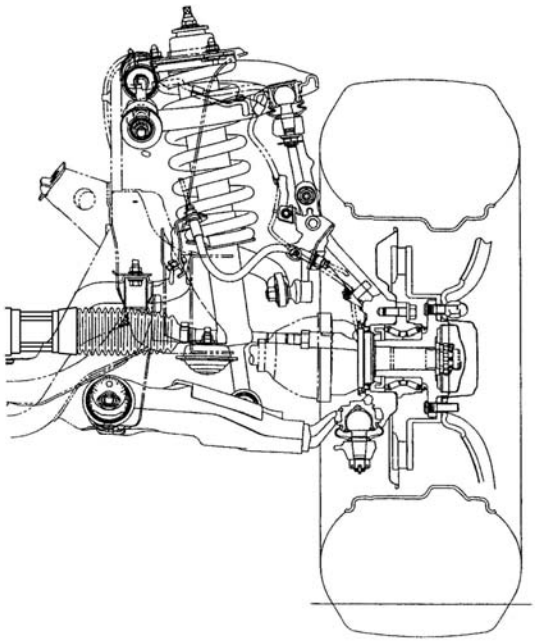
1. Front Suspension

FEATURES

- Newly developed double wishbone suspension with a high mount type upper arm has been adopted.
- Suspension geometry has been optimized for simultaneous pursuit of excellent stability and controllability and ride comfort.
  - > The roll steer coefficient has been optimized, helping to boost straight-line stability.
  - > The caster angle has been increased, aiming for efficient stability and controllability and straight line stability.
  - > A smaller king pin offset has been adopted for good braking stability.
  - > The ground clearance to the installation position of the steering gear has been adjusted in consideration for interference with the ground. In addition, the steering gear is located on the lower arm for excellent driving performance on rough roads.
  - > A coil spring has been adopted for a comfortable ride.
  - > Each suspension bush has been enlarged for optimal compliance, excellent stability and controllability and a comfortable ride.
  - > The front stabilizer is located at the front side of the axle and installed with the steering knuckle.
  - > The front stabilizer is located at the front side of the axle. Ball joints have been adopted on the links at both ends, aiming for highly efficient roll rigidity.
  - > Wheel stroke is maintained enough for a comfortable ride and excellent driving performance on rough roads.
  - > The tire turning angle has been increased with the optimum wheel stroke, helping minimize the turning radius for effective turning.
  - > A mono-fork type absorber has been adopted to make the absorber upright for a comfortable ride.
  - > The characteristics of the coil spring and absorber have been optimized for excellent stability and controllability and a comfortable ride.

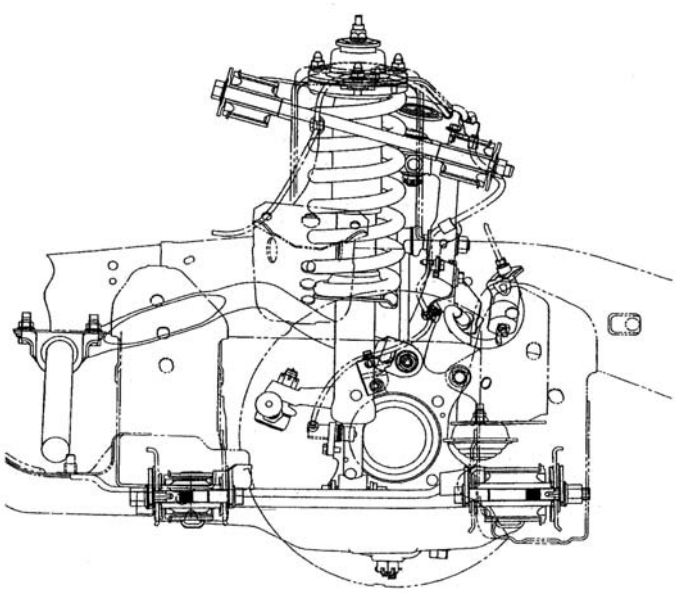
Caster angle	3.49 deg.
Caster trail	21.2 mm
Kingpin offset	27.3 mm
Wheel stroke (bound/rebound)	80/108 mm
Wheelbase	2750 mm
Tire turning angle	36.5/32.8 deg.
Minimum turning radius	5.7 m

- The front axle has been newly developed.
- The new front axle aims for lightness, high reliability, and excellent steering stability.
  > A steering knuckle forged with the knuckle arm has been developed and adopted on the front steering knuckle.
  > The lower arm and ball joint bracket are connected by a weld to lighten the front suspension.
  > A resin seat type ball joint has been adopted on the upper and lower ball joints. They are both pressed into the arm.



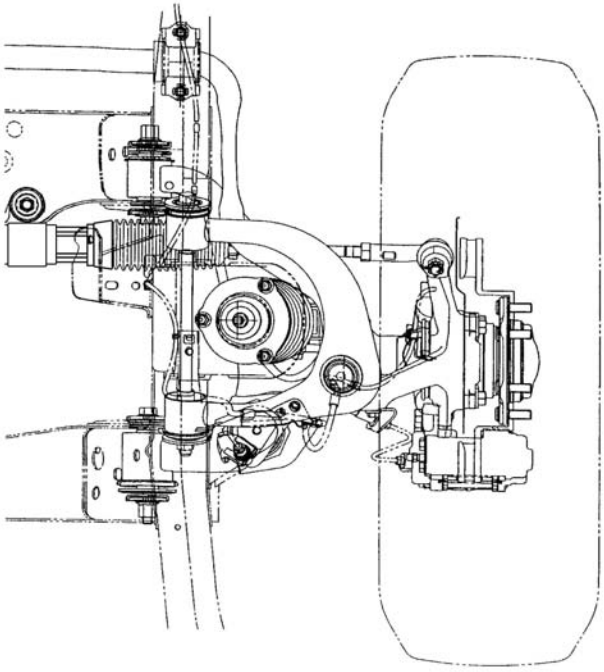
Rear view

B3H-DP-087



Side view

B3H-DP-023



Top view

B3F-DP-025

IV-3. Suspensions

2. Rear Suspension

FEATURES

- A newly developed 4-link rear suspension with lateral control rod has been adopted for the following:
  - > A comfortable flat-ride without excessive pitching.
  - > A sense of security and comfort provided by excellent straight line stability and linear steering response.
  - > A comfortable, elegant ride with low vibration and noise.
  - > Space effectiveness due to optimal part layout.

Ride Comfort

- The adoption of the coil spring allows the use of a low spring rate. This contributes to suppressing input from the road surface and maintaining a balance between the front and rear suspension. The result is a flat ride without excessive pitching of the upper body.
- Large shocks from the ground due to traveling over bumps are absorbed through highly effective shock absorber location and bump strokes, reducing the shock to the rear seats.

Steering Stability

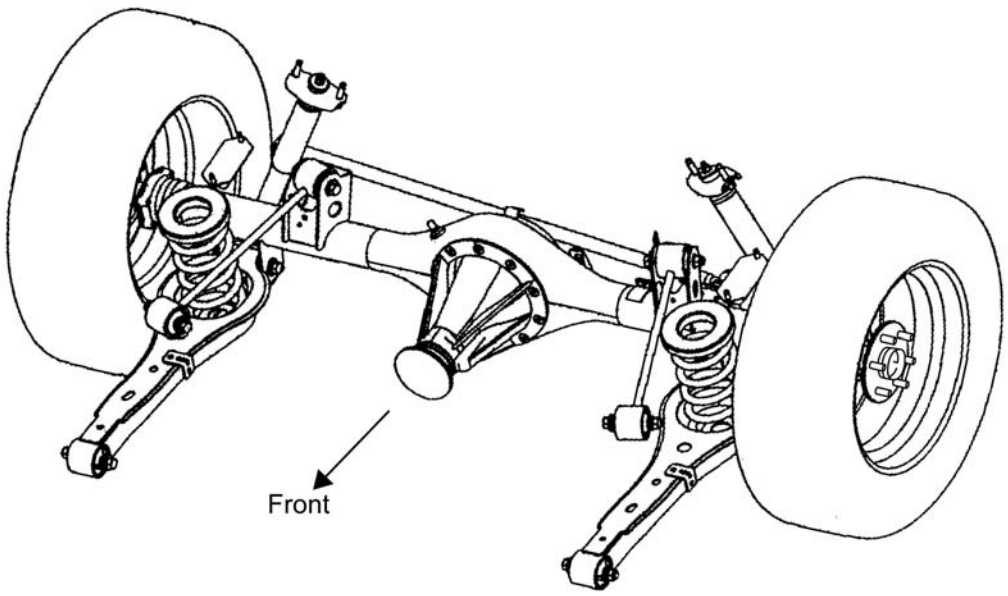
- The adoption of the 4-link rear suspension with lateral control rod contributes to lateral rigidity and excellent straight line stability.
- Excellent lateral rigidity contributes to an enhanced steering feeling, and the linearity and conformity of the vehicle's steering response. High control performance provides comfortable vehicle characteristics and a sense of security during course correction and when driving on winding roads.
- The low-pressure gas-filled shock absorber with stable damping force characteristics has been adopted. It is tuned to deliver sportiness, enhancing stability during high speed driving.

Vibration and Noise

- A large-diameter bush has been adopted on the arm installation part to increase lateral rigidity for steering stability and maintain the rigidity in the forward and rearward directions at an appropriate level. This helps to reduce shock and impact noise when traveling over seams on the road. It also helps to shut off uncomfortable vibration or noise transmission.
- The adoption of the 4-link rear suspension with lateral control rod contributes to rigidity against drive reaction force, helping reduce vibration or shock when taking off or accelerating.

Space Efficiency

- The dimension and layout of the components such as the arm, spring and shock absorber are optimized for more compact packaging, while maintaining the necessary performance. This contributes to the capacity of the fuel tank located under the floor.



B3F-DP-007

IV. DRIVING PERFORMANCE

4. Steering System

IV-4. Steering System

1. Steering Wheel

FEATURES

- The steering wheel* adopted a new design.

4-spoke type with SRS Airbag (Urethane)*

B3H-DP-008 [G1BD]

4-spoke type with SRS airbag (Leather)*

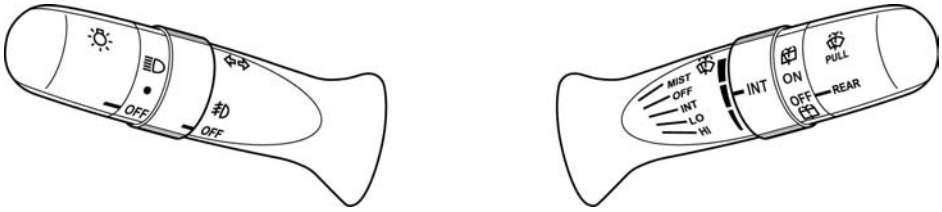
B3H-DP-050 [G1BE]

IV-4. Steering System

2. Combination Switch

FEATURES

- Newly designed combination switch has been adopted to provide an excellent appearance of the knob and the integrated design with the column cover.
- The small switch part has been adopted, aiming for an efficient visibility of the meter.



Combination switch (with front fog lamp* and variable intermittent wiper*)

B3K-DP-303

*Please refer to the Order Guide for detailed specifications.

IV-4. Steering System

3. Steering Gear

FEATURES

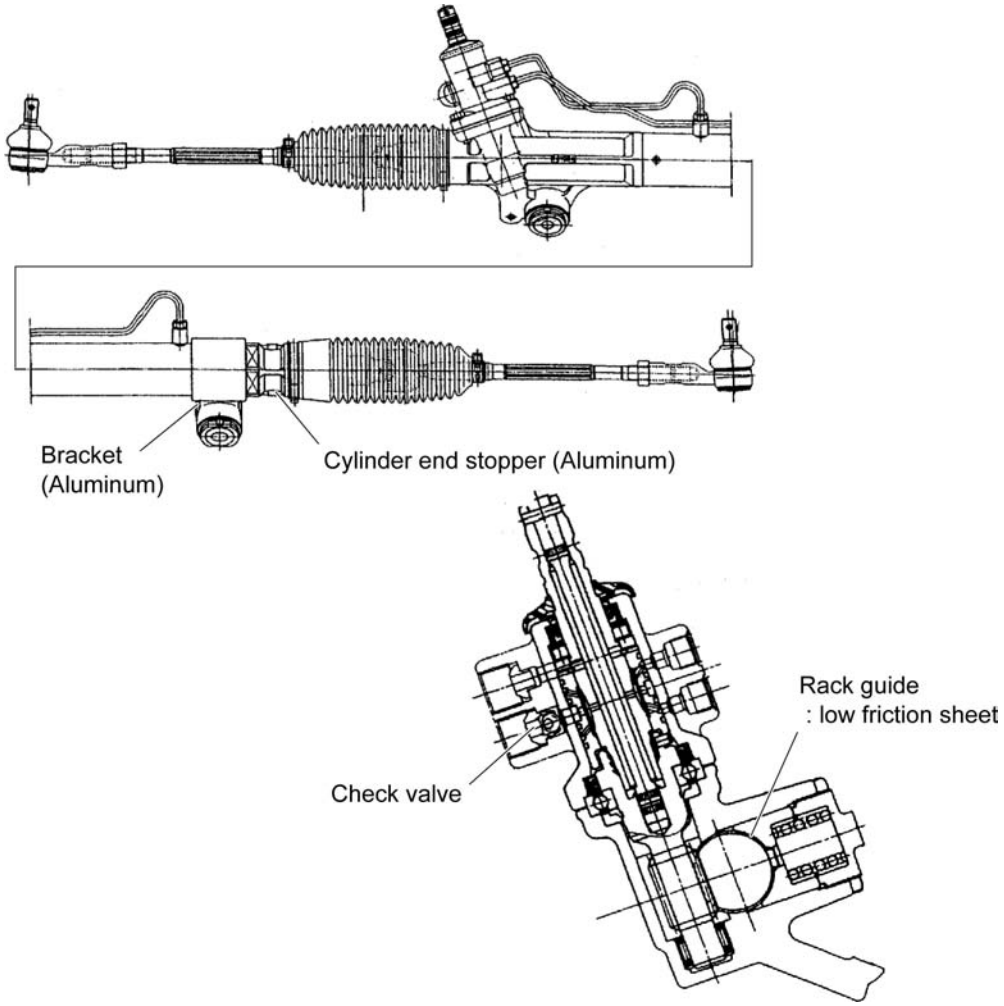
Power Steering

- Engine speed-sensing power steering has been adopted for a natural steering feeling.

Power Steering Gear

- A rack and pinion steering gear which is light and compact has been adopted for excellent steering feeling.
  > The rack and pinion steering gear directly converts the rotation of the pinion into the left and right movements of the rack to steer.
- A light and compact rotary valve with high sensitivity to fluid pressure has been adopted on the control valve of the gearbox.
- The spring constant of torsion bar and fluid pressure characteristics of the control valve have been optimized.
- A check valve has been adopted on the high pressure port to aim at reducing shock from the ground.
- A low friction seat rack guide has been adopted for low friction against the rack bar.
- Aluminum is used in the cylinder end stopper and installation bracket to lighten them.
- Rack stroke and tire turning angle have been adjusted properly for excellent turning performance.
- Gear mount bushings with internal and external cylinder construction are adopted to install the steering gear to the frame. Accordingly, the rigidity in the left and right directions has been optimized and the vertical rigidity and the rigidity in the forward and rearward directions have been enhanced to optimize compliance steer and eliminate vibration from the ground.

