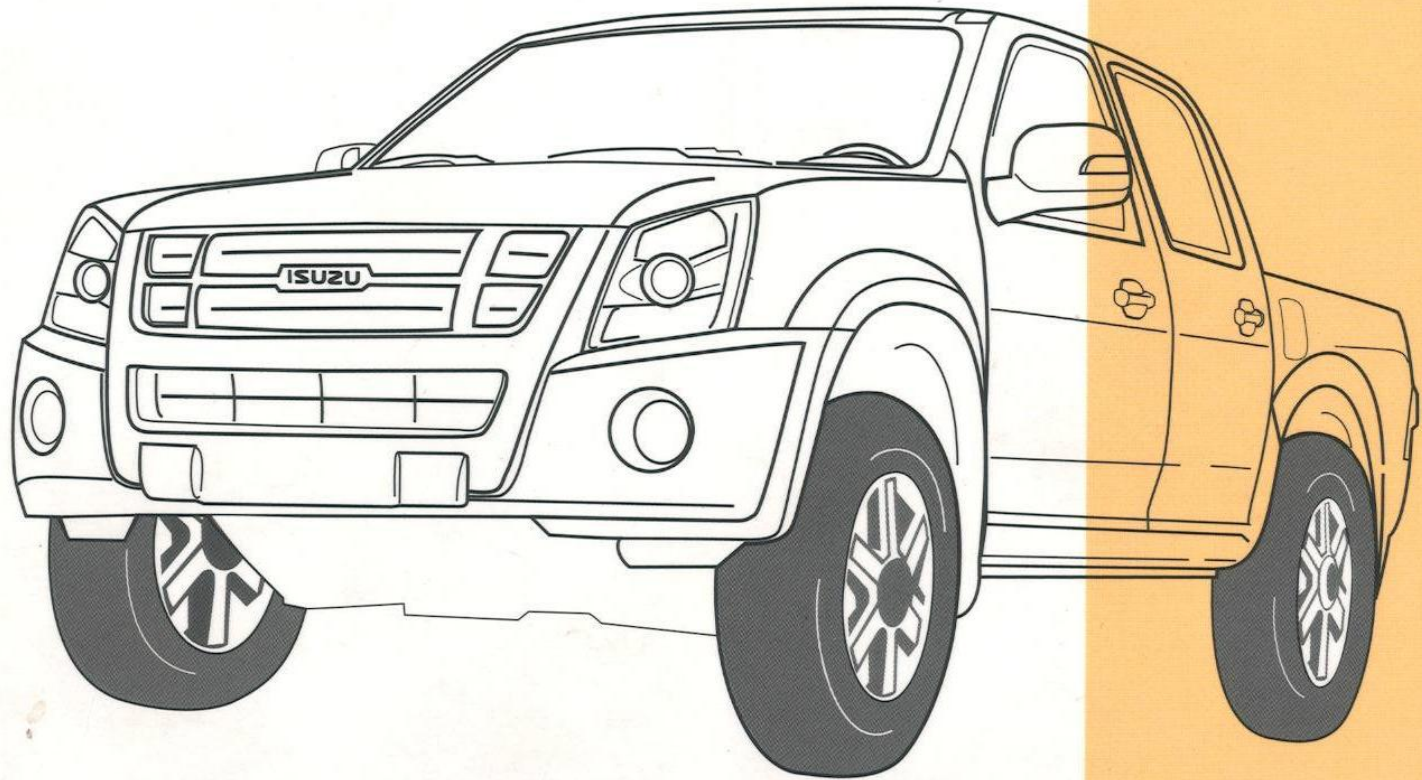


# D-MAX

**ISUZU**  
*Always beside you*




**OWNER MANUAL**

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## SERVICE AND MAINTENANCE

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In order to maintain safety and economical operation, it is suggested that periodic inspection and maintenance be performed regularly according to the recommendations outlined in this section.



## SERVICE AND MAINTENANCE

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### MAINTENANCE SCHEDULE

To insure driving safety and maximum economical operation, periodic inspection and maintenance should be performed by your Isuzu Dealer according to the maintenance schedule.

For service operations which call for disassembly or special equipment or tools, contact your Isuzu Dealer.

#### Maintenance operations

- I : Inspect and correct or replace as necessary
- A : Adjust
- R : Replace or change
- T : Tighten to specified torque
- L : Lubricate

*When performing checks on the following items, regular inspection items should also be checked.*

\*Marks: Under severe driving conditions, more frequent maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### Maintenance Schedule (FOR GENERAL EXPORT)

Maintenance schedule: TFR/S 32 (C24SE)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
*Engine oil		(Replace every 12,000 km or 7,500 miles)																			
*Engine oil filter		(Replace every 12,000 km or 7,500 miles)																			
Engine oil leakage and contamination		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Timing belt		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(Replace every 120,000 km or 75,000 miles)																			
Engine/Accessory drive belt		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spark plugs (for leaded fuel use)		-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R
Spark plugs (for unleaded fuel use)		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Spark plug wire		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exhaust system		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Engine coolant concentration		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Engine coolant		(Change every 2 years)																			
Cooling system for water leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
All hoses and pipes in engine compartment for clog or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Fuel filter		-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R
Fuel leakage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Fuel tank		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
*Air cleaner element		-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I
Engine idling speed and acceleration		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 32 (C24SE)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
O2 sensor		(Replace every 160,000 km or 100,000 miles)																			
Clutch fluid		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Clutch pedal travel and play		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Manual transmission with fluid		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
*Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Transmission or transmission with transfer case oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<b>4WD</b> Propeller shaft universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
Differential gear oil (Front and rear)		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
Front and rear axle oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Front axle shaft rubber boot for damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle case for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle shafts for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Power steering oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 32 (C24SE)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Steering joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Front disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Leaf/coil/torsion bar springs for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 32 (C24SE)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Suspension mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Suspension joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
Other bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-

## SERVICE AND MAINTENANCE

### Maintenance Schedule (FOR GENERAL EXPORT)

Maintenance schedule: TFR/S 26 (6VE1)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
*Engine oil		-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R
*Engine oil filter		-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R
Engine oil leakage and contamination		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Timing belt		(Replace every 160,000 km or 100,000 miles)																			
Engine/accessory drive belt		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spark plugs		(Replace every 160,000 km or 100,000 miles)																			
Exhaust system		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Engine coolant concentration		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Engine coolant		(Change every 2 years)																			
Cooling system for water leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
All hoses and pipes in engine compartment for clog or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Fuel filter		-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R
Fuel leakage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Fuel tank		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
*Air cleaner element		-	I	-	I	-	I	-	I	-	R	-	I	-	I	-	R	-	I	-	I
Engine idling speed and acceleration		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
O2 sensor		(Replace every 160,000 km or 100,000 miles)																			
Valve clearance		(Check and adjust if noisy)																			
Clutch fluid		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".



## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 26 (6VE1)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Clutch pedal travel and play		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Manual transmission with fluid		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
* <input type="checkbox"/> MT Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Transmission or transmission with transfer case oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
*Automatic transmission fluid		-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
* <input type="checkbox"/> AT Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<input type="checkbox"/> 4WD Propeller shaft universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
*Differential gear oil (Front and rear)		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
Front and rear axle oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Front axle shaft rubber boot for damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle case for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle shafts for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Power steering oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 26 (6VE1)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Steering joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Front disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Leaf/coil/torsion bar springs for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Suspension mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 26 (6VE1)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Suspension joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
Other bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-
Air conditioning filter																					

(Replace every 15,000 km (9,000 miles) or 1 year)

## SERVICE AND MAINTENANCE

### Maintenance Schedule (FOR GENERAL EXPORT)

Maintenance schedule: TFR/S 27 (HFV6)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	
*Engine oil		-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-	
*Engine oil filter		-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-	
Engine oil leakage and contamination		-		-		-		-		-		-		-		-		-		-		
Engine/accessory drive belt		(Replace every 100,000 km or 60,000 miles)																				
Spark plugs		(Replace every 120,000 km or 75,000 miles)																				
Exhaust system				-		-		-		-		-		-		-		-		-		
Engine coolant concentration		-		-		-		-		-		-		-		-		-		-		
Engine coolant		(Change every 2 years)																				
Cooling system for water leakage		-		-		-		-		-		-		-		-		-		-		
All hoses and pipes in engine compartment for clog or damage		-		-		-		-		-		-		-		-		-		-		
Fuel filter		-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	
Fuel leakage				-		-		-		-		-		-		-		-		-		
Fuel tank		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		
*Air cleaner element		-		-		-		-		R	-		-		-		R	-		-		
Engine idling speed and acceleration				-		-		-		-		-		-		-		-		-		
O2 sensor		(MIL diagnostic indicates O <sub>2</sub> sensor.)																				
Clutch fluid				-		-		-		-		-		-		-		-		-		

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 27 (HFV6)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Clutch pedal travel and play		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Manual transmission with fluid		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
* <input type="checkbox"/> MT Transfer case oil		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Transmission or transmission with transfer case oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Automatic transmission fluid		-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	R
* <input type="checkbox"/> AT Transfer case oil		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<input type="checkbox"/> 4WD Propeller shaft universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
*Differential gear oil (Front and rear)		-	R	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I
Front and rear axle oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front axle shaft rubber boot for damage		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Axle case for distortion or damage		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Axle shafts for distortion or damage		-	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Power steering oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 27 (HFV6)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Steering joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Front disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Leaf/coil/torsion bar springs for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Suspension mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 27 (HFV6)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Suspension joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
Other bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-
Air conditioning filter																					

(Rotate as required)

(Replace every 15,000 km (9,000 miles) or 1 year)

## SERVICE AND MAINTENANCE

### Maintenance Schedule (FOR GENERAL EXPORT)

Maintenance schedule: TFR/S 54 (4JA1-T)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
*Engine oil		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
*Engine oil filter		-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R
Engine oil leakage and contamination		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Engine idling speed and acceleration		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Fan belt tension and damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Exhaust system		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
All hoses and pipes in engine compartment for clog of damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Valve clearance		A	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A
** Air cleaner element		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Fuel filter		-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-	R	-	-
Engine coolant concentration		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Engine coolant																					
Cooling system for water leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Clutch fluid		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Clutch pedal travel and play		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Manual transmission with fluid		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
*Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

\*\* Marks: Inspect and clean every 5,000 km (3,000 miles).  
Element should be cleaned by pressure air blowdown every 5,000 km (3,000 miles).  
Refer to "Air cleaner".



## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 54 (4JA1-T)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Transmission or transmission with transfer case oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<input type="checkbox"/> 4WD Propeller shaft universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
*Differential gear oil (Front and rear)		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
Front and rear axle oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Front axle shaft rubber boot for damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle case for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle shafts for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I	R	I	I	I
Power steering oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Steering joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 54 (4JA1-T)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Steering joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Front disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Leaf/coil/torsion bar springs for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Suspension mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Suspension joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 54 (4JA1-T)

I: Inspect and correct or replace as necessary

A: Adjust

R: Replace or change

T: Tighten to specified torque

L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	-	R	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
Other bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	-	L	-



## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 77 (4JH1-TC)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
months whichever comes first)	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Transmission or transmission with transfer case oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
*Automatic transmission fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
* <input type="checkbox"/> AT Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<input type="checkbox"/> 4WD Propeller shaft universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
*Differential gear oil (Front and rear)		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
Front and rear axle oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Front axle shaft rubber boot for damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle case for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle shafts for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Power steering oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 77 (4JH1-TC)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Steering joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
*Front disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
*Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Leaf/coil/torsion bar springs for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Suspension mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 77 (4JH1-TC)

I: Inspect and correct or replace as necessary

A: Adjust

R: Replace or change

T: Tighten to specified torque

L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Suspension joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
Other bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-

## SERVICE AND MAINTENANCE

### Maintenance Schedule (FOR GENERAL EXPORT)

Maintenance schedule: TFR/S 85 (4JJ1-TC, 4JJ1-TC High-power)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL: (Use odometer reading or months whichever comes first)	× 1,000 km × 1,000 miles months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
* Engine oil		-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R
* Engine oil filter		-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R
Engine Oil leakage and contamination																					
Engine Idling speed and acceleration																					
Fan belt tension and damage																					
Exhaust system				-		-		-		-		-		-		-		-		-	
All hoses and pipes in engine compartment for clog of damage		-		-		-		-		-		-		-		-		-		-	
Valve clearance		-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	A	-	-	-	-
** Air cleaner element																					
Fuel filter																					
Fuel pump in fuel tank		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
Draining of water separator																					
Engine coolant concentration		-		-		-		-		-		-		-		-		-		-	
Engine coolant																					
Cooling system for water leakage		-		-		-		-		-		-		-		-		-		-	

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

\*\* Marks: Inspect and clean every 5,000 km (3,000 miles).  
Element should be cleaned by pressure air blowdown every 5,000 km (3,000 miles).  
Refer to "Air cleaner".



## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 85 (4JJ1-TC, 4JJ1-TC High-power)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or months whichever comes first)	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Clutch fluid		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Clutch pedal travel and play		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
* Manual transmission with fluid		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
* <input type="checkbox"/> MT Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
* <input type="checkbox"/> AT Automatic transmission fluid <input type="checkbox"/> 4JJ1-TC		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
* <input type="checkbox"/> AT Automatic transmission fluid <input type="checkbox"/> 4JJ1-TC Hi		-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	-	-	-	-	-
* <input type="checkbox"/> AT Transfer case oil		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Propeller shaft loose connections		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
* Propeller shaft universal joints and splines for wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
<input type="checkbox"/> 4WD Universal joints and sliding sleeve		-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 85 (4JJ1-TC, 4JJ1-TC High-power)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or months whichever comes first)	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
* Differential gear oil (Front and rear)		-	R	-	I	-	-	-	R	-	-	-	I	-	-	-	R	-	-	-	I
Oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Shift on the fly system gear oil		I	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Front axle shaft boot for damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle case for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Axle shafts for distortion or damage		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Power steering fluid		I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	R	I	I	I	I
Oil leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
* Steering system for looseness or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering hose		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	R	-	I	-	I
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Right and left turning radius		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Wheel alignment		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Joint ball for oil leakage or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 85 (4JJ1-TC, 4JJ1-TC High-power)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or months whichever comes first)	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Brake fluid		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
* Front Disc brake pads and discs wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
* Rear brake lining and drum wear		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Brake pedal travel and play		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Pipes and hoses for loose connections or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Parking brake function		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Cables for looseness or damage and guide for damage		I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Ratchet for wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I

\* Marks: Under severe driving conditions, additional maintenance is required.  
Refer to "Maintenance schedule under severe driving conditions".

