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If low, check for leaks and add engine coolant up to the ”FULL”. HINT Check the indicator as shown. CHECK BATTERY TERMINALS, FUSIBLE LINK AND FUSES a Check that the battery terminals are not loose or corroded. Disconnect the IAC valve air hose. g Disconnect the PS air hose. h Using 8 mm hexagon wrench, remove the two bolts, nuts air intake chamber and gasket. REMOVE CYLINDER HEAD COVERS Remove the six nuts, seal washers, cylinder head cover and gasket.Measure the valve clearance. See procedure step a d Remove the adjusting shim. Turn the crankshaft so that the cam lobe for the valve to be adusted faces up. Press down the valve lifter with SST A, and remove SST B.RECONNECT HYDRAULIC MOTOR PRESSURE PIPE Connect the hydraulic pressure pipe to the air intake cham ber with the bolt. 28. REINSTALL EGR PIPE Install a new gasket, sleeve ball and the EGR pipe with the two bolts and union nut. REINSTALL EMISSION CONTROL VALVE SET a Install the emission control valve set with the two bolts. b Connect the two VSV connectors. c Connect the two vacuum hoses of the IACV VSV. d Connect the two vacuum hoses of the fuel pressure control VSV. INITIAL CONDITIONS a Engine at normal operating temperature b Air cleaner installed c All pipes and hoses of air induction system connected d All operating accessories switched OFF e All vacuum lines properly connected. WARM UP AND STOP ENGINE Allow the engine to warm up to normal operating tempera ture. NOTICE This measurement must be done in as short a time as possible.REMOVE RH FRONT WHEEL REMOVE RH FENDER APRON SEAL REMOVE PS DRIVE BELT Loosen the bolts, and remove the drive belt. 10. REMOVE RH ENGINE MOUNTING STAY AND NO.2 RH ENGINE MOUNTING BRACKET Remove the bolt, nut, mounting stay and mounting bracket. 14. REMOVE PS OIL RESERVOIR TANK WITHOUT DISCONNECTING HOSES 15.REMOVE CRANKSHAFT PULLEY a Using SST, remove the pulley bolt.Do not allow the timing belt to come into contact with oil, water or steam.http://hvpeds.com/upload/contents/comet-chv-5x-manual.xml

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Do not utilize timing belt tension when installing or removing the mount bolt of the camshaft timing pulley. If necessary, replace the timing belt. INSPECT IDLER PULLEYS Check that the idler pulley turns smoothly. INSTALL RH CAMSHAFT TIMING PULLEY AND TIMING BELT a Remove any oil or water on the RH camshaft timing and No.2 idler pulleys, and keep them clean. b Align the installation mark on the timing belt with the timing mark of the RH camshaft timing pulley as shown. If the marks do not align, remove the timing belt and reinstall 15. INSTALL ENGINE RH MOUNTING BRACKET Install the mounting bracket with the three bolt. Torque 39 N m 410 kgf cm, 30 ft lbf 16. Torque 64 N m 650 kgf cm, 47 ft lbf 20. INSTALL RH ENGINE MOUNTING STAY Install the mounting stay with the bolt and nut. Torque 31 N m 320 kgf cm, 23 ft lbf 21. Bolt Torque 75 N m 760 kgf cm, 55 ft lbf Torque 62 N m 630 kgf cm, 46 ft lbf b Install the No.3 RH engine mounting stay with the two bolts. REMOVE EMISSION CONTROL VALVE SET a Disconnect the two vacuum hoses of the fuel pressure control VSV. b Disconnect the two vacuum hoses of the IACV VSV. c Disconnect the two VSV connectors. d Remove the two bolts and emission control valve set. DISCONNECT RH ENGINE WIRE HARNESS a Disconnect the following connectors 1 Three injector connectors 2 Engine coolant temp.REMOVE INTAKE MANIFOLD a Remove the two bolts and No.2 idler pulley bracket stay and disconnect the ground strap. b Remove the eight bolts, four nuts, intake manifold and gasket. 29. REMOVE RH EXHAUST MANIFOLD a Remove the three nuts and heat insulator. NOTICE Be careful not to damage the camshaft. d Using snap ring pliers, remove the snap ring.

