JAC MEDIUM TRUCK

All information in this Owner's Manual is current at the time of publication. However JAC reserves the right to make changes at any time so that our police of continual product improvement may be carried out.

This manual applies to all current JAC models and includes description and explanation of option as well as standard equipment. As a result, you may find material in this manual that does not apply to your specific vehicle.

FOREWORD

Thank you for choosing JAC. We are pleased to welcome you to the growing number of discriminating people who drive JAC. The advanced engineering and high-quality construction of each JAC we build is something of which we are proud.

This Owner's Manual will introduce you to the features and operation of your new vehicle. If is suggested that you read it carefully since the information it contains can contribute greatly to the satisfaction you receive from your new vehicle.

The manufacturer also recommends that all service and maintenance on your vehicle be performed by an authorized JAC dealer. JAC dealers are prepared to provide high-quality service, maintenance and any other assistance that may be required.

ANHUI JIANGHUAI AUTOMOBILE CO.,LTD.

Note: Because future owners will also need the information included in this manual, when you sell this vehicle, please leave it in the vehicle for their use. Thank you.

The manual has been edited on the basis of the truck air over hydraulic brake, left-hand drive vehicle. On the other models, only the differences have been covered. Some illustrations may not coincide with your vehicle, but the contents of explanations are common. The material in this publication may not be reproduced in any form without written permission from the JAC Motor Company.

SAFETY AND VEHICLE DAMAGE WARNING

This manual includes information titled as WARNING, CAUTION and NOTE

These titles indicate the following:

WARNING:

This indicates that a condition may result in harm or injury to you or other persons if the warning is not heeded. Follow the advice provided with the warning.

CAUTION:

This indicates that a condition may result in damage to your vehicle or its equipment if the caution is not heeded. Follow the advice provided with the caution.

NOTE:

This indicates that interesting or helpful information is being provided.

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BEFORE DRIVING YOUR VEHICLE

BREAKING IN YOUR VEHICLE

Operate the vehicle at moderate speeds during the first 1,000 km (600 miles) to break it in. Make certain that the following points in particular are strictly observed.

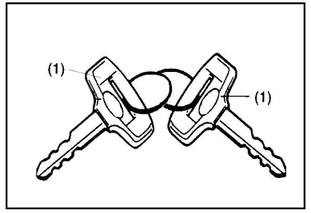
- Allow the engine to warm up fully until the coolant temperature reaches about 60℃(140°F).
- Avoid racing the engine, abrupt start, acceleration and braking.
- Avoid overloading the vehicle, as this will result in a shorter life.
- Avoid high speed operation as far as possible. During break in operation, make sure that the engine speed does not exceed 1,500 rpm.

Make sure that your vehicle does not miss the first 1,000 km (600 miles) and 5,000 km (2,500 miles) inspections.

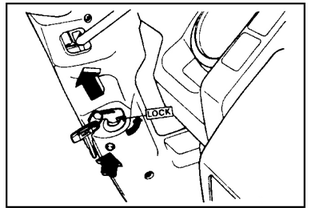
After the first 1,000 km (600 miles) and 5,000 km (2,500 miles) or driving, take your vehicle to your nearest service shop for inspections based on the "Maintenance Requirements".

KEYS

For greater convenience, your JAC has one type of keys. The keys will function in the ignition, locking or unlocking the door and fuel tank cap from outside. Carrying a spare key is recommended in case you accidentally lock one key inside the car.



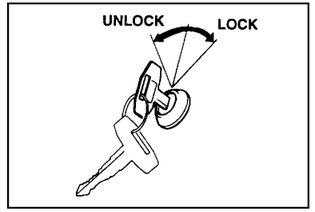
KEY LOCKS



You can release the key by pressing the knob when the key is in "LOCK" position.

DOOR LOCKS

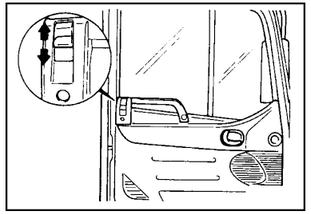
1. Locking using the key



Lock the door by turning the key toward the rear of the car and unlock it by turning it toward the front.

CAUTION:
Be careful not to lock the door with the ignition key left in the vehicle.

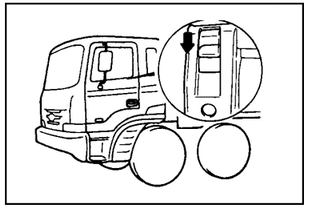
2. Locking from inside



To lock your JAC from inside, simply close the door and push the lock button down. When this is done, the door cannot be opened using either the inside or the outside door handle.

NOTE:
When the door is open or ajar, the warning lamp door will light on.

3. Locking from outside



The doors can be locked without a key.

First push the lock knob down, then close the door while depressing the push button forward.

KEYLESS ENTRY SYSTEM (If installed)

THEFT ALARM SYSTEM

Armed Status

The system is applied when the doors are locked by using the

transmitter. The turn signal lamp blinks twice at the moment that the system is on and blinks once when the system is off. The warning system is not released even though the battery is reconnected after disconnected at the status that the system is on.

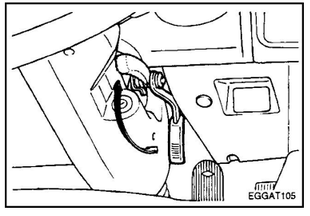
Disarmed Status

The system is released only when the "UN -LOCK" button on the transmitter is pressed.When the door is unlocked with a key instead of the transmitter, the siren sounds immediately.If the key is turned to the "ACC ON" position within 15 seconds, the system is released after 30 seconds.

Replacement of the transmitter battery

When a non -standard battery is used, sometimes the button does not work. Please, use the standard 3V Lithium battery.

WINDOW GLASS

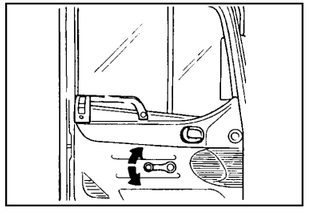


To raise or lower the window, turn the window, regulator handle clockwise or counterclockwise.

WARNING:

When opening or closing the windows, make sure your passenger's arms and hands are safely out of the way.

STEERING WHEEL TILT LEVER



To adjust the steering wheel:

1. Pull the lever upward to unlock
2. Raise or lower the steering wheel to the desired position.
3. After adjustment, securely tighten the lever by pushing it downward.

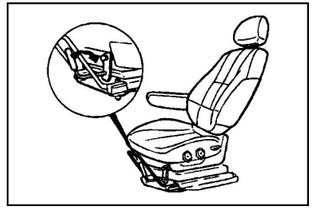
WARNING:

Do not attempt to adjust the steering wheel while driving as this may result in loss of control of the vehicle and result in death or serious injury.

ADJUSTABLE SEAT

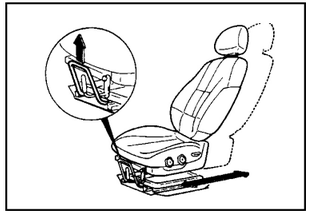
Never attempt to adjust the seat while the vehicle is moving. This could result In loss of control.

Adjusting Seat Forward and Rearward (Driver's side only)



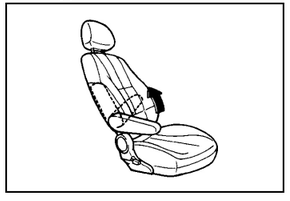
To move the seat toward the front or rear, pull the lock release lever upwards. This releases the seat on its track so you can move it forward or rearward to the desired position. When you find the position you want, release the lever and slide the seat forward or rearward on its track until it locks into position and cannot be moved further.

Seat Cushion Height Fixing (Driver's side only)



To fix the height of the seat cushion, fit the locking knob to the locker. It will hold your seat position from the vibration.

Adjusting Armrest Angle (Driver's side only)

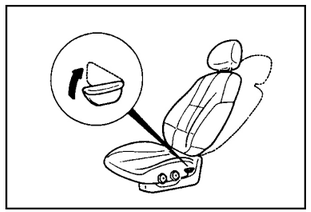


The armrest will be raised or lowered manually.

To raise the armrest, pull it up.

To lower it, press the armrest down.

Adjusting Seatback Angle



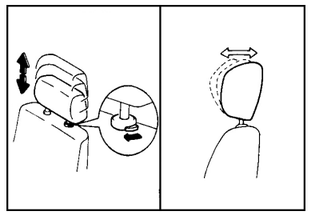
To recline the seatback, lean forward to you're your weight off it, then pull up on the recliner control lever at the outside edge of the seat. Now lean back until the desired seatback angle is achieved.

To lock the seatback into position, release the recliner control lever.

WARNING:

To minimize risk of personal injury in event of a collision or sudden stop, both the driver and passenger seatbacks should always be in a nearly upright position while the vehicle is in motion. The protection provided by the seat belts may be reduced significantly when the seatback is reclined. There is greater risk that the passenger will slide under the belt resulting in serious injury when the seatback is reclined.

Adjustable Headrests



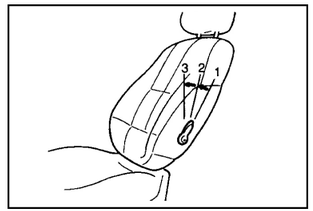
The headrests in your JAC may be raised or lowered by releasing the lock button on the headrest support. To raise the headrest, pull it up. To lower it, press the headrest down. To move the headrest foreward, pull on the top. For maximum effectiveness in case of an accident the headrest should be adjusted so the top of the headrest is at the same height as the top of

occupant's ears. For this reason, the use of a cushion that holds the body away from the seat back should not be used.

WARNING:

Do not operate vehicle with the headrests removed as injury to an occupant may occur in the event of an accident. Headrests may provide protection against neck injuries when properly adjusted.

Lumbar Support Adjustment (If installed) (Driver's seat only)

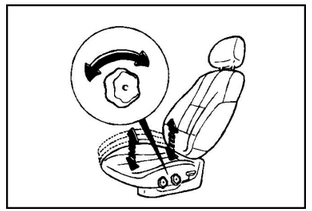


The seats in some JAC are equipped with adjustable lumbar support.

The lumbar support can be adjusted in three stages to provide the most comfortable support.

1. Weak 2. Medium 3.Strong

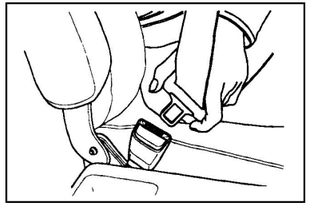
Seat Cushion Height Adjustment (If installed)(Driver's seat only)



To raise or lower the front part of the seat cushion, turn the front knob forward or rearward. To raise or lower the rear part of the seat cushion, turn the rear knob forward or rearward.

SEAT BELTS (3-Point Type)

To Fasten Your Belt



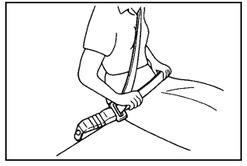
To fasten your seat belt, pull it out of the retractor and insert the metal tab into the buckle. There will be an audible "click", when the tab locks into the buckle.

The seat belt automatically adjusts to the proper length only after the lap belt is adjusted manually so that it fits snugly around your hips. If you lean forward in a slow, easy motion, the belt will extend and let you move around. If there is a sudden stop or impact, however, the belt will lock into position. It will also lock if you try to lean forward too quickly.

Check to make sure the belt is properly locked and that the belt is not twisted.

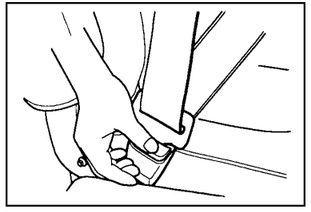
NOTE:
If the driver's seat belt is not fastened when the ignition key Is in the "ON" position, the seat belt warning light will flash.

Adjusting Your Seat Belt



You should place the belt as Iow as possible on your hips, not on yourwaist. If located too high on your body, the chances of sliding out from under it and suffering serious injury or death are increased. Both arms should not be under or over the belt. Rather, one should be over and the other under, as shown in the illustration.

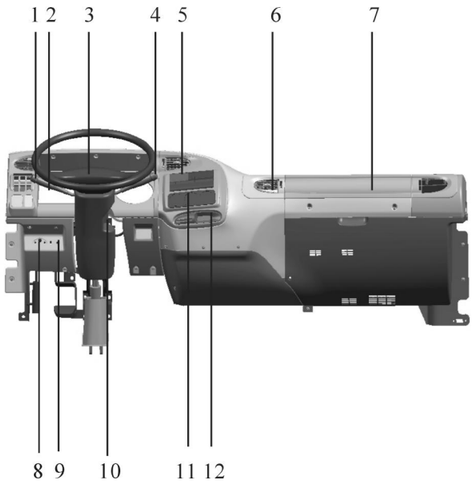
To Release the Seat Belt



The seat belt is released by pressing the release button in the locking buckle. When it is released, the belt should automatically draw back into the retractor.

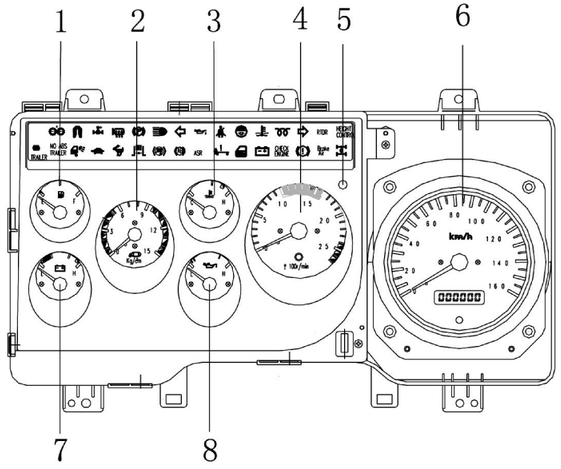
If this does not happen, check the belt to be sure it is not twisted, then try it again.

INSTRUMENTS & CONTROLS



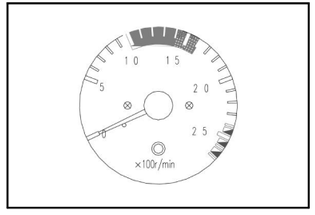
1. Head light/ High & Low beam/turn signal switch
2. Control switchs
3. Horn button
4. Wiper & washer/exhaust brake switch
5. Control switches
6. Wind vent(air condition)
7. Fuse box
8. Parking brake
9. Work light switch
10. Start switch
11. Air conditioner control switches
12. Digital clock

INSTRUMENT CLUSTER AND INDICATOR



1. Fuel gauge
2. Air pressure gauge
3. Water temperature gauge
4. Tachometer
5. Indicator light inspection switch
6. Speedometer
7. Voltage gauge
8. Oil pressure gauge

TACHOMETER

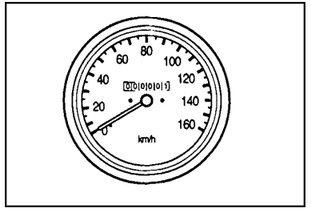


The tachometer registers the speed of your engine in revolutions per minute (rpm). It is useful to help you shift at the appropriate engine speed to avoid lugging or over running.

CAUTION:
The engine should not be raced to such a speed that the needle enters the red zone on the tachometer face. This can cause severe engine damage.

Now there are two kinds of tachometer which can be choose acording the speed of the engine , the tachometer of the max zone is 3100 r/min,the red zone is 2700r/min;the other max zone is 2700r/min , the red zone is 2500r/min.

SPEEDOMETER

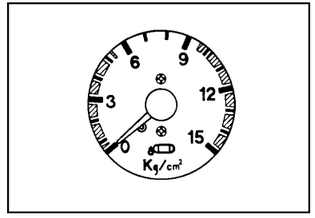


The speedometer indicates the vehicle speed in kilometers or miles per hour.

ODOMETER

The odometer records the total driving distance in kilometers or miles, and is useful for keeping a record for maintenance intervals.

AIR PRESSURE GAUGE

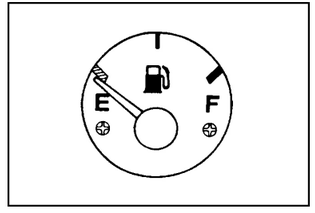


The air pressure gauge indicates the air pressure in the air reservoir at all times.

If the air pressure drops to below4.8-5.7kg/cm², the air pilot light comes on and the warning buzzer will sound at the same time. If fails to build up again , stop the engine immediately and contact your authorized dealer.

CAUTION:
If the air pressure indicates the pressure that is below red zone do not drive the vehicle. This is very dangerous.

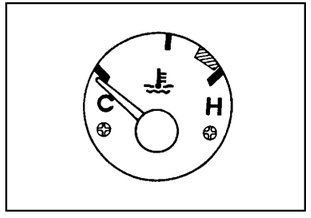
FUEL GAUGE



The fuel gauge will indicate the approximate fuel level in the tank, when the ignition is in the "ON"position.

The position of the pointer will vary slightly when accelerating, braking, or when the vehicle is going up or down hill. So check your fuel supply when the vehicle is more or less specified level, whether standing still or moving.

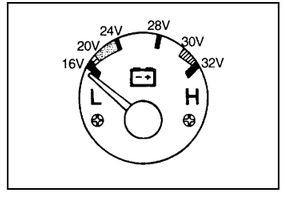
WATER TEMPERATURE GAUGE



When the ignition switch is "ON", this gauge indicates the temperature of the coolant. Under most driving conditions, the needle will remain at approximately the

halfway point. Stop and go driving, driving at high speeds during warm weather or driving up a steep gradient may cause the poi nter to move toward the red sector. If your vehicle overheats, water lamp comes and the indicator goes up. However when the quantity of coolant is below of the specification, the warning buzzer will sound. At this time, stop your vehicle immediately.

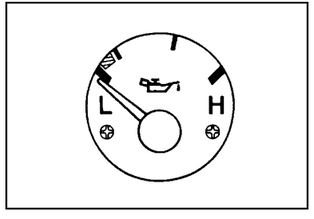
VOLTAGE GAUGE



The voltmeter indicates the battery state of charge. Check while the engine is running. The pointer should always indicate between 20 and 30 volts.

If the pointer reads above 30 volts or below 20 volts, contact your nearest authorized JAC dealer.