## SERVICE AND MAINTENANCE

### FOR GENERAL EXPORT

Maintenance schedule: TFR/S 85 (4JJ1-TC, 4JJ1-TC High-power)

I: Inspect and correct or replace as necessary      A: Adjust

R: Replace or change      T: Tighten to specified torque      L: Lubricate

SERVICE INTERVAL:	× 1,000 km	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
(Use odometer reading or months whichever comes first)	× 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Leaf/Coil/Torsion bar springs for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Mount for looseness or damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers for oil leakage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Shock absorbers mount for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Rubber bushes of suspension wear or damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Spring action for loss of balance due to weakening		-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I
Joint ball rubber boot for damage		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Wheel nuts		T	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T	-	T
Wheel disc for damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Front hub bearing grease		-	-	-	-	-	R	-	-	-	-	-	R	-	-	-	-	-	R	-	-
Front and rear hub bearings for looseness		-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire pressure and damage		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Tire rotation																					
		(Rotate as required)																			
Bolts and nuts on chassis and body		I	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Lube front free - wheeling hubs		-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-
<input type="checkbox"/> Air conditioning filter		(Replace every 15,000 km (9,000 miles) or 1 year)																			

## SERVICE AND MAINTENANCE

Maintenance schedule under severe driving conditions

Severe driving conditions

- A: Repeated short trips
- B: Driving on rough roads
- C: Driving on dusty roads
- D: Driving in extremely cold weather and/or on salted roads
- E: Towing trailer or climbing mountain frequently
- F: Operation in high ambient temperature conditions

<span style="border: 1px solid black; padding: 1px;">C24SE</span>	: C24SE Gasoline engine
<span style="border: 1px solid black; padding: 1px;">6VE1</span>	: 6VE1 Gasoline engine
<span style="border: 1px solid black; padding: 1px;">HFV6</span>	: HFV6 Gasoline engine
<span style="border: 1px solid black; padding: 1px;">G</span>	: Gasoline engine
<span style="border: 1px solid black; padding: 1px;">4JA1-T</span>	: 4JA1-T Diesel engine
<span style="border: 1px solid black; padding: 1px;">4JH1-TC</span>	: 4JH1-TC Diesel engine
<span style="border: 1px solid black; padding: 1px;">4JJ1-TC</span>	: 4JJ1-TC Diesel engine
<span style="border: 1px solid black; padding: 1px;">4JJ1-TC HI</span>	: 4JJ1-TC High-power Diesel engine
<span style="border: 1px solid black; padding: 1px;">D</span>	: Diesel engine
<span style="border: 1px solid black; padding: 1px;">MT</span>	: Manual transmission
<span style="border: 1px solid black; padding: 1px;">AT</span>	: Automatic transmission
<span style="border: 1px solid black; padding: 1px;">4WD</span>	: Four wheel drive

Item	Interval	Condition						
		A	B	C	D	E	F	A+D
Engine oil	<span style="border: 1px solid black; padding: 1px;">G</span> : Change every 5,000 km (3,000 miles) or 3 month							
	<span style="border: 1px solid black; padding: 1px;">4JA1-T</span> : Change every 2,500 km (1,500 miles)							
	<span style="border: 1px solid black; padding: 1px;">4JJ1-TC</span> <span style="border: 1px solid black; padding: 1px;">4JJ1-TC HI</span> : Change every 5,000 km (3,000 miles)			●				●
	<span style="border: 1px solid black; padding: 1px;">4JH1-TC</span>							
Engine oil filter	<span style="border: 1px solid black; padding: 1px;">G</span> : Replace every 5,000 km (3,000 miles) or 3 month			●				●
	<span style="border: 1px solid black; padding: 1px;">D</span> : Replace every 5,000 km (3,000 miles)							
Exhaust pipes and mounting	Inspect every 5,000 km (3,000 miles)	●	●		●			
Air cleaner element	Replace every 20,000 km (12,000 miles)			●				
	<span style="border: 1px solid black; padding: 1px;">D</span> : Inspect every 2,500 km (1,500 miles)							
Steering system for looseness or damage	Inspect every 5,000 km (3,000 miles)		●					
Universal joints and sleeves	Inspect for wear and lubricate every 5,000 km (3,000 miles)		●	●				

## SERVICE AND MAINTENANCE

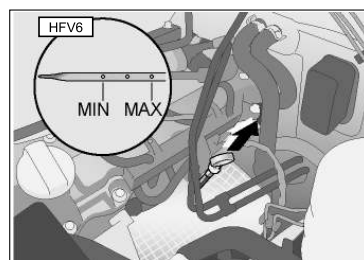
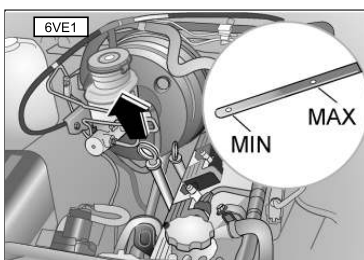
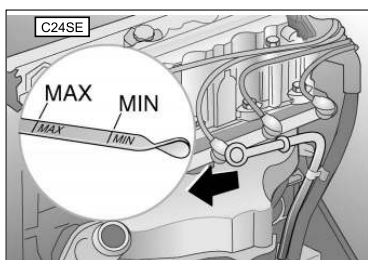
Maintenance schedule under severe driving conditions

Severe driving conditions

- A: Repeated short trips
- B: Driving on rough roads
- C: Driving on dusty roads
- D: Driving in extremely cold weather and/or on salted roads
- E: Towing trailer or climbing mountain frequently
- F: Operation in high ambient temperature conditions

Item	Interval	Condition							
		A	B	C	D	E	F	A+D	
Transmission or transmission with transfer case oil	<div style="border: 1px solid black; padding: 2px;">MT</div> <div style="border: 1px solid black; padding: 2px;">C24SE</div> <div style="border: 1px solid black; padding: 2px;">6VE1</div> <div style="border: 1px solid black; padding: 2px;">D</div>	Change every 20,000 km (12,000 miles) after changing at initial 10,000 km (6,000 miles)		●					
	<div style="border: 1px solid black; padding: 2px;">MT</div> <div style="border: 1px solid black; padding: 2px;">HFV6</div>	Change every 40,000 km (24,000 miles)					●		
	<div style="border: 1px solid black; padding: 2px;">AT</div>	Transmission: Inspect every 20,000 km (12,000 miles) <div style="border: 1px solid black; padding: 2px;">HFV6</div> <div style="border: 1px solid black; padding: 2px;">4JH1-TC</div> <div style="border: 1px solid black; padding: 2px;">4JJ1-TC</div> 40,000 km (24,000 miles) <div style="border: 1px solid black; padding: 2px;">6VE1</div> <div style="border: 1px solid black; padding: 2px;">4J1-TC H</div> Change every 40,000 km (24,000 miles) <div style="border: 1px solid black; padding: 2px;">HFV6</div> <div style="border: 1px solid black; padding: 2px;">4JH1-TC</div> <div style="border: 1px solid black; padding: 2px;">4JJ1-TC</div> 80,000 km (48,000 miles) <div style="border: 1px solid black; padding: 2px;">6VE1</div> <div style="border: 1px solid black; padding: 2px;">4J1-TC H</div>	●	●	●		●	●	●
		<div style="border: 1px solid black; padding: 2px;">4WD</div>	Transfer: Change every 20,000 km (12,000 miles)		●				
Differential oil	Change every 20,000 km (12,000 miles) after changing at initial 10,000 km (6,000 miles)		●						
Front brake pads and discs wear	Inspect every 5,000 km (3,000 miles)	●	●	●					
Rear brake lining and drum wear	Inspect every 5,000 km (3,000 miles)	●	●	●					

## SERVICE AND MAINTENANCE



### MAINTENANCE GUIDE

Regular inspection

Engine oil level

Pull out the oil level gauge rod (oil dipstick), wipe it clean and reinsert.

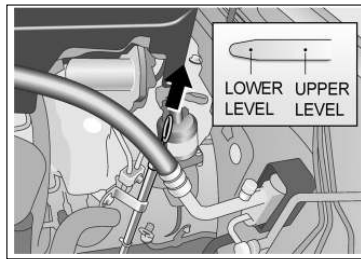
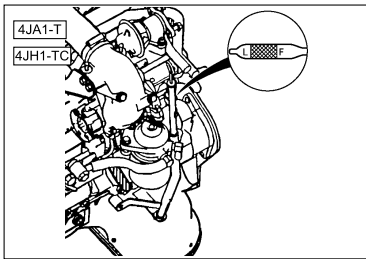
Again pull it out and check that oil level is within the "MAX"("F") and "MIN"("L") level marks. Also check the oil on the gauge rod for contamination.

||||||| **NOTE** |||||||

*The engine oil level should be checked with the vehicle parked on level ground (before the operation of engine).*

*If the engine is running, stop the engine and allow 5 minutes for the oil to settle down before checking the oil level.*

## SERVICE AND MAINTENANCE



Engine oil level 4JJ1-TC 4J1-TC H

Pull out the oil level gauge rod (oil dipstick), wipe it clean and reinsert it. Again pull it out and check that the oil level is within the upper level and lower level. Also check the oil on the gauge rod for contamination.

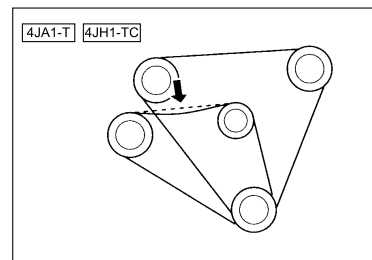
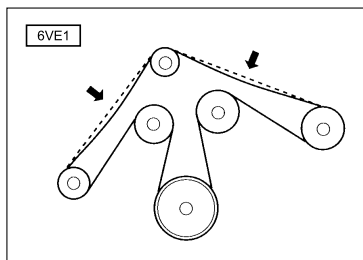
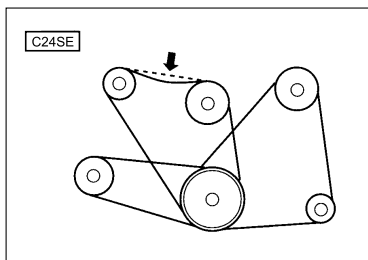
||||| **NOTE** |||||

*The engine oil level should be checked with the vehicle parked on level ground (before operation of the engine).*

*If the engine is running, stop the engine and allow 5 minutes for the oil to settle down before checking the oil level.*



## SERVICE AND MAINTENANCE



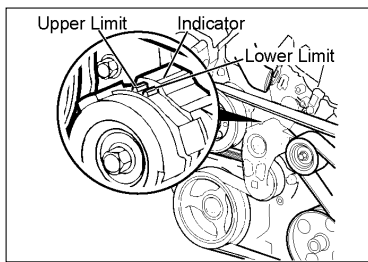
Fan belt **C24SE** **6VE1** **4JH1-TC** **4JA1-T**

Check that the fan belt gives a deflection of approximately 10 mm (0.4 in) when the middle part of the belt is depressed with a force of 10 kg (22 lbs). Also check the belt for cracks and damage.

||||| **NOTE** |||||

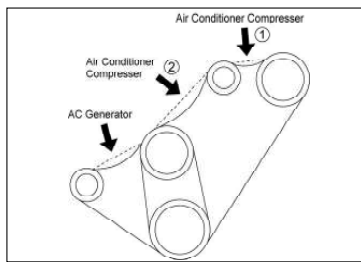
*Check the tension only after running the engine for a few minutes.*

## SERVICE AND MAINTENANCE



Fan belt HFV6

This is auto tensioner for belt  
Check that the indicator on auto tensioner  
is located between upper and lower limit.  
Also check the belt for cracks and damage.



Fan belt 4JJ1-TC 4JJ1-TC HI

Check the fan belt tension.

Belt	Deflection (mm) with a force of 10 kg (22 lbs)	Frequency (Hz) used by frequency meter
ACG&Fan belt (NEW) (USED)	4 - 6 mm (0.16 - 0.24 in)	210 - 234 Hz
	6 - 8 mm (0.24 - 0.31 in)	179 - 193 Hz
Air conditioner belt (① position) (NEW) (USED)	5 - 7 mm (0.20 - 0.28 in)	256 - 310 Hz
	7 - 9 mm (0.28 - 0.35 in)	220 - 252 Hz
Air conditioner belt (② position) (NEW) (USED)	9 - 12 mm (0.35 - 0.47 in)	159 - 189 Hz
	12 - 14 mm (0.47 - 0.55 in)	137 - 155 Hz

Also check the belt for cracks and damage.

### NOTE

Check the tension only after running the engine for a few minutes.

## SERVICE AND MAINTENANCE

### Engine cooling system

The engine cooling system is designed to maintain the engine at the proper operating temperature. The cooling system was filled at the factory with a quality engine coolant. The engine cooling system is designed to use coolant (a 50/50 mixture of ethylene glycol antifreeze and water) rather than plain water. The engine coolant solution should be used year-round. It has many advantages such as:

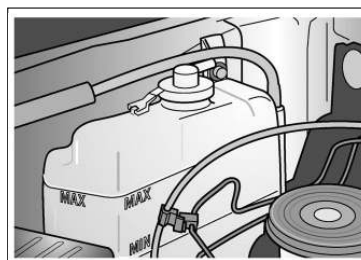
- Providing freezing protection as low as  $-36^{\circ}\text{C}$  ( $-33^{\circ}\text{F}$ )
- Providing boiling protection up to  $128^{\circ}\text{C}$  ( $262^{\circ}\text{F}$ )  C24SE  6VE1  D  
 $132^{\circ}\text{C}$  ( $270^{\circ}\text{F}$ )  HFV6
- Protecting against rust and corrosion in the cooling system
- Maintaining the proper engine temperature for efficient operation and emission control.
- Allowing proper operation of the engine coolant temperature gauge.

See the Maintenance Schedule List in this section to find out when the engine coolant must be replaced.

HFV6

Your vehicle is fitted with a high efficiency, high performance electric engine cooling fan. It has four discrete fan speeds that will be automatically selected when required to help maintain the engine at proper operating temperatures and the air conditioner (where fitted) at it's optimal performance level.

After severe driving the engine cooling fan may continue to operate for up to 15 minutes in order to dissipate excess heat from the engine bay.



### Coolant level

Check the engine coolant level at the interval shown in the Maintenance Schedule unless there is evidence of leaking or overheating. Do not remove the radiator cap when the coolant is hot and under pressure. The engine coolant level should be between the "MAX" and the "MIN" level marks on the radiator reserve tank. In addition, remove the radiator cap and check that the engine coolant is full to the filler neck. Do not remove the radiator cap when the coolant is hot and under pressure. Check the coolant level only when it is cold.

## SERVICE AND MAINTENANCE

### WARNING

*When replenishing the engine coolant, remove the cap on the radiator reserve tank and fill the engine coolant up to the maximum level mark of the radiator reserve tank.*

*Add a 50/50 mixture of good quality ethylene glycol antifreeze and water if engine coolant additions are necessary. Do not overfill. If frequent additions are needed, see your Isuzu Dealer for a cooling system check.*

### CAUTION

*The radiator cap opens and closes in double action. When removing the radiator cap, take caution not to damage the cap and the filler neck.*

### NOTE

*If the proper quality antifreeze is used, there is no need to add extra inhibitors or additives that claim to improve the system. They may be harmful to the proper operation of the system.*

*Be careful not to allow the exhaust manifold to be splashed with engine coolant while the temperature of the engine is high or the exhaust manifold could be damaged.*

### Cooling system service

### WARNING

- *To avoid personal injuries when inspecting or replacing parts of the engine cooling system, carefully follow the instructions below.*
- *Use extreme caution when opening the engine hood if there are signs of steam or engine coolant leaking from the cooling system.*
- *Do not remove the cap on the radiator reserve tank or the radiator if the engine temperature is above 90 °C (194 °F). Allow the engine to cool down before removing the cap. The radiator contains hot fluid which is under pressure.*
- *Using a rag, turn the cap only to the first notch to relieve excess pressure. If opened immediately, hot scalding fluid and steam may escape under pressure, possibly causing personal injury. Ethylene glycol based antifreeze is flammable. If it comes into contact with parts of the engine which are hot, such as the manifold, it could cause a fire.*

## SERVICE AND MAINTENANCE

### Engine coolant change

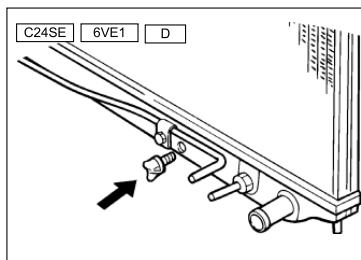
1. To change the engine coolant, make sure that the engine is cool.

#### **WARNING**

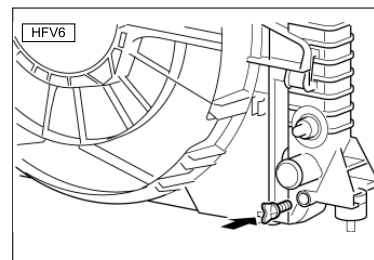
*When the coolant is heated to a high temperature, be sure not to loosen or remove the radiator cap otherwise you might get scalded by hot vapor or boiling water. To open the radiator cap, put a piece of thick cloth on the cap and loosen the cap slowly to reduce the pressure when the coolant has become cooler.*

#### **CAUTION**

*The radiator cap opens and closes in double action. When removing the radiator cap, take caution not to damage the cap and the filler neck.*



2. Open the radiator cap and drain the cooling system by loosening the drain plug on the radiator and on the cylinder block. After draining, close the drain plugs firmly.