REMOVE CYLINDER HEADS a Using a 8 mm hexagon wrench, remove the cylinder head recessed head bolts. b Uniformly loosen and remove the cylinder head 12 pointed head bolts in several passes, in the sequence shown. NOTICE Head warpage or cracking could result from re moving bolts in an incorrect order.http://ndesert.nazwa.pl/userfiles/comet-clutch-tuning-manual.xml

REMOVE VALVES a Using SST, compress the valve spring and remove the two keepers. Using a gasket scraper, remove all the carbon from the piston top surfaces. Maximum warpage 0.10 mm 0.0039 in. If warpage is greater than maximum, replace the cylinder head. INSPECT AND GRIND VALVES a Grind the valve enough to remove pins and carbon. b Check that the valve is ground to the correct valve face angle. Valve face angle 44.5 c Check the valve head margin thickness. Standard margin thickness 1.0 mm 0.039 in. Minimum margin thickness. If not, replace the valve.Free length 41.4 mm 1.630 in. If the free length is not as specified, replace the valve spring. c Using a spring tester, measure the tension of the valve spring at the specified installed length. Inspect camshaft bearings Check the bearings for flaking and scoring. If the bearings are damaged, replace the bearing caps and cylinder head as a set. Measure the Plastigage at its widest point.IF NECESSARY, REPLACE SPARK PLUG TUBE GASKETS a Bend up the tab on the ventilation baffle plate which prevents the gasket from slipping out.NOTICE Be sure to install the gasket correctly. b Place the cylinder head in position on the cylinder head gasket. Install and uniformly tighten the eight bearing cap bolts in several passes, in the sequence shown. Torque 16 N m 160 kgf cm, 12 ft lbf g Remove the service bolt B. INSTALL RH EXHAUST MANIFOLD a Install a new gasket and the exhaust manifold with new six nuts. Uniformly tighten the nuts in several passes. Torque 39 N m 400 kgf cm, 29 ft lbf b Install the heat insulator with the three nuts. INSTALL INTAKE MANIFOLD a Install two new gaskets and the intake manifold with the eight bolts and four nuts. Uniformly tighten the bolts and nuts in several passes. Torque 18 N m 180 kgf cm, 13 ft lbf b Install the No.2 idler pulley bracket stay and ground strap with the two bolts. Torque 13 N m 130 kgf cm, 9 ft lbf 18. INSTALL AIR PIPE a Install the air pipe with the two bolts. Torque 8.

3 N m 85 kgf cm, 73 in. lbf 19. CONNECT RH ENGINE WIRE HARNESS a Connect the two clamps, and install the engine wire harness with the four bolts. b Connect the following connectors 1 Three injector connectors 2 Engine coolant temp.Torque 34 N m 350 kgf cm, 25 ft lbf b Connect the IACV vacuum hose. c Connect the No.2 fuel pipe with two new gaskets and the union bolt. CONNECT LH ENGINE WIRE HARNESS a Connect the three clamps of the LH engine wire harness and install the wire harness with the two bolts. b Connect the following connectors 1 Three injector connectors 2 Cold start injector time switch connector 3 Engine coolant temperature sensor connector 4 Oxygen sensor connector. INSTALL IAC VALVE a Install a new gasket with the two bolts.DISCONNECT ENGINE COOLANT RESERVOIR HOSE Remove the bolt and disconnect the reservoir hose. 14. REMOVE WASHER TANK a Remove the three washer tank mounting bolts. b Disconnect the connector and hose, and remove the washer tank. DISCONNECT VACUUM HOSES a Brake booster vacuum hose from air intake chamber. b Charcoal canister vacuum hose c IACV vacuum tank vacuum hoses 24. DISCONNECT PS ACV a Disconnect the two PS air hoses. b Remove the nut and disconnect the PS ACV 29. DISCONNECT HYDRAULIC COOLING FAN PRESSURE HOSE Using SST, disconnect the pressure hose.DISCONNECT RR ENGINE MOUNTING INSULATOR a Remove the hole plugs. b Remove the four nuts, and disconnect the mounting insulator. 33. REMOVE ENGINE MOUNTING ABSORBER Remove the four bolts and engine mounting absorber. 34. REMOVE ENGINE AND TRANSAXLE ASSEMBLY FROM VEHICLE a Lift the engine out of the vehicle slowly and carefully.CHECK CONNECTING ROD THRUST CLEARANCE Using a dial indicator, measure the thrust clearance while moving the connecting rod back and forth.Check the crank pin and bearing for pitting and scratches. If the crank pin or bearing is damaged, replace the bearings. Arrange the piston and connecting rod assemblies in correct order.