OIL PRESSURE GAUGE



The gauge indicates the engine oil pressure while the engine is running.

If the gauge indicates below 0.5 kg/cm², oil warning lamp comes on and buzzerwill sound at the same time.

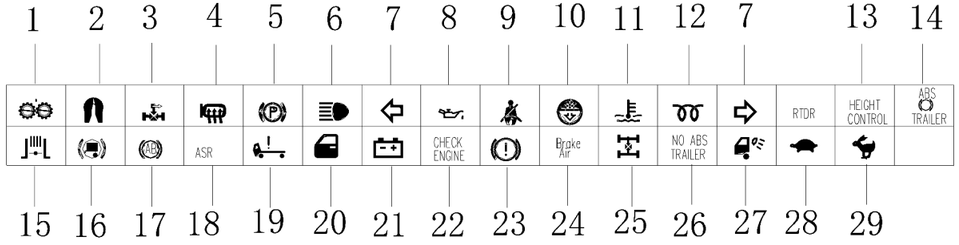
At this time stop the engine immediately and check the lubricating system.

NOTE:

Engine oil pressure when the engine is cold may go up above normal pressure. If the engine is warm, the gauge will indicate normal pressure Immediately.

If the oil filter is clogged, the oil pressure warning light comes on but the buzzer will not sound.

INDICATOR LIGHTS



1. Auto Grease warming light
2. Trailer lock indicator light (only tractor)
3. P.T.O warning light
4. Heater mirror indicator light
5. Parking brake warning light
6. High beam indicator lights
7. Turn signal indicator lights
8. Oil pressure warning light
9. Seat belt warning light
10. Dust indicator light
11. Engine overheat warning light
12. Air heater /Relay indicator light
13. High control indicator light
14. Trailer ABS check indicator light
15. Exhaust brake warning light
16. Trailer brake light
17. ABS warning light
18. ASR warning light
19. Cab tilting warning light
20. Door ajar warning light
21. Charging system warning light
22. Engine check warning light
23. Brake warning light
24. Air pressure warning light
25. Antislip regultor light
26. Trailer NO ABS indicator
27. Working light indicator light
28. Low indicator light
29. High indicator light

AUTO GREASE WARNING LIGHT

The auto grease warning light is on about 42 seconds when filling on grease at each moving part,then goes out.

This light comes on continuously when trouble occurs on this system.

TRAILER LOCK LIGHT (ONLY TRACTOR) (ONLY INSTALLED IN TRCATOR)

The trailer lock light will be illuminated when transmission is shifted into reverse and trailer lock switch is on.

P.T.O INDICATOR LIGHT

The P.T.O indicator light will be illuminated when the P.T.O switch is on.

CAUTION:

Be sure not to operate the switch while driving as this may cause damage to each power train parts.

THE HEATER MIRROR INDICATOR LIGHT

When the heater mirror switch is on, the outside rearview mirror glass is heated and the heat mirror indicator light comes on at the same time.

PARKING BRAKE

This light will be illuminated when the parking brake is applied and the ignition on, and should be extinguished when the parking brake is released. The vehicle should not be driven until the parking brake has been released and the light extinguished.

HIGH BEAM INDICATOR LIGHT

The high beam indicator light comes on whenever the headlights are switched to high beam.

TURN SIGNAL INDICATOR LIGHTS

The blinking green arrow on the instrument panel shows the direction indicated by the turn signals.

If the arrow comes on but does not blink, blinks more rapidly than normal or does not blink at all, a malfunction in thetum signal system is checked

OIL PRESSURE WARNING LAMP

This lamp illuminates when the ignition switch is set to the "ON" position and goes off after the engine has started. If it lights up while the engine is running, the engine must be stopped at once. Contact the nearest authorized JAC dealer.

SEAT BELT REMINDER LIGHT

When the ignition switch is turned on, the seat belt warning light blinks for 5 seconds to remind the driver to wear their seat belt. If the driver fastens the seat belt within 5 seconds, the warning light goes out. When the ignition switch is turned to "ACC" or "LOCK" position, the warning light will also go out.

ENGINE OVER HEAT WARNING LIGHT

If the coolant temperature is too high this warning light will be on, if the coolant level is below than the designed quantity the buzzer will sound at the same time. At this time pull over and stop the vehicle as soon as possible and turn off the engine. Then check the coolant level. If necessary, add coolant. Same ratio as coolant in the radiator should be added.

AIR HEATER/RELAY LIGHT

In severe cold season, if the light is on when turning the ignition key to the "ON" position, hold it there until the light is off. At this time turn the ignition key to the "START" position.

WORKING LIGHT INDICATOR LIGHT

When the working light switch is turned on the light comes on.Turn the switch off after finishing the work or during driving normally.

EXHAUST BRAKE WARNING LIGHT

The exhaust brake warning light will be illuminated if the exhaust brake switch is on. Put the exhaust brake switch back in its place where it was and this light goes out.

TRAILER BRAKE LIGHT (ONLYTRACTOR, PULL CARGO)

The trailer brake light comes on when the trailer brake switch is ap-

plied.

ABS WARNING LIGHT

When the key is turned to "ON", ABS warning light will be on and then off in a few seconds.

If ABS warning light remains on while driving, or remains off when the key is turned to "ON", there may be a problem about ABS.

In this case, you should show an authorized JAC dealer your vehicle and check it as soon as possible.

Though there is a problem about the vehicle, the normal brake system will still operate except ABS

DOOR AJAR WARNING LIGHT

The door ajar warning light warns you that a door is not completely closed.

NOTE:

- Close the door completely.
- Before driving, check that the warning light has gone out.

CHARGE WARNING LIGHT

The charge warning light should come on when the ignition key is turned on, then go out when the engine is running. If the light comes on while you are driving, stop and turn off the engine and check the tension of the belt. If the belt is loose or fraying, adjust or replace the belt.

BRAKE WARNING LIGHT

The brake warning light will be illuminated when oil leaks from the brake system or the brake performance dropped due to wearing brake shoe.

If possible, stop immediately and contact your authorized dealer.

AIR PRESSURE WARNING LIGHT

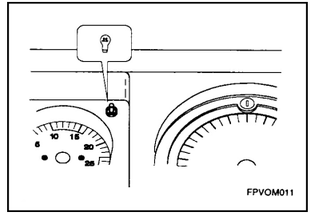
When the air pressure in the air reservoir dropped

(below4.8 -5.7kg/cm²) and the engine is on the air pressure warning light comes on and the buzzer sounds at the same time. Then stop driving your vehicle immediately and run the engine at idle. Wait until the air pressure gets back and this warning light will go out.

CAUTION:

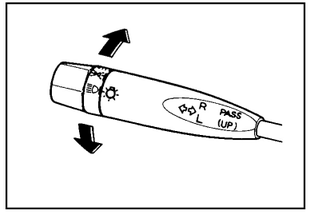
If the vehicle is driven in condition that air pressure warning light comes on, this is very dangerous. If a pressure rising time has a long interval, have the air system checked and repaired by an authorized dealer.

INDICATOR LIGHTS INSPECTION KNOB



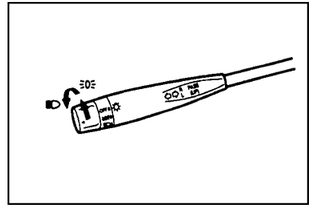
To confirm a short of the bulb, press the knob.In case of a short of the bulb, the bulb should be exchanged as soon as possible.

TRUN SIGNAL SWITCH



Pulling the lever back (away from you) causes the turn signals the left side of the vehicle to blink. Pushing the lever forward (toward you) causes the turn signals on the right side of the vehicle to blink. As the turn is completed, the lever will automatically return to the center position and turn off the turn signals at the same time. If either turn signal indicator light blinks more rapidly than usual, goes on but does not blink, or does not go on at ail, there is a malfunction in the system. Check for a burned -out fuse or bulb or you're your authorized JAC dealer.

HEADLIGHT SWITCH



To operate the headlights, turn the barrel on the end of the multifunc-

tion switch. The first position turns on the parking lights, sidelights, taillights and instrument panel lights. The second position turns on the headlights.

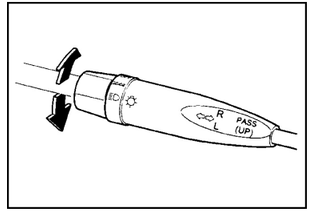
High-beam and Low-beam

To turn on the headlight high beams, push the lever upward. For low beams, pull the lever down. The appropriate headlight beam indicator light will come on at the same time.

NOTE:

This function is operated when the headlight switch is in the "ON" position.

Passing switch



The headlights will be flashed when the lever is pushed upward and release automatically. The headlights can be flashed even though the headlight switch is in the "OFF" position.

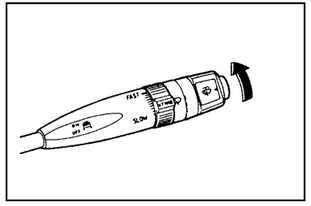
WINDSHIELD WIPER

The windshield wiper switch has three positions:

INT: Intermittent wiper operation

LO : Low-speed operation

HI : High-speed operation

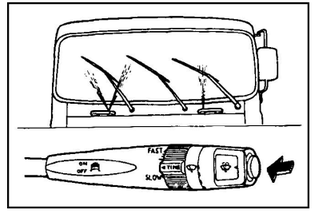


NOTE:

To prevent damage to the wiper system, do not attempt to wipe away heavy accumulations of snow or ice.

Accumulated snow and ice should be removed manually, If there is only a light layer of snow or ice, operate the heater in the defrost mode to melt the snow or ice before using the wiper.

WINDSHIELD WASHER OPERATION

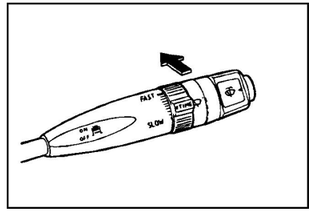


To use the windshield washer, press in on the button on the end of the wiper/washer lever. When the washer button is pressed, the wipers automatically make two passes across the windshield, And the windshield wiper is operated 2 to 3 times at the same time, The washer continues to operate as long as the button is depressed.

CAUTION:

- Do not use the wiper when the windshield is dry.
- The washer button should not be pressed if the washer reservoir is empty. This can damage the washer fluid pump. Do not operate the washer for more than 15 seconds at a time.

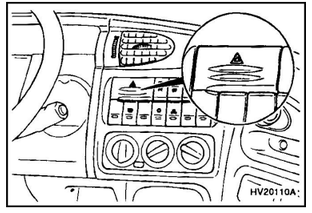
EXHAUST BRAKE SWITCH



To use the exhaust brake, put the "ON" position. The exhaust brake operates when you remove your foot from the accelerator pedal and the clutch pedal. The exhaust brake will not operate automatically if you operate the accelerator pedal or the clutch pedal.

Use exhaust brake when going down a slope.

HAZARD WARNING



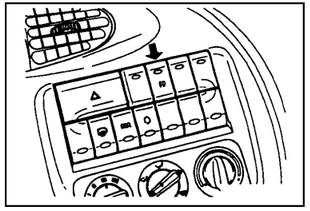
The hazard warning lamp should

be used whenever you find it necessary to stop the car in a hazardous location. When you must make such an emergency stop, always pull off the road as far as possible.

The hazard warning lights are turned on by pushing in on the hazard switch . This causes all turn signal lights to blink. The hazard warning lights will operate even though the key is not in the ignition.

To turn the hazard warning lights off, push in on the switch a second time.

FOG LAMP SWITCH



Use the fog lamp when you go through the foggy area. Use the fog lamp rotating the multiuse lever to 1 step when you are not able to see well due to fog. While operating this switch, clearance lamp, tail lamp, licence plate lamp, instrument lamps will come on at the same time.

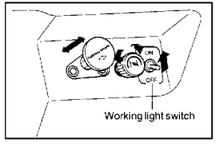
Press the switch one more and the fog lamp will turn off

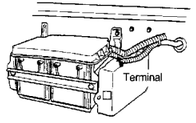
WORKING LIGHT SWITCH

There is a terminal for the work switch in the right side of the battery box.

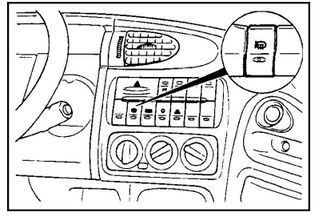
When the switch is turned to "ON", you can use a light by connecting a terminal of the light to the terminal of the work switch.

(If you want to use a light, you should prepare the light and its terminal)



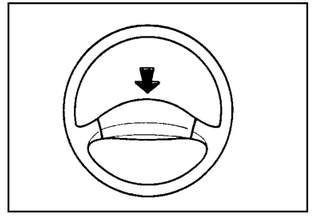


OUTSIDE REAR VIEW MIRROR HEATER (If installed)



Depress the switch to heat the rear view mirror glass. The rear view mirror glass will be heated for defrosting or defogging and will give you improved rear view in all weather conditions. The outside rear view mirror heater automatically turns itself off after approximately 15 minutes.

STEERING WHEEL & HORN



our JAC is equipped with integral styled steering wheel. The horn button is located on the center of the wheel.

The horn sounds when the horn button is pressed firmly.

STARTING THE ENGINE IN WINTER

In cold winter , when the ignition switch is turned to the ON position then the amber lamp [00] will come on. Hold the switch there and wait until the lamp is off. Start the engine.

AIR HEATING SYSTEM

The air heating system warms the intake air up in order to start the engine well and decrease white fume is emitted through the exhaust pipe in winter.

When the ignition key is turned to the ON position, the system is operated automatically.

If the [00] lamp is turned on when turning the ignition key to the ON position, wait until the lamp is off. And start the engine.

CAUTION:
If the lamp blinks, the air heating relay may be damaged or a fuse blown, Check and replace it.

PARKING BRAKE (EXCEPT TRACTOR, PULL CARGO)

Always engage the parking brake before leaving the vehicle. This also turns on the parking brake indicator light when the key is in the "ACC" or "ON" position. Before driving away, be sure that the parking brake is fully released and that the indicator light is off.

- To engage the parking brake, pull the lever up.
- To release the parking brake, pull up and press thumb button.

NOTE:
The buzzer may sound when the parking brake Is released. (ONLY TRACTOR, PULL CARGO) If the buzzer sounds, have the brake system checked as follows:

- Check the air pressure in the air reservoir.
- Check the oil leaks from brake system.
- Check the clearance of brake shoes.

Full air brakes

The full air brake vehicles are equipped with an emergency brake. Should the compressed air pressure fall below 2.7 kgf/crn2 (265kPa), spring operated emergency brake is automatically applied to the rear wheels. On tractors, service brakes are applied to the trailer as well.

INTERIOR LIGHT

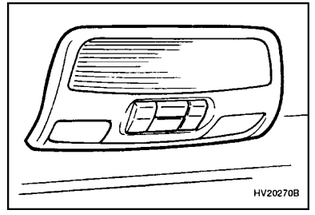
The interior courtesy lights has two buttons.

The two buttons are:

In the " " position, the interior courtesy light comes on when any door is opened regardless of the ignition key position.

In the position, the light stays on at all times.

Map Light

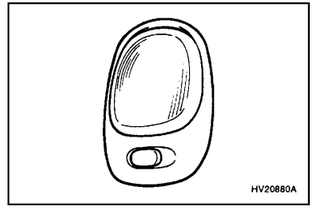


The two map lamp switches are located on both sides of the interior light.Push in the map light switch to turn the light on or off.

Reading Light

The two reading light has two buttons which located each side of interior light.

Sleeper light



The three positions are:

- DR (●)

In the middle position (●), the interior courtesy light comes on when any door is opened regardless of the ignition key position. The light goes out when the door is closed.

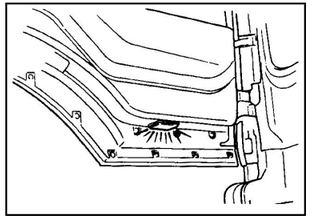
- ON

In the "ON" position, the light stays on at all times.

- OFF

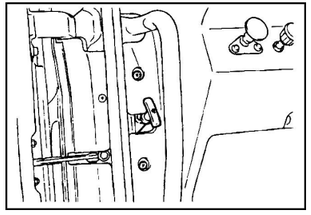
In the "OFF" position, the light stays off at all times even though a door is open.

Front door step warning light



A yellow light comes on when the front door is opened. The purpose of this light is to assist when you get on or off and also to warm passing vehicles.

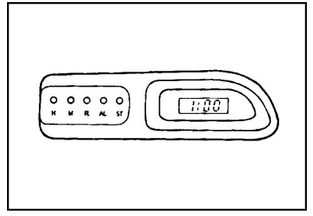
HOOD RELEASE



Pull the release knob to open the hood. The hood will spring up slightly. In front of the vehicle, lift the hood. The hood will open completely by itself after it raised about halfway. To close the hoed, lower and press down on it.After closing the hood, try pulling it up to make sure it is securely closed.

CAUTION:
The hood should be keep closed when the car is in motion.

DIGITAL CLOCK



There are five control buttons for the digital clock. Their functions are:

HOUR - Push "H" to advance the hour indicated.

MIN - Push "M" to advance the minute indicated.

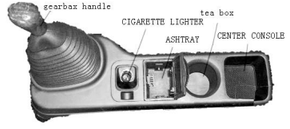
RESET - Push "R" to reset minutes to ":00" to facilitate resetting the clock to the correct time. When this is done:

Pressing "R" between 10:30 and 11:29 changes the readout to 11:00. Pressing "R" between 11:30 and 12:29 changes thereadout to 12:00.

ALARM - In state of holding the alarm button, push "H" or "M".

STOP - To stop the alarm, push the "ST" button.

CENTER CONSOLE



1.GEARBOX HANDLE

The select lever is marked on the gearbox handle so that the driver can control the speed of the truck conveniently.Be sure to the select lever position right before shift the gear shift lever, else will lead to a wrong operation and the truck cann't run steadly.

2. CIGARETTE LIGHTER

For the cigarette lighter to work, the key must be in the "ACC" position or the "ON" position.

To use the cigarette lighter, push it all the way into its socket. When the element has heated, the lighter will pop out to the "ready" position.