#### **NOTE**

*For best results it is suggested that the engine cooling system be flushed when the engine coolant is replaced. It is advisable to flush the interior of the cooling system, including the radiator, before using anti-freeze (ethylene-glycol based). Replace damaged rubber hoses as the engine anti-freeze coolant is liable to leak from even minor cracks. Isuzu recommends using Isuzu genuine anti-freeze (ethylene-glycol based) or equivalent mixed 50/50 with water for the cooling system and not to add any inhibitors or additives.*

## SERVICE AND MAINTENANCE

### CAUTION

*A failure to correctly fill the engine cooling system when changing or topping up the coolant may sometimes cause the coolant to overflow from the filler neck even before the engine and radiator are completely full. If the engine runs under this condition, a shortage of coolant may possibly result in engine overheating.*

*To avoid such trouble, the following precautions should be taken when filling the system.*

3. To refill the engine coolant, pour the coolant up to the filler neck using a filling hose which is smaller in outside diameter than the filler neck, otherwise air between the filler neck and the filling hose will block entry, preventing the system from completely filling up.
4. Keep a filling rate of 9 liter/min. or less. Filling over this maximum rate may force air inside the engine and radiator and the coolant overflow will increase, making it difficult to determine whether or not the system is completely full.
5. After filling the system to the full, pull out the filling hose and check to see if air trapped in the system is has expelled and the coolant level goes down. If the coolant level goes down, repeat topping-up until there is no more drop in the coolant level.
6. After directly filling the radiator, fill the reservoir to the maximum level.
7. Install and tighten the radiator cap and start the engine. After idling for 2 to 3 minutes, stop the engine and reopen the radiator cap. If the water level is lower, replenish.

### WARNING

***When the coolant is heated to a high temperature, be sure not to loosen or remove the radiator cap or you might get scalded by hot vapor or boiling water. To open the radiator cap, put a piece of thick cloth on the cap and loosen the cap slowly to reduce the pressure when the coolant has become cooler.***

8. After tightening the radiator cap, warm up the engine at about 2,000 rpm. Set the heater adjustment to the highest temperature position and let the coolant circulate into the heater water system.
9. Check the needle position of the water thermometer to see that the thermostat has opened, conduct a 5-minute idling again and stop the engine.
10. When the engine has been cooled, check the filler neck for water level and replenish if required. If extreme shortage of the coolant is found, check the coolant system and reservoir tank hose for leakage.
11. Fill the coolant into the reservoir tank up to "MAX" line.

## SERVICE AND MAINTENANCE

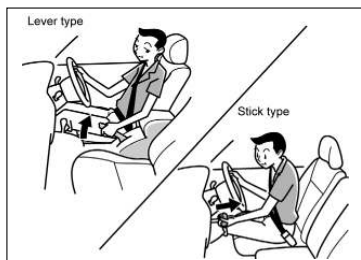


### Steering wheel

Check the steering parts for excessive play and looseness. The standard steering wheel play is about 10 to 30 mm (0.4 to 1.2 in). Also, check the steering for abnormal conditions such as shimmy, pull to one side, hard-steering, etc.

||||||| **NOTE** |||||||

*If the steering parts have excessive play or looseness, or if any abnormal condition is noted, have an Isuzu Dealer check the steering system immediately.*

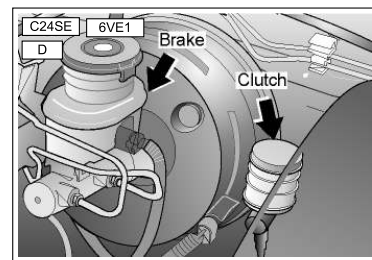


### Parking brake lever and stick travel

Normal parking brake lever and stick travel:

Lever type	6 to 9 notches
Stick type	8 to 14 notches

When pulled with a force of 30 kg (66 lbs).



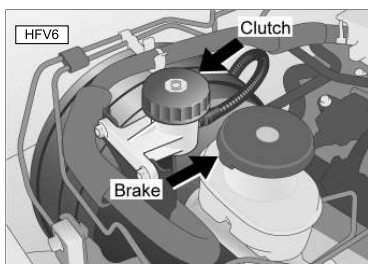
### Brake and clutch fluid level

Check that the brake and clutch fluid level is between the "MAX" and "MIN" level marks on the reservoir. If the level is lower than the "MIN" level, replenish with the recommended hydraulic brake fluid.

### **WARNING**

***If the brake system warning light comes on while driving, the fluid reservoir should be filled to the level mark with the recommended hydraulic brake fluid.***

## SERVICE AND MAINTENANCE



Automatic transmission fluid recommendations proper fluid  AT

Use only automatic transmission fluid labeled DEXRON®-III  6VE1  HFV6  4JH1-TC  4JJ1-TC or ATF-3309  4JJ1-TC Hi. You can buy this fluid from an Isuzu Dealer.

### CAUTION

*Unless the specified ATF is filled, it may cause serious problems with the automatic transmission.*

#### Checking transmission fluid level

Check the automatic transmission fluid level at each engine oil change. Overfilling can cause foaming and loss of fluid. A low fluid level can cause slipping of the transmission. In either case, transmission damage can result.

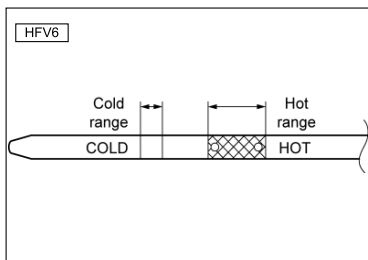
To check the fluid level, first set the parking brake and then start the engine in "P" (Park). With the service brakes applied, move the selector lever through all the gear positions, ending with "P". You must check the fluid level with the engine running at a low idling speed and the vehicle on a level surface.

### NOTE

*If you have driven for a prolonged period of time or in city traffic in hot weather, wait until the fluid cools down (approximately 30 minutes) before checking the fluid level.*



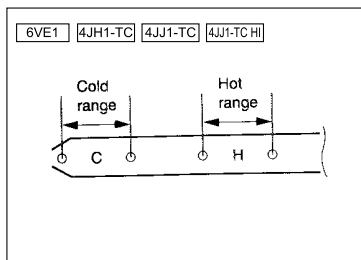
## SERVICE AND MAINTENANCE



Remove the dipstick located at the rear of the engine compartment on the right  G or left  D side of the vehicle. Carefully touch the wet end of the dipstick to find out if the fluid is cool, warm or hot. Wipe it clean and push it back in until the cap seats. Pull out the dipstick and read the fluid level.

If it felt warm, about normal operating temperature of 80°C (176°F)  HFV6   4JH1-TC  4JJ1-TC or 75°C (167°F)  6VE1   4JH1-TC HI, the level should be in the "HOT" range. If it felt cool, about room temperature of 20°C (68°F)  HFV6   4JH1-TC  4JJ1-TC or 25°C (77°F)  6VE1   4JH1-TC HI, the level should be in the "COLD" range.

Transmission fluid level checks must be performed with the vehicle at normal



operating temperatures. Inspections at any other temperatures should only be considered to be reference checks and may not reflect the actual fluid level.

### WARNING

*The dipstick circumference will be quite hot immediately after vehicle operation. Take care not to burn yourself.*

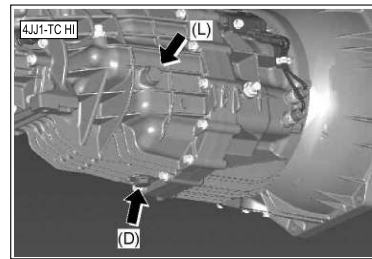
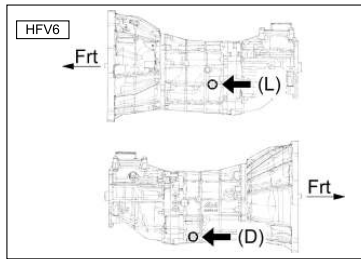
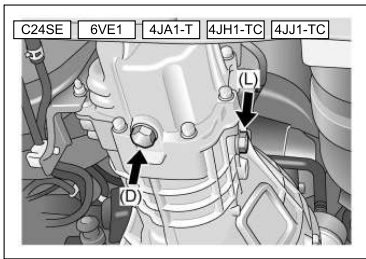
*High ambient temperatures, combined with prolonged stop-and-go driving, will cause the transmission fluid to reach extremely high operating temperatures.*

*To avoid oil burns from the hot transmission oil, do not remove the transmission dipstick from the filler tube until a sufficient cool-down time has elapsed.*

### NOTE

*In very cold weather check the fluid only after the vehicle has completely warmed up. Add just enough DEXRON®-III  6VE1  HFV6   4JH1-TC  4JJ1-TC or ATF-3309  4JH1-TC HI fluid to fill the transmission.*

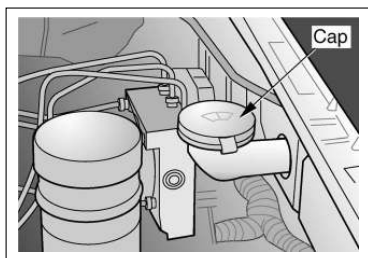
## SERVICE AND MAINTENANCE



Manual transmission  MT and/or transfer case  4WD

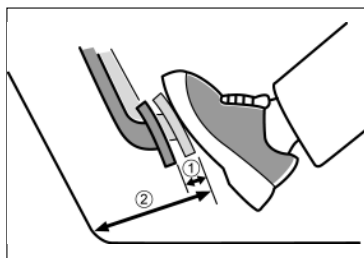
See the Maintenance Schedule List to determine how often the lubricant level should be checked.  
Add engine oil, if needed, to fill to the level of the filler plug hole.  
L = Level plug  
D = Drain plug

## SERVICE AND MAINTENANCE



### Windshield washer solution level

Check that the washer tank is filled sufficiently with solution. Also check the operating condition of the windshield washer.

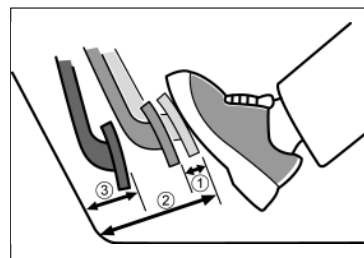


### Clutch pedal free play and height

Standard value: mm (in)

- ① Free play : 5 to 15 (0.2-0.6)
- ② Height : RHD LHD  
181 to 191 187.4 to 197.4  
(7.13 to 7.52) (7.38 to 7.77)

Clutch pedal free play is self-adjustment type.



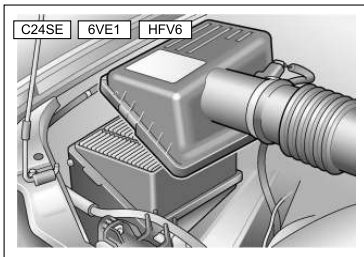
### Brake pedal free play, height and allowance

Standard value: mm (in)

- ① Free play : 6 to 10  
(0.24 to 0.39)
- ② Height : MT AT  
174 to 186 176 to 188  
(6.9 to 7.3) (6.9 to 7.4)
- ③ Allowance: More than  
57 (2.24)

(When depressed with a force of 50 kg (110 lbs)).

## SERVICE AND MAINTENANCE



### PERIODIC MAINTENANCE

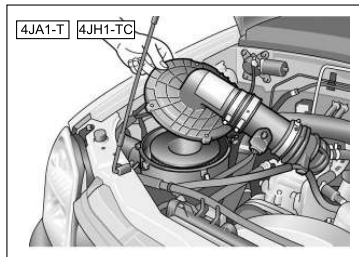
Air cleaner **G** **4JA1-T** **4JH1-TC**

Use of a fouled air cleaner element not only causes a deterioration in the engine output but also causes a rise in fuel consumption, engine oil consumption and exhaust smoke. The air cleaner element should be serviced in the following manner.

#### **CAUTION**

The cover should be reinstalled after aligning the setting marks to prevent dust from entering. It is strongly advisable to use the Isuzu genuine air cleaner element at the time of replacement which differs from dry type air cleaners in construction and function.

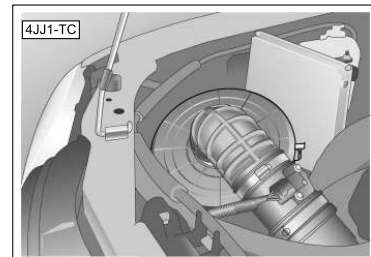
*CAUTION (Continued)*



*CAUTION (Continued)*

*Do not attempt to clean element even if it is dirty as the element is designed to provide normal filtering efficiency before it becomes due for replacement.*

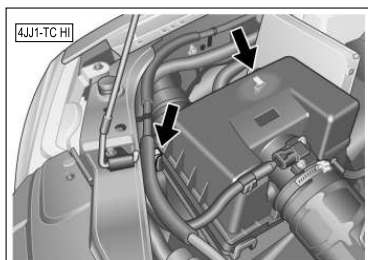
*The engine air cleaner should be installed at all times unless temporary removal is necessary during repair or maintenance of the vehicle, because in the absence of the air cleaner, backfiring could cause fire in the engine compartment.*



Air cleaner **4JJ1-TC** **4JJ1-TC H**

Use of a fouled air cleaner element not only causes a deterioration in the engine output but also causes a rise in fuel consumption, engine oil consumption and exhaust smoke. To clean the element, apply compressed air to the element from inside while turning the element by hand. Pressure of compressed air should not exceed 686kPa.

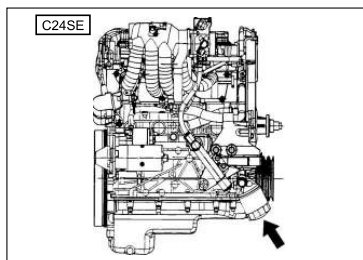
## SERVICE AND MAINTENANCE



### CAUTION

The cover should be reinstalled after aligning correctly to prevent dust from entering. It is strongly advisable to use the Isuzu genuine air cleaner element at the time of replacement.

The engine air cleaner should be installed at all times unless temporary removal is necessary during repair or maintenance of the vehicle. Absence of the air cleaner could cause damage to the engine.



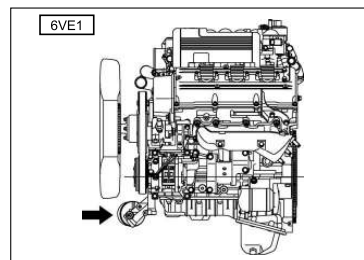
Oil filter  G  4JA1-T  4JH1-TC

1. Loosen the oil filter by turning it counterclockwise with a filter wrench.
2. With a rag, wipe the fitting face of the front cover clean so that the new oil filter can be seated properly.
3. Lightly oil the O-ring and turn the oil filter until the sealing face is fitted against the O-ring. Using the filter wrench, tighten the filter an additional 7/8 turn or by torque 22 N·m (2.2 kgf·m/16 lb·ft).

### CAUTION

Check level of oil in the engine and replenish to specified level as necessary. Start the engine and check for leaks in the oil filter.

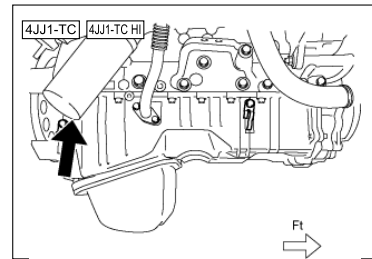
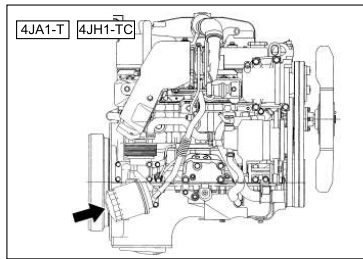
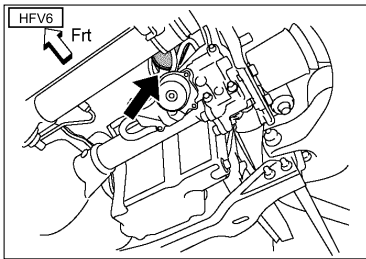
CAUTION (Continued)



CAUTION (Continued)

It is strongly advisable to use the Isuzu genuine oil filter assembly for replacement.

## SERVICE AND MAINTENANCE



Oil filter 4JJ1-TC 4J1-TC HI

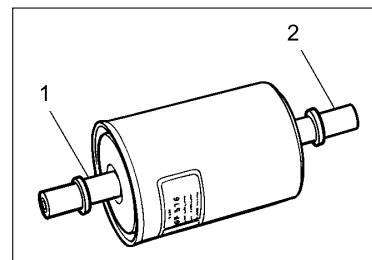
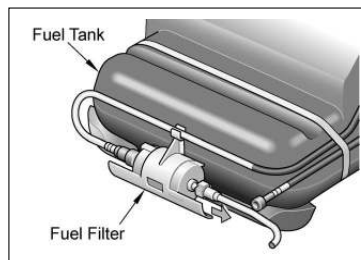
1. Loosen the oil filter by turning it counterclockwise with a filter wrench.
2. With a rag, wipe the fitting face of the oil cooler clean so that the new oil filter can be seated properly.
3. Lightly oil the O-ring and turn the oil filter cartridge until the sealing face is fitted against the O-ring. Using the filter wrench, tighten the filter an additional 2/3 turn.