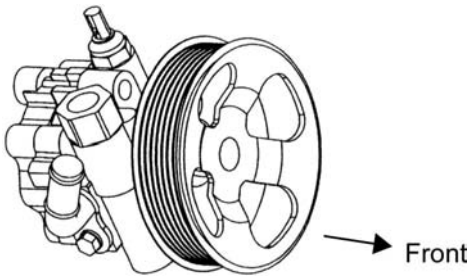
Total gear ratio (neutral)	20.97
No. of turns lock to lock	3.72
Rack stroke (mm)	160


Bracket
(Aluminum)
Cylinder end stopper (Aluminum)
Rack guide
: low friction sheet
Check valve

B3F-DP-018

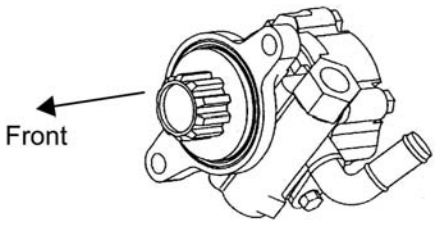
Vane Pump

- For the 1GR-FE engine, a belt-driven vane pump with a built-in flow control valve is adopted.
  > An aluminum housing and steel press pulley have been adopted on the vane pump to lighten it.
- For the 1KD-FTV engine, a gear-driven vane pump is adopted.



1GR-FE

B3H-DP-083

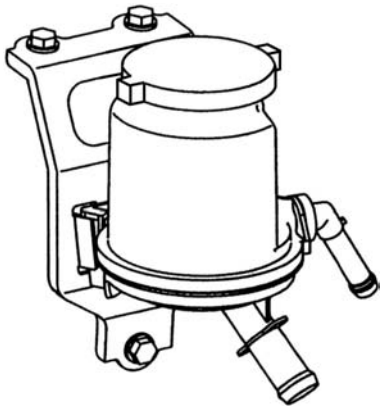


1KD-FTV

B3H-DP-033

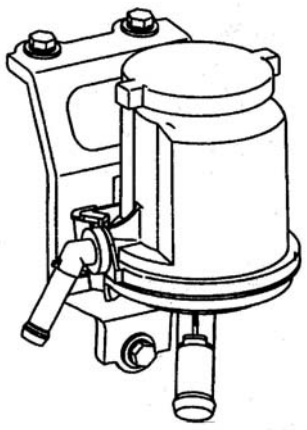
Reservoir Tank

- An independent reservoir tank has been adopted.
- The independent reservoir tank is made of translucent resin to lighten it and to allow the fluid level to be checked easily.



1GR-FE

B3H-DP-084



1 KD-FTV

B3H-DP-034

IV-4. Steering System

4. Steering Column & Intermediate Shaft

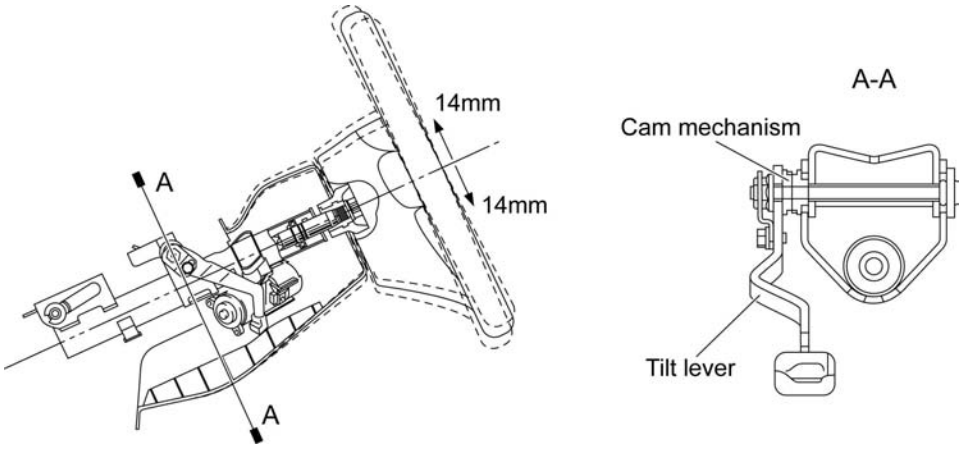
FEATURES

Steering Column

- A cam type tilt steering column has been adopted to be convenient and easy use. A steering column which provides high rigidity has been adopted to aim at reducing vibration while the engine is idling as well as the vertical vibration of the steering column from the ground.
- A newly designed column cover has been adopted in accordance with the adoption of a newly designed combination switch.
- An electrical key interlock system has been adopted on A/T models.

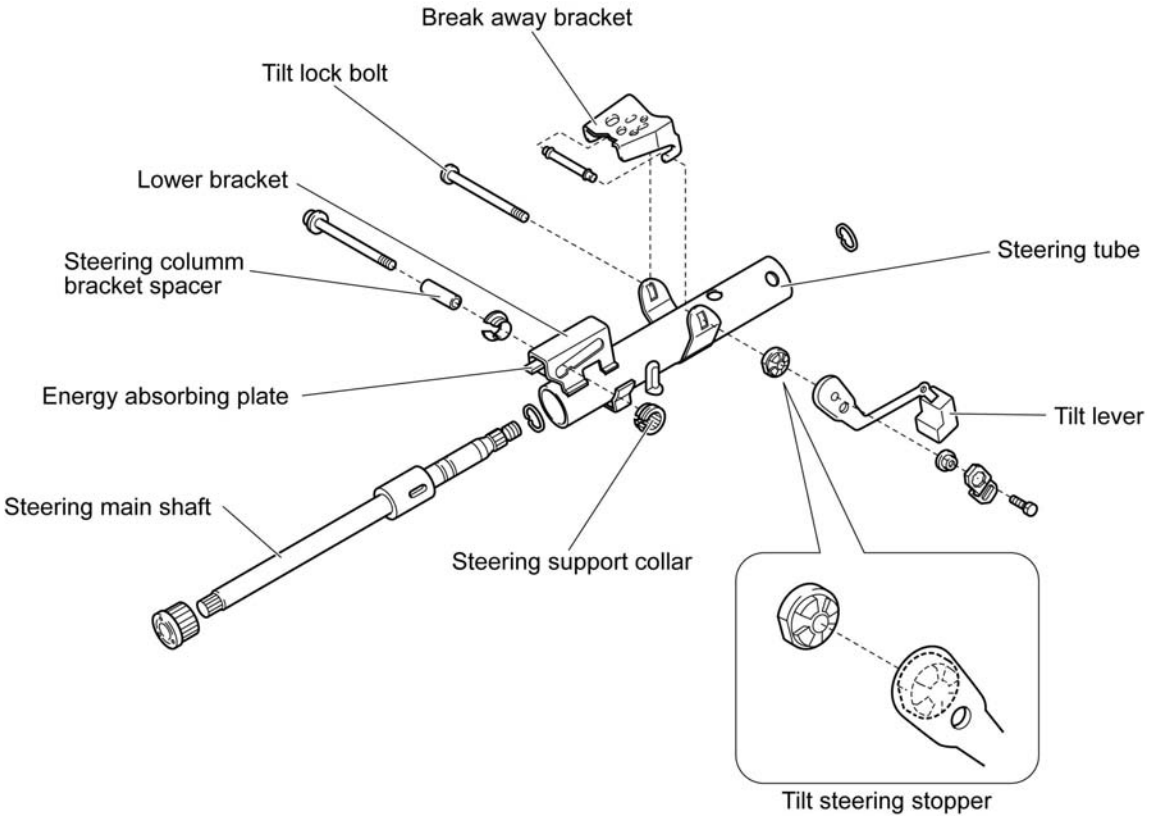
Steering Tilt Mechanism

- A tilt lock mechanism with a cam mechanism has been adopted to lighten the steering tilt mechanism.



B3H-DP-036

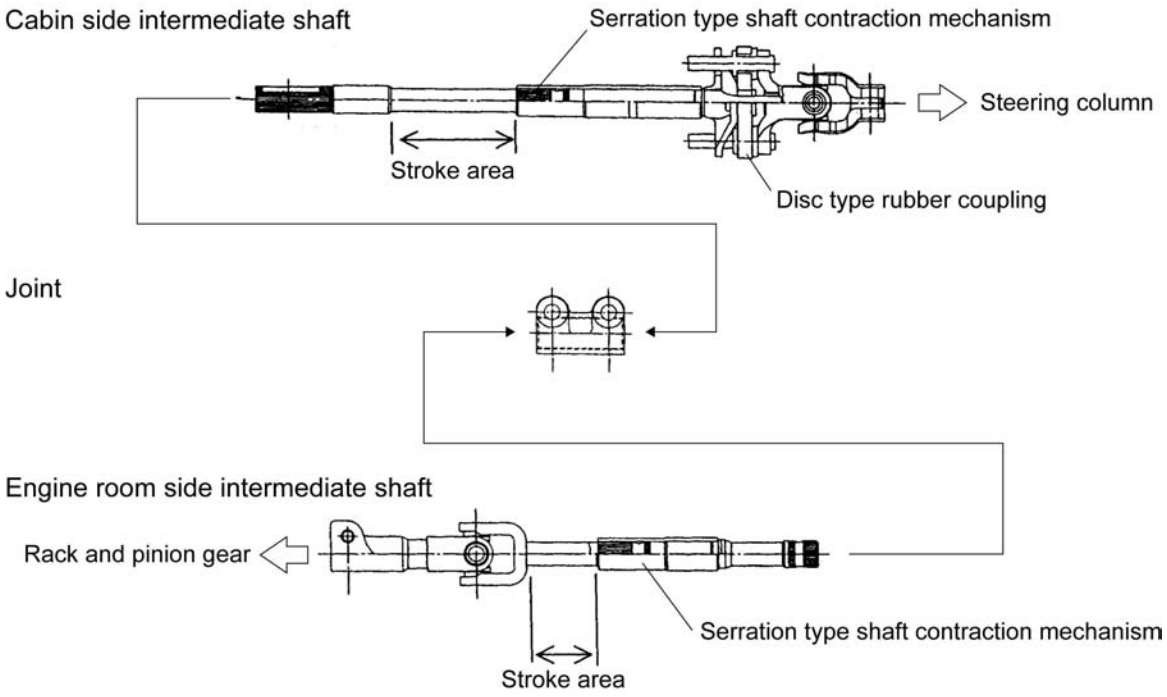
- In the tilt lock mechanism, the cam mechanism operates in synchronization with tilt lever operation, causing the tilt attachment of the steering column tube to pinch the break away bracket.



B3H-DP-037

Intermediate Shaft

- A stroke mechanism which can contract in the axial direction has been adopted on both cabin and engine room ends of the intermediate shaft.
- A disc type rubber coupling has been adopted to help absorb relative displacement of the frame and body and reduce fine vibration from the ground during driving.



B3H-DP-039

IV. DRIVING PERFORMANCE

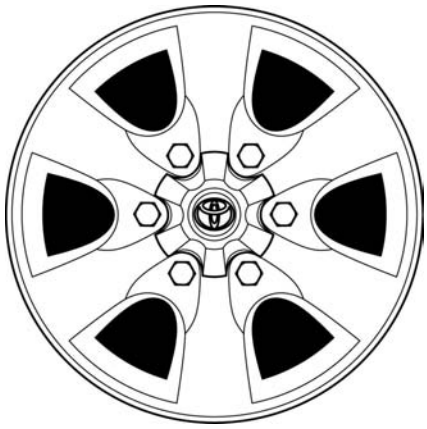
5. Tires & Wheels

IV-5. Tires & Wheels

1. Wheels

FEATURES

- A newly designed 16-inch aluminum wheel has been adopted.
- The distinctive design conveys a strong presence.



B3H-DP-053

IV-5. Tires & Wheels

2. Tires

FEATURES

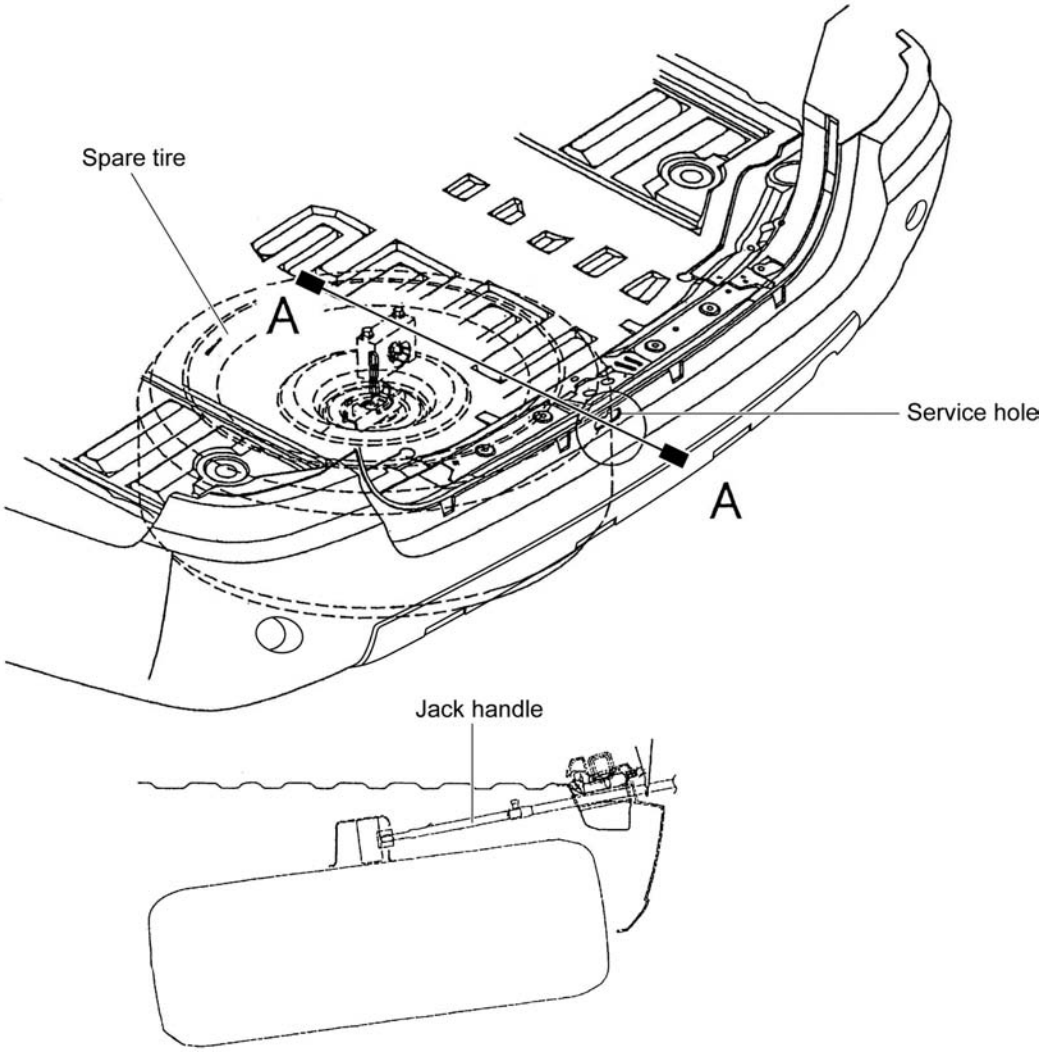
- A 265/70R16 tires has been adopted.
- The RRC (Rolling Resistance Coefficient) of the tires has been help reduced to comply with the European emission regulations STEP III.