CHECK CRANKSHAFT THRUST CLEARANCE Using a dial indicator, measure the thrust clearance while pry ing the crankshaft back and forth with a screwdriver.If the journal or bearing is damaged, replace the bearings. If necessary, grind or replace the crankshaft. Place the crankshaft on the cylinder block. If necessary, grind or replace the crankshaft. HINT If using a standard bearing, replace with one having the same number. REMOVE CRANKSHAFT a Lift out the crankshaft. b Remove the upper main bearings and upper thrust washers from cylinder block. HINT Arrange the main bearings and thrust washers in cor rect order. If deep scratches are present, rebore all the six cylinders or replace the cylinder block. INSPECT CYLINDER BORE DIAMETER HINT There are three sizes of the standard cylinder bore di ameter, marked ”1”, ”2”. If any movement is felt, replace the piston and pin as a set. REMOVE PISTON RINGS a Using a piston ring expander, remove the two compression rings. HINT The piston and pin are a matched set. Arrange the pistons, pins, rings, connecting rods and bearings in correct order. The mark is stamped on the top of the piston. a Using a micrometer, measure the piston diameter at right angles to the piston pin center line, 26 mm 1.02 in. from the piston head. INSPECT CONNECTING ROD Inspect connecting rod alignment Using a rod aligner and thickness gauge, check the connect ing rod alignment. Check that the cap nut can be turned easily by hand to the end of the thread. b If the cap nut cannot be turned easily, measure the outer diameter of the compressed thread with a vernier caliper. Replace the piston rings with ones to match the oversized pistons.Maximum circle runout 0.06 mm 0.0024 in. If the circle runout is greater than maximum, replace the crankshaft. HINT Be sure that end gap of the snap ring is not aligned with the pin hole cutout portion of the piston. Code mark No.1 T or 1R No.2 T2 or 2R c Position the piston rings so that the ring ends are as shown.

NOTICE Do not align the ring ends. Before installing the parts, apply new engine oil to all sliding and rotating surfaces. INSTALL MAIN BEARINGS HINT Main bearings come in widths of 20 mm 0.79 in. and 22 mm. Install main bearing cap bolts HINT The main bearing cap bolts are tightened in two progressive steps steps b and d. If any main bearing cap bolt is broken or deformed, replace a Apply a light coat of engine oil on the threads and under the heads of the main bearing cap bolts. INSTALL CONNECTING ROD CAPS Place connecting rod cap on connecting rod a Match the numbered connecting rod cap with the connecting rod. Torque the bolts. Torque 37 N m 380 kgf cm, 27 ft lbf INSTALL KNOCK SENSORS Using SST, install the two knock sensors.INSTALL ENGINE COOLANT DRAIN COCK a Install a new drain cock as shown. Torque 39 N m 400 kgf cm, 29 ft lbf b Install the drain hose clamp with the bolt. INSTALL DISTRIBUTOR See IG section 12.Torque 77 N m 790 kgf cm, 57 ft lbf INSTALL FR ENGINE MOUNTING INSULATOR Install the mounting insulator with the three bolts. Torque 64 N m 650 kgf cm, 47 ft lbf c Install the RH mounting stays with the three bolts and nut. CONNECT PS ACV a Connect the PS ACV with the nut. b Connect the two PS air hoses. 16. INSTALL FRONT EXHAUST PIPE a Place three new gaskets on the front exhaust pipe. b Install the front exhaust pipe with the bolts and six nuts. CONNECT VACUUM HOSES a Brake booster vacuum hose to air intake chamber b Charcoal canister vacuum hose c IACV vacuum tank vacuum hose 20.CONNECT FUEL INLET HOSE Torque 29 N m 300 kgf cm, 22 ft lbf 24. INSTALL AIR CLEANER ASSEMBLY, VOLUME AIR FLOW METER AND AIR CLEANER HOSE a Install the air cleaner case with three bolts. b Install the air filter. c Connect the air cleaner hose to the throttle body. d Install the air cleaner cap together with the volume air flow meter and air cleaner hose. CAUTION Do not suck air through the valve. Petroleum substances inside the valve are harmful.