## SERVICE AND MAINTENANCE

### CAUTION

Check the level of oil in the engine and replenish to the specified level as necessary. Start the engine and check for leaks in the oil filter.

It is strongly advisable to use the Isuzu genuine oil filter cartridge for replacement.



### Fuel filter

1. Disconnect the quick connector into the fuel filter. Pull off fuel filter from holder to side member side.
2. Install a new fuel filter to holder from side member side. Connect the quick connector from the fuel tube to the fuel filter until it clicks.

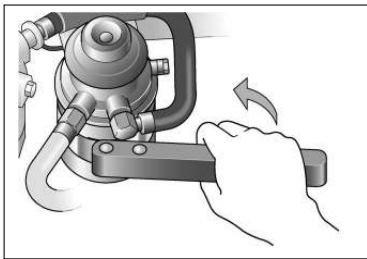
### NOTE

The fuel filter assembly has the inlet and outlet openings. (1) to engine side (2) to fuel tank side

Avoid making wrong connections when installing hoses.

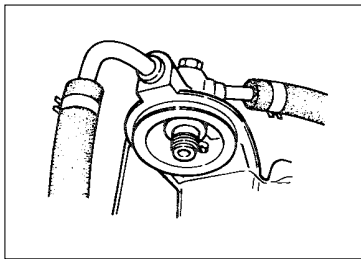
It is strongly advisable to use the Isuzu genuine fuel filter assembly for replacement.

## SERVICE AND MAINTENANCE

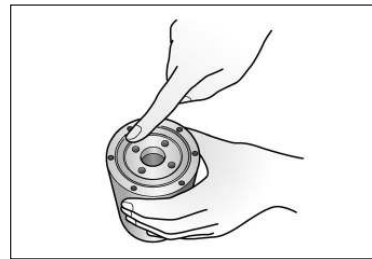


Fuel filter **4JA1-T** **4JH1-TC**

1. Loosen the fuel filter by turning it counterclockwise with a filter wrench.



2. With a rag, wipe the fitting face on the upper cover clean so that new fuel filter can be seated properly.



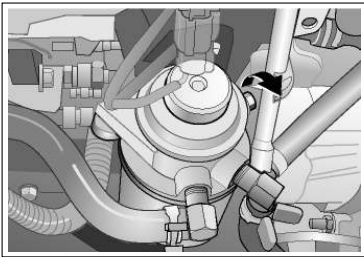
3. Lightly oil the O-ring. Install and turn the filter assembly clockwise carefully to prevent fuel spill until O-ring is fitted against sealing face of the filter cover. Using the filter wrench of rubber type, tighten the filter an additional 2/3 turn.

||||| **NOTE** |||||

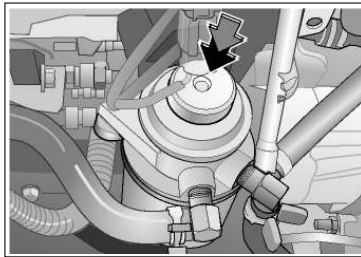
*It is strongly advisable to use the Isuzu genuine fuel filter for replacement.*



## SERVICE AND MAINTENANCE



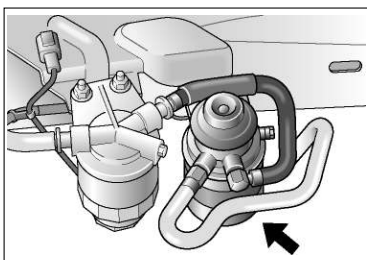
4. Loosen the bleeder plug fully on the top of the fuel filter. (Plug is not removed.)



5. Operate the priming pump on the fuel filter until the fuel comes out from this hole.
6. Tighten the air bleeding plug firmly with fixing torque 4.4 N·m (0.45 kgf·m/3.2 lb·ft). After that, wipe off the spilled fuel on around parts completely.
7. Additionally, operate the priming pump until it becomes hard to do, probably about 10 to 15 times.
8. Check the gear position that is Neutral on the vehicle with manual transmission or Parking the vehicle with automatic transmission. Prepare to start the engine after pressing the clutch pedal.

9. Press the accelerator pedal fully, let the engine start and crank until the revolution goes up over 2,000 rpm (If the engine do not start within 10 seconds, repeat the operation from "4").
10. Release the accelerator pedal and the key as soon as the engine revolution rises (The starter switch "ON" position automatically).
11. Allow the engine to idle for 5 minutes.
12. The engine can maintain to have smooth operation so that the vehicle is ready to be started. But, to be careful, check there is no fuel leakage from the air bleeding plug and mark of the spilled fuel around the parts which the air bleeding work was conducted.

## SERVICE AND MAINTENANCE

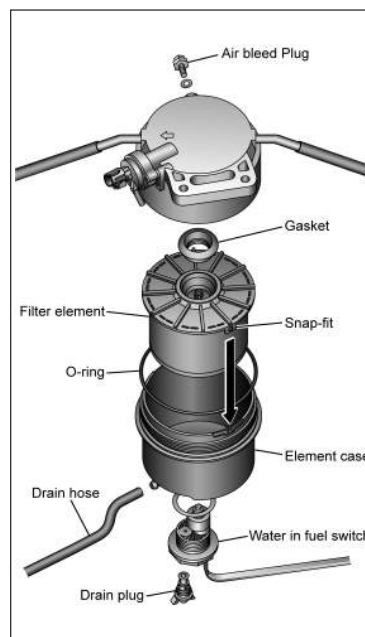


||||| **NOTE** |||||  
*Insufficient air bleeding may cause the Diagnostic Trouble Code (DTC) store or improper engine performance.*

### Fuel filter [4JJ1-TC] [4JJ1-TC H]

1. Detach the drain hose on the lower part of the fuel filter or the drain plug, loosen the air bleed plug, and drain the fuel from the fuel filter.
2. Detach the water-in-fuel switch harness.
3. Turn the element case counterclockwise to detach, and remove the filter element.
4. Replace the O-ring and confirm the snap-fit position, and fit a new filter element inside the element case.

||||| **NOTE** |||||  
*It is strongly advisable to use the Isuzu genuine fuel filter for replacement.*



## SERVICE AND MAINTENANCE

5. Apply a light coat of new diesel oil to the O-ring and gasket.
6. Turn the element case clockwise until it is completely seated against the upper cover. Then check that the drain hose is in its correct position, and then use a filter wrench and tighten to the specified torque.

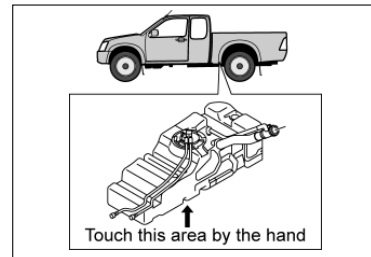
Torque: N·m (kgf·m/ft·lbs)

22-28 (2.2-2.9/16-21)

7. Use a clip to fix the drain hose at the base of the fuel filter, and fit the water-in-fuel switch harness.
8. Before starting the engine, turn the starter switch to the "ON" position. Wait 15 seconds. Return the switch to the "LOCK" position. Repeat this procedure 5 times.
9. After starting the engine, allow it to idle for 10 minutes. Do not increase the engine speed above idle.
10. If the engine could not be started, perform the fuel pump functional check and if it activates, try again from procedure 8.

### NOTE

*Insufficient air bleeding may cause the check engine indicator light to illuminate or improper engine performance.*



### Fuel pump functional check 4JJ1-TC 4JJ1-TCH

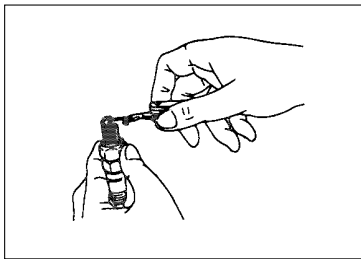
1. Turn the starter switch to the "ON" position.
  2. Touch the under portion of the Fuel Tank with the hand as shown in the following figure within 12 seconds.
  3. Make sure the Fuel Pump is vibrating. The Fuel Pump stops in 12 seconds after turning the starter switch to the "ON" position.
- When repeating the check, return the starter switch to the "ACC" position for 10 - 15 seconds and perform steps 1 - 3.

## SERVICE AND MAINTENANCE

### WARNING

A fuel pump functional check must be conducted under the following conditions to avoid injury.

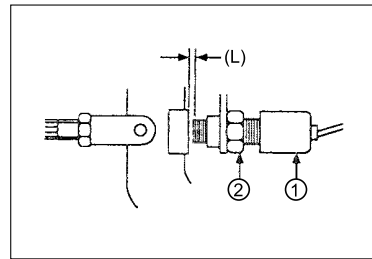
- Apply the parking brake.
- Stop the engine.



#### Spark plugs **G**

Check the spark plug gap by inserting a feeler gauge between the electrodes on the spark plug. If the gap is correct, you will feel a slight drag.

Spark plug gap: mm (in.)  
1.0 to 1.1 (0.039 to 0.043)



#### Clutch pedal to clutch switch or stopper bolt gap adjustment **MT**

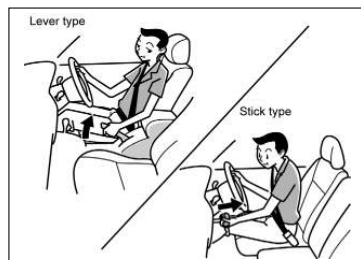
1. Loosen the lock nut (2).
  2. Turn the clutch switch or stopper bolt (1) until the switch bolt or stopper bolt (1) just touches the clutch pedal arm.
  3. Adjust the clutch switch or stopper bolt (1) by backing it out half a turn, and measure the clearance (L) between the clutch pedal arm and the clutch switch bolt end or stopper bolt (1).
  4. Lock the lock nut (2).
  5. Connect the clutch switch connector.
- Clutch switch and clutch pedal clearance (L): mm (in.)

0.5-1.5 (0.020-0.059)

## SERVICE AND MAINTENANCE

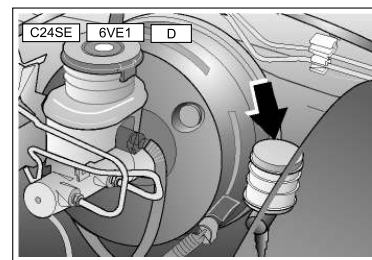
### Bleeding of clutch hydraulic circuits MT

If air enters the clutch circuit, it will cause the clutch to not release. Therefore, the bleeding operation should be performed if the clutch fluid reservoir has been emptied due to a failure to replenish it or if the hydraulic circuit has been disassembled. The bleeding operation calls for the cooperative action of two men.



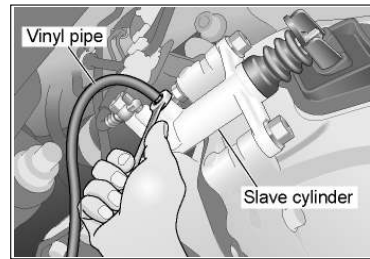
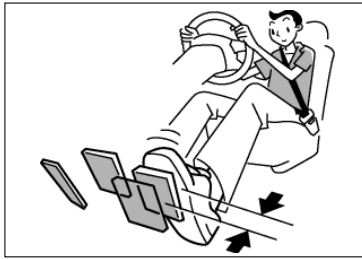
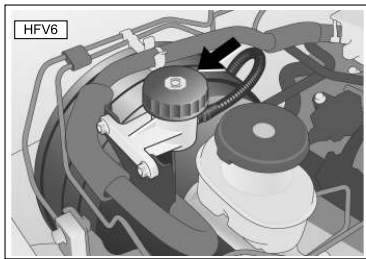
To bleed, proceed as follows

1. Set the parking brake.



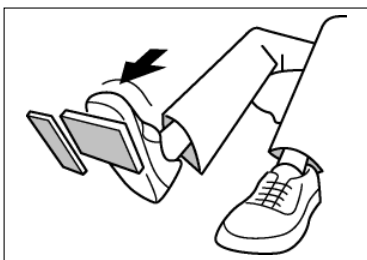
2. Check the level of clutch fluid in the reservoir and replenish if necessary.

## SERVICE AND MAINTENANCE



3. Remove the rubber cap from the bleeder screw and wipe clean the bleeder screw.  
Connect a vinyl tube to the bleeder screw and insert the other end of the vinyl tube into a transparent container.
4. Pump the clutch pedal repeatedly and hold it depressed.
5. Loosen the bleeder screw to release clutch fluid with air bubbles into the container and tighten the bleeder screw immediately.
6. Release the clutch pedal carefully.  
Repeat the above operation until air bubbles disappear from the clutch fluid being pumped out into the container.  
During the bleeding operation, keep the clutch fluid reservoir filled to the specified level.  
Reinstall the rubber cap.

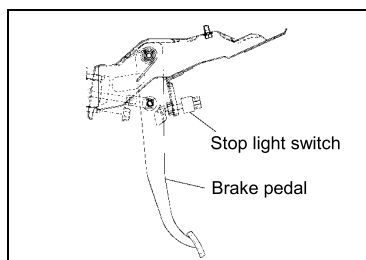
## SERVICE AND MAINTENANCE



### Brake pedal adjustment

The push-rod serves as the brake pedal stopper when the pedal is fully released. Brake pedal height adjustment should be performed as follows:

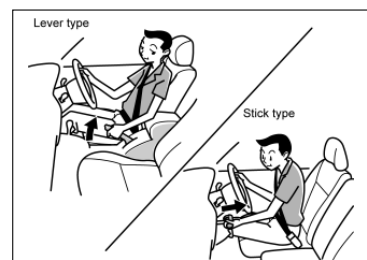
1. Measure the brake pedal height after making sure the pedal is fully returned by the pedal return spring.



2. If the measured value deviates from the specified pedal height, adjust the brake pedal as follows:

- ① Loosen the stop light switch.
- ② After doing so, pull the brake pedal to yourself a little so that the brake pedal is not pushed in.
- ③ Making the brake pedal not movable with one hand, push in the whole stop light switch with the other hand until the plunger of the stop light switch is pushed in and the switch itself hits the rubber of the brake pedal. In this condition, turn the switch clockwise until a "click" sound is made and lock it.

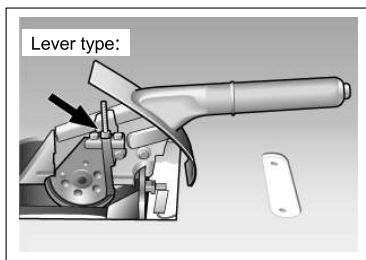
Clearance: (between the switch housing and the brake pedal) 0.2 to 1.2 mm (0.008 to 0.047 in)



### Parking and service brake adjustment

All brakes are self-adjusting. Brakes are adjusted by repeated stepping on the brake pedal.

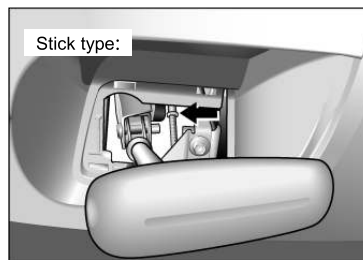
## SERVICE AND MAINTENANCE



The parking brake adjustment should be performed as follows.

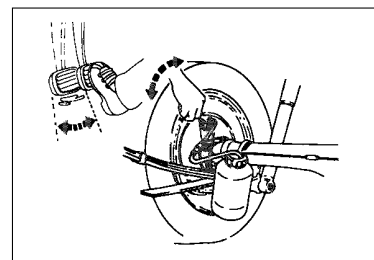
- ① Fully release the parking brake lever.
- ② Loosen the adjust nut.
- ③ Repeatedly step on the brake pedal firmly and release it until the rear brake auto-adjuster completes the function.
- ④ Rotate the adjust nut until all slack disappears from the cable.

The travel of the parking-brake lever is normal when the lever can be pulled back 6 to 9 notches (Lever type), 8 to 14 notches (Stick type) when pulled with a force of 30 kg (66 lbs).



### CAUTION

*The parking and service brake adjustment must be performed if the parking brake lever system traveling range deviates from the specified notch numbers or after overhauling the rear brake assembly. Have the parking and service brake adjusted by an Isuzu Dealer.*

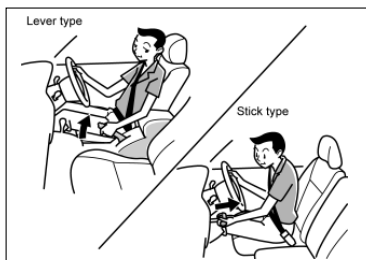


### Bleeding of brake hydraulic circuit

If air enters the brake lines, it will cause poor brake action. Therefore, bleeding should be performed if the brakes have been used with the level of brake fluid in the reservoir excessively low or if brake pipes have been disconnected in the course of brake servicing. The bleeding operation calls for the cooperative action of 2 persons.