IV-5. Tires & Wheels

3. Spare Tire

FEATURES

- A jack handle should be inserted from the service hole located above the rear bumper and passed through the lower back panel to replace a tire.



B3K-DP-007

Product Detail

V

UTILITY & COMFORT

V. UTILITY & COMFORT

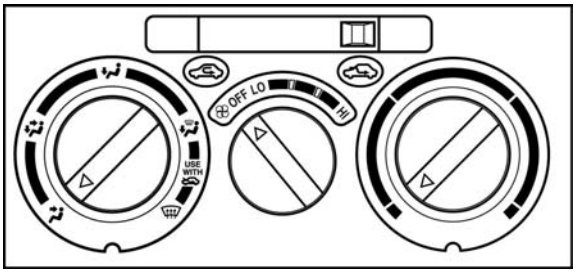
1. Air Conditioning

FEATURES

- The dual type manual air conditioner is adopted.

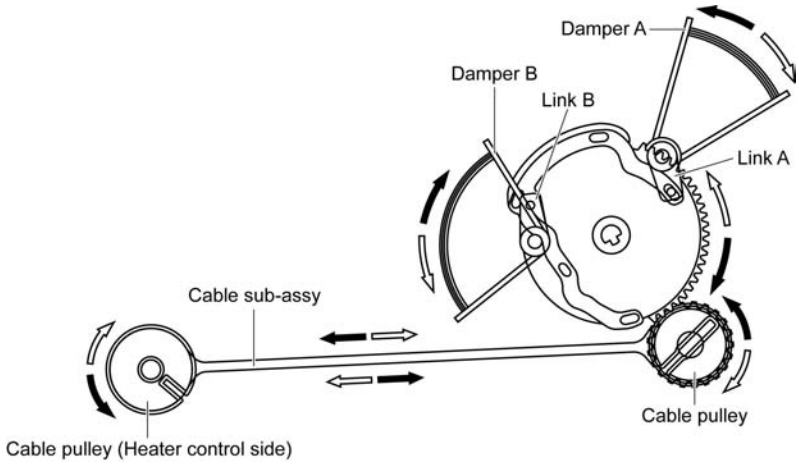
Manual Heater and Air Conditioner

- An easy-to-use cable type manual heater control panel has been adopted. Vent selection can be switched by using the dial on the control panel.



B3H-UC-103 [P3GF]

- A rotary type heater control cable has been adopted. Due to this change, dials can now be operated with constant force.



B3H-UC-006

Air Conditioner Unit

- Thin, light RS (Revolutionary Slim) evaporators with high cooling performance and corrosion resistance have been adopted on both of the front and rear air conditioning systems. The surfaces of the evaporators are coated with resin to help reduce propagation of bacteria which cause unpleasant odors. The base is processed without chrome treatment to help protect the environment.

Front Air Conditioner

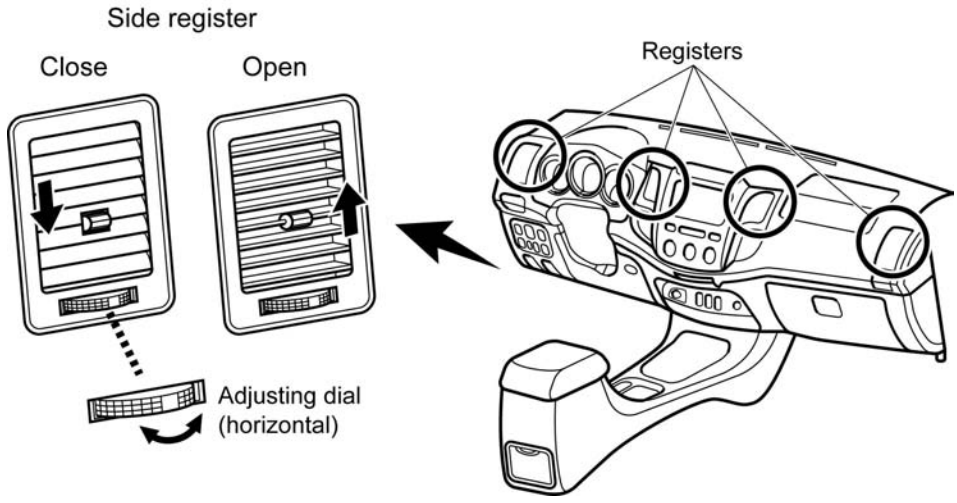
- A sub cool cycle type MF (Multi-Flow)-IV condenser with high cooling performance and fuel efficiency has been adopted.
- A lightweight SFA-II (Straight Flow Aluminum-II) type heater core with an excellent heating performance is adopted.

Rear Air Conditioner

- A rear cooler unit is installed in the quarter trim on the right side of the vehicle. A duct is installed in the quarter trim to allow air flow from the upper area of the quarter trim on the right of the vehicle.

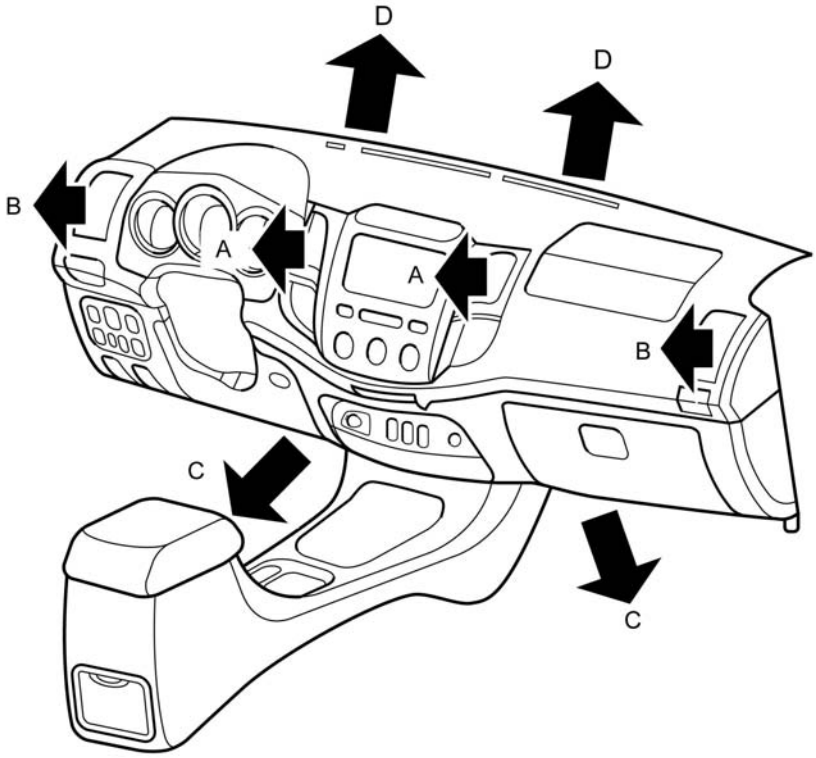
Front Register

- A newly designed register has been adopted to give the appearance of a passenger vehicle.



B3F-UC-038

Front Air Outlets and Front Air Volume Rations



Air flow		A	B	C	D
Vent		Center	Side	Lower	Defroster
Mode	Face	○	○	×	×
	B／L	○	○	○	×
	Foot	×	○	○	○
	F／D	×	○	○	○
	DEF	×	○	×	○

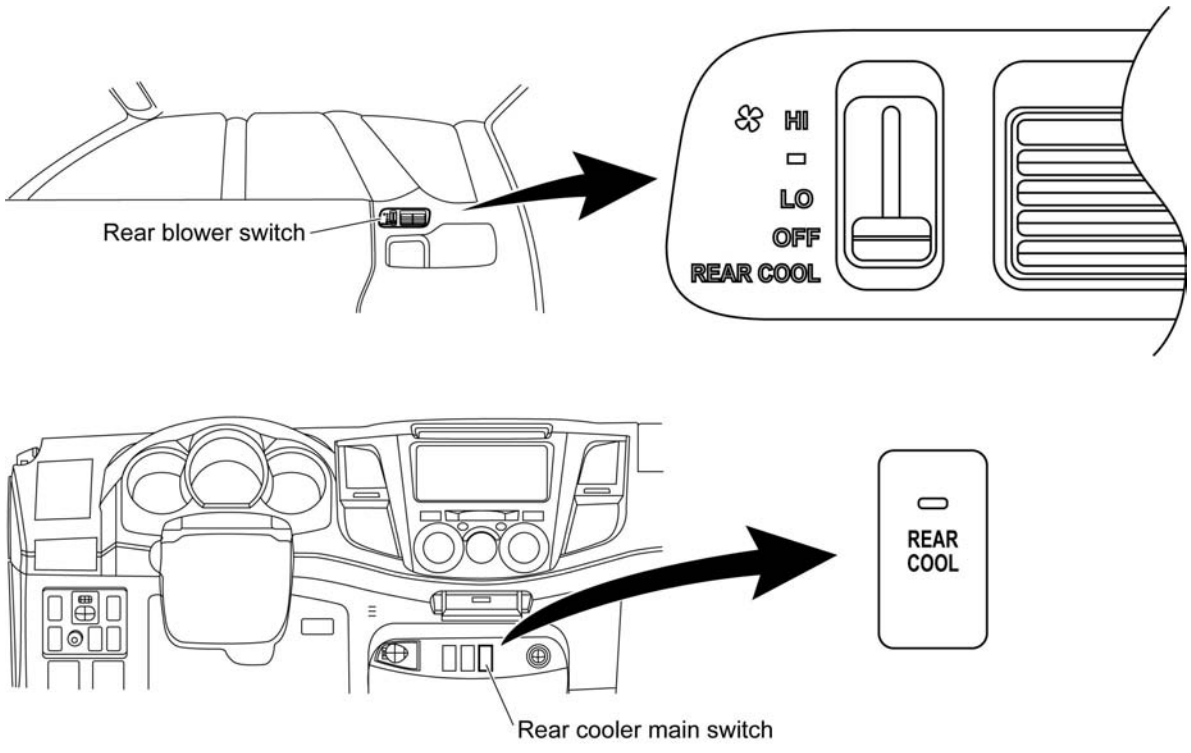
○ indicates air flow. Its size represents air volume. × indicates no air flow.

B3F-UC-041

Rear Blower Switch and Rear Cooler Main Switch

- The rear blower switch has three settings: Low, Middle, and High.
- The rear cooler main switch is placed on the instrument panel. The rear cooler operates as follows:

Rear cooler main switch	Rear blower switch	Front air conditioner switch	Rear cooler operation
ON	ON	ON	Cooling
ON	ON	OFF	Air distribution only
ON	OFF	ON	OFF
ON	OFF	OFF	OFF
OFF	ON	ON	OFF
OFF	ON	OFF	OFF
OFF	OFF	ON	OFF
OFF	OFF	OFF	OFF



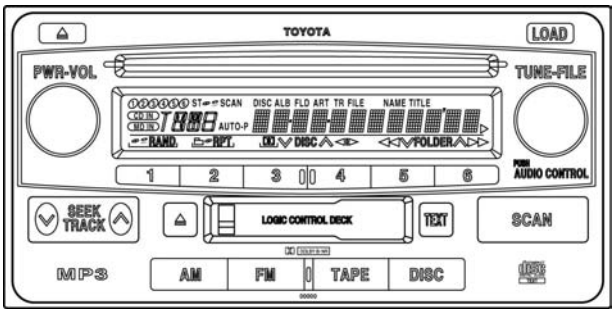
B3F-UC-300

V. UTILITY & COMFORT

2. Audio System

FEATURES

- Audio system* settings are as shown below.
  - > Without radio, 6-speaker
  - > AM/FM radio with cassette and 6-CD changer (built-in amplifier), 6-speaker, amplifier max. output: 40W x 4ch.



B3H-UC-036 [U1AL]

*Please refer to the Order Guide for detailed specifications.

- The CD changer has the following features:

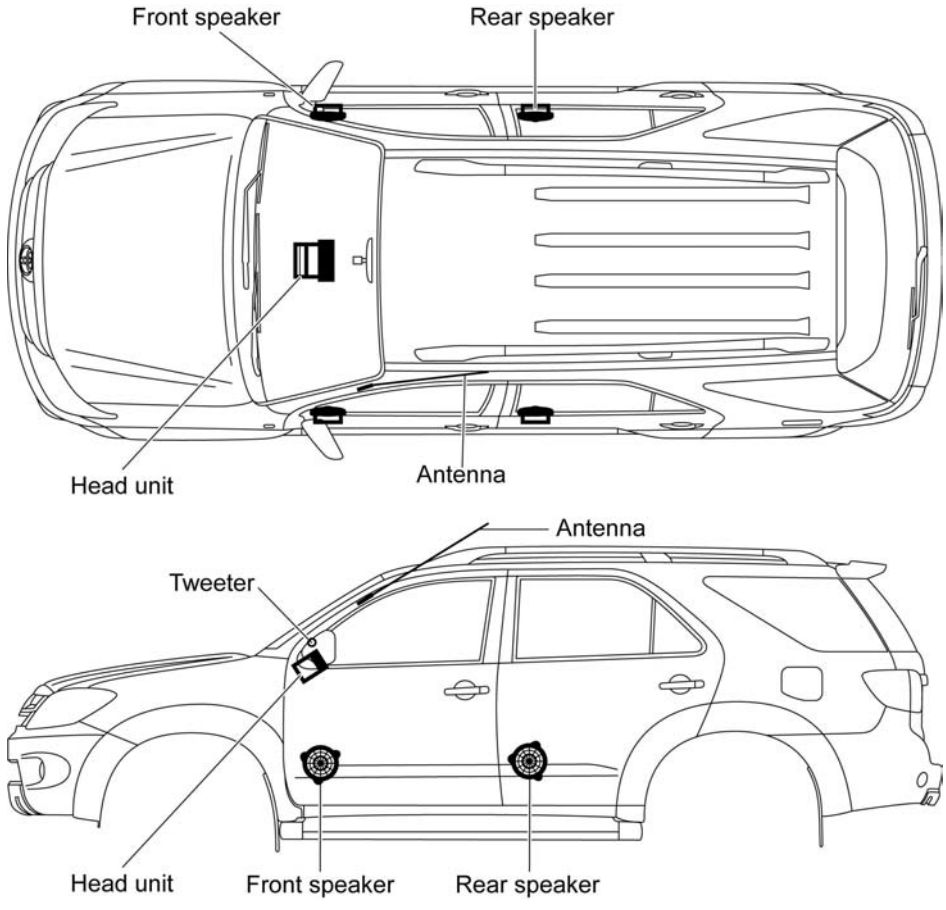
  > The CD player can play discs recorded in the MP3 format. They can also play discs containing both CD-DA and MP3 data.

  > When playing a disc containing CD-TEXT, the EMV display shows the text information. (Only DISC-TITLE and TRACK-TITLE are displayed. ARTIST-TITLE is not displayed.)

Button name	Function
Short touch TEXT button	ELAPSED TIME □ DISC TITLE □ TRACK TITLE □ (return to TIME)
Long touch TEXT button	TEXT data ≥ 13 letters: change pages for TEXT data

  > This system has a DSP (Digital Signal Processor) that uses LEF (Liveliness Enhancing Filter), which allows the bass or treble to be emphasized without distorting the middle ranges.