VISUALLY INSPECT FUEL TANK Look for deformation, cracks or fuel leakage.HINT Install the filter with the coarser surface facing the at mospheric side outward. The various sensors detect the intake air volume, engine rpm, oxygen density in the exhaust gas, engine coolant temperature, intake air temperature and atmospheric pressure etc. HINT Any diagnostic trouble code retained by the

computer will be erased when the battery terminal is removed. There fore, if necessary, read the diagnosis before removing the battery terminal. However, if your vehicle is equipped with a CB radio trans ceiver, etc. HINT Always check the diagnostic trouble code before dis connecting the battery terminal. NOTICE Do not start the engine. If there is no pressure, check the following parts Fusible link Fuses AM2 30A, EFI 15A, IGN 7.5A SFI main relay Fuel pump Wiring connections CHECK FUEL PRESSURE a Check that the battery voltage is above 12 volts. Turn the ignition switch ON. k Measure the fuel pressure.NOTICE These tests must be performed quickly within 10 seconds to prevent the coil burning out. REMOVE CONNECTOR Remove the two screws, connector support, connector and gasket.REMOVE FUEL PRESSURE REGULATOR Loosen the lock nut, and remove the pressure regulator.REMOVE AIR PIPE WITH HOSES a Disconnect the two air hoses. b Remove the bolts and air pipe with hoses. 21. REMOVE RH DELIVERY PIPE AND INJECTORS a Remove three bolts and RH delivery pipe together with the three injectors. Connect SST union and hose to the injector, and hold the injector and union with SST clamp. HINT Install a suitable vinyl hose onto the injector to prevent gasoline from splashing out. INSTALL LH DELIVERY PIPE AND INJECTORS a Place the two spacers in position on the intake manifold. Torque 29 N m 300 kgf cm, 22 ft lbf b Connect the return hose to the No.1 fuel pipe. INSTALL AIR INTAKE CHAMBER a Using 8 mm hexagon wrench, install a new gasket and the air intake number with the two bolts and nuts.

Apply the proper torque to all parts tightened.Pry the lock plate on the nut. Check idle speed Idle speed 50 rpm Remove cap, filter and separator from DP Check and adjust DP setting speed a Maintain the engine at 3,000 rpm. Check idle speed Idle speed 50 rpm Check throttle opener setting speed a Disconnect the vacuum hose from the throttle opener, and plug the hose end. INSPECT AIR ASSIST SYSTEM a Start and wame up the engine. b Disconnect the No.5 air hose from the IAC valve and plug the hose end with your finger. If continuity is not as specified, replace the relay. Resistance Refer to the chart above If the resistance is not as specified, replace the sensor. CHECK VSV FOR GROUND Using an ohmmeter, check that there is no continuity be tween each terminal and the body. If operation is not as specified, replace the VSV. PREPARATION a Disconnect the connectors from the ECM. b Remove the locks as shown in the illustration so that the tester probes can easily come in. Turn the ignition switch ON. Measure the voltage at each terminal. HINT Perform all voltage measurements with the connectors connected. The tester probe should be inserted in the wiring connector from the wiring side. Check the resistance between each of the terminals of the wiring connector. WARM UP ENGINE Allow the engine to warm up to normal operating tempera ture. The cooling system is composed of the water jacket inside the cylinder block and cylinder head, radiator, water pump, thermostat, electronically controlled hydraulic cooling fan, hoses and other components. The radiator consists of an upper tank and lower tank, and a core which connects the two tanks. If low, check for leaks and add engine coolant up to the ”FULL”. The engine coolant should be mixed with demineralized water or distilled water.REMOVE WATER PUMP a Remove the seven bolts. Do not remove the thermostat, even if the engine tends to overheat.