Do not hold the cigarette lighter pressed in. This can damage the heating element and create a fire hazard.

If it is necessary to replace the cigarette lighter, use only a genuine JAC replacement or its approved equivalent.

3. ASHTRAY

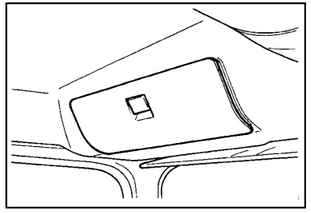
The ashtray may be opened by pushing and releasing the ashtray door at its top edge. To remove the ashtray in order to clean it, the metal ash receptacle should be removed from the ashtray door. Do not attempt to remove the entire ashtray door assembly or damage will result. Instead, push the metal ash receptacle down and forward in the ashtray door, and it can then be lifted out. To reinstall it, place it in the proper position and press it down and forward to reengage the ash receptacle rear lip in the ashtray door. The ashtray lamp will only illuminate when the exterior body lights are switched on.

4. TEABOX

5. CONSOLE

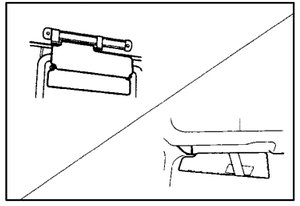
NOTE:
Pressure of the electrical source at down of assistant driver's dashboad is 24 V.

OVERHEAD CONSOLE



The overhead console is located in the interior ceiling.

SUNVISOR

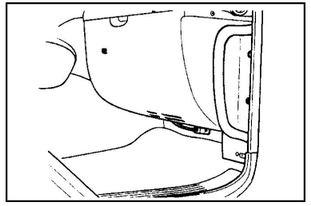


Your JAC is equipped with two sunvisors to give the driver and passenger either frontal or side ward shade. The sunvisors are fitted on both sides on standard models. To reduce glare or to shut out direct rays of the sun, turn the sunvisor down to block the annoyance.

Some vehicles are equipped with the front andside sunvisors for the driver, and the front sunvisor for the passenger.

CAUTION:
Do not place the sunvisor in such a manner that it obscures visibility or the roadway, traffic or other objects.

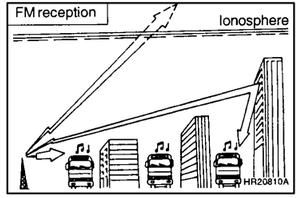
AIR SPRAY NOZZLE



Seperate the spray nozzle plug under the dash panel of passanger side and connect the air hose with this plug. Then you can clear your vehicle with air spray.

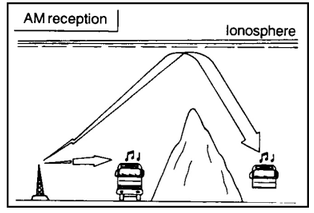
STEREO SOUND SYSTEM

How Car Audio Works

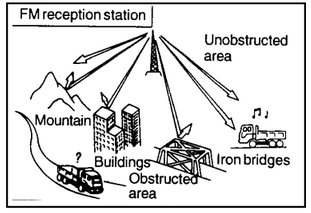


AM and FM radio signals are broadcast from transmitter towers located around your city. They are intercepted by eth radio antenna on your car. This signal is then received by the radio and sent to your car speakers.

When a strong radio signal has reached your vehicle, the precise engineering of your audio system ensures high quality reproduction. However, in some cases the signal coming to your vehicle is not strong and clear. This can be due to factors such as the distance from the radio station, closeness of other strong radio stations or the presence of buildings, bridges or other large obstructions in the area.



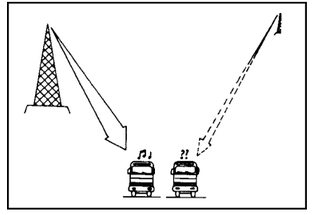
AM signal reception is usually better than FM reception. This is because AM radio waves are transmitted at low frequency. These long, low frequency radio waves can follow the curvature of the earth rather than travelling straight out into the inosphere . In addition, they curve around obstructions so that they can provide better signal coverage. Because of this, clear AM broadcasts can be received at greater distances than FM broadcasts.



FM broadcasts are transmitted at high frequency and do not bend to follow the earth's surface. Because of this, FM broadcasts generally begin to fade at short distances from the station. Also, FM signals are easily affected by buildings, mountains, or other obstructions. These can result in certain listening conditions which might lead you to believe a problem exists with your radio. The following conditions are normal and do not indicate radio trouble:

● Fading - As your car moves away from the radio station, the signal will weaken and sound will begin to fade. When this occurs, we suggest that you select another stronger station.

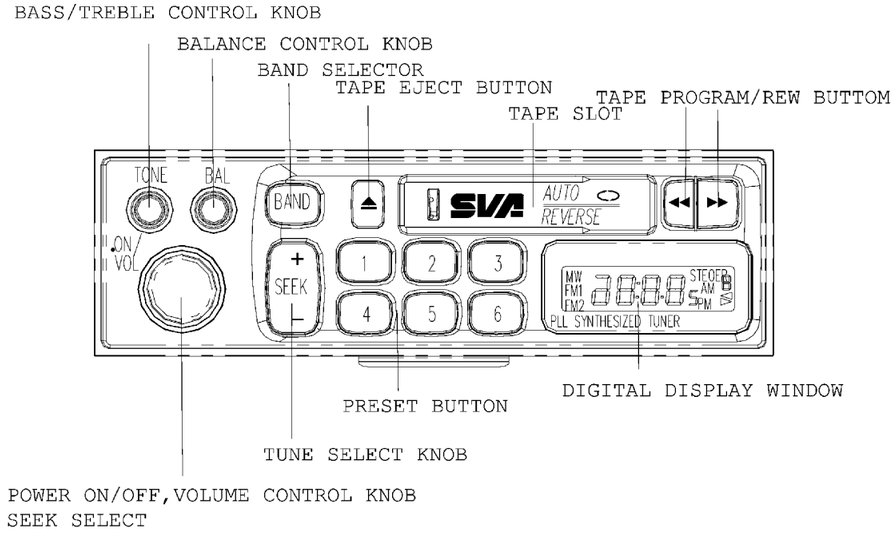
● Flutter/Static - Weak FM signals or large obstructions between the transmitter and your radio can disturb the signal causirng static or fluttering noises to occur. Reducing the treble level may lessen this effect until the disturbance clears



● Station Swapping - As a FM signal weakens, another more powerful signal near the same frequency may begin to play. This is because your radio is designed to lock onto the clearest signal. If this occurs, select another station with a stronger signal.

● Multi-Path Cancellation Radio signals being received from several directions can cause distortion or fluttering. This can be caused by a direct and a reflected signal from the same station,or by signals from two stations with close frequencies. If this occurs, select another station until the condition has passed.

STEREO RADIO AND CASSETTE TAPE PLAYER OPERATION



1.POWER ON/OFF, VOLUME CONTROL KNOB

The radio unit may be operated when the ignition key is in the "ACC" or "ON" position. Rotate the knob clockwise to switch the radio unit on, and to increase the volume. Turn the knob counterclockwise to reduce the volume, and to switch the radio unit off.

2. BASS/TREBLE CONTROL

Press to pop the knob out and turn to the left or right for the desired bass tone.

3. BALANCE CONTROL

Press to pop the knob out and turn it clockwise or counterclockwise until sound from the left and right speakers is about equal from your listening position.

4. SEEK OPERATION

(Automatic Channel Selection)

When the volume control knob is pressed, the unit will automatically tune to the next higher frequency.

5. TUNE (Manual) SELECTION

When the upper side of the knob is pressed, the frequency will increase in 0.1 MHZ steps in FM band, 9 KHZ in AM band and vice versa

With the button held down for 0.5 Sec. or more, the stop signal (broadcasting radio wave) is ignored, and channel selection continues.

6. PRESET BUTTONS

Six (6) stations for AM, FM respectively can be preset in the electronic memory circuit on this unit.

HOW TO PRESET STATIONS

Six AM and six FM stations may be programmed into the memory of the radio. Then, by simply pressing the band select button and/or on e of the six station select buttons, you may recall any of these stations i.nstantly. To program the stations,follow these steps:

● Press band selector to set the band for AM, FM and FM12 .

● Select the desired station to be stored by seek, scan or manual tuning.

● Determine the preset station select button you wish to use to access that station.

● Press the station select button for more than two seconds. A select button indicator will show in the display indicating which select button you have depressed. The frequency display will flash after it has been stored into the memory.

You should then release the button, and proceed to program the next desired station. A total of 12 stations can be programmed by selecting on AM and FM stations per button.

● When completed, any preset station may be recalled by selecting AM, FM band and the appropriate Station Button.

7. BAND SELECTOR

Pressing the BAND button changes the AM, FM1 and FM2 bands . The mode selected is displayed on LCD .

8. TAPE EJECT BUTTON

To eject the tape, press the button.

9. TAPE PROGRAM

When you press the button whose arrow is in the same direction as the tape play arrow in the display the tape will advance at high speed.

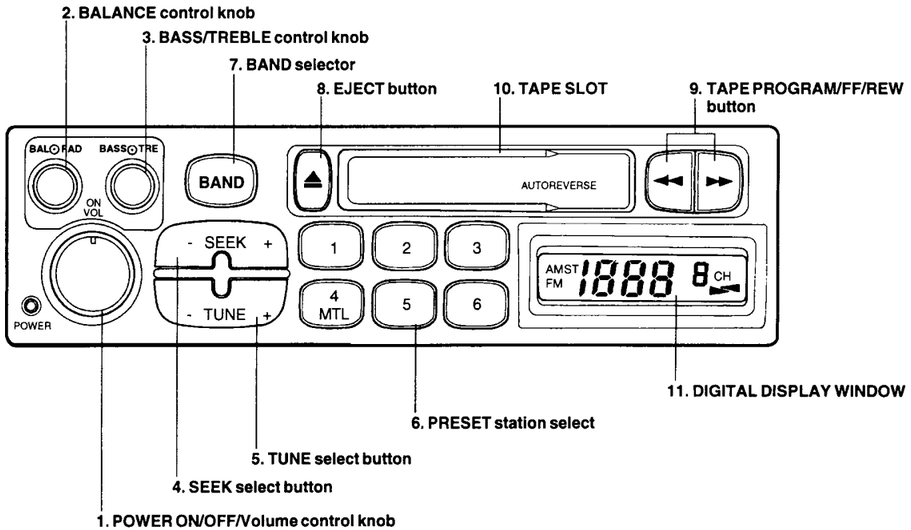
When you press the button whose arrow is in the opposite direction to the tape play arrow in the display the tape will rewind at high speed.

To stop FF or REW action, press the opposite button.

When you press two buttons simultaneously you play the reverse side of the tape and an

arrow will appear in the display to show tape direction.

STEREO RADIO AND CASSETTE PLAYER OPERATION



1. POWER ON/OFF, VOLUME CON TROL KNOB

T he radio unit may be operated when the ignition key is in the "ACC" or "ON" position. Rotate the knob clockwise to switch the radio unit on, and to increase the volume. Turn the knob counter clockwise to reduce the volume, and to switch the radio unit off

2. BALANCE CONTROL

Press to pop the knob out and turn it clockwise or counterclockwise until sound from the left and right speakers is about eq ual from your listening position.

3. BASS/TREBLE CONTROL

Press to pop the knob out and turn to the left or right for the desired bass tone.

4. SEEK OPERATION

(Automatic Channel Selection)

When the (+) side is pressed, the unit will automatically tune to the next higher frequency and when the (-) side is pressed, it will automatically tune the next lower frequency.

5. TUNE (Manual) SELECTION

When the upper side of the knob is pressed, the frequency will increase in 0.1 MHZ steps in FM band, 9 KHZ in AM band and vice versa.

With the button held down for 0.5 Sec. or more, the stop signal (broadcasting radio wave) is ignored, and channel selection continues.

6. PRESET BUTTONS

Six (6) stations forAM, FM and FM2 respectively can be preset in the electronic memory circuit on this unit.

HOW TO PRESET STATIONS

Six AM and twelve FM stations may be programmed into the memory of the radio. Then, by simply pressing the band select button and/or one of the six station select buttons, you may recall any of these stations instantly. To program the stations, follow these steps:

- Press band selector to set the band for AM, FM and FM2.
- Select the desired station to be

stored by seek, scan or manual tuning.

● Determine the preset station select button you wish to use to access that station.

● Press the station select button for more than two seconds. A select button indicator will show in the display indicating which select button you have depressed. The frequency display will flash after it has been stored into the memory. You should then release the button, and proceed to program the next desired 9tation. A total of 18 stations can be programmed by selecting on AM and two FM stations per button.

● When completed, any preset station may be recalled by selecting AM, FM or FM2 band and the appropriate Station Button.

7. BAND SELECTOR

Pressing the BAN D button changes the AM, FM 1 and FM2 bands. The mode selected is displayed on LCD.

8. TAPE EJECT BUTTON

To eject the tape, press the button.

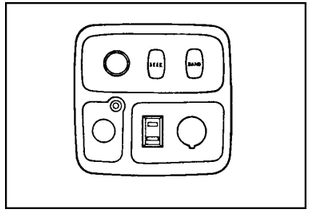
9. TAPE PROGRAM

When you press the button whose arrow is in the same direction as the tape play arrow in the display the tape will advance at high speed.

When you press the button whose arrow is in the opposite direction to the tape play arrow in the display the tape will rewind at high speed. To stop FF or REW action, press the opposite button.

When you press two buttons simultaneously you play the reverse side of the tape and an arrow will appear in the display to show tape direction.

REMOTE CONTROL FUNCTIONS



1. POWER ON/OFF, VOLUME CONTROL KNOB

Rotate the knob clockwise to switch the radio unit on, and to increase the volume. Turn the knob counterclockwise to reduce the volume, and to switch the radio unit off.

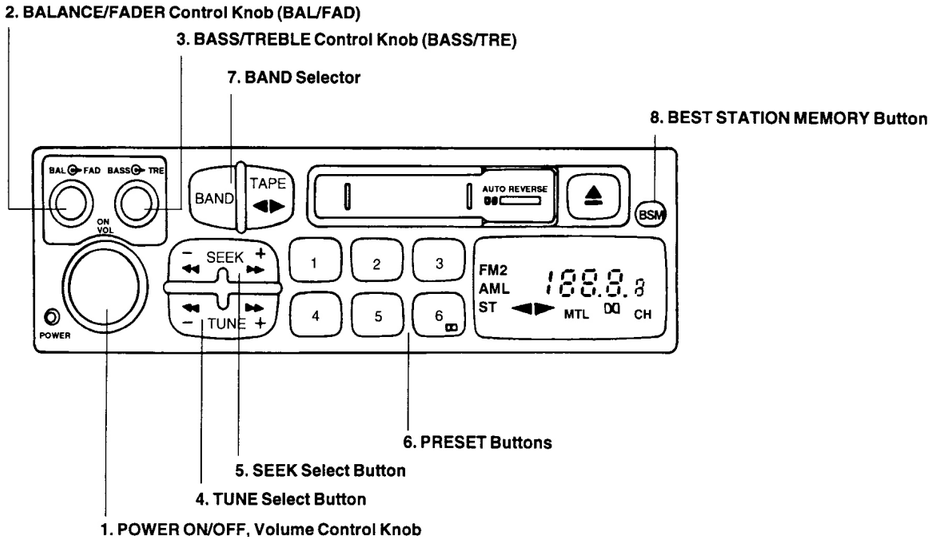
2. SEEK OPERATION

When the button is pressed, it will automatically tune to the next higher frequency.

3. BAND SELECTOR

Pressing the BAND button changes the AM, FM and FM2 bands, The mode selected is displayed on LCD.

STEREO RADIO OPERATION



1. POWER ON -OFF,VOLUME CONTROL KNOB

The radio unit may be operated when the ignition key is in the " ACC" or "ON" position. Press and rotate the knob clockwise to switch the radio unit on, and to increase the volume. Turn the knob counter-clockwise to reduce the volume, and to switch the radio unit off.

2. BAL (Balance Control) Knob

Pop -up control knob with one push. Turn the control knob clock-wise to emphasize right speaker sound. (Left speaker sound will be attenuated)

When the control knob is turned counterclockwise, left speaker sound will be emphasized. (Right speaker sound will be attenuated)

FAD (Fader Control) Knob

Further pull -lock position of popped -up knob.Turn the control knob clockwise to emphasize front speaker sound. (Rear speaker sound will be attenuated)

When the control knob is turned counterclockwise, rear speaker sound will be emphasized (Front speaker sound will be attenuated)

3. BASS Control Knob

Press to pop the knob out and turn to the left or right for the desired bass tone.

TREBLE Control Knob

Further pull -lock position of popped -up knob .Turn to the left or right for the desired treble tone.

4. TUNE (Manual) Selection Button

Press the (+) side or (-) side to increase or to decrease the fre-quency.

With the button held down for 0.5 sec. or more, the stop signal (broadcasting radio wave) is ig-nored and channel selection con-tinues.

5. SEEK Operation (Automatic Channel Selection)

When the (+) side is pressed, the unit will automatically tune to the next higher frequency and when the (-) side is pressed, it will auto-matically tune to the next lower fre-quency.

6. PRESET STATION SELECT Button

Six (6) station for AM, FM and FM2 respectively can be preset in the electronic memory circuit on this unit.

HOW TO PRESET STATIONS

Six AM and twelve FM stations may be programmed into the memory of the radio. Then, by simply pressing the band select button and/or one of the six station select buttons, you may recall any-of these stations instantly. To program the stations, follow these steps:

- Press band selector to set the band for AM, FM and FM2.
- Select the desired station to be stored by seek, scan or manual tuning.
- Determine the preset station select button you wish to use to access that station.
- Press the station select button for more than two seconds. A select button indicator will show in the display indicating which select button you have depressed. The frequency display will flash after it has been stored into the memory.

You should then release the button, and proceed to program the next desired station. A total of 18 stations can be programmed by selecting one AM and one FM station per button.

- When completed, any preset station may be recalled by selecting AM, FM or FM2 band and the appropriate station button.