Audio System Layout



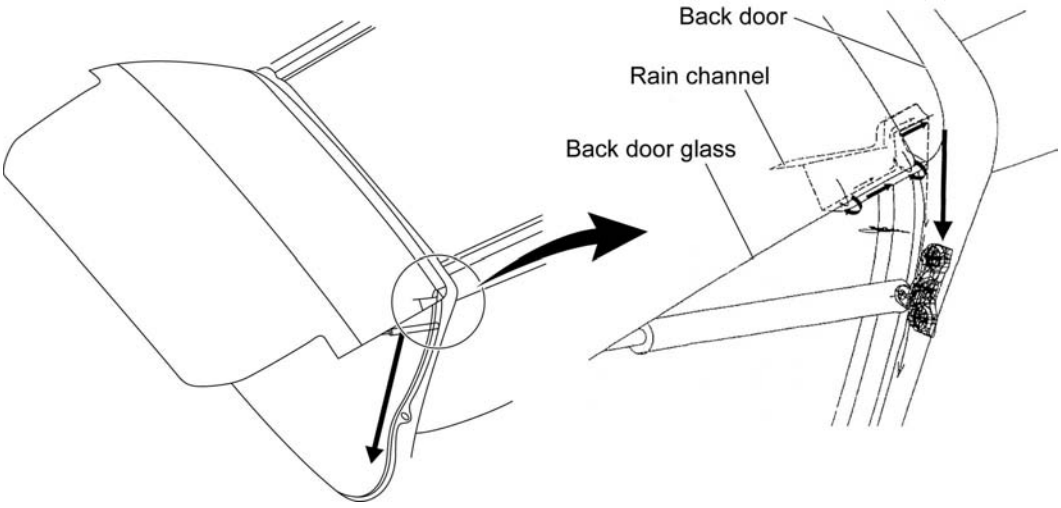
B3F-UC-301

V. UTILITY & COMFORT

3. Back Door

FEATURES

- The back door has a rain channel to help prevent water from entering the cabin when the back door is opened.



B3F-UC-002

V. UTILITY & COMFORT

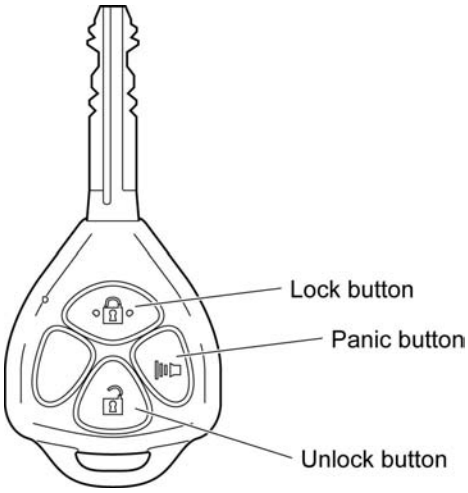
4. Door Lock System

V-4. Door Lock System

1. Wireless Door Lock

FEATURES

- Wireless door lock with a newly designed transmitter is provided.



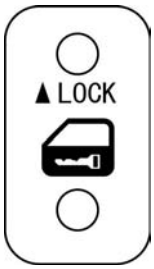
B3H-UC-307

V-4. Door Lock System

2. Door Lock

FEATURES

- Silent type door locks and the door lock striker have resulted in a heavy sound when closing doors, providing a feel of luxury.
- A grip type outside handle which can be easily operated has been adopted.
- A convenient inside handle integrated with a door locking knob has been adopted.
- In consideration of usability, a ▲LOCK mark is added to the lock switch on the door switch base on the driver's side.



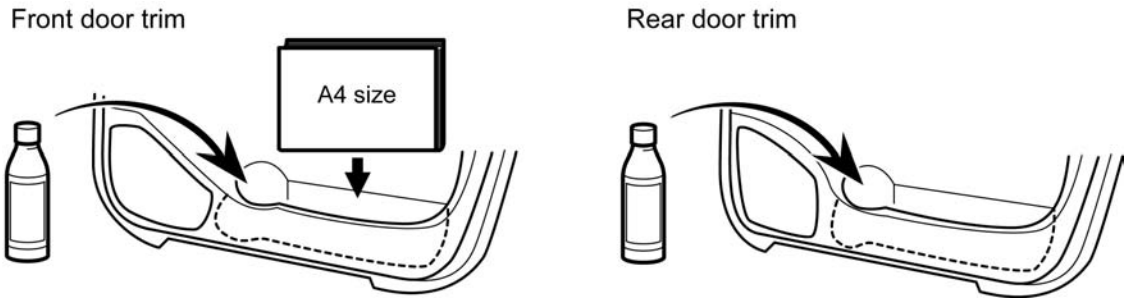
B3H-UC-302

V. UTILITY & COMFORT

5. Storage Space

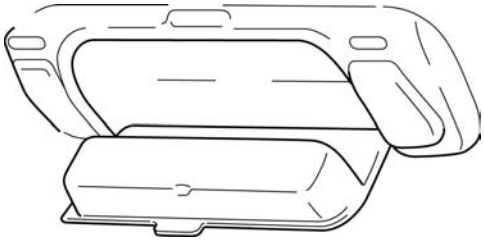
FEATURES

- Front and rear doors have convenient large pockets.



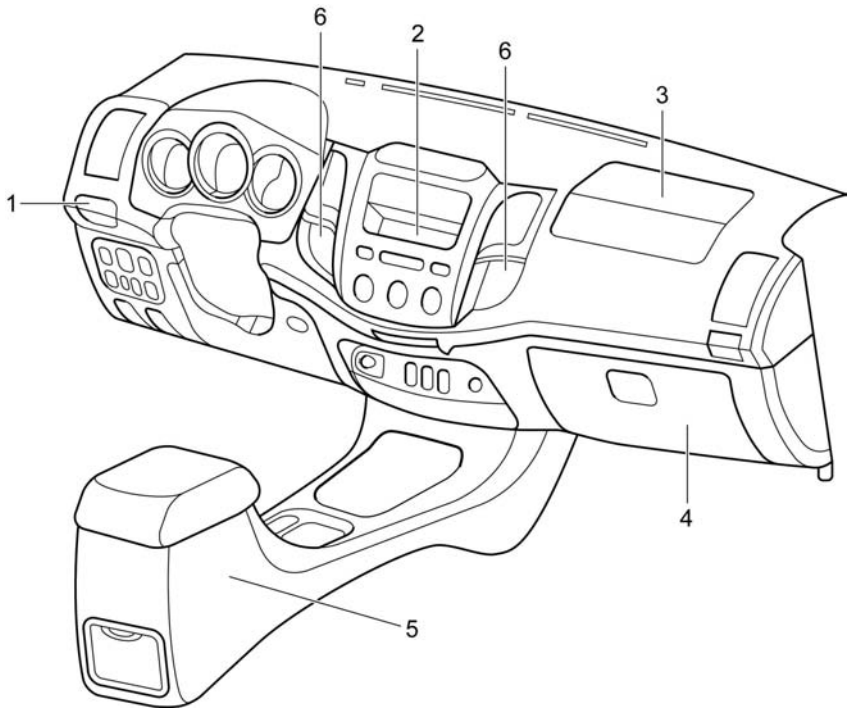
B3K-UC-010

- A convenient header box with a map lamp integrated has been adopted.

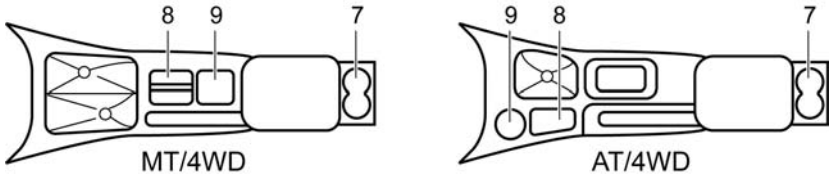


B3H-UC-022 [L5FB]

- Convenient storage spaces are provided on the instrument panel and console box.



B3F-UC-302

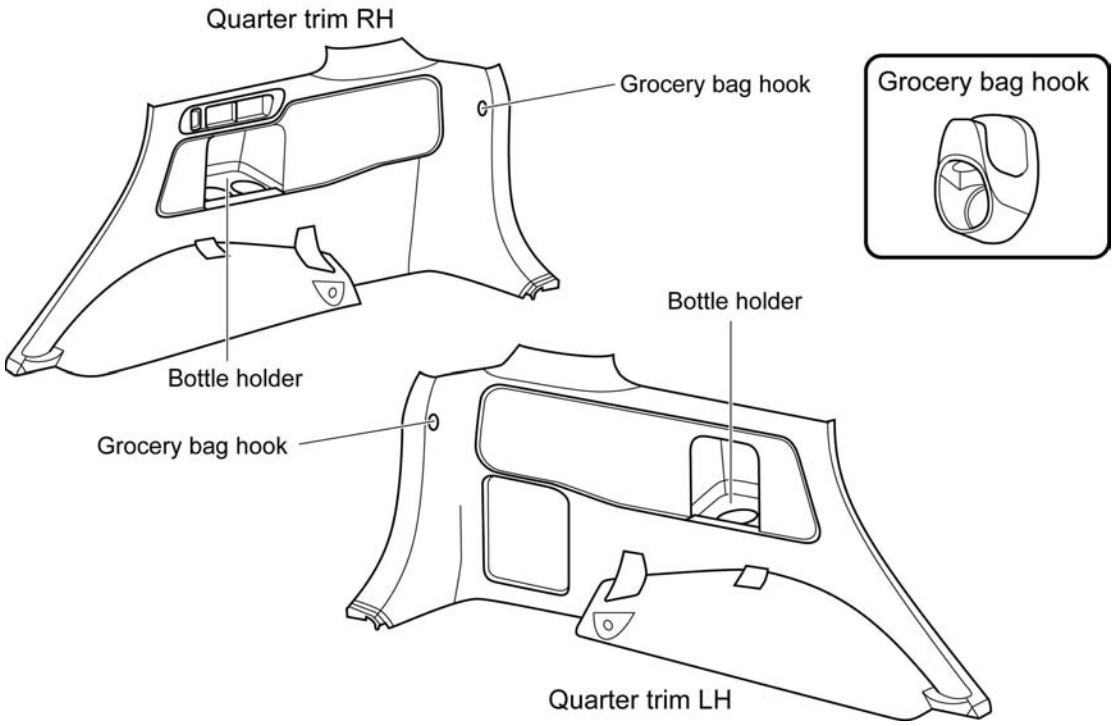


B3F-UC-029

No.	Item	No.	Item
1	Instrument panel cup holder	6	Center box
2	1DIN box* (Without audio head unit)	7	Rear cup holder
3	Passenger airbag	8	Small article compartment
4	Glove box	9	Console cup holder
5	Console rear box	-	-

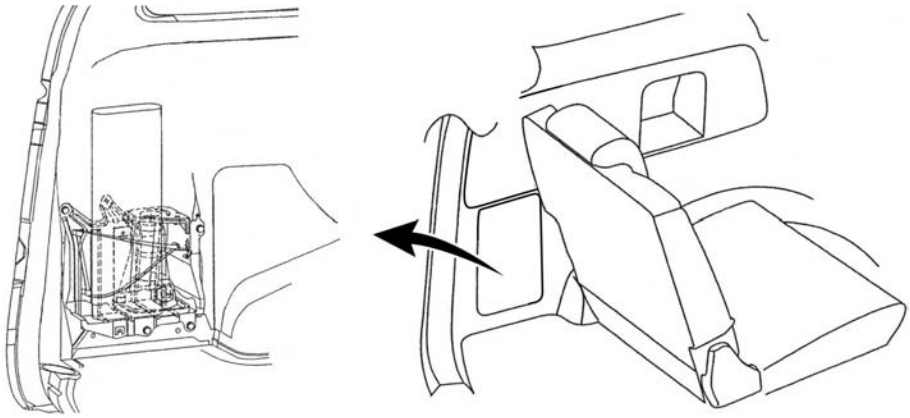
*Please refer to the Order Guide for detailed specifications.

- The quarter trim has a bottle holder and a grocery bag hook.



B3F-UC-003

- The jack and tools are placed in the LH deck side trim to enable them to be taken out without moving the rear seat.



B3F-UC-013

V. UTILITY & COMFORT

6. Security

V-6. Security

1. Engine Immobilizer System

- To help prevent vehicle theft, an engine immobilizer system which makes the engine inoperable unless a genuine key is used has been adopted.
- The antenna coil located around the ignition key cylinder receives the encrypted ID code sent from the transponder chip built into the key grip. If the code matches the registered ID code in the immobilizer ECU, the ECU releases the immobilizer system and communicates with the engine ECU to allow the engine ignition and fuel injection.

V-6. Security

2. Security System

FEATURES

- A security ECU integrated with wireless tuner has been adopted for the security system.

Functional Items

- Function items 16 and 17 are not set when factory shipped and after battery reconnection. These items can be set by customization.

No.	Items	Contents
1	Wireless door lock	When the ignition switch is off and all doors are closed, all doors are locked with the LOCK button.
2	Wireless door unlock	When the ignition switch is off, all doors are unlocked with the UNLOCK button.
3	Wireless answer back	When locking or unlocking with transmitter, the operation can be checked by hazard lamps blinking. (lock : once, unlock : twice)
4	30 sec. auto lock	When unlocking with transmitter, the door is automatically locked and the security system turns on if the door is not opened or the ignition switch is not turned on within 30 seconds.
5	Door ajar warning (when pressing wireless lock button)	When pressing the LOCK button while any doors are ajar, the security horn sounds to warn that the door is ajar. (sounds for 1 sec.)
6	Additional transmitter registration	Up to 4 transmitter switches can be registered.
7	Rolling code	A high security level rolling code is used in the signal from the transmitter.

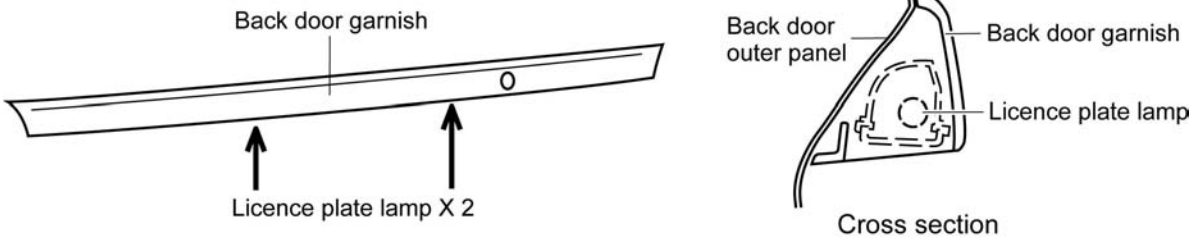
No.	Items	Contents
8	Security system set or unset with wireless button	The security system is turned on or off by operating the LOCK or UNLOCK button of the transmitter.
9	Answerback sound customize	The sound of the answerback can be turned on or off by the dealer or user. (The sound mentioned in No.5 can be turned on or off.)
10	Illuminated entry	When unlocking with transmitter, the lamp for the ignition switch come on for 30 seconds. These lamps turn off when locking with the LOCK button or turning the ignition switch on. When any doors are open, these lamps come on.
11	Door open detection	When detecting any doors are open during armed state, the alarm starts.
12	Hood open detection	When detecting the hood is open during armed state, the alarm starts.
13	Impact detection	When the glass is broken and abnormal vibration is detected during armed state, the alarm starts. The detection of abnormal vibration can be canceled temporarily.
14	Alarm with detected horn	In addition to the usual alarm, the alarm with detected horn is made when alarming.
15	Armed state and alarm state release with wireless UNLOCK button	The alarm can be stopped with the UNLOCK button. The armed state is also cancelled.
16	Vehicle speed auto lock	When the vehicle speed reaches 25 km/h for the first time after closing all the doors, all doors are locked. (They are locked only once, and they are not automatically locked again until the door is opened or closed. This function can be cancelled along with the No.17 function.)
17	IG-off door unlock	If all doors are locked by the function No.19, all doors are unlocked by turning the ignition switch off.
18	Security indicator	Used in common with the LED for the immobilizer.
19	Alarm by reconnecting battery	When the battery is disconnected in the armed state, the alarm starts when it is reconnected.
20	Alarm memory	If the alarm is memorized when the armed or alarm state is cancelled, the hazard lamps blink three times to inform the driver of the alarm at the time of unlocking with transmitter.
21	Alarm with alarm button	When the alarm button is kept pressed for a certain period of time, the alarm starts. When any of the transmitter buttons is pressed, the alarm stops.