DISCONNECT ENGINE COOLANT TEMPERATURE SENSOR CONNECTOR REMOVE WATER INLET Remove the three nuts and water inlet from water pump. INSTALL WATER INLET Install the water inlet with the three nuts. NOTICE If using a high pressure type cleaner, be careful not to deform the fins of the radiator core.REMOVE RADIATOR AND HYDRAULIC COOLING FAN a Remove the two bolts and two upper supports. HINT Make a note of the direction to face the pipes. Water leakage will result if the bottom of the lock plate groove is damaged or dented, Therefore, repair or replace if necessary.Use a plier or like object and be careful not to damage the core plates. Fluid ATF DEXRON HINT Check that fluid level is within the ”HOT” level on reser voir tank. If the fluid is cold, check that it is within the ”COLD” level on the tank. REMOVE HYDRAULIC MOTOR

FROM FAN SHROUD Remove the three bolts and hydraulic motor. NOTICE Be careful not to damage the motor housing. REMOVE MOTOR COVER a Remove the four bolts and motor cover. NOTICE Be careful not to damage the housing.Before installing the parts, apply new fluid to all sliding and rotating surfaces. MOUNT MOTOR HOUSING Slightly mount the motor housing in a vise. NOTICE Be careful not to damage the motor housing. REMOVE RH HEADLIGHT ASSEMBLY a Remove the three bolts. b Disconnect the three connectors and remove the headlight assembly. REMOVE RH FOG LAMP ASSEMBLY a Remove the two bolts. If necessary, replace the oil cooler.INSTALL UPPER RADIATOR SUPPORT SEAL Install the support seal with the ten clips. The lubrication system consists of an oil pan, oil pump, oil filter and other external parts which supply oil to the moving parts in the engine block. If the quality is poor, replace the oil.In addition, used engine oil contains potentially harmful contaminants which may cause skin cancer. REMOVE DRIVE AND DRIVEN ROTORS Remove the eight screws, pump body cover, the drive and driven rotors. If it does not, replace the relief valve.

If necessary, replace the oil pump assembly. INSTALL OIL PAN BAFFLE PLATE Install the baffle plate with the four bolts and nut. Torque 5.5 N m 75 kgf cm, 65 in. lbf 14. INSTALL OIL STRAINER Install a new gasket and the oil strainer with the three nuts. Torque 5.5 N m 75 kgf cm, 65 in. Torque 19 N m 195 kgf cm, 14 ft lbf INSTALL OIL FILTER a Clean the filter contact surface on the filter mounting. The ECM receives signals from various sensors, judges the operating conditions and determines the optimum injection duration, tim ing, ignition timing and idle speed. Shift transmission into “N” position or neutral. Warm up engine at normal operating temperature. Switched off all accessories. Switched off air conditioning. Connect tachometer test probe to terminal IG data link connector 1. Check idle speed. Be sure that fuel is enough in tank. Turn ignition switch on.The G1, G2 signals inform the ECM of the standard crankshaft angle. The NE signals inform the ECM of the crankshaft angle and the engine speed. Disconnect distributor connector. Measure resistance between each terminal shown. Replace distributor.Since the width of the IGT signal is constant, the dwell angle control circuit in the igniter determines the time the control circuit starts primary current flow to the ignition coil based on the engine rpm and ignition timing one revolution ago, that is, the time the Tr turns on. Spark should be generated.Repair or replace harness or connector. Check ignition coil. Disconnect ignition coil connector. Check primary coil. Disconnect igniter connector.Check voltage between terminals THW and E2 of ECM connector. Turn ignition switch on. Sensor Circuit CIRCUIT DESCRIPTION The intake air temp.The structure of the sensor and connection to the ECM is the same as the water temp.Measure voltage between terminals THA and E2 of ECM connector. Check intake air temp.