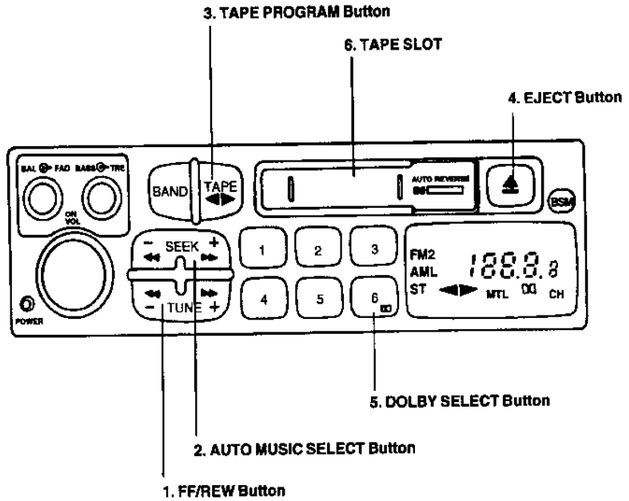
7. BAND Selector

Pressing the BAND button changes the AM, FM 1 and FM2 bands. The mode selected is displayed on LCD.

8. BEST STATION MEMORY Button (BSM)

When the BSM button is pressed for two seconds or longer, the preceding memory is all cleared, and six channels with the highest field intensity are selected and kept in memory of the preset key in the sequence of the preset key in the sequence of frequencies.

CASSETTE TAPE PLAYER OPERATION



1. FF/REW BUTTON

● The FF (fast forward tape winding) starts when the (+) side is pressed during the PLAY or REW.

● The play starts when the (+) side is pressed again during the FF.

● The REW (rewinding) starts when the (-) side is pressed during the PLAY or FF.

● The play starts when the (-) side is pressed again during the REW.

2. AUTO MUSIC SELECT BUTTON

Press the button to find the starting point of each song in a prerecorded music tape. The quiet space between songs (must have at least a 4 sec. gap) can be accepted by the AUTO MUSIC SELECT button.

● Pressing the (+) side will play the beginning of the next music segment.

● Pressing the (-) side will start replay at the beginning of the music just listened to.

3. TAPE PROGRAM BUTTON

This allows you to play the reverse side of the tape by merely depressing the program button. An arrow will appear in the display to show tape direction.

4. EJECT BUTTON

● When the EJECT button is pressed with the cassette loaded, the cassette is ejected.

● When the EJECT button is pressed during the FF/REW, the cassette is ejected.

5. DOLBY SELECT BUTTON

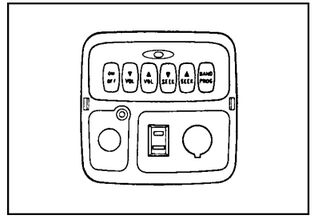
If you get background noise during PLAY, you can reduce this considerably by merely pressing DOLBY SELECT button. If you want to release, press the button again.

6. TAPE SLOT

Insert cassette with exposed tape side facing towards to cassette slot.

Insertion of the cassette will automatically c ut off the radio reception and playback will start.

REMOTE CONTROL FUNCTIONS



1. POWER ON/OFF

Press the button to turn on the radio unit Press this button once more and it will be in "OFF" position.

2. VOLUME

When the ▲ is pressed the unit will automatically increase the volume, and when the is pressed, it will automatically decrease the volume.

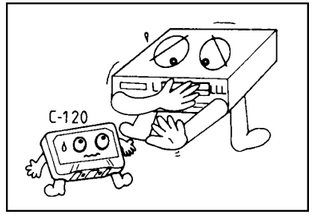
3. SEEK

When the ▲ is pressed, the unit will automatically tune to the next higher frequency and when ▼ the is depressed, it will automatically tune to the next lower frequency.

4. BAND SELECTOR

Pressing the BAND button changes the AM, FM1 and FM2 bands. The mode selected is displayed on VFD (Vacuum Florescent Display).

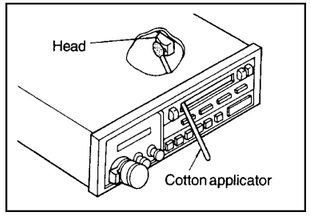
Care of Cassette Tapes



Proper care of your cassette tapes will extend the tape life and increase your listening enjoyment. Always protect your tapes and cassette cases from direct sunlight, severe cold and dusty conditions. When not in use, cassettes should always be stored in the protective cassette case in which they were originally supplied. When the vehicle is very hot or cold, allow the interior temperature to become more comfortable before listening to your cassettes.

● Never leave a cassette inserted in the player when not being played. This could damage the tape player unit and the cassette tape.

● We strongly recommend against the use of tapes longer than C-60 (60 minutes total).Tapes such as C-120 or C-180 are very thin and do not perform as well in the automotive environment.



● Be sure that the cassette label is not loose or peeling off or tape ejection may be difficult.

● Never touch or soil the actual audio tape surfaces.

● Keep all magnetized objects, such as electric motors, speakers or transformers away from your cassette tapes and tape player unit.

● Store cassettes in a cool, dry place with the open side facing down to prevent dust from setting in the cassette body.

● Avoid repeated fast reverse usage to replay one given tune or tape section. This can cause poor tape winding to occur, and eventually cause excessive internal drag and poor audio quality in the cassette. If this occurs, it can sometimes be corrected by fast winding the tape from end to end several times. If this does net correct the problem, do not continue to use the tape in your vehicle.

● The playback head, capstan and pinch rollers will develop a coating of tape residue that can result in deterioration of sound quality, such as a wavering sound. They should be cleaned monthly using acommercially available head cleaning tape or special solution available from audio specialty shops. Follow the supplier's directions carefully and never oil any part of the tape player unit.

● Always be sure that the tape is tightly wound on its reel before inserting in the player. Rotate a pencil in the drive sprockets to wind up any slack.

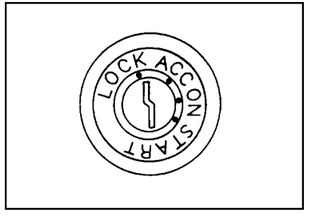
STARTING & OPERATING

BEFORE STARTING THE ENGINE

Before starting the engine, you should always:

1. Look around the vehicle to be sure there are no flat tires, puddles of oil or water or other indications of possible trouble.
2. After entering the car , check to be sure the parking brake is engage.
3. Check your seat , seatback and headrest to be sure they are in their proper position..
4. Check the position of the interior and exterior mirrors.
5. Lock all the doors
6. Fasten your seat belt and be sure that all other occupants have fastened theirs.
7. Turn off all lights and accessories that are not needed.
8. When you turn the ignition switch to "ON" check that all appropriate warming lights are operating and that you have sufficient fuel.

IGNITION SWITCH



WARNING:

The engine should not be turned off or the key removed from the ignition key cylinder while the car is in motion.

"ON"

When the key is in the "ON" position, the ignition is on and all accessories may be turned on .If the engine is not running ,the key should not left in the "ON" position . This will discharge the battery and may also damage he ignition system.

"ACC"

With the key in the "ACC" position, the radio and other accessories may be operated.

"LOCK"

The key can be removed or inserted in this position.Steering is locked by removing the key.

NOTE:

You can remove the key by depressing the knob when the key is in "LOCK" position.

"START"

The position for engine staring when released after starting the engine, the key will return automatically to the "ON" position

NOTE:

Do not hold the key in the " START" position for more than 15 seconds.

TO SRART THE ENGINE

1. PLACE the shift lever in neutral and pull the parking brake lever all the way.
2. On vehicle with a cold start feature ,set the COLD START switch to "ON" to reduce the warm up period of the engine in very cold whether . The COLD START pilot lamp will light
3. Insert the key into the starter switch
4. Depress the accelerator pedal all the way in and place the key to "START" position, and the starter will turn and the engine will start.

The engine will be easier to start with the clutch disengaged.

CAUTION:

Points to note at starting

- Do not operate the starter for more than 15 seconds at a time. If the starter is operated for a longer period, the battery will run down or even heat damage to the starter will result.

Do not jab the accelerator pedal but keep it depressed until the engine starts.

- Depress the clutch pedal when starting. Since the starter load is reduced, the engine will be easier to start, particularly in very cold weather.

5. On vehicles with a cold start feature, place the cold start switch to "OFF" after the engine speed has increased.

6. Slowly release the accelerator pedal and turn the fuel button in the direction of "H" to set the engine speed slightly higher than the idling speed. Allow the engine to warm up for over five minutes until the coolant temperature is raised.

Engine warm up is required for circulating oil throughout the engine and raising coolant temperature for proper combustion.

CAUTION:
Do not race the engine during the warm up period, as it could be detrimental to the engine.

7. During the warm up operation, check to ensure that the gauges and meters are performing properly.

8. After the engine warm up operation is over turn the fuel button in the direction of "L" until the engine runs smoothly at idle speed. For the idle speed, see section II.

STARTING AND STOPPING THE ENGINE FOR TURBO CHARGER

1. Do not race the engine or sudden accelerate the engine immediately after start it. If the engine is cold, allow the engine to idle for several seconds before it is driven to ensure sufficient lubrication of the turbo charger unit.

2. After high speed or extended driving, requiring a heavy engine load, the engine should be allowed to idle, as shown in the chart below, before turning it off. This idle time will allow the turbo charger to cool prior to shutting the engine off.

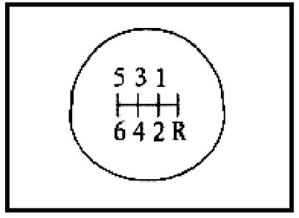
Driving Condition		Required Idle Time
Normal driving		Not necessary
High speed driving	Up to 80 km/h	About 20 seconds
	Up to 100km/h	About 1 minute
Steep mountain slopes or continued driving in excess of 100km/h		About 2 minutes

WARNING:
Do not turn the engine off immediately after it has been subjected to a heavy load. Doing so may cause severe damage to the engine or turbo charger unit.

SELECT LEVER

Manual Transmission

Your Manual Transmission vehicle has a fully synchro-meshed, 6-forward and 1-reverse speed transmission controlled by a gear shift, lever located on the floor. This shift pattern is shown on the knob.



When shifting the gear shift lever, fully depress the clutch pedal, then release the pedal slowly. Make full use of the gear position.

CAUTION:
- Shift to the reverse position only when the vehicle is completely stopped.
- Do not rest your foot on the clutch while driving, because it will cause needless wear,
- Do not hold your vehicle with the engine when stopped on the upgrade. Use the parking brake.

DRIVING FOR ECONOMY

Observe general operating manners and operate your vehicle on the "safety first" basis. To conserve fuel, prolong tire life and accomplish others for economical driving follow these suggestions:

● Avoid sharp tums, abrupt acceleration, quick starts and abrupt braking except when unavoidable.

● When accelerating, make an early shift.

● Do not drive with the engine at an abnormally high or low speed.

● Observe proper coolant temperatures of 75 to 90℃(167 to 194°F) when driving. If coolant temperature is too low, it will not only increase fuel consumption but will also be harmful to the engine.

● Maintain proper tire inflation pressures when driving.

ANTI-LOCK BRAKE SYSTEM

The Anti -Lock Brake System (ABS) is designed to prevent wheel lock -up during sudden braking or on hazardous road surfaces. The ABS control module monitors the wheel speed and controls the pressure applied to each brake. Thus, in emergency situations or on slick roads, your ABS will increase vehicle control during braking.

NOTE:

During ABS operation, a slight pulsation may be felt in the brake pedal when the brakes are applied. Also, a noise may be heard in the engine compartment while driving. These conditions are normal and indicate that the anti -lock brake system is functioning properly.

WARNING:

Your ABS will not prevent accidents due to improper or dangerous driving maneuvers. Even though vehicle control is improved during emergency braking, always maintain a safe distance between you and objects ahead. Vehicle speeds should always be reduced during extreme road conditions.

The braking distance for cars equipped with an anti -lock braking system may be longer than for those without it in the following road conditions.

● Driving on rough, gravel or snow-covered roads.

● Driving with tire chains installed.

● Driving on roads where the road surface is pitted or has different surface height.

During these conditions the vehicle should be driven at reduced speeds. The safety features of an ABS equipped vehicle should not be tested by high speed driving or cornering. This could endanger the safety of you rself or others.

GOOD BRAKING PRACTICES

● After being parked, check to be sure the parking brake is not engaged and that the parking brake indicator light is out before driving way.

● Driving through deep water may get the brakes wet. They can also get wet when the vehicle is washed. Wet brakes can be dangerous! Your vehicle will not stop as quickly if the brakes are wet and it may also pull to one side. If you suspect that the brakes may be wet, cautiously apply the brakes. Your brakes are probably wet if the braking action is not normal and requires either more pedal pres sure than usual or pulls to one side. To dry the brakes, apply the brakes lightly until the braking action returns to normal, taking care to keep the vehicle under control at all times. If the braking action does not return to normal, stop as soon as it is safe to do so and call the nearest service shop for assistance.

● Don't coast down hills with the vehicle out of gear. This can be dangerous. Keep the vehicle in gear at all times, use the brakes to slow down, then shift to a lower gear so that engine braking will help you maintain a safe speed.

Normal braking

To reduce the speed of the vehicle, first apply engine and exhaust brakes. After the vehicle has slowed down, depress the service brake pedal .When shifting down, use care to prevent engine overrunning.

Depress the brake pedal about 1/2 of the way at a point 25 to 35 m (28 to 38 yd) ahead of the target stopping point.

At a point 5 to 6 m (5.5 to 6.5 yd) ahead of the target stopping point, slowly release the pedal (about 1/2 to 1/3 of the initial stroke). After the vehicle has further approached the target point, slightly depress the pedal to bring the vehicle to a stop. In this manner the vehicle can be gently stopped without shock.

Pay attention to the following points:

● Since the service brakes provide powerful braking, there is no need for depressing the brake pedal all the way except in an emergency.

● If the vehicle is stopped with the initial foot pressure on the brake pedal, shock will be produced when the vehicle stops. Slowly ease foot pressure to minimize the shock. If the brake pedal is fully released, however, all the air in the brake system will be discharged and the vehicle may not stop at the target point but may move further ahead.

● Do not pump the pedal. Frequent pumping will result in temporary loss of the air and the vehicle will move on. In a congested traffic, there is danger of bumping into the rear end of another vehicle ahead. Try to stop the vehicle by depressing the pedal once.

● On air over hydraulic brake vehicles, if the buzzer sounds and BRAKE pilot lamp lights when the pedal is depressed, stop the vehicle immediately. It is the sign of fluid leaks or low brake performance due to excessive brake shoe clearance. Call the nearest service shop for inspection and repair.

The brake system is a completely dual system. Even if fluid leaks occur in one of the circuits, therefore, the vehicle can be stopped through use of the other circuit.

Abrupt braking

In the event of an emergency, depress the brake pedal all the way.

The brakes are applied to all wheels and the vehicle stops abruptly. Be careful of strong shock produced when the vehicle stops.

CAUTION:

Frequent use of abrupt braking will result in premature wear of the tires, brake drums, brake linings and other parts and will reduce the life of all parts. Avoid use of abrupt braking except in an emergency. When the road surface is wet as in rainy weather or when there is ice on the road surface, abrupt braking can cause hazardous skidding.

TO COUPLE A TRAILER

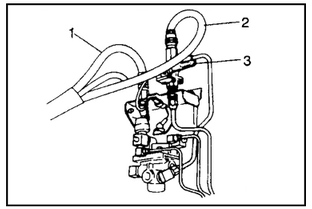
● If the trailer is positively coupled, theindicator lamp in the instrument will light. If the lamp does not light, check

NOTE:

The indicator lamp will light with the gear shift lever only in reverse

● On a pintle hook equipped vehicle, the indicator lamp will light when the trailer lock switch (If installed) is pushed in.

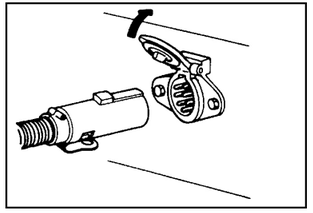
After the trailer has been coupled, perform the following step and check:



1. Couple the service 1 and emergency air hoses 2 and open air service valve 3.

NOTE:

Do not confuse the hoses when coupling them.



2. On a pintle hook equipped vehicle, pull out the cab control valve and shut off the supply of air to the trailer before connecting the service and emergency air hoses.

Connect the air hoses and open the air service valve. Then, push the cab control valve in and supply air to the trailer.

3. Connect the jumper cable.

Check to ensure that the stop lamps, tail lamps and turn signal lamps of the trailer light and flash by operating the respective switches.

4. Release the parking brakes of the trailer.

5. Pull the trailer brake lever toward you to check that the trailer brakes apply.

If exhaust air sound is heard when the lever is returned, the brakes are performing well.

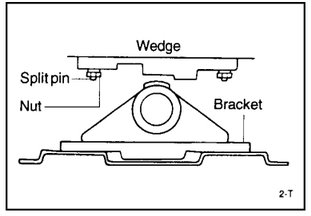
BEFORE USING THE TRACTOR COUPLER

Before you use the tractor coupler, you should always;

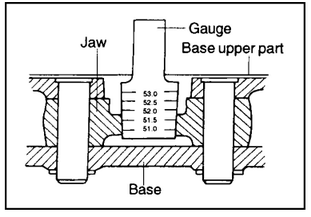
● Apply grease to each nipple and operating part sufficiently.

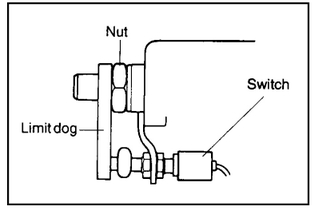
● Whenever couple a trailer, apply grease to nipples of base upper part, rolling shaft and bracket sufficiently.

● After cleaning the used grease in containing to foreign matter, apply new grease sufficiently.



How to adjust rolling angle





● If the inside diameter of jaw is worn, adjust it.

● Turn the limit dog with a tool counterclockwise.

● Loosen the nut slowly. This will diminish the inside diameter of jaw according to moving yoke forward.