V-6. Security

3. Back Door

FEATURES

- The license lamps have been installed on the garnish so as not to drill a hole in the back door panel, thus helping to prevent vehicle theft.



B3F-UC-005

V. UTILITY & COMFORT

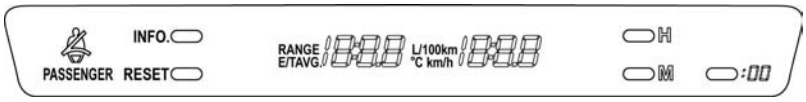
7. Convenience Equipment

V-7. Convenience Equipment

1. Multi-information Display

FEATURES

- A multi-information display is adopted. It shows vehicle information (outside temperature, average fuel consumption, instant fuel consumption, average vehicle speed, IG-ON time, cruising range and compass) and time.



B3F-UC-009 [T3PB]

V-7. Convenience Equipment

2. Sun Visor

FEATURES

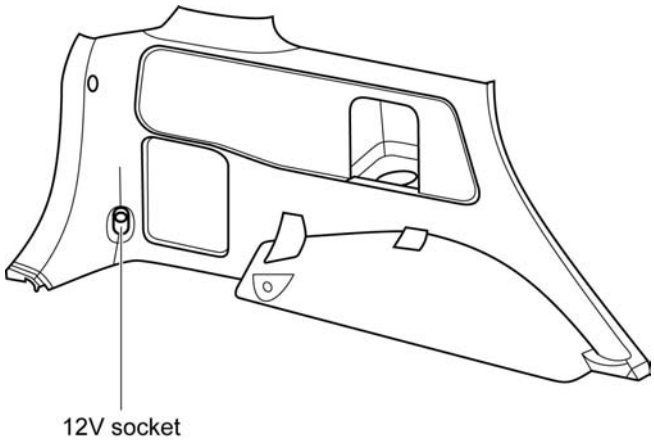
- A ticket holder is provided on the driver's sun visor, and a vanity mirror is provided on the passenger seat sun visor.
- The sun visor features a turnover function for convenient use.
- The visor arm is in color for market appeal.
- A sun visor that has a fabric surface on the cabin side is adopted to enhance marketability.

V-7. Convenience Equipment

3. Accessory Connector

FEATURES

- The accessory connector socket and the cigarette lighter are placed separately for better product quality.
- The accessory connector socket is placed on the left quarter trim for better product quality.



B3F-UC-008

V-7. Convenience Equipment

4. Coat Hook

FEATURES

- The assist grip has a coat hook*.

*Please refer to the Order Guide for detailed specifications.

Product Detail

VI

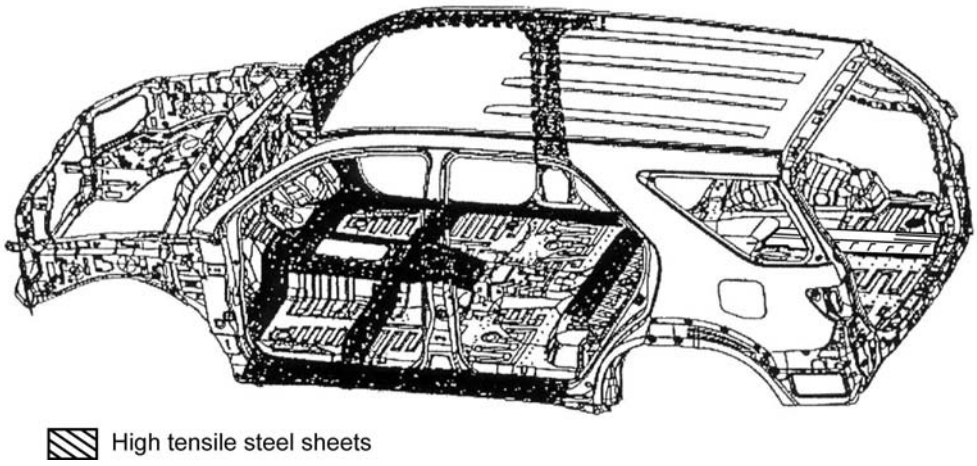
BODY STRUCTURE

VI. BODY STRUCTURE

1. High Rigidity Body

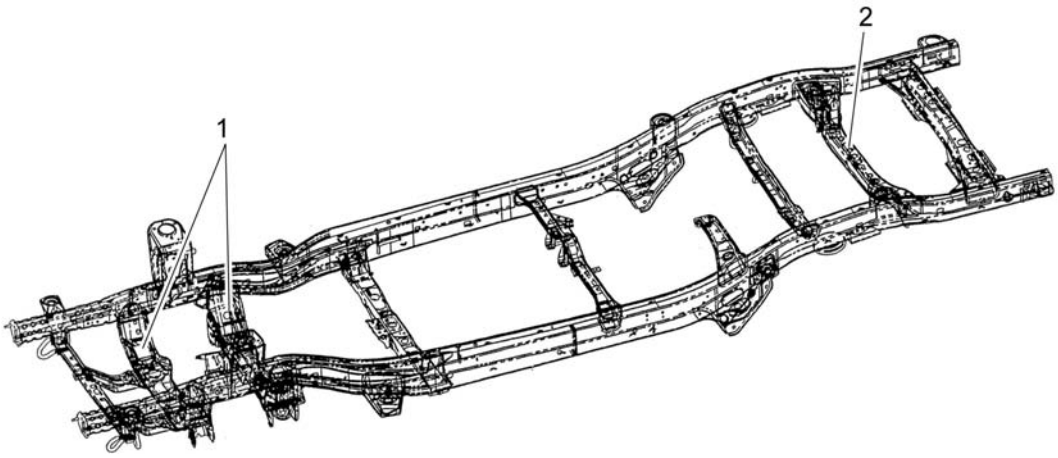
FEATURES

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



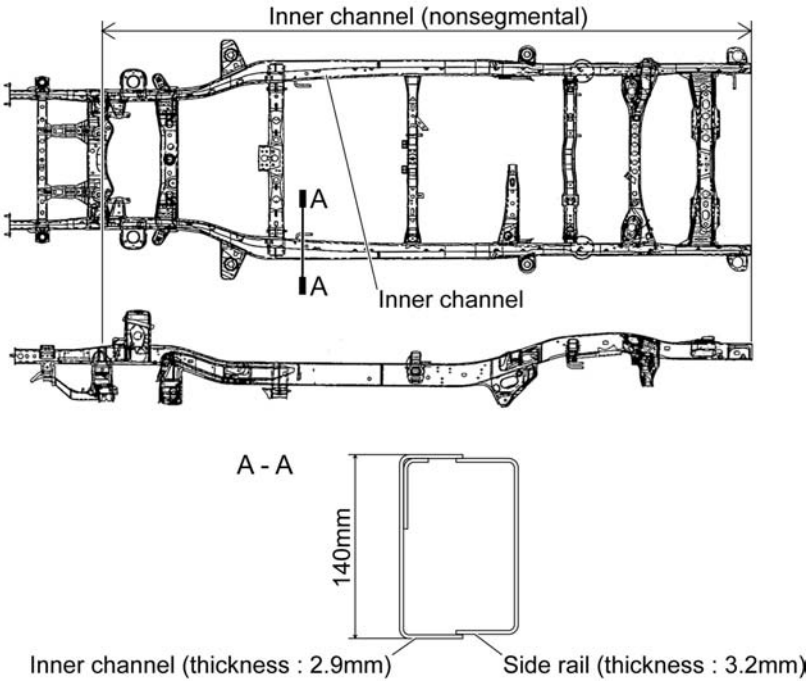
B3F-BS-021

- The following components are used to optimize the rigidity of the attaching parts of the front and rear suspensions, and to help ensure stability and controllability, and straight line stability.
  - > Two large suspension cross members is deployed on the attached part of the suspension. -1
  - > A cross member with a built-in bracket is deployed to the attached part of the rear lateral control. -2



B3F-BS-010

- The thick side rail with a high cross section and the reinforcements efficiently placed on the side rail parts help ensure high lateral bending rigidity for enhanced stability and controllability.
- By integrating the cross member attaching front and rear inner channels into one, the number of welded parts are reduced, helping ensure reliable quality.



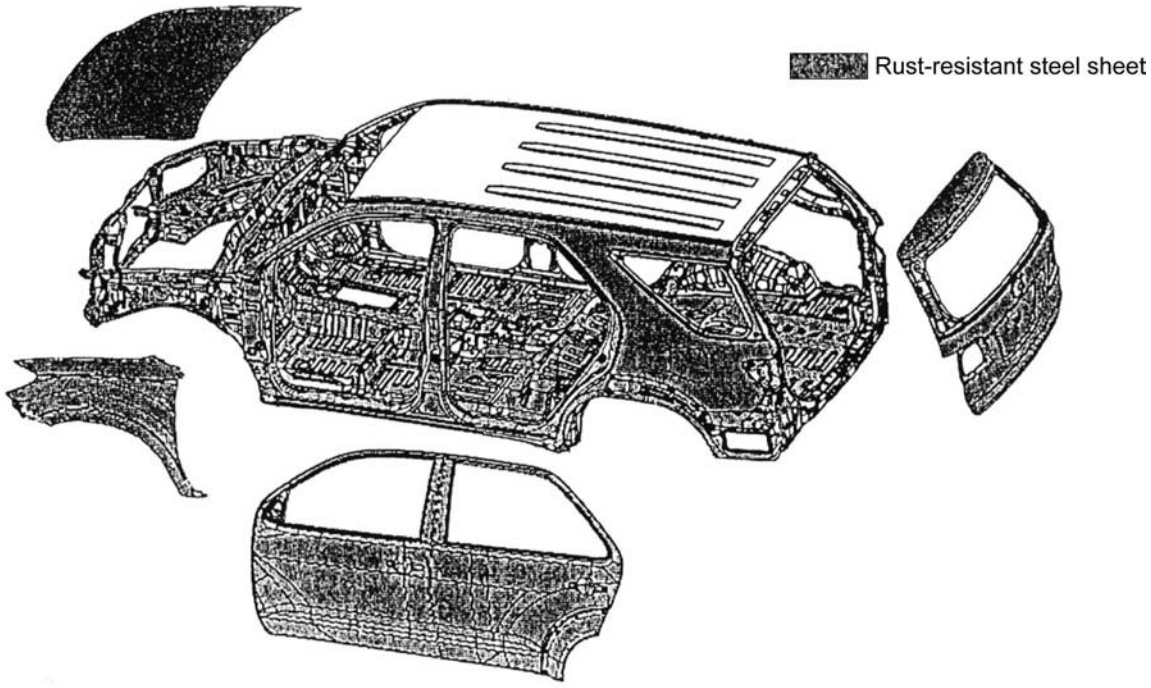
B3F-BS-011

VI. BODY STRUCTURE

2. Rust Resistant Body

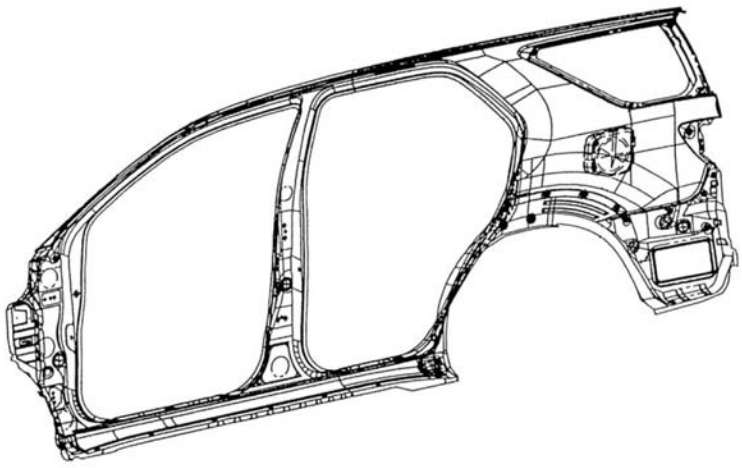
FEATURES

- Rust-resistant steel sheets have been adopted in rust-prone areas. All outer panels except the roof are also made of rust-resistant steel.



B3F-BS-002

- A joint-less side member outer panel enhances rust-prevention.



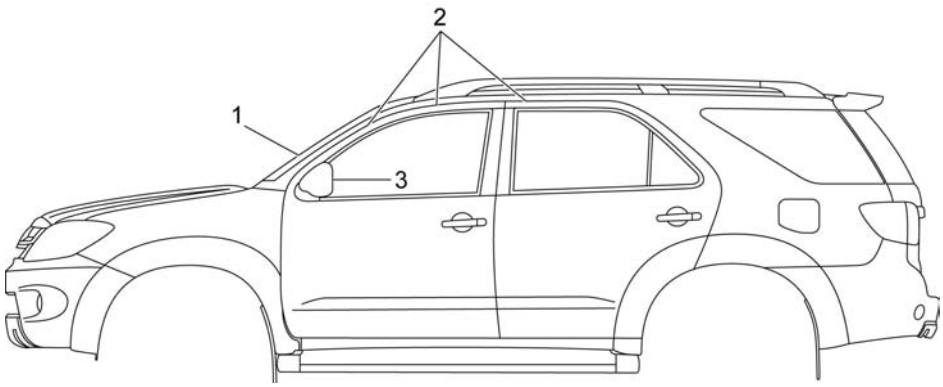
B3F-BS-003

VI. BODY STRUCTURE

3. Low Noise & Low Vibration Measures

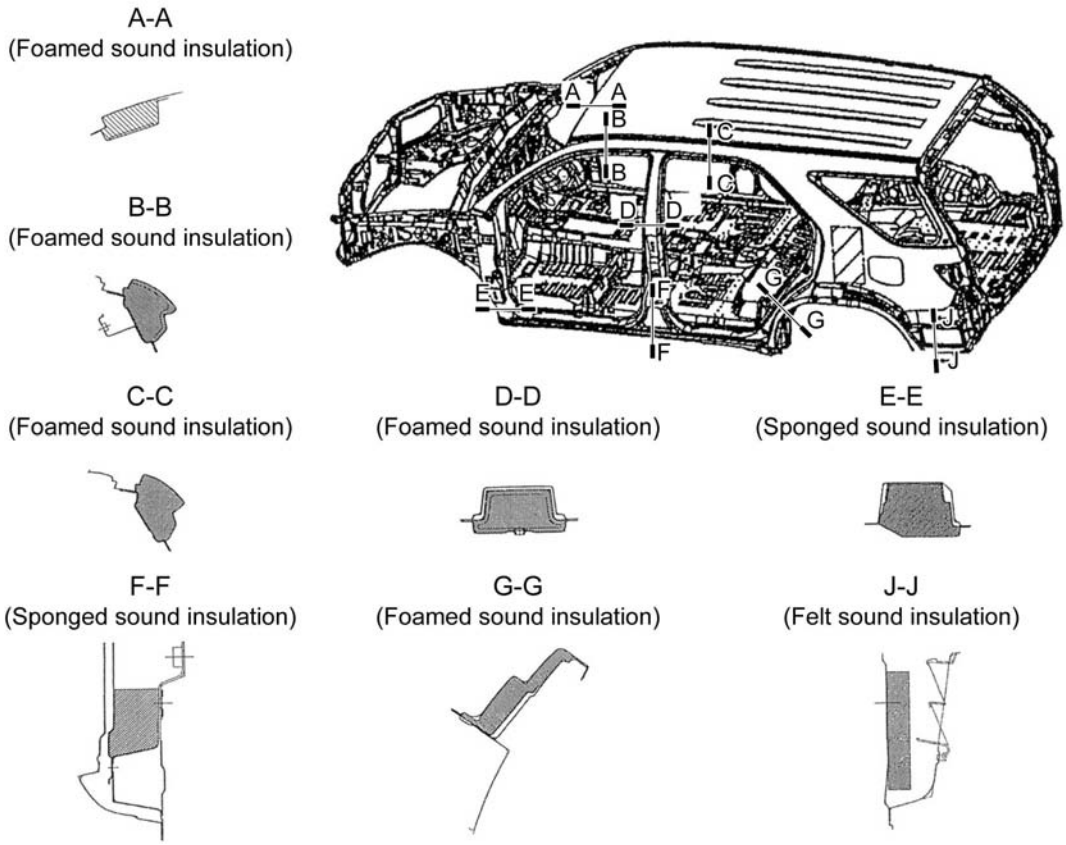
FEATURES

- The following have been performed around the doors to reduce wind noise.
  - > Windshield glass has been tilted. -1
  - > Door parting lines have been set sideways. -2
  - > The shape of the door mirrors has been formed to reduce wind noise. -3