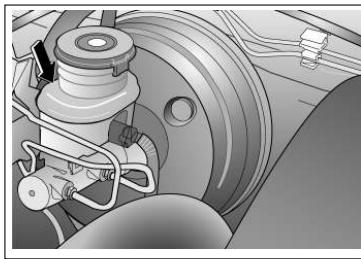


## SERVICE AND MAINTENANCE

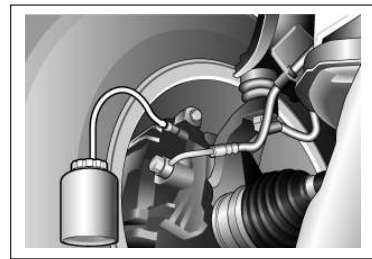


To bleed, proceed as follows

1. Apply the parking brake. Place the shift lever in "N" or "P" position  AT. Start the engine.

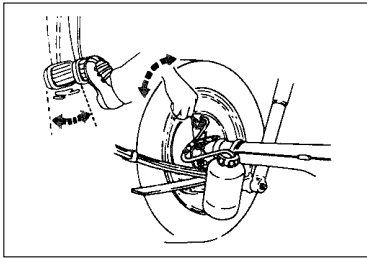


2. Check the level of brake fluid in the reservoir and replenish if necessary.

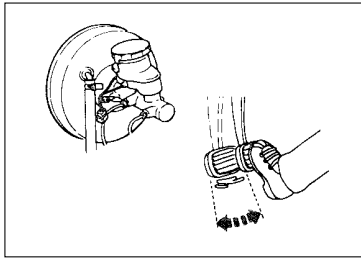


3. Remove the rubber cap from the bleeder screw and wipe and clean the bleeder screw. Connect a vinyl tube to the bleeder screw and insert the other end of the vinyl tube into a transparent container.

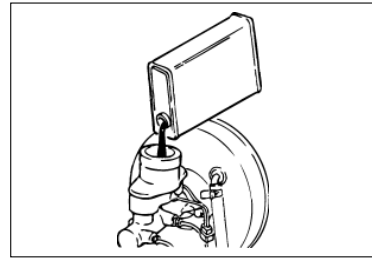
## SERVICE AND MAINTENANCE



4. Pump the brake pedal repeatedly and hold it depressed.
5. Loosen the bleeder screw to release the brake fluid with air bubbles into the container and tighten the bleeder screw immediately.



6. Release the brake pedal carefully. Repeat the above operation until air bubbles disappear from the brake fluid being pumped out into the container. During the bleeding operation, keep the brake fluid reservoir filled to the specified level. Install the rubber cap.

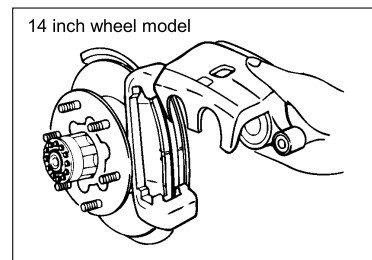
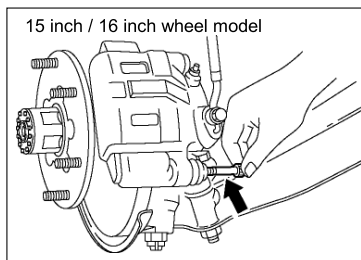
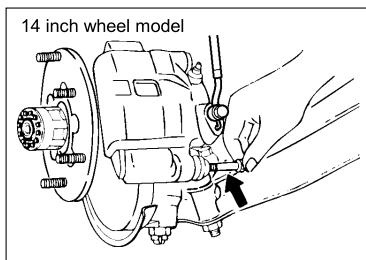


7. When bleeding is completed on each wheel, check the level of brake fluid in the reservoir and replenish if necessary.

### CAUTION

*Brake booster (master-vac) will be adversely effected if bleeding is performed without running the engine.*

## SERVICE AND MAINTENANCE



### Front brake pads and disc rotor wear check

1. Remove the Front wheel.
2. Remove the lock bolt from the caliper.

||||| **NOTE** |||||

*Don't remove the brake hose from caliper when replacing pads.*

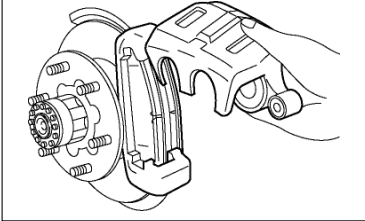
3. Remove the caliper from the support bracket and hang the caliper to the upper link or the frame.

||||| **NOTE** |||||

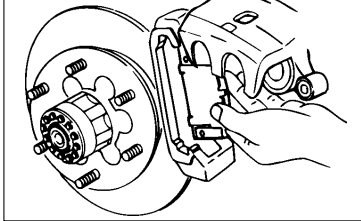
*While caliper is removed from support bracket, never step on the brake pedal or the piston will protrude rapidly.*

## SERVICE AND MAINTENANCE

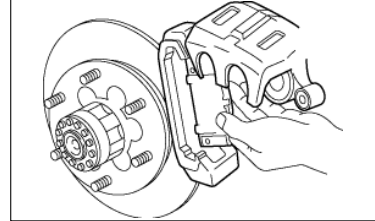
15 inch /16 inch wheel model



14 inch wheel model



15 inch / 16 inch wheel model:



4. Remove the pad assembly with the shim. Mark the pad locations if they are to be reinstalled.

To install, follow the removal steps in the reverse order, noting the following point:

Lock bolt tightening torque

14 inch wheel model: N·m (kgf·m/ft·lbs)

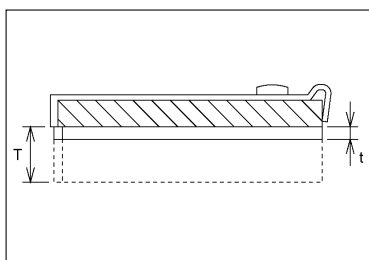
32-40 (3.3-4.1/ 24-30)

15 inch / 16 inch wheel model:

N·m (kgf·m/ft·lbs)

32.4-42.2 (3.3-4.3/ 24-31)

## SERVICE AND MAINTENANCE



Thickness of disc pad

14 inch wheel model: mm (in)

Standard (T)	Limit (t)
10.0 (0.394)	1.8 (0.071)

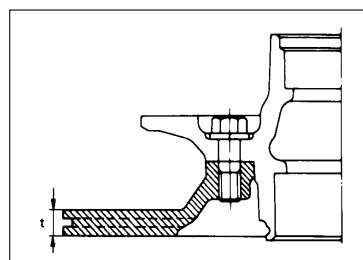
15 inch / 16 inch wheel model: mm (in)

Standard (T)	Limit (t)
10.0 (0.394)	1.5 (0.059)

Replace the front disc pad whenever the pad wear indicator makes a squeaking noise or when the pad is worn to within 1.8 mm (0.071 in) (14 inch wheel model) or 1.5 mm (0.059 in) (15 inch / 16 inch wheel model) of the shoe table.

### CAUTION

When the thickness of the disc pad is less than the limit (t), replace it at the Isuzu Dealer.



Thickness of disc rotor

14 inch wheel model: mm (in)

Standard	Limit (t)
26.0 (1.024)	24.6 (0.969)

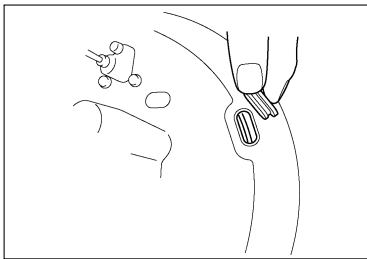
15 inch / 16 inch wheel model: mm (in)

Standard	Limit (t)
27.0 (1.063)	25.6 (1.008)

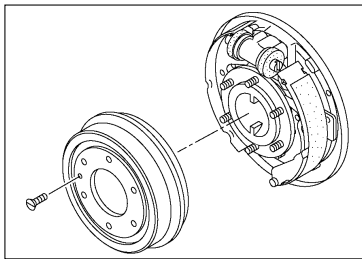
### CAUTION

When the thickness of the disc rotor is less than the limit (t), replace it at the Isuzu Dealer.

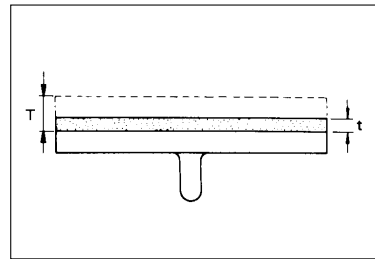
## SERVICE AND MAINTENANCE



Rear brake lining and drum wear check  
When inspecting only the thickness of the brake lining:  
Remove the grommet from the brake back plate and inspect the thickness of the lining from the inspection hole.



When inspecting the whole brake lining and brake drum:  
1. Remove the rear wheel.  
2. Loosen the screw and remove the brake drum.



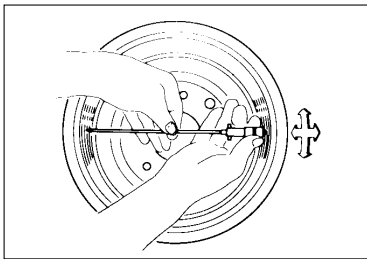
Thickness of brake lining

	mm (in)
Standard (T)	Limit (t)
5.0 (0.197)	1.0 (0.039)

### CAUTION

When the thickness of the brake lining is less than the limit (t), replace it at the Isuzu Dealer.

## SERVICE AND MAINTENANCE



Measuring the brake drum

		mm (in)	
		Standard	Limit
2WD (Except Hi-Ride)	Inside diameter	254 (10.000)	255.5 (10.059)
2WD (Hi-Ride) 4WD	Inside diameter	295 (11.614)	296.5 (11.673)

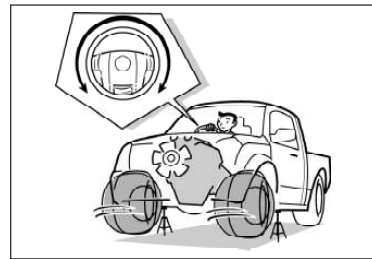
### CAUTION

When the inner diameter of the brake drum is less than the limit, replace it at the Isuzu Dealer.

### Bleeding of power steering hydraulic circuit

v

If an abnormal noise is heard when the steering wheel is turned, it indicates that air is present in the hydraulic system and bleeding must be performed in the following manner.

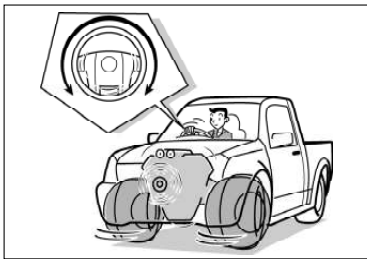


1. Jack up the front wheels until they are clear of the ground.
2. With the engine stationary, turn the steering wheel fully in both directions several times.

NOTE

While bleeding check the fluid level and replenish if necessary.

## SERVICE AND MAINTENANCE

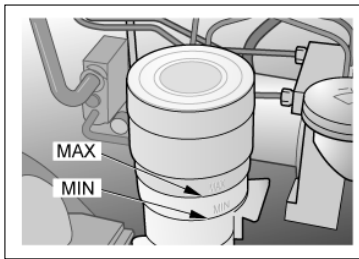


3. With the engine idling, turn the steering wheel fully several times in both directions.

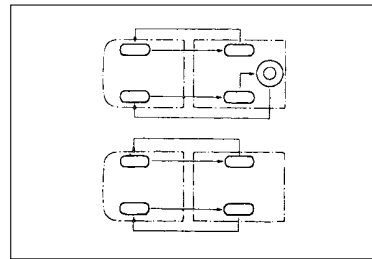
### CAUTION

*Avoid turning the steering wheel to a lock position and holding it there for more than 5 seconds, otherwise the fluid temperature will increase sharply.*

4. Lower the vehicle to the ground and turn the steering wheel fully in both directions several times, with the engine idling.



5. Bring the steering wheel to the straight-ahead position, stop the engine, and check that the level of fluid in the fluid reservoir does not rise. If the fluid level rises sharply, air is not completely removed from the system and the operations outlined under step 4 must be repeated.
6. Check the level of fluid in the fluid reservoir and check joints for leakage.

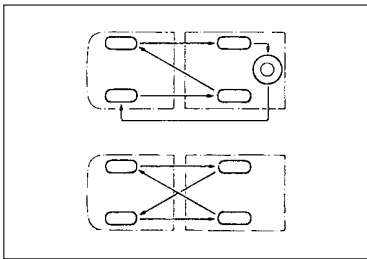


### Tire rotation

For radial tires, interchange the front and the rear wheels on the same side as shown in the figure.



## SERVICE AND MAINTENANCE

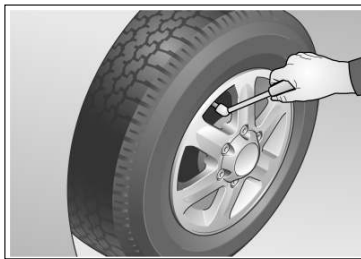


If one-sided tire wear appears on radial tires, rotate the wheels as shown in the figure.

||||| **NOTE** |||||

- After rotation, adjust the front and rear tire pressure and be sure to check wheel nut tightness.
- The spare tire disc wheel is steel (not aluminum).

*It is for emergency use only for vehicles that are equipped with an aluminum wheel (do not use in the rotation sequence).*



### Tire inflation pressure

The standard inflation pressures for tires are listed below.

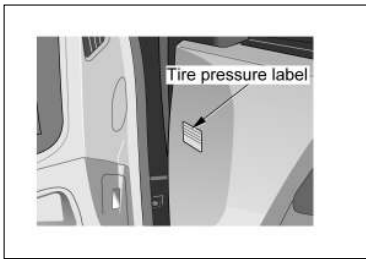
||||| **NOTE** |||||

*Check tire pressure when the tires are cold (after the vehicle has been inoperative for more than 3 hours or driven less than 1.6 km (1 miles)).*

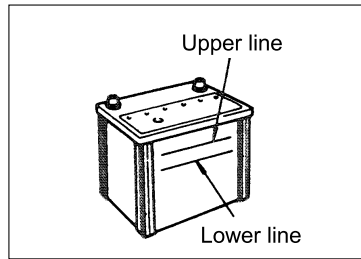
2WD		
TIRE SIZE	TIRE INFLATION PRESSURE: kg/cm <sup>2</sup> (psi/kPa)	
	FRONT	REAR
195R14C 8PR	2.5 (36/250)	4.5 (65/450)
195R15C 8PR	2.75 (40/275)	4.5 (65/450)
215/70R15C	2.25 (33/225)	3.75 (54/375)

2WD HI-RIDE, 4WD		
TIRE SIZE	TIRE INFLATION PRESSURE: kg/cm <sup>2</sup> (psi/kPa)	
	FRONT	REAR
225/75R15C	2.25 (33/225)	3.25 (47/325)
245/70R16	2.0 (29/200)	2.8 (41/280)

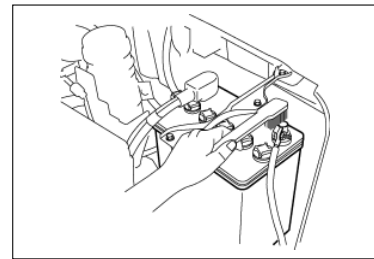
## SERVICE AND MAINTENANCE



The correct pressure for your tires is shown on the tire pressure label located on the driver's door.



Battery normally produce flammable gases which can cause explosion. Do not put equipment or the tool which may cause explosion by a spark when it touched a battery terminal. Do not smoke or use a lighter near the battery. If your new vehicle has a MF battery, you will never have to add water. Instead, install a new battery. Do not try to jumpstart the vehicle or charge it or test the battery if the fluid level is below the lower level line on the side of the battery. Battery is overheated and may explode.



### Cleaning of battery

If the external part of the battery is fouled, clean with tepid water. Apply a thin coat of vaseline or grease onto the battery terminals to prevent corrosion.

## SERVICE AND MAINTENANCE

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### Replacing a headlight

Open the hood and replace the headlight, first unplugging the headlight connector near the engine.

||||| **NOTE** |||||

*When replacing a bulb, make sure the light switch is "OFF". Use only bulbs with the same wattage rating.*

### Headlights

Proper adjustment of the headlights is most important in assuring sufficient illumination on the highway without blinding other motorists. When light adjustment is necessary it is advisable to contact an authorized dealer who has special equipment for this purpose.