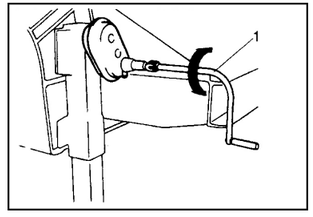
● If it's inside diameter is 51-51.2 using the Gauge, tighten the limit dog to adhere the nut perfectly. At this time, check that the gauge could be rotated by hand.

● Before towing, make sure that there is no interference between coupler parts.

● Confirm the adherence state of limit dog and nut, operating state of secondary lock.

● Do not tighten the nut clock wise greater than primary state absolutely.

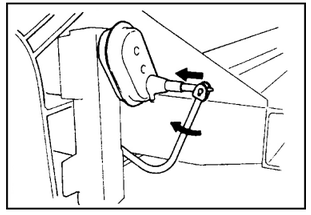
ADJUSTING BED



By rotating the lever 1, the height of the bed is controlled.

CAUTION:
Be sure not to hurt yourself.

After adjusting bed

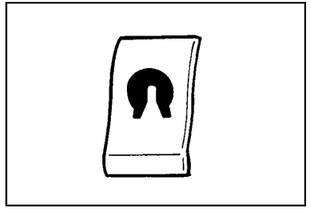


Do the adjusting bed lever as shown below before driving vehicle.

Trailer braked and secured by chocks. Drawbar adjusted to coupling height.

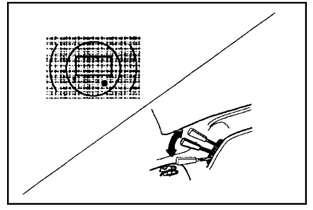
CAUTION:
Be sure no one is standing between tractor and trailer during the coupling operation

TRAILER LOCK SWITCH (If installed)



The trailer lock switch is located on the instrument panel. Use this switch to lock the turntable of the dolly when the vehicle is to reverse. When the switch is pushed, theindicator lamp in the instrument will light.

TRAILER BRAKE LEVER

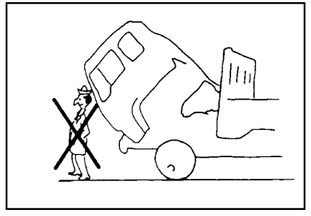


When the lever is pulled toward you, trailer brakes will be applied. Use the brakes when going down a slope. The more the lever is pulled toward you, the stronger the braking power will be come. When the trailer brakes are performing, the indicator lamp will light.

● Even when the trailer brakes are performing, the service brakes will normally apply.

CAUTION:
Do not use the trailer brakes to slow down the vehicle. Avoid using the trailer brakes for a long period.

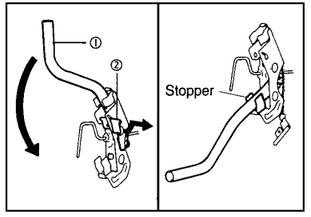
TILTING CAB



To tilt the cab, drive the vehicle to a flat surface and proceed as follows:

1. Apply the parking brake and shift the gearshift lever into neutral. Apply chocks to the wheels and shut off the engine.
2. If there are articles on the seat, they could break the windshield when the cab is tilted.
3. Make sure that the doors are securely closed.
4. Check to ensure that there is enough space around the cab. More than 1 m wide space is required before and above the cab.
5. Before the cab is brought down, check to ensure that there are no waste cloth and other combustible things left behind in the engine room.

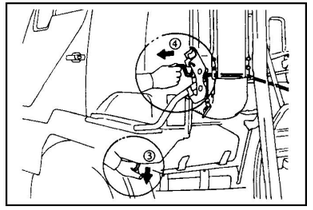
Manual tilting cab



To raise the cab

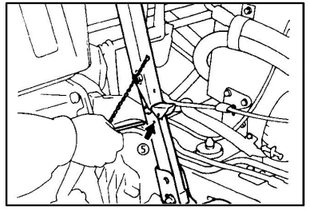
1. Remove the hook lever key ② from the lever ①.
2. Pull the lever toward you.

NOTE:
Make sure that the lever is pulled all the way until it touches the stopper. If the lever is not pulled, the hook might not fit in place when the cab is returned.



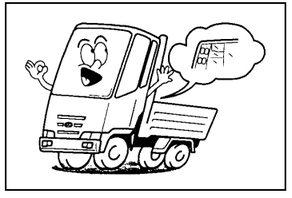
3. Hold the grip ③ of the cab. While pressing it down, pull the safety hook ④.
4. The cab will go up. While pressing it down to prevent abrupt motion, let it go up slowly.

Push the cab all the way up, and the cab will be automatically held in position by the cab stay. Insert the safety pin⑤.



CAUTION:
For safety's sake, make sure the safety pin is inserted.

PRECAUTIONS DURING OPERATION



We recommend the following points during operation.

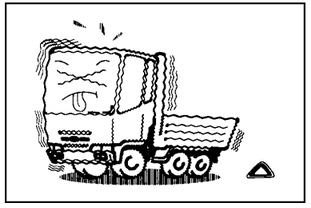
Before driving

● Check to ensure that the meters, pilot lamps and gauges are performing well.

● Release the parking brake lever all the way and confirm that the PARKING BRAKE pilot lamp has gone out.

● When making a start in loaded condition, shift into the 1 st speed gear and make slow start. Extended use of the clutch in half -engaged position will reduce the life of the clutch.

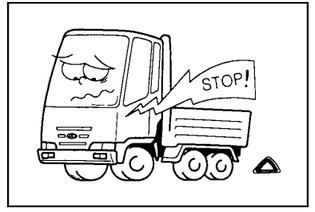
● If strange sound, vibration, unsmooth acceleration, odor or anything wrong is noted, stop the vehicle and check all conditions immediately.



● If the causes cannot be found out or if the correction is impossible, have the vehicle checked by the nearest service shop.

● If hard steering or inadequate brake application occurs during operation, stop and check the vehicle immediately.

● If a pilot lamplights or the buzzer sounds , stop the vehicle immediately.

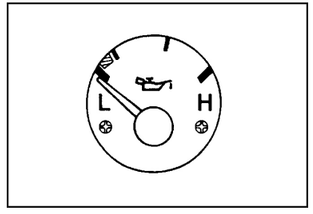


The red pilot lamps should be OFF during operation. If there is any red pilot lamp that is ON, it shows that there is something wrong. Stop the vehicle and check to locate the cause immediately.

● The orange and green pilot lamps will light when the respective switches are turned on .They do not indicated trouble.

CAUTION:
Operation of thevehicle with a red pilot lamp ON can be dangerous. Be sure to stop the vehicle, find the cause and correct defective points promptly. The buzzer will be silenced when the vehicle is stopped and the parking brake lever pulled.

Oil pressure



If the oil press ure falls below 1.5 kgf/cm²(50kPa) while the engine is idling, the OIL PRESSURE pilot lamp will light and the buzzer will sound.

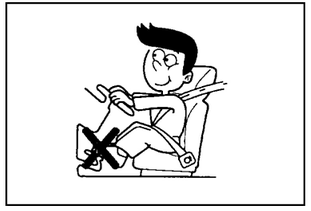
Stop the engine and check for oil leaks and level at once. If they are good, the oil system is defective. Have the oil system checked by an authorized dealer.

● The OIL PRESSURE pilot lamp also light when the oil filter is clogged. Be sure to check the pressure gauge to confirm the oil pressure.

In severe cold weather the pilot lamp may continue to light for a while after starting because of increased oil viscosity. Do not oper-

ate the vehicle until the engine warms up fully.

● Do not keep your foot on the clutch pedal during operation.



Use of the clutch in half-engaged position will not only result in loss of power but will also reduce the life of the clutch.

● The ideal coolant temperature for the engine operation is 75 to 90℃ (167 to 194°F).

If the coolant temperature remains at around 100℃(212°F), the engine is slightly overheated. With the vehicle stationary, continue to run the engine to cool it or shift into a lower speed gear to reduce the engine load.

If the pointer passes beyond 110℃ (230°F) and enters the red zone, the engine is overheated. The water temperature warning light will also light. Stop the vehicle and run the engine at a slightly higher speed than the idle speed to cool the engine.

Do not stop the engine immediately. A sudden rise in coolant temperature could cause seizure of the engine.

When the engine is being cooled, check for coolant leaks. After the coolant temperature has fallen, check for low coolant level or loose or broken fan belt.

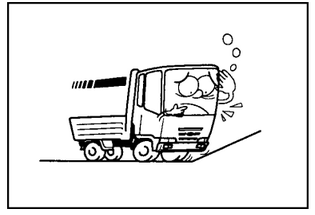
CAUTION:

When adding coolant, pay attention to the following points.

● Use city water as coolant. Avoid the use of hard water such as river water if possible.

● When the radiator cap is removed, place a cloth over the cap, raise the pressure release lever and slowly open the cap. If the cap is abruptly opened while the coolant is still hot, the hot water might gush out and might cause scalding.

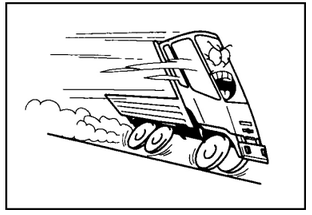
● If a large amount of cold water is abruptly poured in an overheated engine, cracks might develop in the crankcase, etc. Slowly add water, while keeping the engine running.



● Same ratio as the coolant in the radiator should be added.

● Before going up a slope, shift down to prevent placing undue load on the engine and drive line.

When going up a slope, maintain a vehicle speed near the maximum torque of the engine.



● Use care to prevent the engine from overrunning.

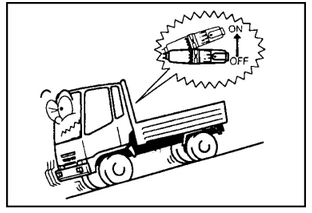
Overrunning often occurs when going down a slope or shifting down.

● Engine over running occurs when the engine is made to turn beyond the maximum speed by the tires. Undue load on the engine could cause severe engine damage.

CAUTION:

Avoid skipping the next lower speed gear when shifting down, as overrunning readily occurs.

Prior to going down a slope



1. Use engine brake and exhaust brake,

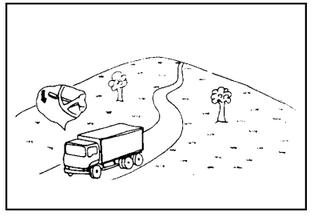
2. Do not overuse the service brakes.

3. Use special care not to increase the speed excessively.

Make sure that the engine does not overrun.

4. Check to be sure that the brakes can be applied properly.

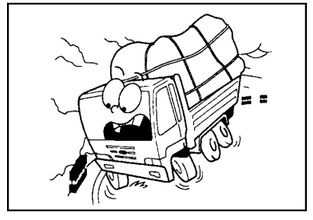
ON Tractor



● Apply trailer brakes when going down a zigzag slope.

● Even when the trailer brakes are operative, the service brakes are applied to both the tractor and trailer.

CAUTION:
Avoid extended use of the trailer brakes as far as possible.



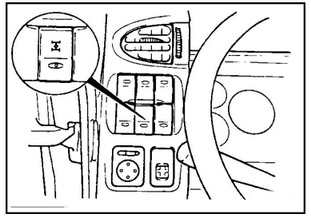
● When making a turn to the right or left, remember that the rear wheels make a shorter turn than the front wheels.

● Before rounding a curve, reduce the speed of the vehicle.

● Pay attention to the shoulder of the road.

INSTRUCTIONS FOR INTER-AXLE DIFERENTIAL (If installed)

If there is a rough read ahead, temporarily stop the vehicle and lock the interaxle differential.



When the interaxle differential is locked, the DIFFERENTIAL LOCK pilot lamp will light.

If you went ahead without locking the interaxle differential and found it impossible to move ahead any further, depress the brake pedal immediately. After the tires have stopped rotation, push the lock switch to lock the interaxie differential. After you have got out of the rough road, push the switch again to unlock the interaxle differential.

CAUTION:
Make sure that the tires are stationary when the interaxle differential lock switch is pushed.

EMERGENCY BRAKE (TRA - CTOR)

The emergency brakes are spring-operated brakes which are automatically applied to the rear wheels when the compressed air pressure abnormally falls. Observe the following instructions.

How to operate

When the compressed air pressure falls below 2.7 kgf/cm² (265 kPa), the emergency brakes are automatically applied.

Manual emergency brake application can be accomplished by pulling the parking brake knob in. Use the knob in case of emergency.

How to release

When the compressed air pressure fell and the emergency brakes were manually applied, run the engine until the AIR pilot lamp goes out. Thereafter, push the paking brake knob to release the emergency brakes.

Since the pressure might fall temporarily after the release, be sure to check the pressure before starting the vehicle.

CAUTION:
If the AIR pilot lamp is ON when the parking brake knob is pushed, the brakes will not be full released, and brake dragging will result. When the AIR pilot lamp is ON, therefore, do not push the knob.

If the emergency brakes are automatically applied due to a defective brake line, the compressed air pressure does not rise so cannot be pulled. Release the brakes in the following sequence:

Pull the knob of the cab control valve.

Since the standby tank is used for emergency brake release, remember that the emergency brake release can be made only about twice.

● When the air in the standby tank has been fully consumed, the tire inflation pressure may be employed. For this purpose, however, special tools are required. Ask your nearest service shop.

IN CASE OF EMERGENCY

IF THE ENGINE WILL NOT START

CAUTION:
If the engine will not start, do not push or pull the car to start it. This could result in a collision or cause other damage.

If Engine Doesn't Turn Over or Turns Over Slowly

1. Check the battery connections to be sure they are clean and tight.
2. Turn on the interior light. If the light dims or goes out when you operate the starter, the battery is discharged.
3. Do not push or pull the vehicle to start it. See instructions for "Jump Starting" on the following pages.

If Engine Turns Over Normally but Does Not Start

1. Check fuel level.
2. Check injection pump nozzle.
3. If engine still refuses to start, call a JAC dealer or seek other qualified assistance.

JUMP STARTING

WARNING:
The gas produced by the battery during the jump-start operation is highly explosive. If these instructions are not followed exactly, serious personal injury and damage to the vehicle may occur. If you are not sure how to follow this procedure, seek qualified assistance. Automobile batteries contain sulfuric acid. This is poisonous and highly corrosive. When jump starting, wear protective glasses and be careful not to get acid on yourself, your clothing or on the car.

● If you should accidentally get acid on your skin or in your eyes, immediately remove any contaminated clothing and flush the area with clear water for at least 15 minutes.

● Then promptly obtain medical attention. If you must be transported to an emergency facility, continue to apply water to the affected area with a sponge or cloth.

● The gas produced by the battery during the jump-start operation is highly explosive. Do not smoke or allow a spark or open flame in the vicinity.

● The battery being used to provide the jump start must be 24-volt. If you cannot determine that it is a 24-volt battery, do not attempt to use it for the jump start.

● To jump start a car with a discharged battery, follow this procedure exactly:

1. If the booster battery is installed in another vehicle, be sure the two vehicles are not touching.
2. Turn off all unnecessary lights and accessories in both vehicles.
3. Attach the clamps of the jumper cable in the exact order shown on the previous page. hat is, first, attach one clamp of the jumper cable to the positive (+) post or cable of the discharged battery. Then attach the other end of the same cable to the positive (+) post or cable of the booster battery. Next, using the other cable, attach one clamp to the negative (-) post or cable of the booster battery. Then attach the other end of that cable to a solid metal part of the engine away from the battery. Do not connect the cable to any moving part.
4. Start the engine in the car with the booster battery and let it run for a few minutes. This ill help to assure that the booster battery is ully charged. During the jumping operation, un the engine in this vehicle at about 1000 rpm.
5. Start your engine using the normal starting rocedure. After the engine starts, leave the umper cables connected and let the engine run at fast idle or about 1000 rpm for several minutes.
6. Following the exact reverse order of their being attached, carefully remove the jumper cables. Remove the negative cable first, then the positive cable.

If you do not know why your battery became is charged (because the lights were left on, etc.), have the charging system checked by

your JAC dealer.

IF THE ENGINE OVERHEATS

If your temperature gauge indicates overheating, you experience a loss of power, or hear loud pinging or knocking , the engine is probably too hot. If this happens, you should:

1. Pull off the road and stop as soon as it is safe to do so.

2. Place the gear selector lever in neutral and set the parking brake. If the air conditioner is on, turn it off.

3. If coolant is running out under the vehicle or steam is coming out from the cap, stop the engine. Do not open the cap until the coolant has stopped running or the steaming has stopped. If there is no visible loss of coolant and no steam, leave the engine running and check to be sure the engine cooling fan is operating. If the fan is not running, turn the engine off.

4. Check to see if the water pump drive belt is missing. If it is not missing, check to see that it is tight. If the drive belt seems to be satisfactory, check for coolant leaking from the radiator, hoses or under the vehicle. (If the air conditioner had been in use, it is normal for cold water to be draining from it when you stop).

WARNING:
While the engine is running, keep hands, long hair and clothing away from moving parts such as the fan and drive belts to prevent injury.

5. If the water pump drive belt is broken or coolant is leaking out, stop the engine immediately and call the nearest JAC dealer for assistance.

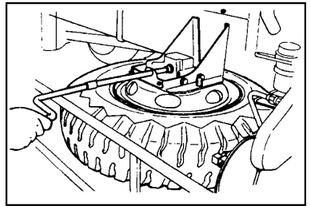
WARNING:
Do not remove the radiator cap when the engine is hot. This may allow coolant to be blown out of the opening and cause serious burns.

6. If you cannot find the cause of the overheating, wait until the engine temperature has returned to normal. Then, if coolant has been lost, carefully remove the radiator cap and add water to bring the fluid level in the reservoir up to the halfway mark.

7. Proceed with caution, keeping alert for further signs of overheating. If overheating happens again, call a JAC dealer for assistance.

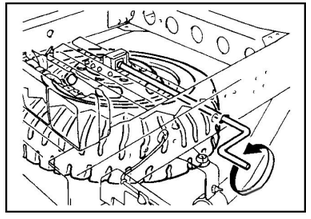
CAUTION:
Serious loss of coolant indicates there is a leak in the cooling system and this should be checked as soon as possible by a JAC dealer.