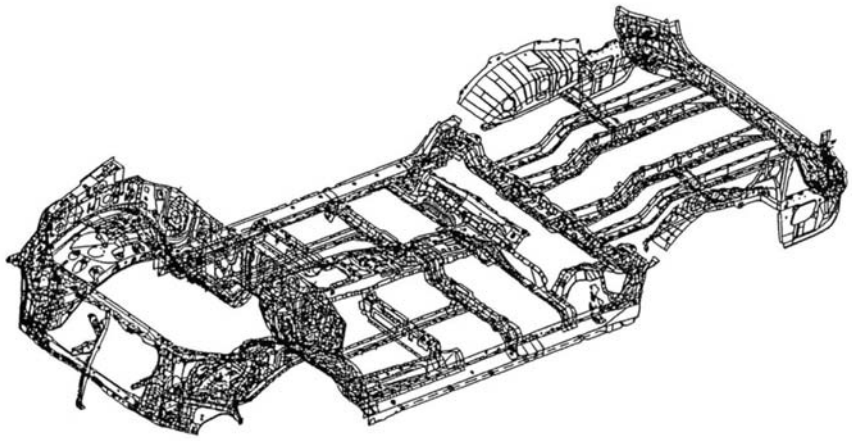
B3F-BS-004

- Sound insulation materials have been used around the cabin to help reduce noise.
  - > Foamed sound insulation has been installed to the cross section of the frame. -1
  - > Sponged or felt sound insulation has been installed in the work hole. –2



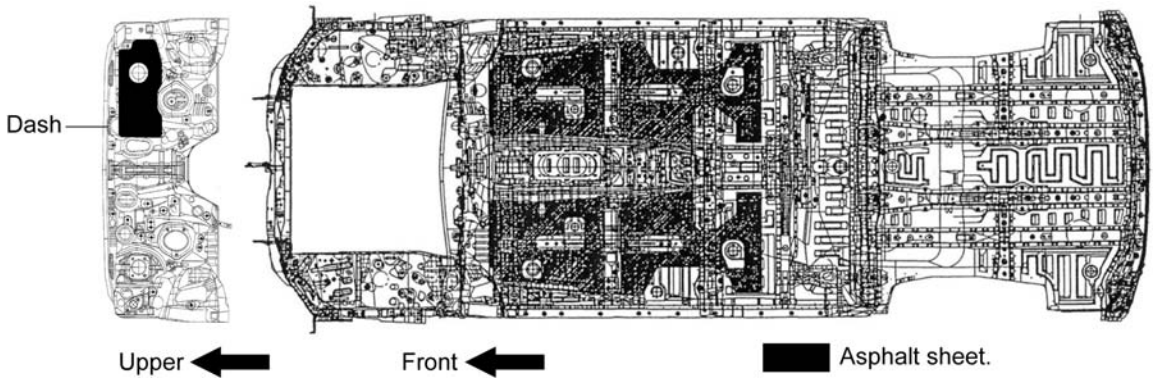
B3F-BS-005

- The sufficient framing with optimized joints for the underbody helps reduce floor vibration.



B3F-BS-006

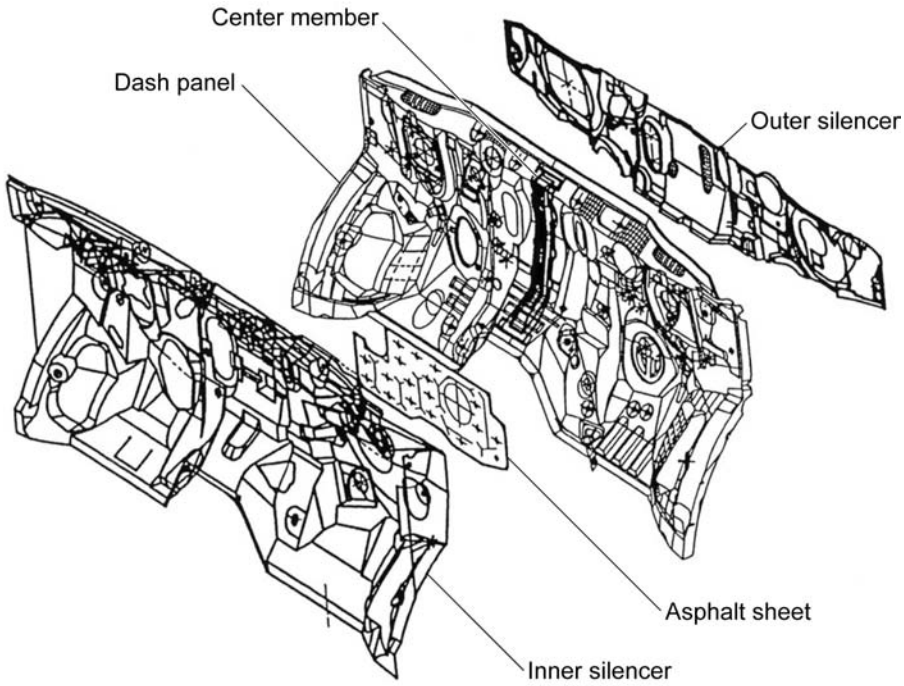
- Noise and vibration have been reduced effectively by optimizing allocation of the asphalt sheet.



B3F-BS-015

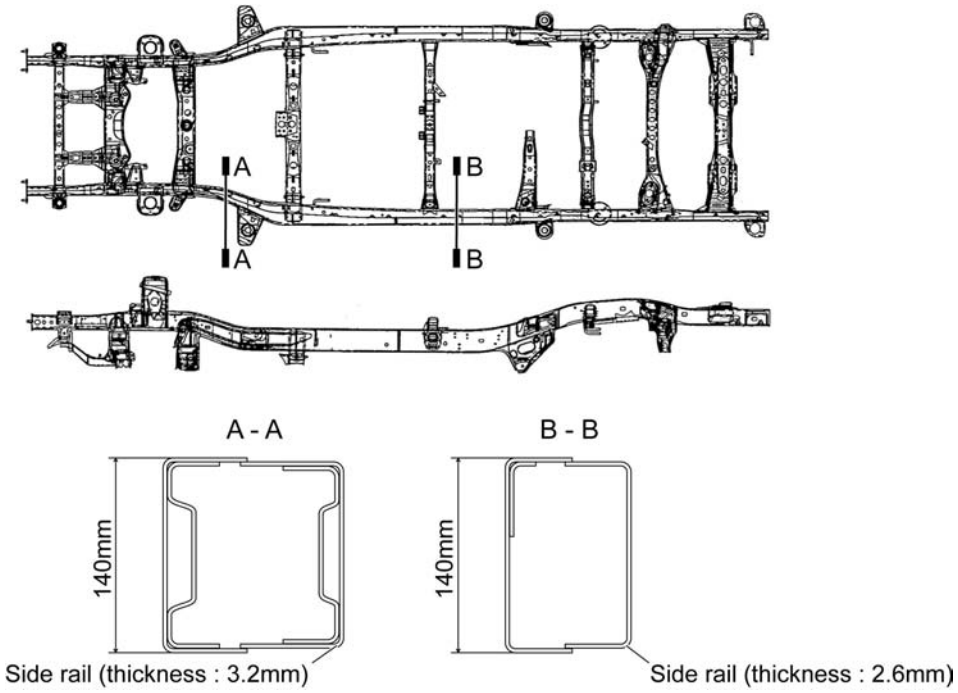
- The following sound absorption/insulation and damping materials have been installed to help reduce noise.
  - > Felt type inner silencer (cabin side)
  - > Thick asphalt sheet (cabin side)
  - > Center member (dash panel)
  - > High-density outer silencer* (engine room side)

*Please refer to the Order Guide for detailed specifications.



B3F-BS-016

- The large side rail cross section and the jointing rigidity of the cross members help ensure excellent torsion rigidity in the frame for ride comfort.
- The thick side rail with a high cross section helps ensure high vertical bending rigidity, minimizing the vehicle's up-down movements to provide excellent ride comfort. The side rail has different thickness in the front and the rear for optimal rigidity in both areas.



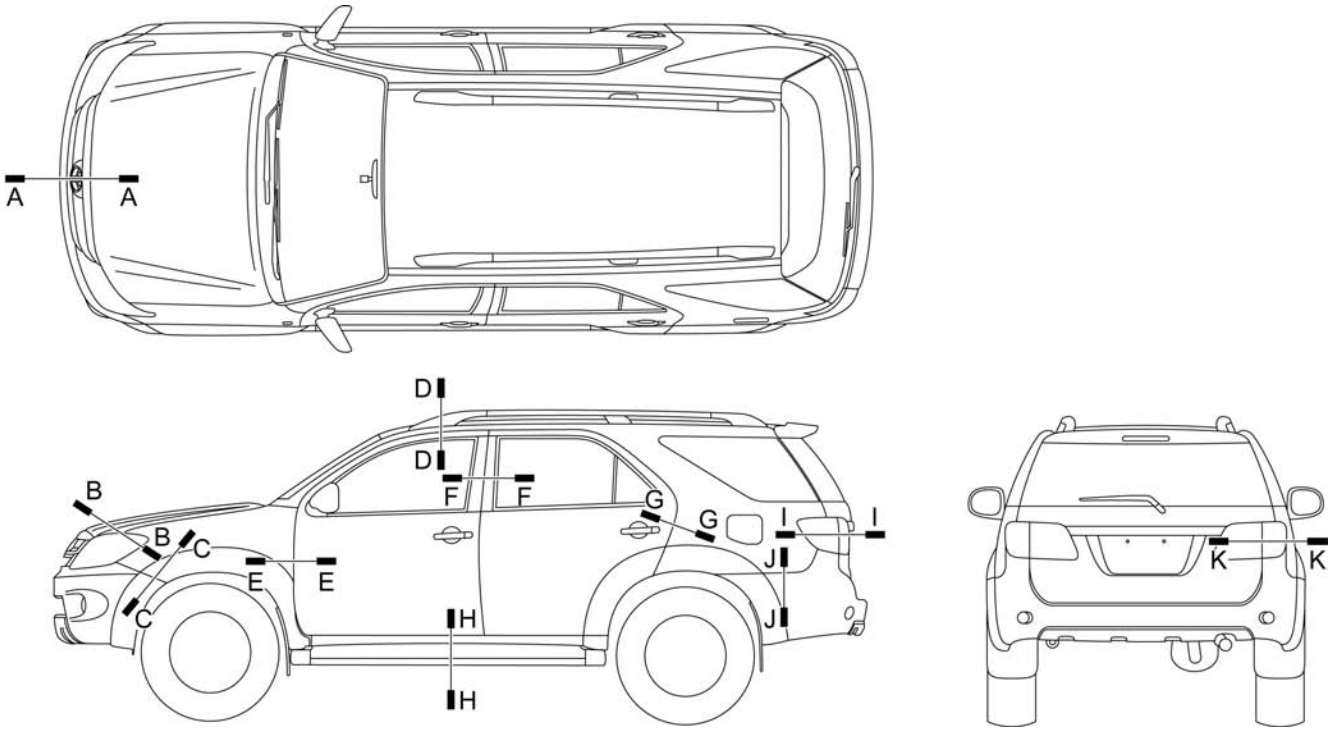
B3F-BS-012

VI. BODY STRUCTURE

4. Other Features

FEATURES

- The clearance between parts was minimized for enhanced appearance.



B3F-BS-018

Portion	A	B	C	D	E	F
Clearance (mm)	5.0	2.0	1.0	5.0	4.6	5.0
Portion	G	H	I	J	K	
Clearance (mm)	4.5	5.5	2.0	0.5	5.6	

Product Detail

VII

SAFETY

VII. SAFETY

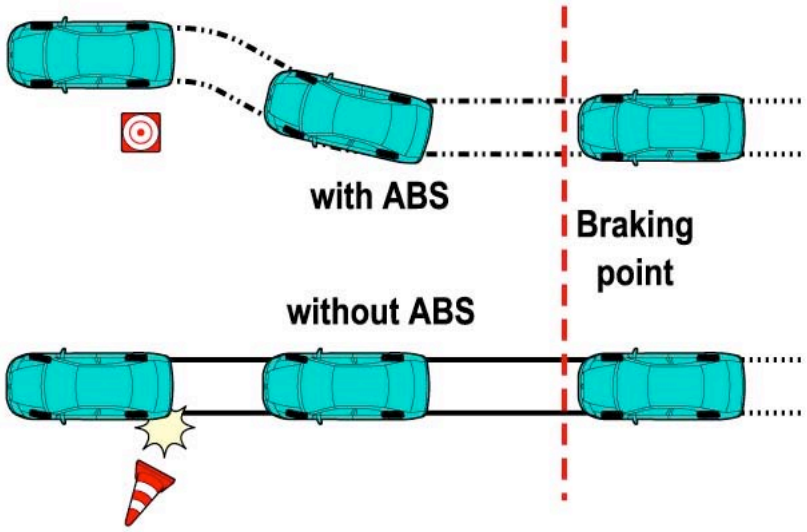
1. Active Safety

VII-1. Active Safety

1. Brake Control System

FEATURES

- ABS (Anti-lock Brake System) regulates braking hydraulic pressure, preventing the wheels from locking up on slippery surfaces.