#### **CAUTION**

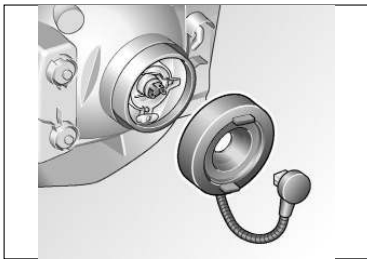
- *Avoid turning the headlights on and off at frequent intervals. Doing so shortens their service life.*
- *The bulb might be a high temperature. Note the burn when you exchange bulbs.*

## SERVICE AND MAINTENANCE

The standard bulb wattage ratings are given below.

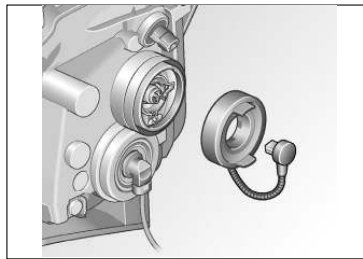
Location	Wattage	Number of bulb (s)	
Halogen headlights	Headlight	60/55	2
	Front turn light	21 (Amber)	2
	Clearance light	5	2
Halogen headlights (Projector type)	Headlight (Low)	55	2
	Headlight (High)	65	2
	Front turn light	21 (Amber)	2
	Clearance light	5	2
<input type="checkbox"/> Side turn signal lights	5	2	
<input type="checkbox"/> Side turn signal lights (LED) (Outside rearview mirror)	0.736	2 modules	
<input type="checkbox"/> Front fog lights	51	2	
<input type="checkbox"/> Rear fog light	21	1	
Rear combination lights	Turn signal	21 (Amber)	2
	Stop and tail	21/5	2
	Back-up (Standard/Flat deck)	18/21	2
License plate light (Step bumper/Others)	5	2/1	
<input type="checkbox"/> Front map lights	5	2	
Dome light	10	1	
<input type="checkbox"/> Spot lights	5	2	
<input type="checkbox"/> Inspection lights	1.2	1	
<input type="checkbox"/> High mounted stop light (LED)	2.4	1 module	

## SERVICE AND MAINTENANCE



### Halogen headlights system

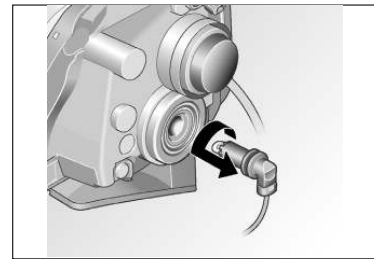
1. Open the engine hood and engage the support.
2. Remove the connector.
3. Remove the rubber boot.
4. Release the bulb retaining clip.
5. Remove the bulb.



### Halogen headlights system (Projector type)

#### Low beam

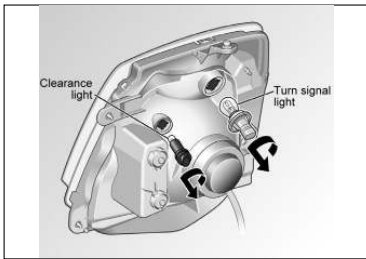
1. Open the engine hood and engage the support.
2. Remove the connector.
3. Remove the rubber boot.
4. Release the bulb retaining clip.
5. Remove the bulb.



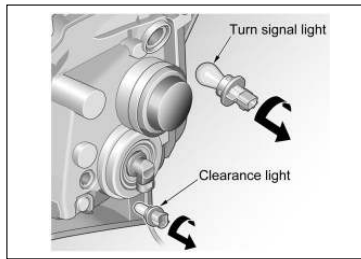
### High beam

1. Open the engine hood and engage the support.
2. Remove the bulb socket by turning it counterclockwise.
3. Disconnect the connector.
4. Remove the bulb from the socket.

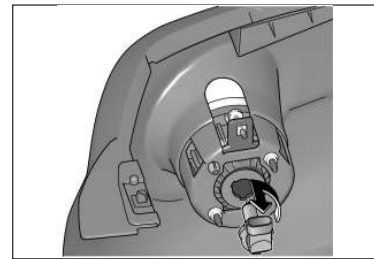
## SERVICE AND MAINTENANCE



**Clearance lights and front turn signal lights**  
Open the engine hood and remove the bulb by turning the lamp socket counterclockwise.



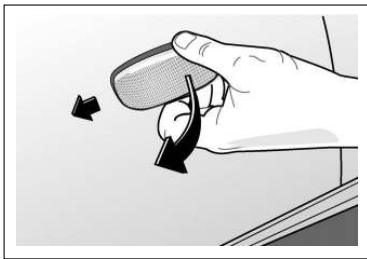
**Clearance lights and front turn signal lights (Projector type headlights)**  
Open the engine hood and remove the bulb by turning the lamp socket counterclockwise.



**Front fog lights**  **V**

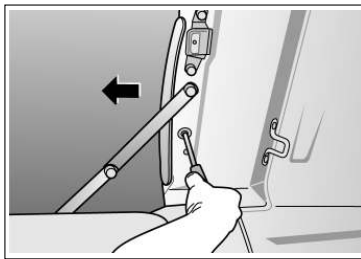
1. Remove the bulb socket (accessible from behind the front bumper) by turning it counterclockwise.
2. Disconnect the connector.
3. Remove the bulb from the socket.

## SERVICE AND MAINTENANCE



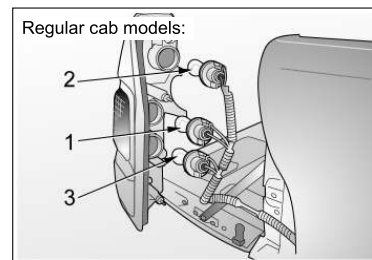
### Side turn signal lights

Slide the light toward the front of the car and pull the rear end forward. Remove the lamp socket by turning it counterclockwise. Remove the bulb from the lamp socket.



### Rear combination lights

Unscrew each of the two screws securing the lens.

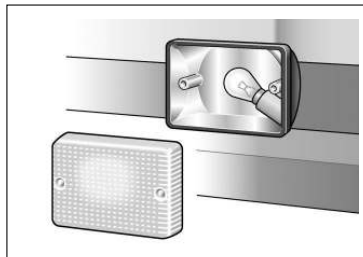
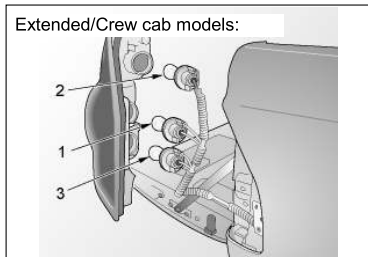


### Regular cab models:

Remove the bulb from the bulb holder.

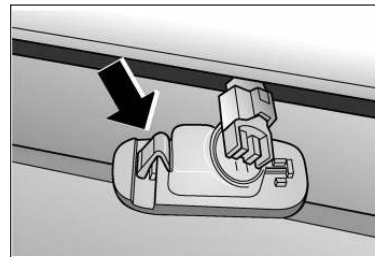
- 1 : Turn signal light bulb
- 2 : Stop and tail light bulb
- 3 : Back-up light bulb

## SERVICE AND MAINTENANCE



### Rear fog light

Remove the screws retaining the lens and remove the lens.

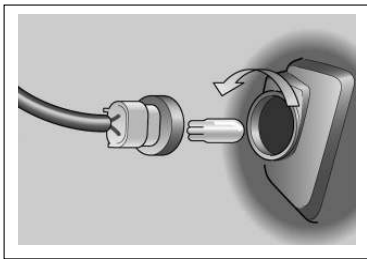


### License plate lights

Disengage by releasing the catch for the light unit inside the body (there is an arrow to indicate this) then remove the unit. Remove the bulb by turning the lamp socket to the left.



## SERVICE AND MAINTENANCE



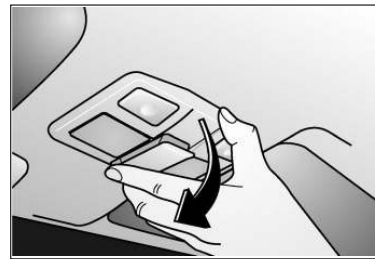
### Step bumper models:

Remove the bulb (accessible from behind the step bumper) by turning the lamp socket counterclockwise.



### Dome light

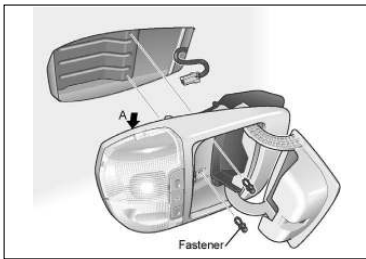
Remove the cover with a screwdriver or similar tool.



### Spot lights V

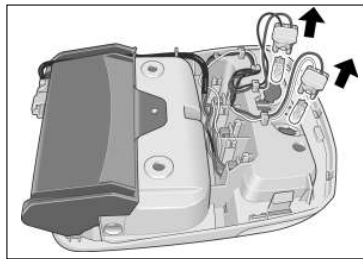
The light assembly can be removed easily by pulling down by hand, then remove the bulb from the socket.

## SERVICE AND MAINTENANCE

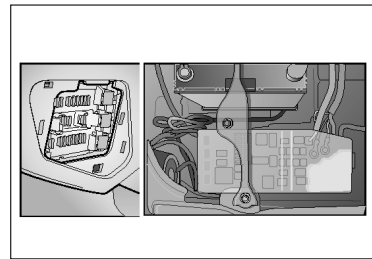


Front map light  V

1. Open the lid and remove the two fasteners.
2. A steel ruler or an equivalent article is inserted in the lens side hook part and the crevice A section, a metal clip is pushed in and the overhead console is removed.
3. Disconnect the connector.



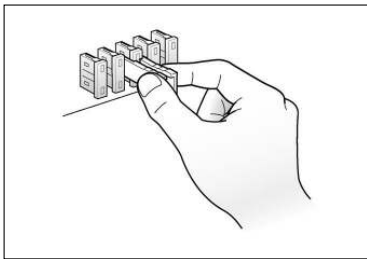
4. Push the bulb socket in and turn it counterclockwise to remove it.



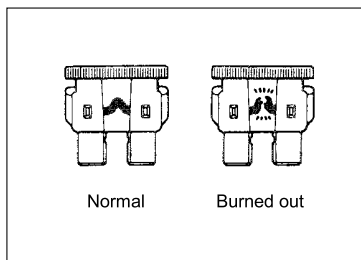
Fuse box

Two fuse boxes are installed under the dash panel on the driver side and the other in the engine compartment. The cover can be removed easily by hand.

## SERVICE AND MAINTENANCE



To replace a fuse, use the fuse puller. The fuse puller is located in the fuse box inside the cabin.



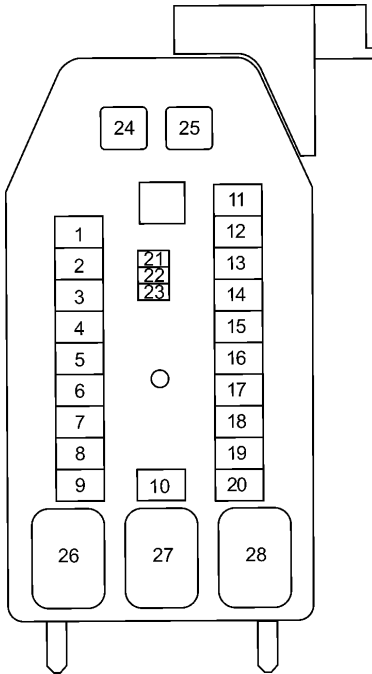
The drawing on the right illustrates a burned out fuse. Use a spare fuse of the same amperage for replacement.

||||| **NOTE** |||||

- *When replacing a fuse, it is important to use a spare fuse of the amperage shown on the fuse box cover.*
- *If the spare fuse also burns out, have the circuit checked by an Isuzu Dealer.*

## SERVICE AND MAINTENANCE

Fuse box on dash panel



Fuse

No.	Capacity	Label identification
1	10A	Meter
2	10A	<input type="checkbox"/> Trailer
3	10A	Engine <input type="checkbox"/> HFV6
	15A	TCM, Glow, IG Coil <input type="checkbox"/> C24SE <input type="checkbox"/> 6VE1 <input type="checkbox"/> D
4	15A	Back Light
5	10A	Turn Light
6	10A	Elec. IG
7	10A	TCM <input type="checkbox"/> HFV6
	10A	Engine <input type="checkbox"/> C24SE <input type="checkbox"/> 6VE1 <input type="checkbox"/> D
8	10A	ABS/4WD
9	20A	Frt Wiper
10	10A	<input type="checkbox"/> SRS
11	10A	Audio
12	20A	Cigar/ACC Socket
13	15A	Audio (+B)
14	20A	<input type="checkbox"/> Door Lock
15	10A	Meter (+B)
16	10A	Dome Light
17	10A	<input type="checkbox"/> Anti Theft
18	15A	Stop Light
19	10A	<input type="checkbox"/> Rr Fog Light
20	10A	Starter
21	10A	Spare
22	15A	Spare
23	20A	Spare

## SERVICE AND MAINTENANCE

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### Slow blow fuse

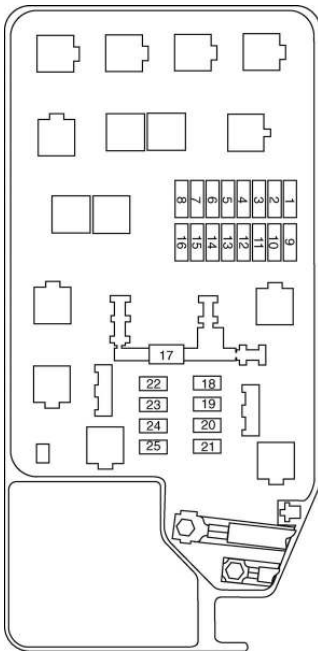
24	20A	<input type="checkbox"/>	Rear Defogger
25	30A	<input type="checkbox"/>	Power Window

### Relay

26	-	<input type="checkbox"/>	Rear Defogger
27	-	<input type="checkbox"/>	Power Window
28	-		-

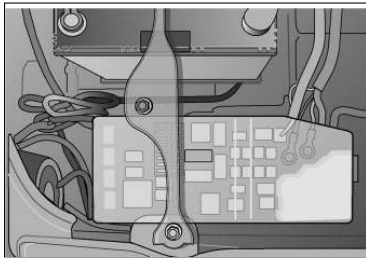
## SERVICE AND MAINTENANCE

Fuse box in engine compartment



No.	Engine / capacity					
	C24SE	6VE1	HFV6	4JH1-TC	4JA1-T	4JJ1-TC, 4JJ1-TCH
1	15 A: ECM	20 A: ECM	15 A: ECM	10 A: ACG (S)		
2	-	10 A: ECM (B)	15 A: O <sub>2</sub> Sensor pre	-		10 A: TCM
3	-	10 A: TCM	10 A: ECM (B)	-		10 A: Fuel Pump
4	10 A: ACG (S)	15 A: Frt Fog	10 A: TCM / PIM (B)	10 A: ECM	-	10 A: Engine
5	10 A: H/Light-High (RH)					
6	10 A: H/Light-High (LH)					
7	10 A: H/Light-Low (RH)					
8	10 A: H/Light-Low (LH)					
9	20 A: Fuel Pump		20 A: Trailer	-		20 A: Trailer
10	10 A: O <sub>2</sub> Sensor	20 A: O <sub>2</sub> Sensor	-	20 A: Cond Fan	-	20 A: Cond Fan
11	10 A: Tail (RH)					
12	10 A: Illumi & Tail (LH)					
13	10 A: A/C					
14	10 A: 4WD					
15	10 A: Horn					
16	10 A: Hazard					
17	100 A: Main		-	80 A: Main		120 A: Main
18	40 A: ABS-1		20 A: Frt Fog	40 A: ABS-1		
19	20 A: ABS-2		60 A: RAD Fan	30 A: ABS-2	20 A: ABS-2	
20	20 A: Cond Fan		20 A: Fuel Pump	30 A: ECM	20 A: Cond Fan	40 A: ECM
21	40 A: IG-1					
22	-		30 A: Blower			
23	20 A: Frt Fog	-	40 A: ABS-1	20 A: Frt Fog		
24	30 A: Blower		20 A: ABS-2	60 A: Glow	50 A: Glow	60 A: Glow
25	50 A: IG-2		60 A: IG-2	50 A: IG-2		60 A: IG-2

## SERVICE AND MAINTENANCE

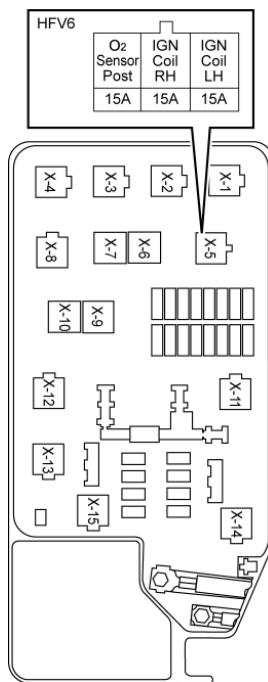


### Relay

Relays are also contained in the engine compartment fuse box; their location in the fuse box and their functions are indicated on the inside of the fuse box cover.