SPARE TIRE



1. To install a tire, face the convex side of wheel upward, put the hanging plate in the disc wheel, and rotate the spare tire carrier handle clockwise to lift the tire.

NOTE:
While lifting the tire, check to ensure that the chain is not twisted and that the hanging plate is not displaced.



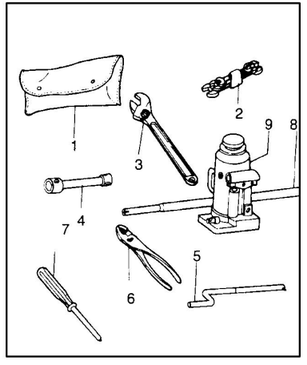
2. Check to ensure that the tire has been firmly secured.

NOTE:
The spare tire should also be inflated to specifications and should be checked for external damage and wear.

CAUTION:
If the spare tire cannot be firmly secured, store the spare tire in the rear body or cab and have inspection made at your nearest service shop.

TOOLS

1. Tool set case
2. Spanners
3. Angle wrench
4. Socket wrench
5. Spare tire handle
6. Plier
7. Screw driver
8. Jack handle
9. Hydraulic jack



NOTE:
Please drive after fixing jack with belt in the tool box.

IF YOU HAVE A FLAT TIRE

If a tire goes flat while you are driving

1. Take your foot off the accelerator pedal and let the car slow down while driving straight ahead. Do not apply the brakes immediately or attempt to pull off the road as this may cause a loss of control. When the car has slowed to a speed when it is safe to do so, brake carefully and pull off the road.

Drive off the road as far as possible and park on firm, level ground. If you are on a divided highway, do not park in the median area between the two traffic lanes.

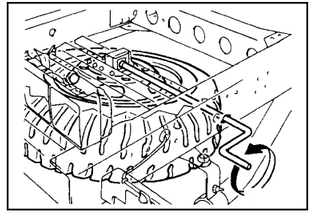
2. When the car is stopped, turn on your emergency hazard flashers, set the parking brake and put the transaxle in reverse.

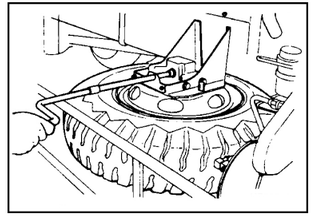
3. Change the tire following the instructions provided on the following pages.

Changing a flat tire

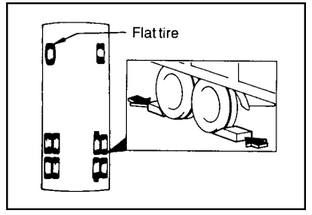
The procedure described on the following pages can be used to rotate tires as well as to change a flat tire. When preparing to change a flat tire, check to be sure the gear selector lever is in reverse gear and that the parking brake is set, then:

1. Obtain Spare Tire and Tool





2. Block the Wheel

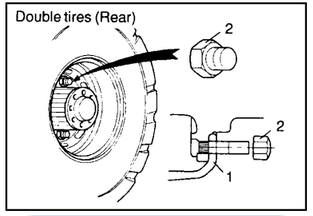


Block the wheel that is diagonally opposite from the flat to keep the vehicle from rolling when the car is raised on the jack.

3. Loosen Wheel Nuts

The wheel nuts should be loosened slightly before raising the car.

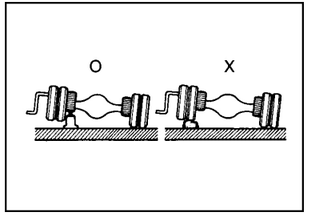
1) Tire wheel
2) Wheel nut



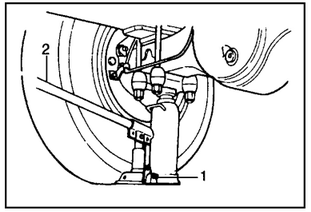
NOTE:
Make sure that the rear outer tires are raised on a jack when they have to be replaced. Do not attempt replacing the outer tire with the inner tire placed on a kerb stone.

CAUTION:
Be careful not to hurt yourself when changing a flat tire.

JACK POSITION



The base of the jack should be placed on firm, level ground.
The jack should be positioned as shown in the drawing.
Raising the Car
Install the jack handle into the jack as shown in drawing. To raise the vehicle, close the valve 1 by turning it clockwise and move the jack handle 2 up and down.



WARNING:
Do not get under the car when it is supported by the jack! The vehicle could fall and cause serious injury or death. No one should stay in the car while the jack is being used.

Changing Wheels
Use the wrench to loosen the wheel nuts, then remove them with your fingers. Remove the wheel, slide the wheel off the studs and lay it flat so it cannot roll way.
To re-installed the wheel, put the wheel on the hub and put the wheel nuts on the studs and tighten them finger tight.
Lower Vehicle and Tighten Nuts
To lower the car to the ground, turn the valve 1 counterclockwise by the jack handle.
Then position the wrench as shown in the drawing and tighten the wheel nuts.
● Wheel nut tightening torque:
8 studs wheel: 485 to 545 N.m (49 to 56 kg.m)
10 studs wheel :603 to 749 N.m(61 to 76 kg.m)

NOTE:
Wheel nut maintenance interval
1. After driving your vehicle during first 1,000 km , retighten the wheel nuts with the specified torque.
2. And then, wheel nuts should be checked or retightened for every 5,000 km or a month.
3. After replacing the tire, if you drive your vehicle for 50~100 km, then the wheel nut should be retightened.

TIRE INFLATION PRESSURES
Low tire inflation pressures could cause overheating and burst of the tire. High tire inflation pressures, on the other hand, will drastically reduce tire life.
When tires were replaced, be sure to adjust the tire inflation pressures to the standard values.
● The standard tire inflation pressure caution plate at the right side of the driver's seat shows the maximum tire inflation pressures for operation on the general road. To extend ti re life, it is advisable that the tires are adjusted to the inflation pressures calculated from the load.
Precautions for adjustment of tire inflation pressures
● Adjustment should be made while the tires are cold before operation.
● In the case of double tires,

make sure that there is no difference in inflation pressure between the tires. If there is a difference, the higher inflated tire will suffer premature wear and damage, and the lower pressure one will also be adversely affected.

● During operation or immediately after operation, the tire inflation pressures will increase because of the heat. Since the increase of tire inflation pressure during operation is not an abnormal condition, do not deflate the tires.

● The tire inflation pressures need not be increased for high speed operation.

When tires are replaced, pay attention to the following points:

1. New tires should be first installed to the front wheels and subjected to break-in operation before they are moved to the rear wheels. Since the new tires grow during the initial period of use, adjust their inflation pressures after break-in operation.

Break-in operation should be performed at 60 km/h (37 mph) or lower speed over a distance of more than 200 km (124 miles).

2. Use tires of the same brand, size, pattern and plies. Avoid mixed use of different types of tires, as there is a danger of deterioration in handling and stability.

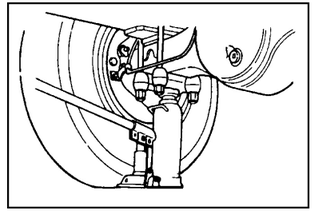
3. The difference in outside diameter between the inner and outer tires of the double tire should be limited to 12 mm (0.47 in.) or less. If there is a difference, install the smaller diameter tire inside.

4. Since snow tires are slightly different in size from general tires of the same size, avoid mixed use of a snow tire and general tire as double tire.

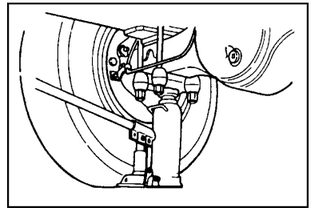
HOW TO USE THE JACK

Put the Jack in Place

The base of the jack should be placed on firm, level ground. The jack should be positioned as shown in the drawing.

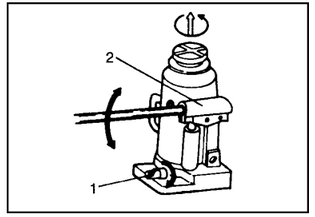


The position of rear wheel



NOTE:
Do not place the jack under Rod-Radius.

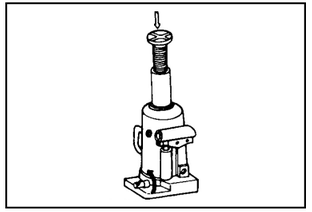
HOW TO OPERATE THE JACK



If the jack-up point is high, extend the jack by turning the jack head counterclockwise. Close the valve 1 by turning it clockwise and then insert the wrench handle into the socket 2 and move it up and down.

To lower

Turn the valve counterclockwise by the wrench handle.

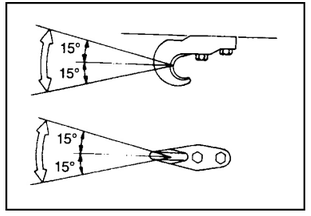


NOTE:
After using, push the jack all the way down and close the valve.

CAUTION:
Do not overload when raising the jack.

TOWING

When using the towing hook, observe the following:



Make sure that the towing angle of hook does not exceed the limits shown in illustration. Make sure that no load is abruptly placed on the towing hook.

NOTE:
The angles specified in illustration hold good when your vehicle Is towed by a towing vehicle about the same size.

When your vehicle is towed, pay attention to the following points

● Use strong ropes and fasten the ropes to the hooks in such a way that they won't be allowed to come off.

● Do not stop your engine. The engine power is needed for supplying compressed air for the brakes and operating the power steering system.

● Be sure that the transaxle is in neutral. Also, be sure that ignition key is in the "ON" postion .

CAUTION:

● When your vehicle is towed, remove the rear axle shafts.

● When your engine or brakes are defective, make sure that your vehicle is towed by a towing vehicle designed for the purpose.

● The engine brake, exhaust brake and parking brakes (air over hydraulic brake vehicle) do not function.

Precautions when the vehicle fails

● If anything goes wrong during operation, calm yourself and gradually reduce the vehicle speed, while paying attention to the vehicles behind, and stop the vehicle at a point the closest to the shoulder of the road.

● Set the hazard warning switch to "ON" to make the hazard lamps flash. At the same time, place a red flag or a red lamp for indication of the trouble. If the indication of the trouble is not made, there is a danger of an approaching vehicle bumping into your vehicle.

● Be sure to apply chocks to the tires. If the propeller shaft or rear axle is defective, the parking brakes might not be applied.

● Check the faulty point. If you can correct it yourself, proceed after making sure that neither your safety nor other's will be jeopardized.

● If you cannot correct the trouble yourself, contact the nearest service shop.

APPEARANCE CARE

Corrosion Prevention & Appearance Care

PROTECTING YOUR JAC FROM CORROSION

By using the most advanced design and construction practices to combat corrosion, JAC produces cars of the highest quality. However, this is only part of the job. To achieve the long -term corrosion resistance your JAC can deliver, the owners cooperation and assistance is also required.

Common Causes of Corrosion

The most common causes of corrosion on your car are:

● Road salt, dirt and moisture that is allowed to accumulate underneath the car.

● Removal of paint or protective coatings by stones, gravel, abrasion or minor scrapes and dents which leave unprotected metal exposed to corrosion.

High-Corrosion Areas

If you live in an area where your car is regularly exposed to corrosive materials, corrosion protection is particularly important. Some of the common causes of accelerated corrosion are road salts, dust control chemicals, ocean air and industrial pollution.

Moisture Breeds Corrosion

Moisture creates the conditions in which corrosion is most likely to occur. For example, corrosion is accelerated by high humidity, particularly when temperatures are just above freezing. In such conditions, the corrosive material is kept in contact with the car surfaces by moisture that is slow to evaporate.

Mud is a particular enemy of corrosion protection because it is slow to dry and holds moisture in contact with the vehicle. Even though the mud appears to be dry, it can still retain moisture and promote corrosion.

High temperatures can also accelerate corrosion of parts that are not properly ventilated so the moisture can be dispersed. For all these reasons, it is particularly important to keep your car clean and free of mud or accumulations of other materials. This applies not only on the visible surfaces but particularly to the underside of the car.

TO HELP PREVENT CORROSION

You can help prevent corrosion from getting started by observing the following:

Keep Your Car Clean

The best way to prevent corrosion is to keep your car clean and free of corrosive materials. Attention to the underside of the car is particularly important.

● If you live in a high -corrosion erea where road salts are used, near the ocean, areas with industrial pollution, acid rain, etc. You should take extra care to prevent corrosion. In winter, hose off the underside of your car at least once a month and be sure to clean the underside thoroughly when winter is over.

● When cleaning underneath the car, give particular attention to the components under the fenders and other areas that are hidden from view. Do a thorough job; just dampening the accumulated mud rather than washing it away will accelerate corrosion rather than prevent it. Water under high pressure and steam are particularly effective in removing accumulated mud and corrosive materials.

● When cleaning lower door panels, rocker panels and frame members, be sure that drain holes are kept open so that moisture can escape and not be trapped inside to accelerate corrosion.

APPEARANCE CARE

In order to maintain the value of you r vehicle, it is necessary to perform regular maintenance using the proper procedure. Be sure to maintain your vehicle in compliance with any pertinent environ mental pollution control regulations. Carefully select the materials to be used for washing, etc.to be sure that they do not contain corrosives; if in doubt, contact an authorized JAC dealer for assistance in the selection of these materials.

Washing

Chemicals contained in the dirt and dust picked up from the road surface can damage the paint coat and body of your vehicle if left in prolonged contact.

Frequent washing is the best way to protect your vehicle from this damage. This will also be effective in protecting it from environmental elements such as rain, snow, salt air, etc. Do not wash the vehicle in direct sunlight. Park the vehicle in the shade and spray it with water to remove dust. Next, using an ample amount of clean water and a vehicle washing brush or sponge, wash the vehicle from top to bottom. Use a mild vehicle washing soap if necessary. Rinse thoroughly and wipe dry with a soft cloth. After washing the vehicle (including washing in an automatic vehicle wash), carefully clean the joints and flanges of the doors, etc. where dirt is likely to remain. Clean the engine room and the bottom of chassis with steam cleaner. Be careful, at this time, not to blow steam onto such electrical devices as starter, generator, etc.

CAUTION:

When washing your vehicle, pay attention to the following points.

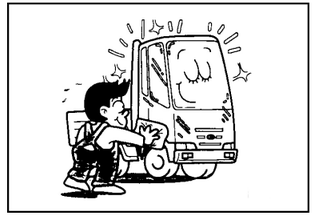
- Be sure to stop the engine beforehand.
- Cover the starter, genarator and other electrical devices to prevent direct exposure to steam of a steam cleaner or water.
- Do not spray water against the air cleaner inlet and its vicinity.

Waxing

Waxing the vehicle will help prevent the adherence of dust and road chemicals to the paintwork.

Apply a wax solution after washing the vehicle, and ply wax at least once every three months.

Polishing



The vehicles should only be polished if the paintwork has become stained or lost its luster Mat-finish parts and plastic bumpers must not be polished; polishing these parts will stain them or damage their finish.

Spot Cleaning

Don't use gasoline, strong solvents or corrosive cleaning agents. These can damage the finish of the car. To remove road tar, use turpentine on a clean, soft cloth. Be gentle.

To remove dead insects or tree sap, use warm water and mild soap or car-washing solution. Soak the spot and rub gently. If the paint has lost its luster, use a commercial car-cleaning polish.

CLEANING THE INTERIOR

To Clean the Vinyl Upholstery

To clean the vinyl upholstery, first remove loose dirt and dust with a vacuum cleaner. Then apply a solution of mild soap or detergent and water using a clean sponge or soft cloth. Allow this to stay on the surface to loosen the dirt, then wipe with a clean damp sponge or cloth. If all the dirt stains are not removed, repeat this procedure until the upholstery is clean. Do not use gasoline, solvent, paint thinner or other strong cleaners.

Cleaning the Carpets

Use a foam-type carpet cleaner. Cleaners of this type are available in aerosol cans in liquid form or powder. Read the instructions and follow them exactly. Using a vacuum cleaner with the appropriate attachment, remove as much dirt from the carpets as possible. Apply the foam following the manu-

facturers directions, then rub in overlapping circles. Do not add water. These cleaners work best when the carpet is kept as dry as possible.

Cleaning the Seat Belts

To clean the seat belts, use a cloth or sponge with mild soap or detergent and warm water. Do not use strong detergents, dye, bleach or abrasive materials on the seat belts as this may weaken the fabric.

While cleaning the belts, inspect them for excessive wear, cuts, fraying or other signs of damage and replace them if necessary.

Cleaning the Windows

You may use any household window cleaner on the windows.

Any Questions?

If you have any questions about the care of your car, consult your JAC dealer.

VEHICLE MAINTENANCE REQUIREMENTS

Engine oil and filter

The engine oil and filter should be changed at those intervals specified in the maintenance schedule. If the car is being driven in severe conditions, more frequent oil and filter changes are required.

Valve clearances

An incorrect valve clearance will not only result in rough engine operation but will also cause excessive noise and reduced engine output.

Inspect valve clearance and adjust as required while the engine is cold.

Fuel lines and connections

Check the fuel lines and connections for leakage and damage. Replace any damaged or leaking parts immediately.

Fuel filter

A clogged filter can limit the speed at which the vehicle may be driven, damage the emission system and cause hard starting. If an excessive amount of foreign matter accumulates in the fuel tank, the filter may require replacement more frequently.

After installing a new filter, run the engine for several minutes, and check for leaks at the connections.

Vacuum and crankcase ventilation hoses

Inspect the surface of hoses for evidence of heat and/or mechanical damage. Hard and brittle rubber, cracking, tears, cuts, abrasions, and excessive swelling indicate deterioration. Particular attention should be paid to examining those hose surfaces nearest to high heat sources, such as the exhaust manifold.

Inspect the hose routing to assure that the hoses do not come in contact with any heat source, sharp edges or moving component which might cause heat damage or mechanical wear. Inspect all hose connections, such as clamps and couplings, to make sure they are secure, and that no leaks are present. Hoses should be replaced immediately if there is any evidence of deterioration or damage.

Fuel hose, vapor hose and fuel filler cap

The fuel hose, vapor hose and fuel filler cap should be inspected at those intervals specified in the maintenance schedule. Make sure that a new fuel hose, vapor hose or fuel filler cap is correctly replaced. Consult your JAC dealer if you have any questions.