B3H-SA-001

- The brake actuator and skid control ECU have become light and compact by unifying them. The brake actuator hydraulic circuit consists of six solenoid valves, optimizing brake performance.
- The ABS warning lamp comes on and ABS operation is prohibited as a fail-safe when problems occur in the skid control ECU or brake actuator.
- A LSP & B (Load Sensing Proportioning and By-pass) valve has been adopted for the brake control valve, contributing to optimum rear brake effectiveness depending on the loading conditions.

VII-1. Active Safety

2. Brake Mechanism

FEATURES

- The front brake is for a disc diameter of 319 mm and has adopted a disc rotor with the disc thickness of 28 mm, contributing to heat resistance.
- A leading/trailing drum brake has been adopted for the rear brake.
- A center lever type parking brake has been adopted, aiming for a car-like operationality.

VII. SAFETY

2. Passive Safety

VII-2. Passive Safety

1. Impact Absorbing

FEATURES

Impact Absorbing Body

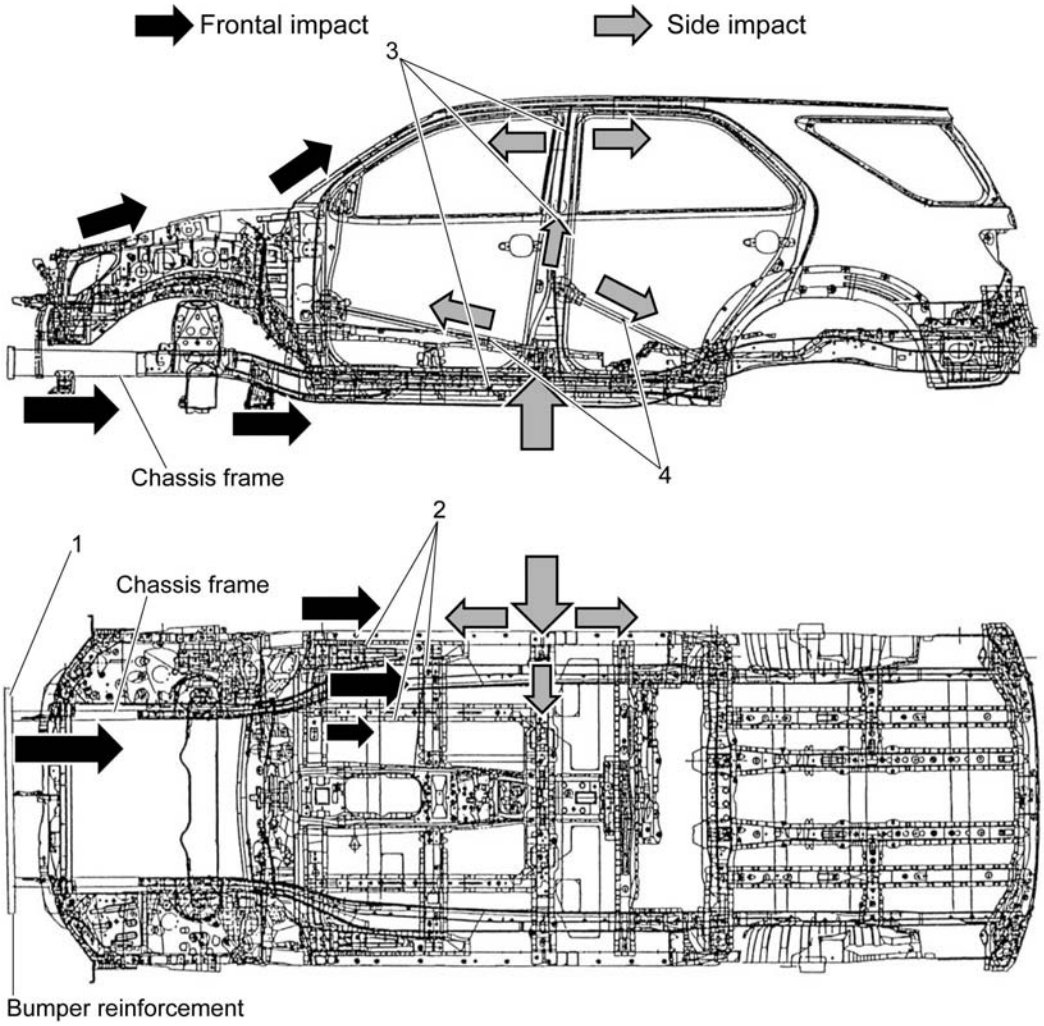
- The impact absorbing structure helps to effectively absorb the energy of impact in the unlikely event of a front or side collision.

Frontal Impact

- A large bumper reinforcement has been adopted to help offer excellent impact absorption at the front of the vehicle. -1
- Frame and body reinforcement panels have been optimally placed to help reduce impact to the cabin in the unlikely event of a collision. -2

Side Impact

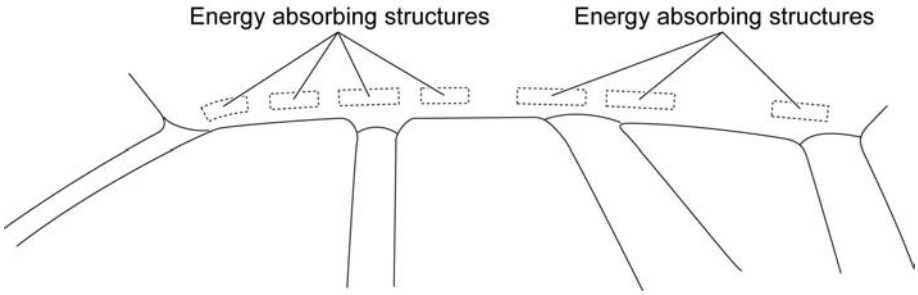
- Frame and body reinforcement panels have been optimally placed to help minimize cabin deformation in the unlikely event of a collision. -3
- The strength of the door side-impact beam has been optimized. -4


Frontal impact
Side impact
3
Chassis frame
4
2
1
Chassis frame
Bumper reinforcement

B3F-SA-001

Head Impact Protection Structure

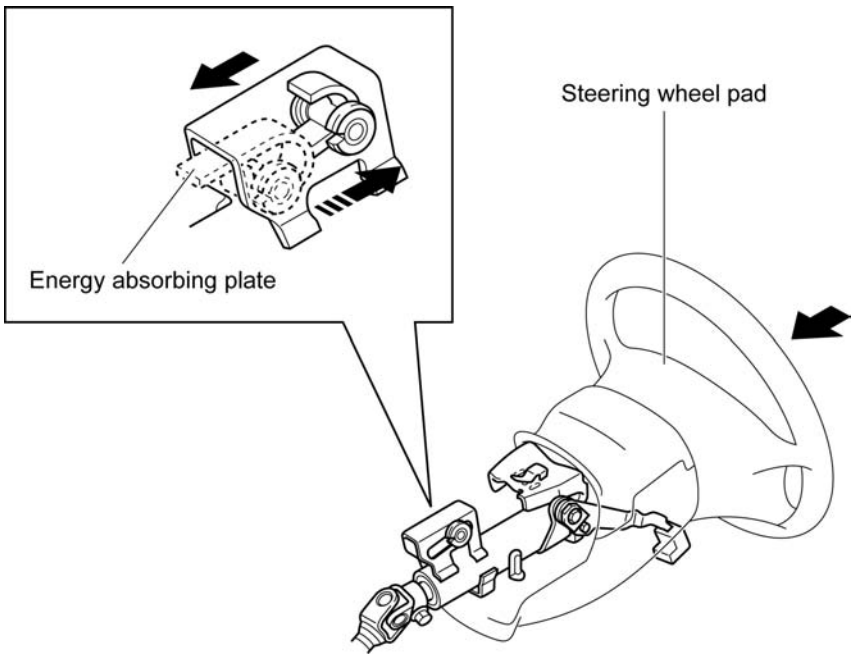
- A shock absorbing structure is provided in each pillar garnish and the roof side to help reduce shock to the passengers' heads.



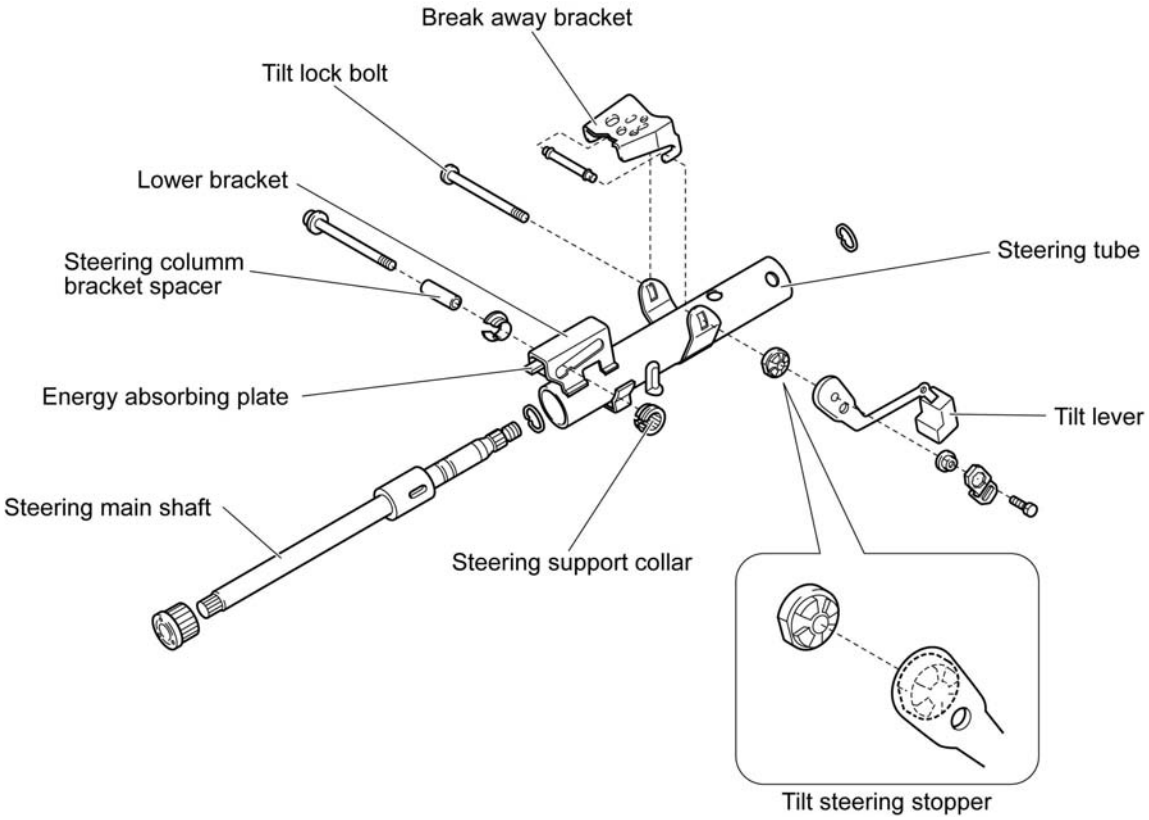
B3F-SA-002

Steering Column

- The steering column is fixed on the steering support of the instrument panel reinforcement with the lower bracket and break-away bracket.
- If the steering wheel is subjected to shock from the driver, the steering wheel and wheel pad, or the airbag absorb the energy. Simultaneously, the steering support collar of the lower bracket breaks and the steering column tube moves towards the front of the vehicle leaving the steering column bracket spacer and break-away bracket. The energy absorbing plate is deformed at this time to absorb the shock energy.



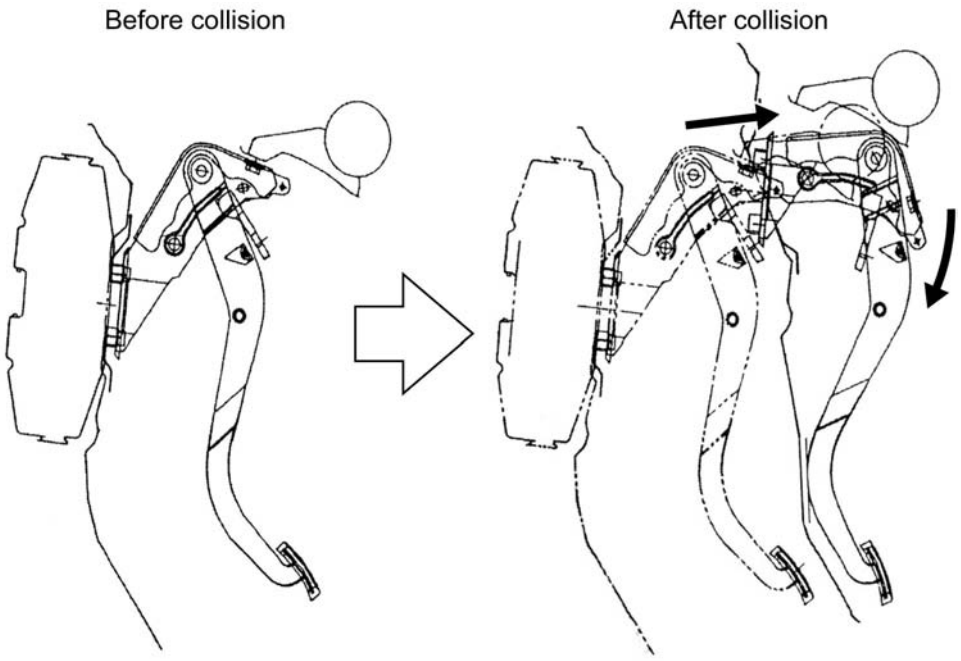
B3F-SA-003


Break away bracket
Tilt lock bolt
Lower bracket
Steering columm
bracket spacer
Steering tube
Energy absorbing plate
Tilt lever
Steering main shaft
Steering support collar
Tilt steering stopper

B3H-DP-037

Brake Pedal

- The brake pedal has a structure that separates its upper part upon frontal impact and with adoption of the pedal stopper at the lower part of the instrument panel, it enabled to help reduce the volume of the pedal retraction into the driver's foot space at the event of a frontal collision.