### **WARNING**

*When replacing a fuse, make sure you use a fuse of the specified amperage. Never install a wire or something similar as it could damage electrical components and cause a fire.*



No.	Engine / relay					
	C24SE	6VE1	HFV6	4JH1-TC	4JA1-T	4JJ1-TC, 4JJ1-TC HI
X-1	Tail Light		Fog Light			
X-2	Fuel Pump		Tail Light			
X-3	Horn					
X-4	Dimmer					
X-5	-	Fuse see left	Glow			
X-6	Starter		Head Light			
X-7	Head Light	-	Starter Cut	CSD	Starter Cut	
X-8	-		Starter			
X-9	FRT Fog Light	-	Cond Fan	-	Cond Fan	
X-10	Cond Fan	-	Transmission	-	Transmission	
X-11	Heater					
X-12	-	Starter Cut	ECM Main	-	ECM Main	
X-13	Starter Cut	ECM Main	Fuel Pump	-	Cond Fan	Fuel Pump
X-14	A/C Comp			Starter Cut	A/C Comp	
X-15	Thermo	Starter	Thermo			

## SERVICE AND MAINTENANCE

### RECOMMENDED FLUIDS, LUBRICANTS AND FUELS FOR GENERAL EXPORT

In order to obtain maximum performance and longest service life from your Isuzu vehicles, it is very important to select and use correctly best lubricants and diesel fuels.

When lubricating, be sure to use ISUZU genuine lubricants or recommended lubricants listed below, according to the maintenance schedule for each vehicle model.

The lubrication intervals in the maintenance schedule and the coverage and period of new vehicle warranty are based on the use of ISUZU genuine lubricants or recommended lubricants as given in the chart which will serve as a guide for selecting lubricants of proper brand name.

LUBRICATION	MAKE	BRAND/TYPE	GRADE		
			API	ACEA	JASO
Gasoline engine crankcase C24SE 6VE1	ISUZU GENUINE ISUZU GENUINE CALTEX SHELL CASTROL BP	BESCO RACING ACE TYPE SJ (5W-30) BESCO MULTI ACE (7.5W-30) HAVOLINE FORMULA (15W-40, 10W-30, 20W-50) HELIX PLUS (15W-50) GTX-7 (15W-40) VISCO 3000 (15W-40)	SJ SG SL SJ/CF SG/SH SG/SH	A3/B3	
Gasoline engine crankcase HFV6	CALTEX	10W-30 HAVOLINE FORMULA (10W-30)	SL SL		
Diesel engine crankcase	ISUZU GENUINE ISUZU GENUINE ISUZU GENUINE CALTEX/CHEVRON CALTEX/CHEVRON SHELL SHELL CASTROL CASTROL BP EXXONMOBIL EXXONMOBIL EXXONMOBIL	BESCO MULTI-Z TYPE CF-4 (10W-30) BESCO MULTI-Z SUV (5W-30) BESCO S-3 (10W, 20W, 30, 40) DELO CXJ (15W-40, 20W-50, 40) DELO 400 MULTIGRADE (15W-40) RIMULA X (15W-40) RIMULA D (15W-40, 30, 40) RX SUPER PLUS (15W-40) TECTION J PLUS (15W-40) BP VANELLUS C6 (15W-40) ESSOLUBE XTJ (15W-40) EXXON/ESSOLUBE XD-3 (15W-40) MOBIL DELVAC MX (15W-40)	CF-4 CD CD CF CE/CF/CI-4 CH-4 CF CH-4 CH-4 CH-4 CH-4 CF-4 CI-4 CI-4	E3/E5 E3 E3 E3/B3 E3	DH-1 DH-1 DH-1 DH-1 DH-1 DH-1



## SERVICE AND MAINTENANCE

LUBRICATION	MAKE	BRAND/TYPE	GRADE		
			API	ACEA	JASO
Manual transmission (MSG, MUA) C24SE 6VE1 D Transfer case	<b>ISUZU GENUINE</b> CALTEX/CHEVRON SHELL SHELL CASTROL BP EXXONMOBIL EXXONMOBIL	<b>BESCO GEAR OIL TRANSAXLE (5W-30)</b> DELO 400 MULTIGRADE (15W-40) HELIX PLUS (15W-50) RIMULA X (15W-40) RX SUPER PLUS (15W-40) BP VANELLUS C6 (15W-40) EXXON/ESSOLUBE XD-3 (15W-40) MOBIL DELVAC MX (15W-40)	<b>SG</b> CD/CE/CF/CI-4 SJ/CF CH-4 CD/CE/CF CD/CE/CF CI-4 CI-4	E3/E5 A3/B3 E3	DH-1 DH-1
Manual transmission (MUX) 4JJ1-TC H1	<b>ISUZU GENUINE</b>	<b>BESCO GEAR OIL TRANSAXLE (5W-30)</b>	<b>SG</b>		
Manual transmission HFV6		75W-90	GL-3		
Automatic transmission 6VE1 4JH1-TC 4JJ1-TC Power steering	<b>ISUZU GENUINE</b> CALTEX/TEXACO SHELL CASTROL BP	<b>BESCO ATF III</b> TEXAMATIC 1888 (DEXRON® III) DONAX TG (DEXRON® III) TQ DEXRON III (DEXRON® III) AUTORAN DX3 (DEXRON® III)			
Automatic transmission 4JJ1-TC H1	EXXONMOBIL	MOBIL ATF 3309			
Automatic transmission HFV6		DEXRON® III			

## SERVICE AND MAINTENANCE

LUBRICATION	MAKE	BRAND/TYPE	GRADE	
			API	ACEA
Differential Shift on the fly system (GL-5 only)	ISUZU GENUINE	BESCO GEAR OIL SH (80W-90, 90, 140)	GL-5	
	ISUZU GENUINE	BESCO SHIFT ON THE FLY (75W-90)	GL-5	
	CALTEX	THUBAN GL-5 EP (80W-90, 85W-140)	GL-5	
	SHELL	SPIRAX A (140)	GL-5	
	CASTROL	EPX90 (90)	GL-5	
	CASTROL	DYNADRIVE (80W-90)	GL-5	
Differential (Limited Slip Differential)	BP	ENERGEAR HYPO (90)	GL-5	
	BP	ENERGEAR EP (80W-90)	GL-5	
	EXXONMOBIL	MOBILUBE HD (80W-90)	GL-5	
	ISUZU GENUINE	BESCO GEAR OIL LSD (140)	GL-5	
	CALTEX	GEAR OIL LSD (90)	GL-5	
	SHELL	SPIRAX A LS 90 (90)	GL-5	
Grease fitting (Multi purpose grease)	CASTROL	HYPOY LSX (90)	GL-5	
	BP	ENERGEAR LS-M (90)	GL-5	
	EXXONMOBIL	MOBILUBE LS (85W-90)	GL-5	
	ISUZU GENUINE	BESCO L-2 GREASE (No. 2), L-3 GREASE (No. 3)		
	CALTEX/TEXACO	STARPLEX-2 (No. 2)		
	SHELL	RETINAX LX2 (No. 2)		
Propeller shaft sliding yoke Universal joint (Multi purpose grease containing molybdenum disulfide)	CASTROL	LM GREASE (No. 2/No. 3)		
	BP	ENERGREASE LS (No. 2/No. 3)		
	EXXONMOBIL	MOBILGREASE XHP 222/223 (No. 2/No. 3)		
Engine cooling system	ISUZU GENUINE	ONE LUBER MO GREASE		
	CALTEX	MOLYTEX GREASE EP2 (No. 2)		
	SHELL	RETINAX HDX2 (No. 2)		
Engine cooling system	ISUZU GENUINE	BESCO LLC SUPER TYPE E		
	CALTEX/TEXACO/ CHEVRON	EXTENDED LIFE COOLANT		
		HAVOLINE XLC DELO XLC		

**NOTE:**

- \* If GL-5 Limited Slip Differential Lubricant is not available, use GL-5 Lubricant mixed with 1 bottle (118ml) of Limited Slip Differential Lubricant additive (Parts No. 8-01052-358-0) or equivalent.

## SERVICE AND MAINTENANCE

FLUID	TYPE
Clutch and brake fluid reservoir	<b>Besco brake fluid</b> Hydraulic brake fluid SAE J1703 FMVSS 116 DOT.3 grade

**NOTE:**

When the recommended lubricants are specified in the workshop manual, follow them.

DIESEL FUEL/APPLICABLE STANDARD	
JIS (JAPANESE INDUSTRIAL STANDARD)	Based on K2204 Diesel Fuel
DIN (DEUTSCHE INDUSTRIE NORMEN)	Based on EN590; 1997
SAE (SOCIETY OF AUTOMOTIVE ENGINEERS)	Based on SAE J-313C
BS (BRITISH STANDARD)	Based on BS EN590; 1997

DIESEL FUEL/APPLICABLE STANDARD (Sulfur content below 50ppm)	
JIS (JAPANESE INDUSTRIAL STANDARD)	Based on K2204 Diesel Fuel
DIN (DEUTSCHE INDUSTRIE NORMEN)	Based on EN590; 2004
ASTM (AMERICAN SOCIETY FOR TESTING and MATERIALS)	Based on D975-04c NO.1-D S15 or NO.2-D S15 (below 15 ppm)
BS (BRITISH STANDARD)	Based on EN590; 2004

**NOTE:**

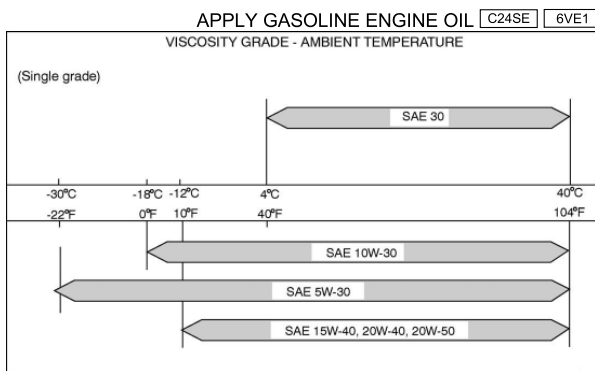
Do not use fuels other than those listed above. Doing so may adversely affect the engine.

## SERVICE AND MAINTENANCE

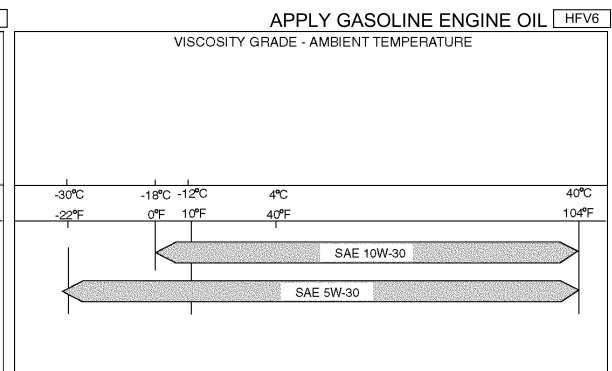
### LUBRICATION

Lubricants should be carefully selected according to the lubrication chart. It is also important to select viscosity of lubricants according to the ambient temperature by referring to the following table.

OIL VISCOSITY CHART FOR GASOLINE ENGINE

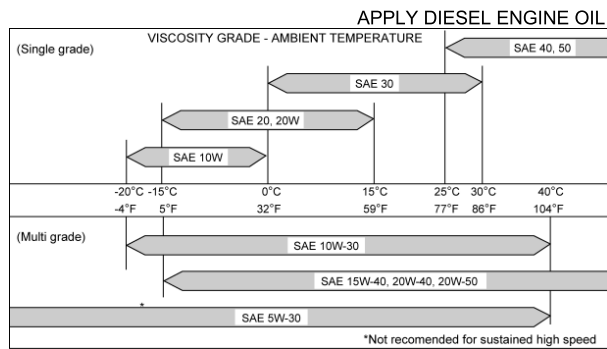


OIL VISCOSITY CHART FOR GASOLINE ENGINE



## SERVICE AND MAINTENANCE

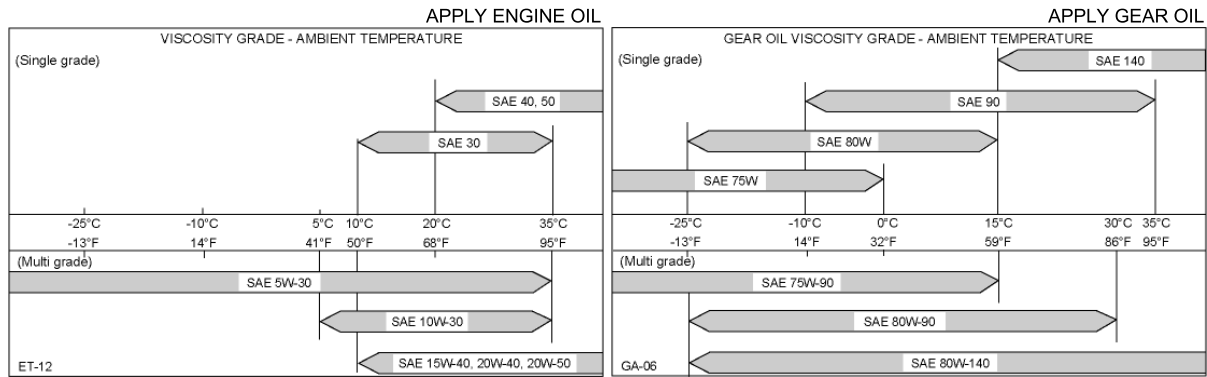
### OIL VISCOSITY CHART FOR DIESEL ENGINE



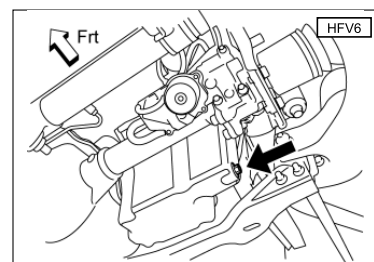
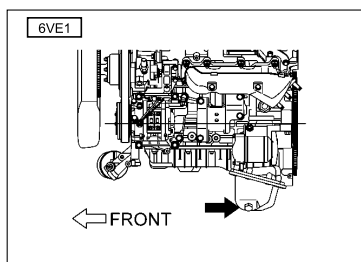
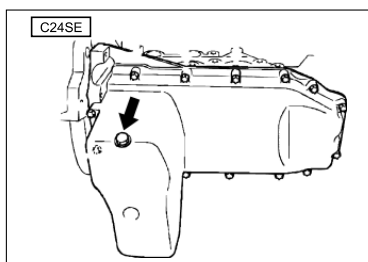
## SERVICE AND MAINTENANCE

OIL VISCOSITY CHART FOR TRANSMISSION CASE

OIL VISCOSITY CHART FOR FRONT AXLE AND REAR AXLE



## SERVICE AND MAINTENANCE



### LUBRICATION GUIDE

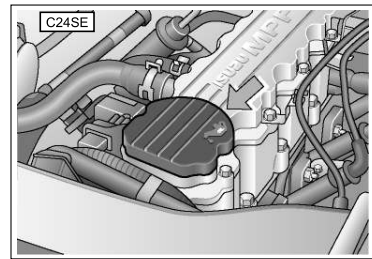
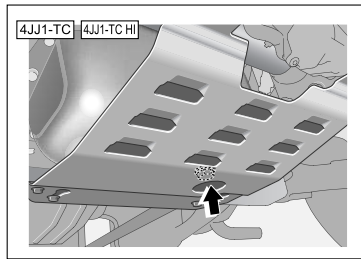
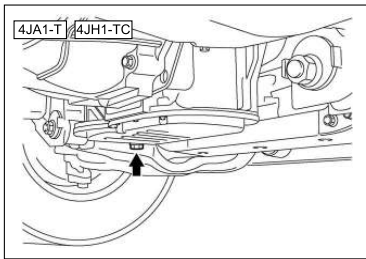
Changing engine oil

Drain the engine crankcase completely by removing the drain plug on the lower part of the oil pan while the engine is hot.