Air cleaner filter

A genuine JAC part is recommended for replacement of the air cleaner filter.

Drive belts

Inspect all drive belts (water pump and alternator) for evidence of cuts, cracks, excessive wear or oiliness, and replace if necessary. Drive belts should be checked periodically for proper tension and adjusted as necessary.

Engine coolant

The coolant should be changed at those intervals specified in the Vehicle Maintenance Requirements Section.

Brake hoses and lines

Visually check for proper installation, chafing, cracks, deterioration and any leakage. Replace any deteriorated or damaged parts immediately.

Brake fluid

Check brake fluid level in the brake fluid reservoir. The level should be between % - and "H" marks on the side of the reservoir. Use only hydraulic brake fluid conforming SAE J706

Brake drums and linings

Check for scoring, burning, leaking fluid, broken parts, and excessive wear.

Brake pads, calipers and rotors

Check the pads for excessive wear, discs for run out and wear, and calipers for leaking fluid leakage.

Parking brake

Inspect the parking brake system such as parking brake lever, cables, and so on. For detailed service procedures, refer to the Shop manual.

Exhaust pipe connections, muffler and suspension bolts

Check the exhaust pipe, muffler, and suspension connections for looseness or damage.

Steering gear box, linkage and boots

With the car stopped and engine off, check for exccessive free-play in the steering wheel, check the linkage for bends or damage. Check the dust boots and ball joints for deterioration, cracks, or damage. Replace any damaged parts.

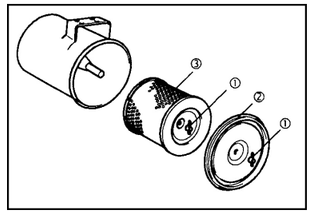
Wheel bearing grease

Check the wheel bearings and grease according to the maintenance schedule. For inspection procedures, see Shop Manual.

PAPER ELEMENT TYPE AIR CLEANER MAINTENANCE

The air cleaner element should be cleaned or replaced when the dust indicator light in the cluster comes on.

Removal and installation of element



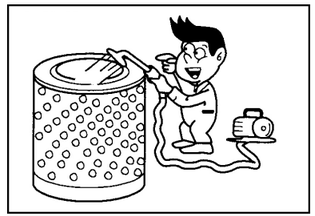
1. Loosen the wing nut ① and remove the cover ② straight and withdrow the element ③.
2. Check the element for contamination. The cleaning procedure varies with the degree of contamination.
3. After cleaning, install by reversing the removal procedure.

NOTE:
The inner element should be replaced when he outer element is replaced.
Note that the inner element is not washable.

Cleaning of element

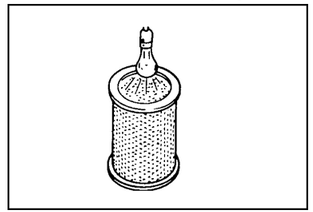
Dry dust buildup

Blow clean compressed air evenly up and down from inside the element to loosen and remove the dust.



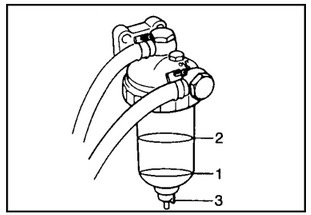
NOTE:
Do not strike the element or hit it against other object. Make sure that the pressure of the compressed air used for cleaning does not exceed 2 kgf /cm².

Checks to make after drying



Check the filter paper for damage, pinholes and thin portions. If a defective portion or broken packing is evident, replace the element with a new one.

REMOVAL OF CONDENSATE FROM WATER SEPARATOR



Check the water separator about once a week. Remove the condensate before the float 1 in the water separator reaches the position of the red line2.

To remove the condensate proceed as follows:

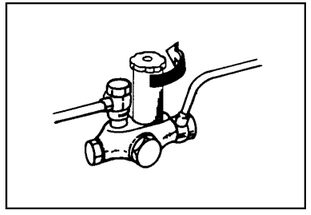
1. Loosen the plug 3 to discharge the condensate.
2. After the float has come down,

tighten the plug.

3. Wipe clean the water separator and its neighborhood.

4. Check for fuel leaks.

BLEED OF FUEL FILTER

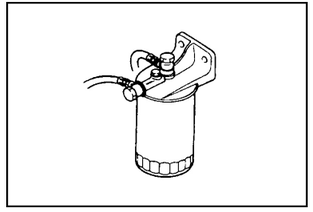


If the engine stops by being used up fuel, cleaning the fuel system or changing the fuel filter the engine does not start through fuel is replenished due to be come air into the fuel system .

Air should be removed from the fuel system to make it start your engine.

Bleed air by the following procedure.

1. Loosen the air bent cock on the top of the fuel filter.



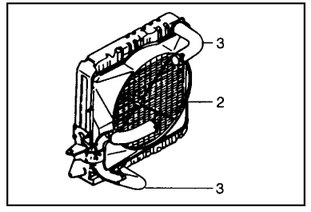
2. Turn the priming pump couter-clckwise with pressing down and then the pump piston is pushed out by a spring.

3. Operate the priming pump until the fuel without air bubble flow out.

4. Tighten the air bent cock and fix the pump piston by turning clockwise with pressing down.

5. Start the engine and check for fuel leaks.

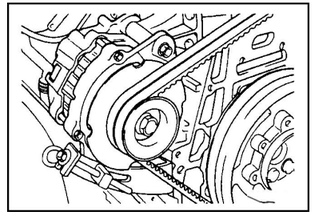
CHECK RADIATOR AND RADIATOR HOSE



Check the radiator 2, radiator hose 3, etc. for water leaks.

Check for the traces of water leaks on the g round where the vehicle has been parked. If there are water leaks in the cooling system, take the vehicle to the nearest service shop for service.

Adjustable Generator freeplay



Slightly loosen the generator attaching bolts and adjust by moving the whole generator.

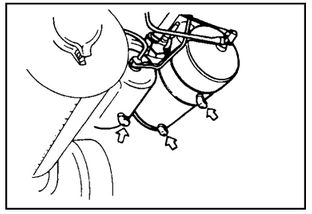
CAUTION:

- After adjustment, tighten the bolts and nuts firmly. Overtension will cause damage to the V-belt and bearing.
- Make sure that the V-belt is not fouled with oil or grease. Oil or grease will cause the belt to slip and will shorten its life.
- When a V-belt is defective, make sure that the two V-belts are replaced as a set.

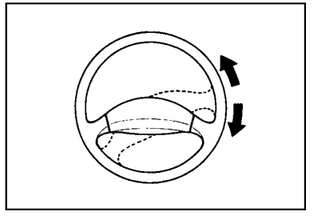
REMOVAL OF CONDENSATE WATER FROM AIR TANK

Open all drain cocks to remove the water collected in the air tank.

STEERING WHEEL FREE PLAY



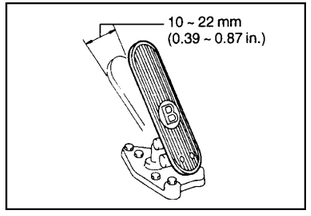
STEERING WHEEL FREE PLAY



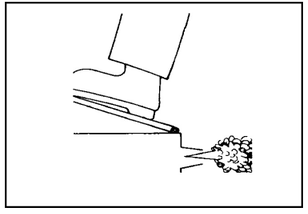
Lightly rock steering wheel at the center position to check for free play. If the free play exceeds 15 to

35 mm, have the steering wheel adjusted by your nearest Authorized Dealer.

CHECKING BRAKE PEDAL FREE PLAY



Check the pedal free play by depressing the pedal with finger.The pedal free play is the stroke made by the pedal moves until you feel a change in resistance.This is the brake pedal free play. The freeplay should be within the limits specified in the illustration below. If it is not, have it inspected by your JAC dealer and adjusted or repaired if necessary.

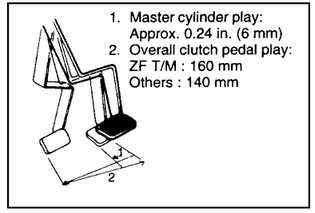


CLUTCH PEDAL PLAY

The clutch pedal play will decrease as the disc wears. If it is not adjusted, the clutch will slip, making it impossible to operate the vehicle. When the clutch pedal play has decreased to less than 8.3 in. (210 mm), adjustment is required.

Check the pedal play by depressing the pedal with finger. Depressing the pedal will make you feel resistance in two stages. The pedal play is the stroke made by the pedal until it reaches the second stage and is 0.24 to 0.31 in. (6 to 8mm) standard. The play in the first stage is the master cylinder play. In the second stage, it is the clutch booster push rod play. The play is easier to check when the compressed air pressure is lower. If it is out of specification, have it inspected and adjusted or repaired if necessary.

● Adjust the clutch master cylinder play, which is the movement of

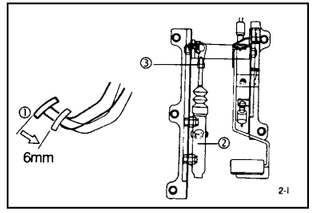


the pedal up to the first resistance encountered when the pedal is depressed with your finger. Adjust this play to about 6 mm (0.24 in.) by turning the center belt of the master cylinder push rod. After adjusting, firmly tighten the nut on the center belt while holding the belt in position with a corench.

1) Master cylinder play:
Approx. 0.24 in. (6 mm)

2) Master cylinder

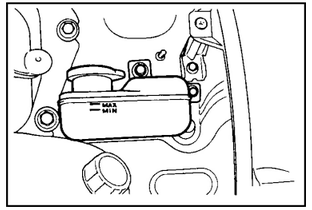
3) Play adjusting nut



NOTE:
If the adjustment cannot be made to this play specification, the clutch disc is worn down to the service limit. Take the vehicle to your nearest service facility for correction.

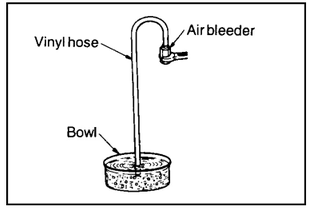
Bleeding of clutch piping

If there is air in the piping, the clutch will be hard to disengage.

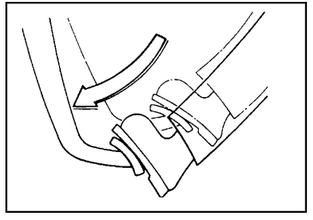


When the fluid reservoir tank has been emptied, be sure that the clutch piping is bled. Have an assistant in bleeding the piping and proceed as follows:

1. Fill the clutch fluid reservoir tank with brake fluid up to the "MAX" level. Since the level falls during the bleeding operation, add brake fluid to prevent emptying the tank.



2. Remove the rubber cap from the air bleeder of the clutch booster, mount one end of a transparent vinyl hose, and put the other end in a bowl containing brake fluid.



3. Depress the clutch pedal several times. After the stroke has settled, keep the pedal depressed.

Let the assistant loosen the air bleeder to discharge the air along with the brake fluid. Let him tighten the air bleeder immediately after air has been discharged.

NOTE:
If the brake fluid is discharged from the air bleeder, the stroke of the pedal will change. Tighten the air bleeder immediately after the pedal has touched the stopper.

4. After the air bleeder has been tightened, release the pedal.

5. Repeat steps 3 and 4 until there are no more air bubbles in the brake fluid that runs out from the air bleeder. As a final step, tighten the air bleer firmly and install the rubber cap.

6. Check the fluid level in the fluid reservoir tank and add brake fluid up to the "H" level. Depress the clutch pedal to check for fluid leaks.

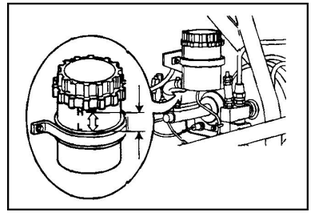
CHECKING THE BRAKES

CAUTION:
Because brakes are essential to the safe operation of the car, it is suggested that they be checked and inspected by your JAC dealer. The brakes should be checked and inspected for wear at those intervals specified in the vehicle maintenance schedule in Section 6-3.

Checking the Brake Fluid Level

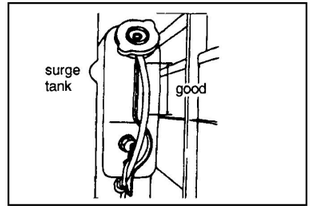
WARNING:
Use caution when handling brake fluid. It can damage your vision if it get into your eyes. It will also damage your vehicles paint if spilled on it and not removed immediately.

To Check the Fluid Level (If installed)

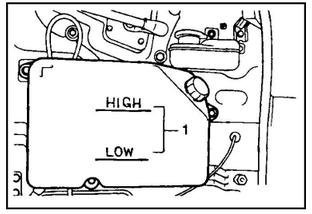


The fluid level in the brake fluid reservoir should be checked periodically. The level should be between the "L" and "H" marks on the side of the reservoir. If the level is at or below the "L" mark, carefully add fluid to bring it up to "H". Do not overfill.

COOLANT LEVEL AND LEAKS IN COOLING SYSTEM



If [icon] lamp is illuminated add the coolant after removing the surge tank cap at firt.



Check reservoir tank for the coolant level.The coolant level should be with in the range 1 shown in the illustration. If the level is low, add coolant by reference to "Replacement of coolant".

CAUTION:

- Check the coolant level before vehicle operation while the engine is cold.
- After checking the coolant level, be sure to reinstall the cap positively.
- Be sure to add the coolant containing antirust or anti-freeze of the same concentration as the coolant in the cooling system.
- Do not check the coolant level after the engine has been stopped. Be sure to check the level when the coolant temperature is low.

Checking and changing the engine coolant

WARNING:

Do not remove the surge tank cap when the engine is hot. When the engine is hot, the coolant is under pressure and may erupt through the opening if the cap is removed. You could be seriously burned if you do not observe this precaution.

Do not remove the surge tank cap until the radiator is cool to the touch.

Handling of cooling system

Engine overheating is caused by the low coolant level or rust and scale accumulations in the cooling system. If the radiator clogs very badly or coolant is very dirty, perform cleaning and coolant replacement as described below. If the coolant level is low, add coolant as necessary.

CAUTION

When the cooling system is cleaned, the coolant or cleaning solution is drained at elevated temperature. Therefore, be careful not to get scalded.

Addition of coolant

If the warning lamp lights when the starter switch is set to "ON", the coolant level is low. Note that the procedure for adding coolant varies according to the type of the engine cooling system on vehicle. Use city water as coolant and add anti-rust or anti-freeze to have a specified concentration for prevention of engine or cooling system corrosion.

Do not use hard water from well river etc.

Antifreeze

Select proper concentration between 30 and 53% by reference to the table shown below.

Atmosphere temperature (°C)	Antifreeze fluid (%)	Coolant (%)
-10	30	70
-15	36	64
-20	42	58
-25	45	55
-30	50	50
-35	53	47

CAUTION:

- Be sure to use anti-freeze at the concentration most appropriate for the atmospheric temperature within a range from 30 to 53%. If the concentration is below 30%, the anti-corrosion property will be adversely affected. If the concentration is above 53%, the anti-freeze property will decrease and engine overheating will also be caused. Use anti-freeze at the specified concentration.
- If winter is over, be sure to drain the coolant containing antifreeze and put In genuine anti-rust "RADIPET 9".

ADJUSTMENT OF BRAKE SHOE CLEARANCE

Air brake vehicles

If the brake linings are wom and the clearance between the brake drum and linings (brake shoe clearance) increases, it can be dangerous because the brake performance deteriorates. Check and adjust the brake shoe clearance at regular intervals.

- The brake shoe clearance should be determined on the basis of the stroke of the brake chamber push rod. If the push rod stroke exceeds 40 mm (1.57 in.) on the front wheels or 50 mm (1.97 in.) on the rear wheels when the brake pedal is depressed all the way, ad-

just the clearance.

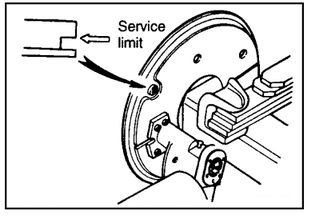
1. Apply chocks to the tires before the wheel to be adjusted is jacked up.

2. Strongly push the outer periphery of tire to check for wheel looseness. If the wheel is loose, it cannot be correctly adjusted. Take the vehicle to your nearest service shop for correction.

3. Start the engine to increase the compressed air pressure to more than 6.4 kgf/cm² (625kPa). Leave the engine running at idle.

4. Push the knob of the cab control valve to release the emergency brakes.

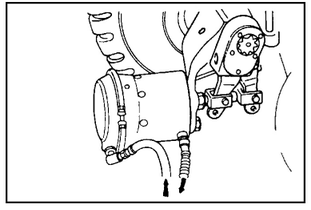
5. Remove the dust cap from the wheel brake inspection hole and check the lining thickness. If the lining is worn down to the notch shown in illustration, it is worn beyond the service limit. Have your nearest service shop replace the linings. Make sure that the dust cap is reinstalled after inspection.



6. Turn the worm shaft of the slack adjuster in the direction that the push rod extends until the worm shaft touches the stopper.

7. Back off the worm shaft 3 or 4 notches on the front wheels or 4 or 5 notches on the rear wheels.

The notches are indicated by the clocks the worm shaft makes when turned.



8. Measure the stroke made by the push red of the brake chamber when the brake pedal is depressed all the way. Verify that the stroke is up to specifications given in the following table if it is out of specification, adjust with the worm shaft.

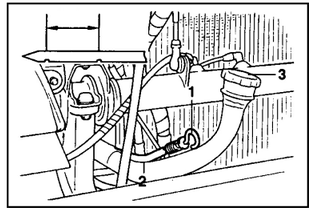
Standard stroke of brake chamber push rod

Front wheel	25 mm (0.98 in.)
Rear wheel	30 mm (1.18 in.)

9. Turn the wheel in the forward direction by hand and depress the brake pedal to stop rotation of the wheel. Turn the wheel to check for dragging. With slight foot pressure on the brake pedal, turn each wheel by hand to check that the front wheels are slightly lighter to turn than the rear wheels or there is not great difference and that right and left wheels are about equal.