It indirectly determines whether the fuel mixture is rich or lean by detecting the concentrate of oxygen present in the exhaust gas. Connect terminals TE1 and E1 of data link connec tor 1. Connect positive probe to terminal VF1, VF2 and negative probe to terminal E1 of data link connec tor. Repair or replace harness or connector. Check each item found to be a possible cause of problem.Measure voltage between terminal HT of ECM connec tor and body ground.Warm up engine to normal operating temperature. Measure voltage between terminal HT of ECM connec tor and body ground, when engine is idling and racing at 2,500 rpm. It converts the intake air readings into a voltage signal by means of a potentiometer. Intake air volume signal is used to calculate the basic injection duration and basic ignition advance angle. Measure voltage between terminals VC and E2 of ECM.It converts the intake air readings into a voltage signal by means of a potentiometer. Intake air volume signal is used to calculate the basic injection duration and basic ignition advance angle. Measure voltage between terminals VS and E2 of ECM.Check voltage between terminals VC and E2 of ECM.Turn ignition switch ON. Measure voltage between terminals VTA and E2 of ECM. Check resistance between terminals 3 and 1 of throttle position sensor. Disconnect the throttle position sensor connector. After this signal is converted into a more precise rectangular wave form by the waveform shaping circuit inside the combination meter, it is then transmitted to the ECM.

Drive the vehicle and check if the operation of the speedometer in the combination meter is normal. The No. 1 speed sensor is operating normally if the speedometer display is normal. Hint Check speedometer circuit. A rich mixture is therefore necessary in order to achieve good startability. While the engine is being cranked, the battery voltage is applied to terminal STA of the ECM. Turn ignition switch OFF.

Connect terminals TE2 and E1 of data link connec tor 2. Turn ignition switch ON. Don’t start the engine. Connect terminals TE1 and E1 of data link connec tor 2. This sensor contains a piezoelectric element which generates a voltage when it becomes deformed, which oc curs when the cylinder block vibrates due to knocking. Measure resistance between terminals KNK1, KNK2 of ECM connector and body ground.Repair or replace harness or connector. Does malfunction disappear when a good knock sensor is intalled. Check and replace ECM Reference INSPECTION USING OSCILLOSCOPE With the engine racing 4,000 rpm measure. Repair EGR system. Check resistance of EGR gas temp. sensor. Remove EGR gas temp. sensor. Measure resistance between terminals of EGR gas temp.Air Conditioning Switch Signal The ECM uses the output from the air conditioning switch to determine whether or not the air conditioning is operating so that it can increase the idling speed of the engine if necessary. Turn ignition switch OFF. Connect terminals TE2 and E1 of data link connector.Remove air conditioning control assembly. Disconnect air conditioning control assembly con nector. Turn ignition switch on. Measure voltage between terminal AC1 of air condition ing control assembly connector and body ground. When it goes on the terminal PNP of the ECM is grounded to body ground via the starter relay and theft deterrent ECU, thus the terminal PNP voltage becomes O V. Crank the engine. Connect terminals TE1 and E1 of data link connec tor 2. Continuity Check for short in all the harness and components con nected to IGN fuse See attached wiring diagram. Check ignition switch. Turn ignition switch on. Check EFI fuse. Apply battery voltage between terminals 1 and 3. Check continuity between terminals 2 and 4. Replace SFI main relay. Continuity Check for short in all the harness and components con nected to EFI fuse See attached wiring diagram. Check voltage between terminal BATT of ECM connector and body ground.

They inject fuel into the cylinders based on the signals from the ECM. HINT The correct waveform appears as shown in the illustration on the below. Repair or replace harness or connector. Measure resistance of injector. The injection volume, i,e, the length of time the injector is energized, is controlled by the ECM and the cold start injector time switch. During a cold start, when the starter turns the contacts in the cold start injector time switch close. Disconnect ECM connector. Measure voltage between terminal STJ of ECM connec tor and body ground when ignition switch is turned to STA. Measure resistance between terminals shown below. Replace start injector time switch.Disconnect IAC valve connector. Measure resistance between terminals shown below.Thus the circuit opening relay switches on, power is supplied to the fuel pump and the fuel pump operates. Check circuit opening relay.Repair or replace harness or connector.Repair or replace harness or connector. Repair or replace. Remove fuel pressure control VSV. Disconnect fuel pressure control VSV connector. Measure resistance between terminals. Measure resistance between each terminal and the body.Measure voltage between terminal FPU of ECM con nector and body ground.Turn ignition switch ON.When the engine speed is 3,900 rpm or less and the throttle valve opening angle is 60 or more, the ECM turns the VSV ON and closes the IACV. Remove IACV control VSV. Disconnect IACV control VSV connector. Measure resistance between terminals. Measure resistance between each terminal and the body.Measure voltage between terminals ISAAC of ECM connector and body ground.When these terminals are connected with the E1 terminal, diagnostic trouble codes in normal mode or test mode can be read from the Malfunction Indicator Lamp on the combination meter. Us ing data provided by sensors which monitor various engine functions rpm, intake air volume, eng, temper ature, etc.