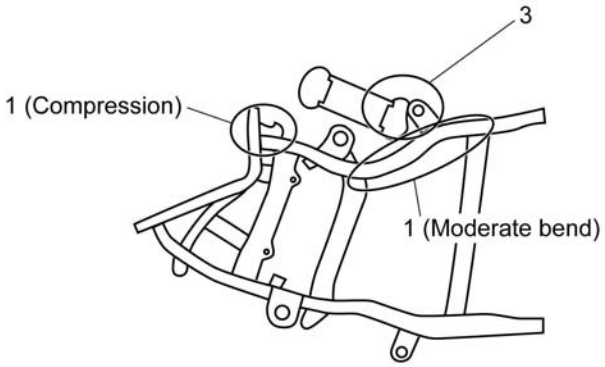


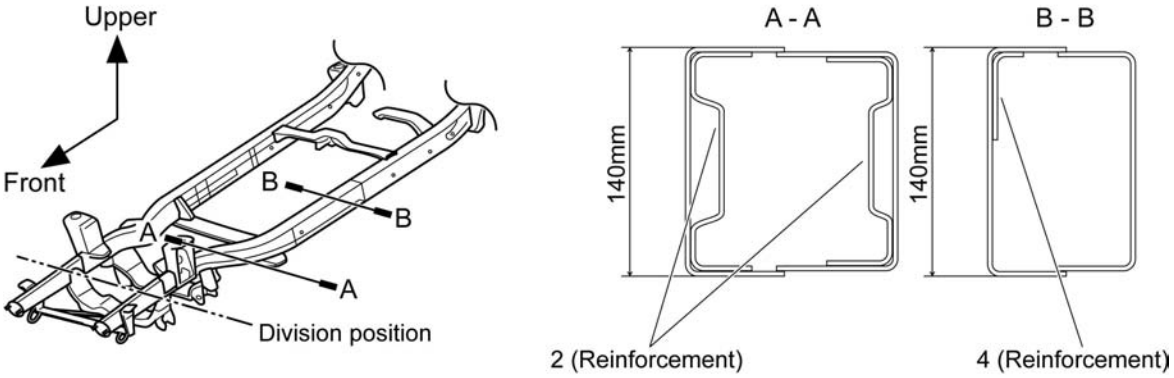
B3H-SA-006

Frame

Impact Absorbing

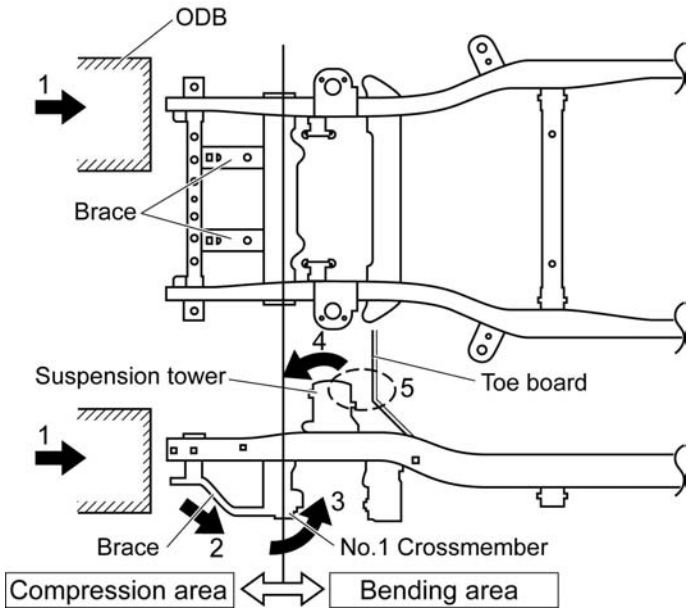
- The side rail is divided into two parts: compression and bending areas. A material with optimal thickness is used in the compression area to enhance compression efficiency, while balancing with the bending area. -1
- Reinforcement is given on the side rail kick part. -2
- A large No.2 cab mount bracket is adopted to contact the tires with the brackets in the event of collision. -3
- Reinforcement is given on the center part of the side rail. -4





B3H-SA-009

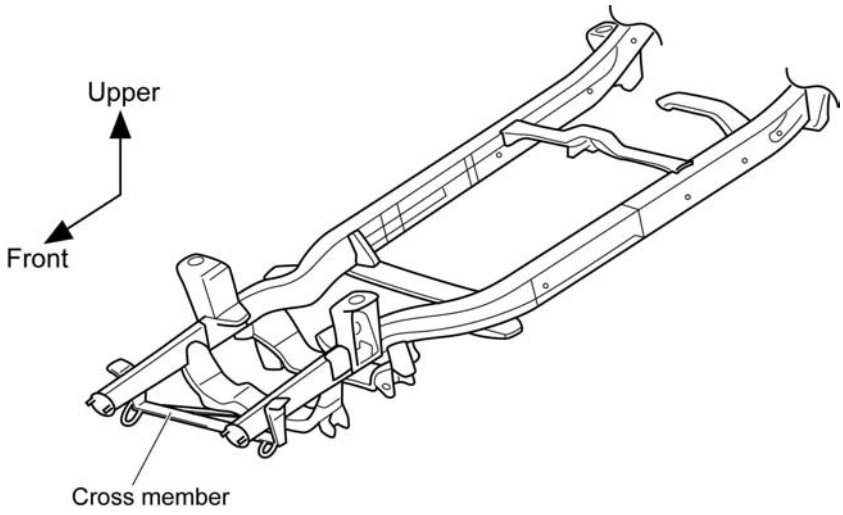
- Impact braces are attached beneath the front-end of the frame. They work as follows:
  > 1. The ODB (Offset Deformable Barrier) impact.
  > 2. Impact braces share load.
  > 3. Generates counter-clockwise moments in the No.1 cross member.
  > 4. Generates counter-clockwise moments in the suspension tower.
  > 5. Controls the board (body floor) press force in the suspension tower.



B3H-SA-010

Vehicle Compatibility

- A cross member is attached beneath the front-end of the frame. This helps prevent the vehicle from getting under in the event of collision with a low ride vehicle.



B3H-SA-011

Rear and Side Collision Support

- Reinforcement is given on the side rail kick part.

VII-2. Passive Safety

2. Seatbelts

FEATURES

- The following seatbelts have been adopted.

Seat	Equipment
Front	3-point ELR (Emergency Locking Retractor)
Rear No. 1	Outer seats: 3-point ELR Center seat: 2-point NR (Non- Retractable)
Rear No. 2	3-point ELR

- Five-step adjustable shoulder anchors have been adopted in the front seatbelts, providing comfortable wear.
- The webbing coating is applied to 3-point seatbelts to contribute to durability.
- The portion of the shoulder anchor to which the webbing is passed through is designed to maintain the shape of the webbing as much as possible.
- A buckle switch has been available for the seatbelt warning system on the driver's and front passenger's seats*.

*Please refer to the Order Guide for detailed specifications.

VII-2. Passive Safety

3. SRS Airbags

FEATURES

- SRS (Supplemental Restraint System) 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.

Product Detail

VIII ENVIRONMENT

VIII. ENVIRONMENT

1. Prevention of Global Warming

VIII-1. Prevention of Global Warming

1. Reduction of Global Warming Substance

FEATURES

Reduction of Emission of CO2=Fuel Economy

- 1GR-FE (4.0 L) gasoline engine and 1KD-FTV (3.0 L) diesel engine have top class fuel efficiency.

VIII. ENVIRONMENT

2. Environmental Consciousness

VIII-2. Environmental Consciousness

1. Recycle

Instrument Panel

- Major resin parts use easily recyclable materials such as PP (polypropylene).
- Connecting claws are provided or resin clips are used to connect parts, eliminating the use of metal clips which interfere with recycling.
- Material identification marking is applied on all newly adopted resin parts.
- A notch or marking is applied on parts so that the parts can be easily scrapped in the recycling process.

Door Trim

- Resin which is easily recycled is used.

VIII-2. Environmental Consciousness

2. Reduction of Harmful Materials

FEATURES

- The amount of environmentally harmful material used on the vehicle has been reduced as much as possible.

Chlorine

- The amount of vinyl chloride, which produces harmful gases when burned, has been reduced by adopting a felt dash silencer.

Hexavalent Chromium

- The cooler evaporator is coated without using hexavalent chromium.

Lead

- The amount of lead used on the vehicle has been reduced by using aluminum in the heater core.

Organic Solvents

- A new clutch lining which does not use organic solvents in the manufacturing process has been developed and adopted to help protect the environment. It has the same performance as the conventional type.

VIII-2. Environmental Consciousness

3. Reduction of Evaporative Emissions

FEATURES

- 1GR-FE (4.0 L) gasoline engine is environmentally friendly, complying with the European Step III emission regulation level.
- 1KD-FTV (3.0 L) diesel engine is environmentally friendly, complying with the European Step III (Step I*) emission regulation level.

*Please refer to the Order Guide for detailed specifications.

Product Detail

IX

SPECIFICATIONS

SPECIFICATIONS

			KUN51L-IKMSY	KUN51L-IKPSY	GGN50L-IKMSK

Major Dimensions & Vehicle Weights

Overall	Length	mm	4695	4695	4695
	Width	mm	1840	1840	1840
	Height*1	mm	1850	1850	1850
Wheel Base		mm	2750	2750	2750
Tread	Front	mm	1540	1540	1540
	Rear	mm	1540	1540	1540
Room	Length*2	mm	2515	2515	2515
	Width	mm	1475	1475	1475
	Height	mm	1210	1210	1210
Overhang	Front	mm	900	900	900
	Rear	mm	1045	1045	1045
Min. Running Ground Clearance		mm	220	220	220
Angle of Approach		degrees	30	30	30
Angle of Departure		degrees	25	25	25
Curve Weight	Front	kg	1075 - 1080	1095 - 1100	1010 - 1030
	Rear	kg	820 - 835	820 - 835	815 - 840
	Total	kg	1895 - 1915	1915 - 1935	1825 - 1870
Gross Vehicle Weight	Front	kg	1260	1260	1260
	Rear	kg	1250	1250	1250
	Total	kg	2510	2510	2510
Cargo Space	Capacity	m^3	0.2, 0.6*4, 1.0*5	0.2, 0.6*4, 1.0*5	0.2, 0.6*4, 1.0*5
	Cargo floor to ground	mm	-	-	-
	Cargo Height	mm	-	-	-
	Cargo Length*3	mm	-	-	-
	Cargo Width	mm	-	-	-
Fuel Tank Capacity		L	65	65	65

*1: Unladen Vehicle

*2: With Rear No.2 Seat

*3: Back Door Closed, Rear No.1 Seat

*4: Without Rear No.2 Seat

*5: Without Rear No.1 and No.2 Seat

Performance

Max. Speed		km/h	175	173	180
Max. Cruising Speed		km/h	-	-	-
Acceleration	0 to 100 km/h	sec.	-	-	-
	0 to 400 m	sec.	-	-	-
	1st Gear	km/h	-	-	-

SPECIFICATIONS

			KUN51L-IKMSY	KUN51L-IKPSY	GGN50L-IKMSK
Max. Permissible Speed	2nd Gear	km/h	-	-	-
	3rd Gear	km/h	-	-	-
	4th Gear	km/h	-	-	-
Min. Turning Radius	Tire	m	5.7	5.7	5.7
	Body	m	6.0	6.0	6.0

SPECIFICATIONS

Engine

		KUN51L-IKMSY	KUN51L-IKPSY	GGN50L-IKMSK
Engine Type		1KD-FTV	1KD-FTV	1GR-FE
No. of Cyls. & Arrangement		4-Cylinders, In-line	4-Cylinders, In-line	6-Cylinders, V type
Valve Mechanism		16-Valve, DOHC	16-Valve, DOHC	24-Valve, DOHC with VVT-i
Bore x Stroke	mm	96.0 x 103.0	96.0 x 103.0	94.0 x 95.0
Displacement	cm^3	2982	2982	3956
Compression Ratio		17.9 : 1	17.9 : 1	10.0 : 1
Fuel System		Common-Rail Type	Common-Rail Type	EFI
Research Octane No. or Cetane No.		50 or Higher	50 or Higher	95 or Higher
Max. Output (SAE-NET)	kW/rpm	120 / 3400	120 / 3400	175 / 5200
Max. Torque (SAE-NET)	Nm/rpm	343 / 1400 - 3200	343 / 1400 - 3200	343 / 2400 - 4800

Engine Electrical

Battery Capacity (5HR)	Voltage & Amp.hr.	12-64	12-64	12-55
Alternator Output	Watts	960	960	960
Starter Output	kW	2.2	2.2	1.6

Chassis

Transmission Type		R151F (MT)	A340F (AT)	R150F (MT)
Transmission Gear Ratio	1st	4.313	2.804	3.830
	2nd	2.330	1.531	2.062
	3rd	1.436	1.000	1.436
	4th	1.000	0.705	1.000
	5th	0.838	-	0.838
	Reverse	4.220	2.393	4.220
Differential Gear Ratio (Front/Rear)		3.583 / 3.583	3.909 / 3.909	3.583 / 3.583
Differential Ring Gear Size (Front/Rear)	in.	8" / 8"	8" / 8"	8" / 8"
Brake Type	Front	Ventilated Disc	Ventilated Disc	Ventilated Disc
	Rear	Leading-Trailing Drum	Leading-Trailing Drum	Leading-Trailing Drum
Suspension Type	Front	Double Wishbone	Double Wishbone	Double Wishbone
	Rear	4-Link with Lateral Rod	4-Link with Lateral Rod	4-Link with Lateral Rod
Stabilizer Bar (Front/Rear)		Standard / -	Standard / -	Standard / -
Steering Gear Type		Rack & Pinion	Rack & Pinion	Rack & Pinion
Steering Gear Ratio		19.1	19.1	19.4
Lock to Lock		3.72	3.72	3.72
Power Steering Type		Integral Type	Integral Type	Integral Type

SPECIFICATIONS

	GGN50L-IKASK

Major Dimensions & Vehicle Weights

Overall	Length	mm	4695
	Width	mm	1840
	Height*1	mm	1850
Wheel Base		mm	2750
Tread	Front	mm	1540
	Rear	mm	1540
Room	Length*2	mm	2515
	Width	mm	1475
	Height	mm	1210
Overhang	Front	mm	900
	Rear	mm	1045
Min. Running Ground Clearance		mm	220
Angle of Approach		degrees	30
Angle of Departure		degrees	25
Curve Weight	Front	kg	1040 - 1050
	Rear	kg	820 - 845
	Total	kg	1860 - 1895
Gross Vehicle Weight	Front	kg	1260
	Rear	kg	1250
	Total	kg	2510
Cargo Space	Capacity	m^3	0.2, 0.6*4, 1.0*5
	Cargo floor to ground	mm	-
	Cargo Height	mm	-
	Cargo Length*3	mm	-
	Cargo Width	mm	-
Fuel Tank Capacity		L	65

*1: Unladen Vehicle

*2: With Rear No.2 Seat

*3: Back Door Closed, Rear No.1 Seat

*4: Without Rear No.2 Seat

*5: Without Rear No.1 and No.2 Seat

Performance

Max. Speed		km/h	180
Max. Cruising Speed		km/h	-
Acceleration	0 to 100 km/h	sec.	-
	0 to 400 m	sec.	-
	1st Gear	km/h	-

SPECIFICATIONS

			GGN50L-IKASK
Max. Permissible Speed	2nd Gear	km/h	-
	3rd Gear	km/h	-
	4th Gear	km/h	-
Min. Turning Radius	Tire	m	5.7
	Body	m	6.0

SPECIFICATIONS

	GGN50L-IKASK

Engine

Engine Type		1GR-FE
No. of Cyls. & Arrangement		6-Cylinders, V type
Valve Mechanism		24-Valve, DOHC with VVT-i
Bore x Stroke	mm	94.0 x 95.0
Displacement	cm^3	3956
Compression Ratio		10.0 : 1
Fuel System		EFI
Research Octane No. or Cetane No.		95 or Higher
Max. Output (SAE-NET)	kW/rpm	175 / 5200
Max. Torque (SAE-NET)	Nm/rpm	376 / 3800

Engine Electrical

Battery Capacity (5HR)	Voltage & Amp.hr.	12-55
Alternator Output	Watts	960
Starter Output	kW	1.6

Chassis

Transmission Type		A750F (AT)
Transmission Gear Ratio	1st	3.520
	2nd	2.042
	3rd	1.400
	4th	1.000
	5th	0.716
	Reverse	3.224
Differential Gear Ratio (Front/Rear)		3.583 / 3.583
Differential Ring Gear Size (Front/Rear)	in.	8" / 8"
Brake Type	Front	Ventilated Disc
	Rear	Leading-Trailing Drum
Suspension Type	Front	Double Wishbone
	Rear	4-Link with Lateral Rod
Stabilizer Bar (Front/Rear)		Standard / -
Steering Gear Type		Rack & Pinion
Steering Gear Ratio		19.4
Lock to Lock		3.72
Power Steering Type		Integral Type