10. As a final step, install the dust plug. Operate the vehicle at a slow speed and perform brake tests to check for brake performance, uneven braking and other troubles.

ENGINE OIL LEVEL



Position the vehicle on a level surface. The best time to check the oil level is before operating the engine or about 30 minutes after stop of engine.

The checking procedure is as follows:

1. Wipe the level gauge 1 well with a cloth, insert it into the level gauge guide 2 and remove the gauge to check the oil level. The oil level should be between "FULL" and "LOW" inscribed lines.

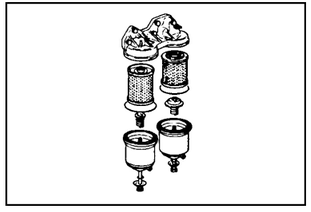
> CAUTION:
> If the oil level is checked when the engine is stopped before sufficient rise of oil temperature, the detected level will be lower than the actual level, because some oil accumulation in the engine does not flow back into the oil pan.

2. If the level is low, add engine oil through the filler cap 3. After addition of engine oil, allow more than six minutes and then recheck

the oil level.

3. If a badly contaminated engine oil is obvious when checking the oil level, replace the engine oil irrespective of the service intervals.

OIL FILTER



● The engine oil and filter should be changed at those intervals specified in the maintenance schedule. If the car is being driven in severe conditions, more frequent oil and filter changes are required.

● If the filter is blocked the warning light is on and if the oil pressure is low the buzzer sounds at the same time. Replace it independent of the mileage.

● An element assembly cannot be reused.

Replacement of filter type

1. Put an empty container below the oil filter drain hose. Remove the air bleeding plug and drain the engine oil out.

2. Disassemble the case by pulling the center bolt on the oil filter out and remove the element.

3. Use the genuine parts when you assemble. Replace the element and rub packing of the case simultaneous. Apply engine oil on the rub packing before assembling. Tighten the center bolt with specified torque 5.5±0.5 kg.m.

4. When you replace only the oil filter replenish the engine oil.

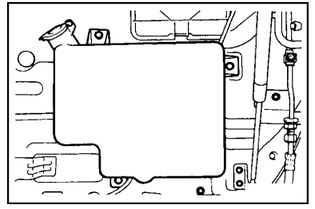
5. Crank the engine and check the oil leakage and the oil level later.

CAUTION

Be very careful when draining the engine oil as it may be hot enough to burn you.

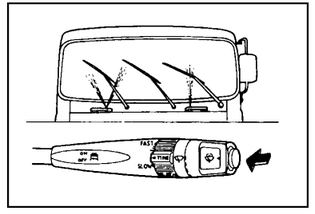
Dropped oil may cause a fire. Wipe and clean each part in the engine room.

WINDSHIELD WASHER FLUID LEVEL



Check to ensure that windshield washer fluid is at a proper level.

Operation of wipers



● Push the knob to check that the windshield washer fluid is sprayed at the correct position.

● Turn the lever and check the wipers for proper operation.

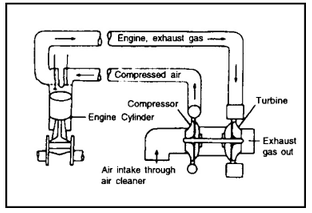
NOTE:

Be sure to operate the windshield washer before the wipers are operated.

Do not operate the wipers on dry glass,This can result in more rapid wear of the wiper blades and may scratch the glass.

TURBOCHARGER

Principle of turbo charger operation



Turbo engine is a device that produces more power by supplying sufficient air into the combustion chamber by using the energy of exhaust gas is usually wasted in the general engine.

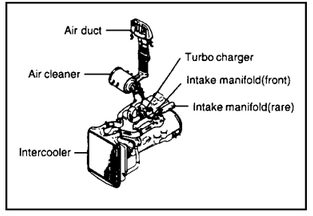
The exhaust gases are accelerated in the turbine housing and directed onto the turbine wheel to turn it.

This spins the compressor wheel,

which results in the intake air being forced into the engine cylinders.

As the intercooler is installed that improves the fuel economy and power of the engine, while reducing harmful exhaust gases to a minimum.

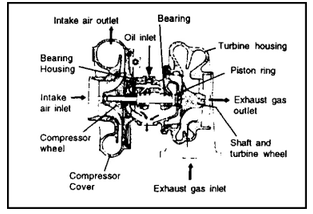
Intercooler



The intake air compressed by the turbocharger increases to 170~℃ and as a result, power of the engine is limited by engine overheated. The intercooler cools the heat. This improves the combustion efficiency and as a result, it increases that the fuel economy and power of the engine, while reducing harmful exhaust.

Precautions while operating

1. Check the oil level and oil pressure



Before starting the engine, measure the crankcase oil level. As soon as the engine starts, check oil pressure indicator for nor mal rise.

2. Warm the engine up

After the engine starts, avoid sudden acceleration or sudden start.

Enough RPM is needed before starting engine until the engine is warm for 3 to 10 minutes.

3. No staring suddenly and No accelerating heavily

If you accelerate heavily, start suddenly or when you turn off the engine suddenly it may damage to the engine and turbocharger parts.

CAUTION

● If running a vehicle without air cleaner filter, foreign material drawn can destroy engine and turbo charger.

● When you turn off an engine suddenly may damage bearing, hi-speed rotation part of turbo charger inside, so let the engine run at idle for sufficient time.

BATTERY INSTRUCTIONS

Check the battery fluid level and specific gravity at regular intervals.

CAUTION:

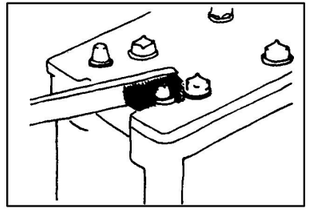
● The battery generates highly Inflammable gases.

Take special care not to use a fire or produce sparks near the battery.

● The battery fluid contains sulfuric acid.

In case of contact with the skin or clothes, immediately wash away with a large amount of clean water and seek medical help.

Cleaning of battery terminals



1. Clean the battery terminals if they are stained or corroded. If there is white powder on the terminals, wash with hot water.

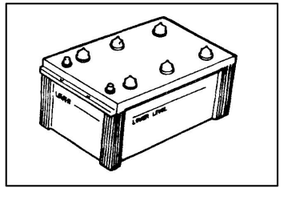
2. Remove and polish the terminals with a wire brush or emery paper if they are markedly corroded.

3. Apply a thin coat of grease to the terminals after cleaning and tightening.

NOTE:
The terminals must be firmly tightened. Before cleaning the terminals, make sure the caps are installed securely to prevent foreign matter from entering the battery.

Fluid Quantity

The fluid level should be between the "UPPER" and "LOWER" level lines. If the level is low, add distilled water up to the "UPPER" line.



NOTE:
If your battery has only one level line, the line indicates the "LOWER" level (lowest).

If your battery has no level line, the fluid level should be between 10 and 15mm above the plates.

If the level is low, add distilled water until it is 15mm above the plates.

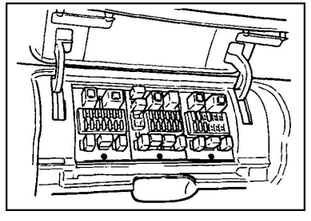
NOTE:
After addition of water, be sure to charge the battery (by operating the vehicle), because otherwise the fluid could be frozen in winter.

Specific gravity

Measure the specific gravity. If it is less than 1.220 (at a fluid temperature of 20℃), recharge the battery.

NOTE:
The standard specific gravity of battery is 1.260 to 1.270 (at a fluid temperature of 20℃).

REPLACEMENT OF FUSE



If the electrical system is out of order, open the cover and check for a blown fuse in the following sequence.

1. Open the cover.
2. Remove the circuit checker from the reverse side of the cover.
3. Insert the female terminal of the circuit checker into "CHECKER" ground terminal and touch the male terminal to the fuse top surface.
4. If the lamp lights, the fuse is good.

The headlamp circuit should be checked with the head light switch at ≣D lighting position.

5. Replace the defective fuse.

CAUTION:

- Use of a fuse out of specification or wire could be dangerous. Be sure not to use a substitute fuse. Make sure that a blown fuse is replaced with a genuine fuse. If a defective point cannot be located, have inspection made at your nearest service shop.
- Do not pour water over the relay and fuse box. Do not put your foot on the box or kick it. When the inside of the cab was cleaned with water, remove the water completely through the drain hole in the floor and then tilt the cab.

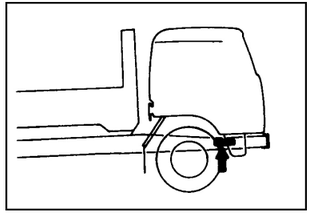
REPLACING LIGHT BULBS

Before attempting to replace a light bulb, be sure the switch is turned to the "OFF" position and place the ignition switch in the "LOCK" position. Be sure to replace the burned-out bulb with one of the same number and wattage rating.

Lamp Name		V-W
1. Head lamp		24-75/70
	Position lamp	24-5
2. Fog lamp		24-55
3. Turn signal lamp		24-21
4. Side turn signal lamp		24-12
5. Turn signal lamp		24-21
6. Tail/Stop lamp		24-5/21
7. Backup lamp		24-21
8. License lamp		24-12

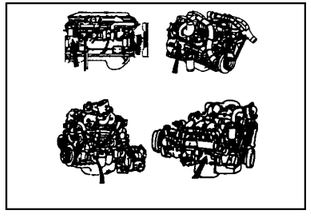
CONSUMER INFORMATION

CHASSIS NUMBER



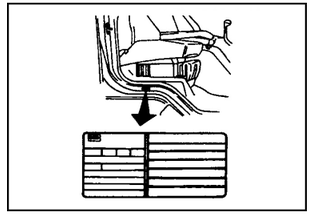
Stamped on the right front frame.

ENGINE NUMBER



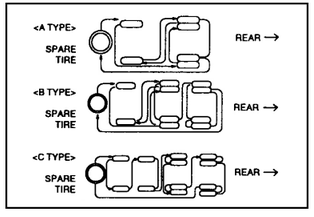
The engine number is stamped on the engine crank case.

NAMEPLATE



The nameplate showing the vehicle model, chassis number and engine model is mounted under

TIRE ROTATION



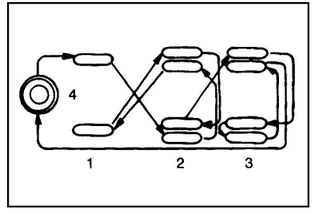
Tires should be rotated every 8,000 km (5,000miles). If you notice that tires are wearing unevenly between rotations, have the car checked by a JAC dealer so the cause may be corrected.

After rotating, adjust the tire pressure and be sure to check wheel nut tightness.

NOTE:

- Do not mix biss-ply and radial-ply under any circumstances.
- In ace double rear wheel, the difference of outer diameter between outer wheel and Inner wheel Is less than 12mm.

DOUBLE REAR AXLE



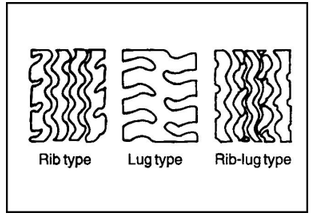
1. Front tire
2. Rear front tire
3. Rear reartire
4. Spare tire

PRECAUTIONS BEFORE HIGH SPEED OPERATION

The higher the vehicle speed, the more heat the tires generate, and eventually there is a danger or a burst.

The heat generated by the tires varies greatly with the tire pattern, tire inflation pressure, load and speed. Pay attention to the following points.

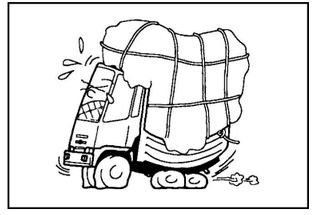
- Keep the tires inflated at normal pressure.
- Avoid overloading.



The lug type pattem tires are not suited for high speed operation, as they tend to skid. If your vehicle is equipped with the lug type tires, care should be taken not to operate it at very high speed.

Exercise special car when controlling the steering wheel or applying brakes on a wet road surface.

BE SURE TO CHECK THE FOLLOWING WHEN LOADING

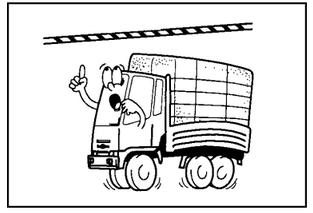


Do not load cargo on one side only. Make sure that cargo is evenly distributed.

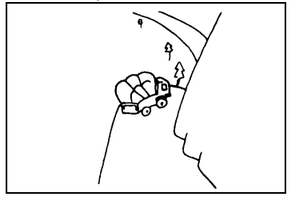
When long cargos are to be loaded, use rigid frames to minimize their protrusion from the rear end of the body.

NOTE:
Be careful about the height of loading.

● When the rigid frames are used under the cargo, pay attention to the positions of the frames.



● Place a sheet over the cargo and positively fasten the ropes to prevent the cargo from getting out of position. Make sure that the sheet is securely fastened and does not flap with the wind.



● If cargo is loaded to an excessive height, the vehicle might overturn on turns.

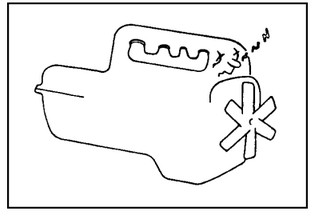
● If the engine shuts down because of lack of fuel during operation, the air will enter the fuel system and the engine won't start even after the fuel tank is refilled. After fuel has been added, bleed the fuel system according to front

TROUBLESHOOTING

Refer to the following causes when the vehicle fails, and fake the corrective action as soon as possible. If the causes can not be founded out, have the vehicle checked and repaired by an authorized dealer.

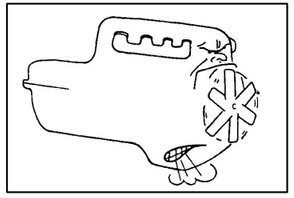
When the starter switch is in "S" position, engine doesn't start.

Starter does not rotate at all or rotates slowly.



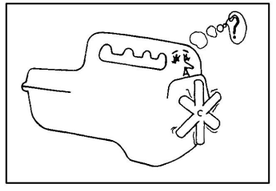
CAUSE	ACTION
Battery discharged	Recharge or replace
Battery terminal disconnected, loosened or corroded	Secure terminal and clean corroded portion
Engine oil viscosity too high	Replace with oil or proper viscosity

Starter rotates but engine does not start



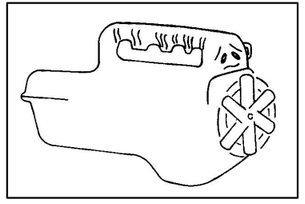
Air heater circuit fuse blown-out	Replace fuse
Insufficient pre-heating	Preheat fully
Fuel short	Refill
Air cleaner clogged	Clean or replace element
Air in fuel system	Bleed

Engine stalls when speed is reduced



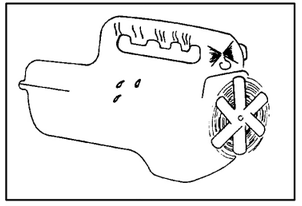
Engine too cold	Close radiator cover
Air cleaner clogged	Clean or replace element
Idling speed low	Adjust with engine control button

Low torque



Parking brakes applied	Releases all the way
Air cleaner clogged	Clean or replace element

Engine overheating

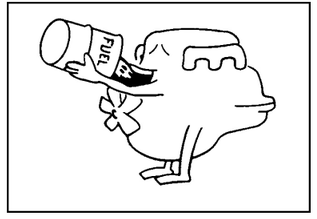


Radiator cover closed	Open cover
Coolant level low	Add coolant and check for leaks
Radiator front surface contaminated	Clean
Fan belt loose or broken	Adjust tension or replace
Rust or scale in radiator	Clean radiator or replace coolant

poor exhaust emissions

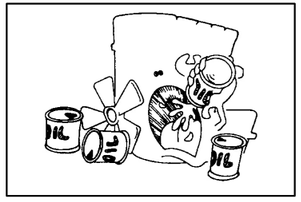
Air cleaner clogged	Clean or replace element

Excessive fuel consumption



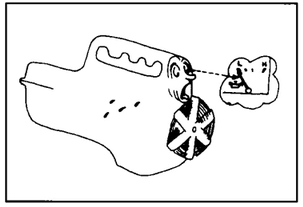
Fuel leaks	Correct leaks
Low tire inflation pressure	Adjust tire inflation pressure
Engine too cold	Close radiator cover
Air cleaner clogged	Clean or replace element

Excessive engine oil consumption



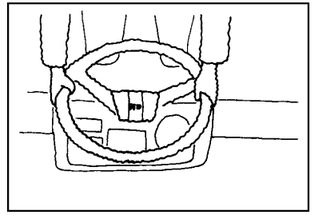
Oil level high	Adjust to specified level
Oil leaks	Correct leaks
Warm-up neglected	Be sure to warm-up

Engine oil pressure does not rise



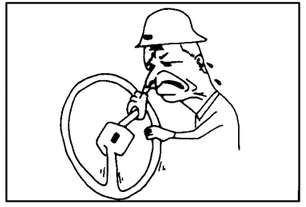
Low oil level	Adjust to specified level

Steering wheel and vehicle make abnormal vibration



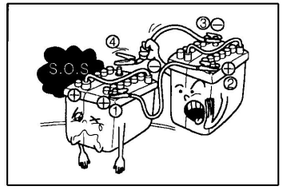
Tires unevenly inflated	Adjust to specified inflation pressures
Tires unevenly worn	Replace
Wheel nuts loose	Tighten to specifications

Hard steering



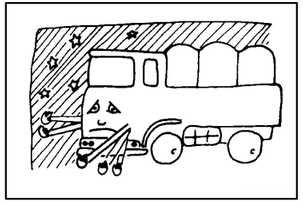
Front tires underinflated	Adjust to specified inflation pressures

Run-down battery



Lamps or switches left ON	Turn off all unnecessary switches
Battery terminal disconnected, loose or corroded	Reconnect terminal securely and clean corroded portions
Low battery fluid level	Add
Fan belt loose or broken	Adjust tension or replace belt
Battery out of life	Replace

Lamps do not light



Fuse blow	Replace
Bulb defective	Replace