, the microcomputer ECM triggers the spark at precisely the right instant. With a tachometer

connected to the system. Connect the test probe of the tachometer to terminal IG of the DLC1. DO NOT pull on the cords. Center Cord on the Distributor Side Insert the grommet portion into the terminal hole of the distrib utor cap ignition coil. b Ex. Center Cord on the Distributor Side Align the spline of the distributor ignition coil with the spline of the holder, and slide on the holder. Never attempt to adjust the electrode gap on used spark plug. Spark plug should be replaced every 100,000 km 60,000 miles.If abnormal, replace the spark plug.DO NOT pull on the cord. REMOVE DISTRIBUTOR CAP Remove the three bolts and distributor cap. INSTALL DISTRIBUTOR CAP Install the distributor cap with the three screws. Look at the distributor attachment hole to set.Center Cord Align the spline of the distributor cap with the spline groove of the holder, and slide the holder. NOTICE Check that the holder is correctly installed to the grommet and distributor cap as shown in the illustra tion. When the plunger is pulled to the left as shown above, the contact plate of the plunger allows current from the battery to flow directly from terminal 30 to the motor, and the starter rotates. When the plunger is pulled to the left as shown above, the contact plate of the plunger allows current from the battery to flow directly from terminal 30 to the motor, and the starter rotates. REMOVE STARTER HOUSING, CLUTCH ASSEMBLY AND GEAR a Remove the two screws. b Remove the following parts from the magnetic switch assembly 1 Starter housing and clutch assembly. Disconnect the four brushes and remove the brush holder.Standard diameter 30 mm 1.18 in. Minimum diameter 29 mm 1.14 in. If the diameter is less than minimum, replace the armature. INSPECT UNDERCUT DEPTH Check that the undercut depth is clean and free of foreign materials.

Brush Springs INSPECT BRUSH SPRING LOAD Take the pull scale reading the instant the brush spring sepa rates from the brush.INSERT STEEL BALL INTO CLUTCH SHAFT HOLE a Apply grease to the steel ball. b Insert the steel ball into the clutch shaft hole. Torque 39 N m 400 kgf cm, 29 ft lbf b Connect the starter wire with the nut. c Connect the starter connector. INSTALL CRUISE CONTROL ACTUATOR a Install the cruise control actuator with the three bolts. The IC regulator uses integrated circuits and controls the voltage produced by the generator. Disconnect the battery cables when the battery is given a quick charge. The IC regulator uses integrated circuits and controls the voltage produced by the generator. Disconnect the battery cables when the battery is given a quick charge. Then when the engine is started, the voltage output increases as the generator rpm increases. Then when the engine is started, the voltage output increases as the generator rpm increases. If insufficient, refill with distilled or purified water. b Check the specific gravity of each cell.HINT “New belt”. REMOVE GENERATOR a Disconnect the generator connector. b Remove the nut, and disconnect the generator wire. c Disconnect the wire harness from the clip. d Remove the pivot bolt, adjusting lock bolt and generator. REMOVE BRUSH HOLDER AND IC REGULATOR a Remove the brush holder cover from the brush holder. b Remove the five screws, brush holder and IC regulator. REMOVE PULLEY a Hold SST a with a torque wrench, and tighten SST B clockwise to the specified torque.If rough or scored, replace the rotor. b Using a vernier caliper, measure the slip ring diameter.INSPECT REAR BEARING Check that the bearing is not rough or worn. INSTALL PULLEY a Install the pulley to the rotor shaft by tightening the pulley nut by hand. b Hold SST A with a torque wrench, and tighten SST b clockwise to the specified torque.