#### **WARNING**

*Hot engine oil can cause severe skin burns. Allow the engine to cool before draining the engine oil.*

## SERVICE AND MAINTENANCE



Then install the drain plug with a new gasket.  
Drain plug tightening torque: 44 N·m (4.5 kgf·m/33 lb·ft)

Next fill the engine crankcase from the filler port with new engine oil of the specified grade.

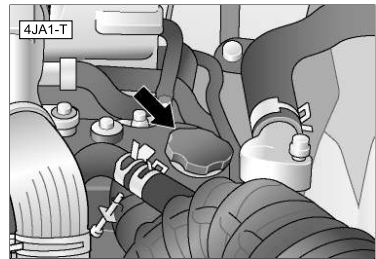
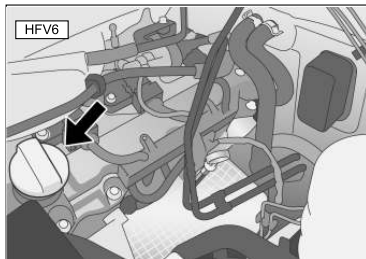
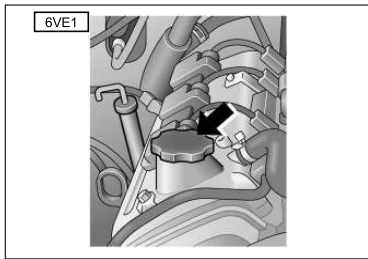
||||| **NOTE** |||||

*Use SG or SJ grade engine oil for gasoline engine, and CD or CE grade engine oil for diesel engine (Refer to "RECOMMENDED FLUIDS, LUBRICANTS AND FUELS FOR GENERAL EXPORT").*

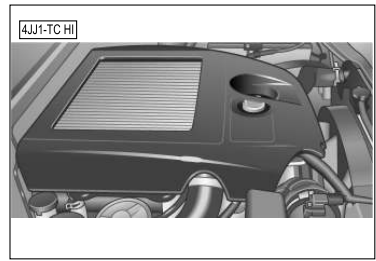
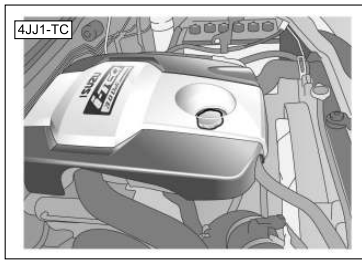
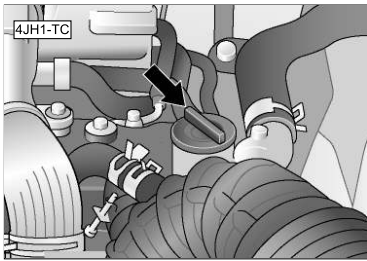
When the engine crankcase is filled to the "FULL" or "MAX" level mark on the oil dipstick, start and let the engine idle for a few minutes, then stop the engine and recheck the oil level and replenish, if necessary.



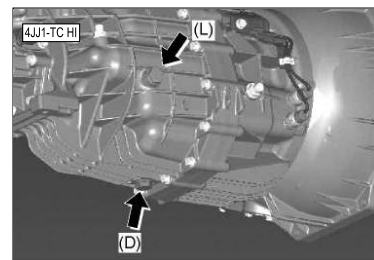
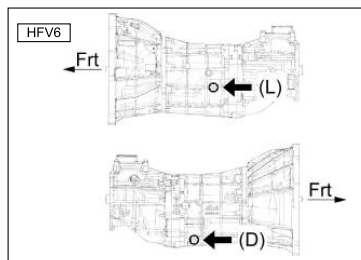
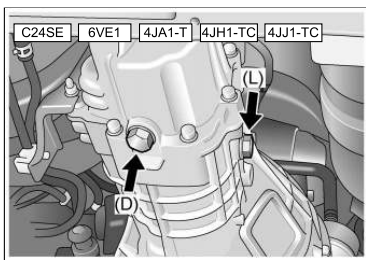
## SERVICE AND MAINTENANCE



**SERVICE AND MAINTENANCE**



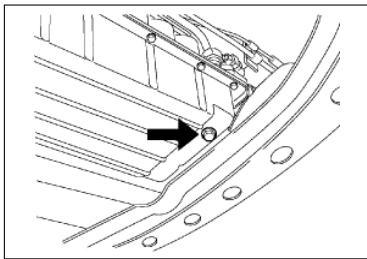
## SERVICE AND MAINTENANCE



### Changing transmission oil MT

Drain the transmission case by removing the drain plug (D) on the lower face of the transmission case. Fill the transmission case to the bottom of the level plug hole (L) with the specified transmission oil through the level plug hole.

## SERVICE AND MAINTENANCE



Automatic transmission fluid (ATF) AT  
6VE1 4JH1-TC 4JJ1-TC 4J1-TC H

1. Start the engine and allow it to idle until the ATF reaches a temperature of 40-50°C (104-122°F).
2. Park the vehicle on level ground and block the wheels.
3. Stop the engine.
4. Raise the vehicle and support it with suitable safety stands.
5. Remove the drain plug from the oil pan and drain the ATF.
6. Remove the oil pan.

7. Inspect and install the oil pan.  
Use a new gasket. Clean the oil pan and magnet.  
Oil pan bolt tightening torque  
: 8 N·m (0.8 kgf·m/5.9 lb·ft)  
4JJ1-TC 4JH1-TC  
: 7.4 N·m (0.75 kgf·m/5.5 lb·ft)  
6VE1 4J1-TC H
8. Replace the gasket and install the drain plug.  
Drain plug tightening torque  
: 35 N·m (3.6 kgf·m/26 lb·ft)  
4JJ1-TC 4JH1-TC  
: 19 N·m (1.9 kgf·m/14 lb·ft)  
6VE1 4J1-TC H
9. Pour about 5 liters of new ATF. Then, add more ATF carefully as necessary checking with the dipstick.
10. Remove the safety stands and wheel blocks.
11. Start the engine and shift the selector into all positions from "P" through "L", and then shift into "P".
12. With the engine idling, check the fluid level. Add fluid up to the "COLD" level on the dipstick.
13. The ATF level must be checked again for correct level with the "HOT" level. Refer to "Automatic transmission fluid" in this section.

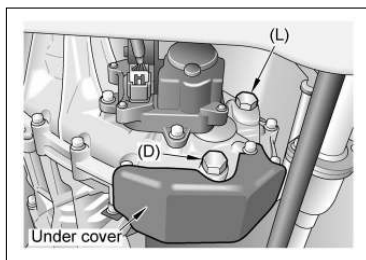
### NOTE

- Do not reuse an old washer (gasket). Clean the drain plug (especially the threaded section).
- Keep the engine idle (do not stop it) during the oil level adjustment. Refer to page 5-39.

G

Change the Automatic transmission fluid at the Isuzu Dealer.

## SERVICE AND MAINTENANCE

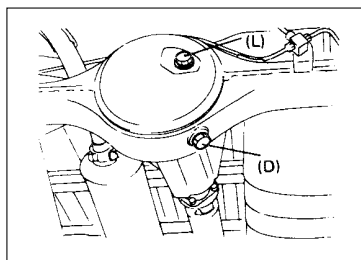


### Changing transfer oil <sup>4WD</sup>

Remove the undercover.

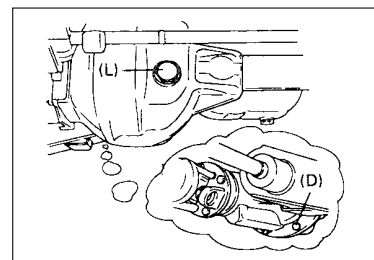
Drain the transfer by removing the drain plug (D).

Fill the transfer to the bottom of the level plug hole (L) with the specified transmission oil through the level plug hole.



### Changing differential oil (rear axle)

Drain the rear axle case by removing the drain plug (D). Fill the rear axle case to the level plug (L) with the specified gear oil through the level plug hole.

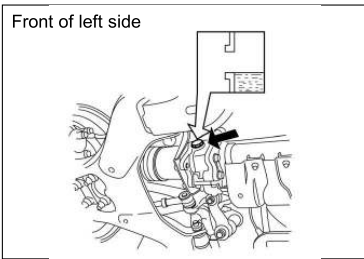


### Changing differential oil (front axle) <sup>4WD</sup>

Drain the axle case by removing the drain plug (D). Fill the axle case to the level plug (L) with the specified gear oil through the level plug hole.

## SERVICE AND MAINTENANCE

Front of left side

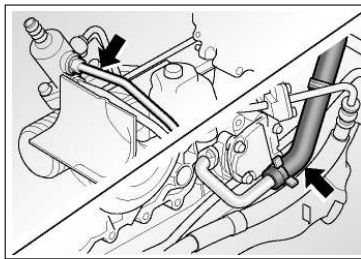


### Shift on the fly system V

Open the filler plug and make sure that the oil level is up to the plug port. If the oil level is low, please replenish with gear oil of GL-5 grade.

#### **WARNING**

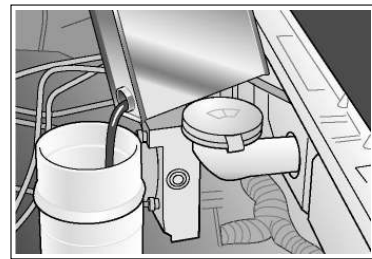
*Immediately after driving, the oil may be hot, use caution.*



### Changing power steering fluid V

#### Draining

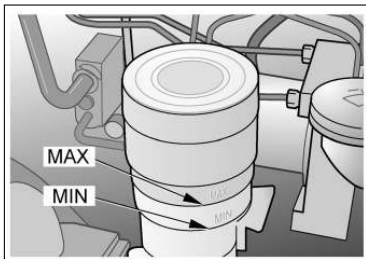
1. Jack up the front wheels until they are clear of the ground.
2. Remove the fluid pipe between the steering unit and the fluid reservoir, and the fluid hose between the pump and the fluid reservoir.
3. When draining is completed, remove remaining fluid within hydraulic system by turning the steering wheel fully in both directions several times.



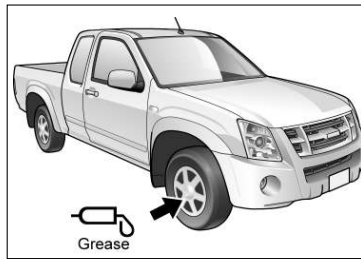
#### Refilling

1. Install the fluid pipe and hose securely and fill the fluid reservoir with the specified automatic transmission fluid.
2. When the fluid reservoir is filled to the specified level, allow 2 or 3 minutes. While refilling, keep fluid reservoir replenished as necessary to prevent air from entering the hydraulic system.

## SERVICE AND MAINTENANCE

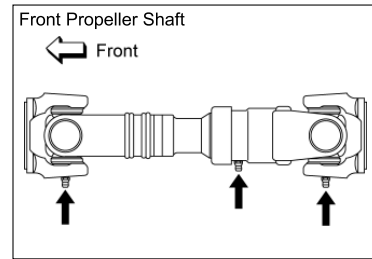


3. Lower the front wheels to the ground. Start and let the engine idle for a few minutes. Recheck the fluid level and replenish the reservoir if necessary.



### Repacking front hub bearing with grease

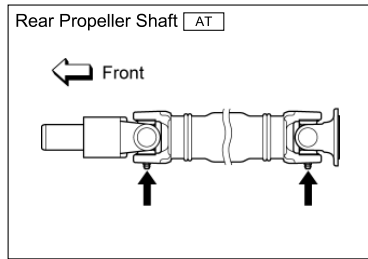
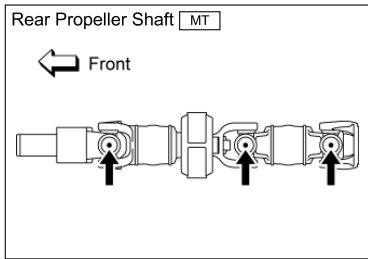
It is suggested that the vehicle be taken to your Isuzu Dealer when the above operation becomes necessary as the operation calls for disassembly and reassembly.



### Greasing points **4WD**

Lubricate the following points with the recommended grease. Propeller shaft universal joints and sliding sleeve.

**SERVICE AND MAINTENANCE**





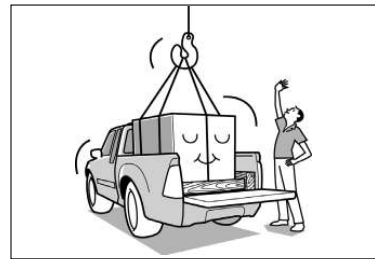
## SERVICE AND MAINTENANCE

### LET'S LOAD WITH A CARGO CORRECTLY

Overloading and uneven loading are very dangerous. Please keep to correct loading based on the standard maximum load. Wrong loading may cause an unstable cargo and overload, damaging the cargo bed and frame.

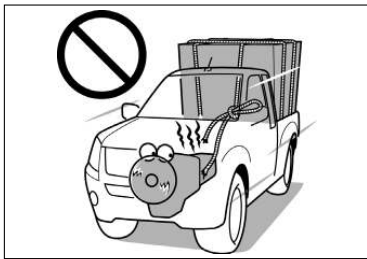


Do not fasten a cargo with excessive force. Pull up the hood or fasten a cargo firmly with a rope to prevent the cargo from falling down. Fixing a cargo with excessive force may result in damaged cargo bed and/or guard frame.

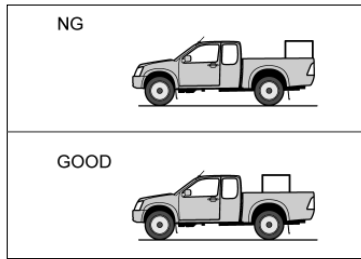


When loading with a heavyweight cargo: In case of a heavyweight cargo, use pads under the cargo to prevent it from moving and fix it firmly with a wire rope, etc. Do not fix a cargo by excessive force.

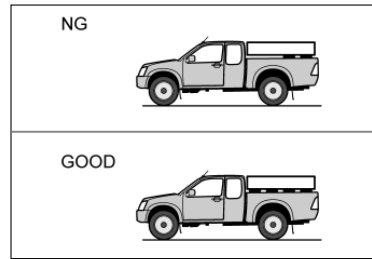
## SERVICE AND MAINTENANCE



Make sure that there is no combustible between the cab and cargo bed. Check and see that a hood or rope end hangs down between the cab and cargo bed. If it is neglected, a fire may break out due to engine heat. Pay special attention to hood/rope end treatment.

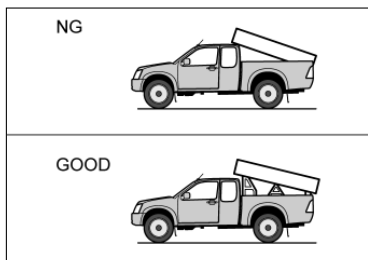


How to load with a cargo  
Aim at even loading instead of placing a cargo at the rear or front end of cargo bed.

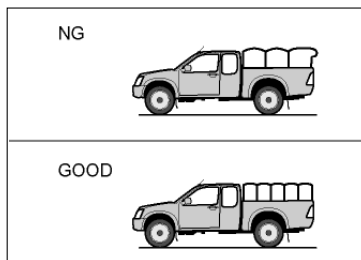


When using cargo supporters, be sure to arrange them evenly.

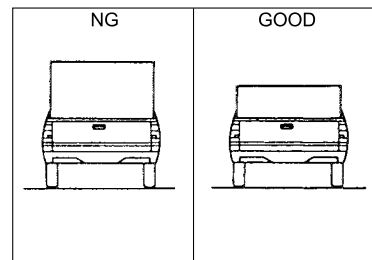
## SERVICE AND MAINTENANCE



For loads with a length greater than the cargo bed length suitable supporters must be used instead of allowing the guard frame and rear end of the cargo bed to support the cargo.



Pull up the hood exactly or fasten the cargo firmly with a rope to prevent the cargo from falling, and use rubber belts, etc. to prevent sheet ends from flapping in the wind.



Avoid high loading, otherwise the vehicle might fall down sideways in a side wind or when turning.