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It's common knowledge that the Honda Foreman 500 is one of the all-time best-selling all-terrain vehicles (ATVs). Due to its durability and dependability, it is a favorite option among farmers, ranchers, and construction workers. However, several potential issues might arise during operation, such as the gearbox shifting into neutral or the air conditioning system malfunctioning. In the event that you face any of these challenges, we are able to provide you with the information you want. In this article, we will discuss some of the most prevalent problems associated with the Honda Foreman 500 and the error codes. Let's get started! Honda Foreman 500 Codes (DTCs) Here are the ESP (Electronic stability program) system fault codes you may encounter in the Honda Foreman 500: GEAR POSITION INDICATOR BLINKS SYSTEM 1 ECM (writing & recording circuit) 2 ES shift switch system (up & down) 3 Angle sensor system 4 Gear position switch system 5 ECM motor driver circuit 6 ECM fail-safe relay circuit 7 ECM voltage convert circuit 8 Angle sensor system 9 Angle sensor system 10 CKP sensor system 11 Rear VS sensor system 12 Gear position switch system 13 Throttle position (TP) sensor system Here are the EPS System fault codes you may encounter in the Honda Foreman 500 and their meaning: CODE FUNCTION FAILURE SYSTEM LATCH | RESET | REVEST 11-01 Abnormally rapid shift of the vehicle's speed signal Indicator ON/Subsistution control of the engine RPM Revest 11-02 Comparison of the vehicle speed and signal for engine speed Indicator ON/Subsistution control of the engine RPM Revest 13-01 EPS ECU internal circuit (Lower FET stuck ON) Indicator ON/Halt steering assist immediately Reset 13-02 EPS ECU internal circuit (Upper FET stuck ON) Indicator ON/Halt steering assist immediately Reset 13-03 EPS ECU internal circuit (FET stuck ON) Indicator ON/Halt steering assist immediately Reset 13-04 EPS ECU internal circuit (FET stuck ON (VM)) Indicator ON/Halt steering assist immediately Reset 13-05 EPS ECU internal circuit (FET stuck ON (over current)) Indicator ON/Halt steering assist immediately Reset 14-01 EPS ECU internal circuit (Power relay stuck ON) Indicator ON/Halt steering assist immediately Reset 14-02 EPS ECU internal circuit (Fail-safe relay 1 stuck ON) Indicator ON/Halt steering assist immediately Reset 14-03 EPS ECU internal circuit (Fail-safe relay 2 stuck ON) Indicator ON/Halt steering assist immediately Reset 14-04 EPS ECU internal circuit (Power relay stuck open) Indicator ON/Halt steering assist immediately Reset Here are the Dual Clutch Transmission (DCT) fault codes you may encounter in the Honda Foreman 500 and their meaning: DTC FUNCTION FAILURE SYMPTOM 4-1 (4) Dual clutch PC solenoid valve Low input Loose or poor contact of the dual clutch PC solenoid valve connector Dual clutch PC solenoid valve or its circuit malfunction Gearshift function does not work (2nd, 4th or reverse gear only) 8-1 (8) TP sensor circuit High voltage TP sensor or its circuit malfunction Gearshift function does not work (2nd, 4th or reverse gear only) 15-1 (15) Shift solenoid valve circuit • Loose or poor contact of the shift solenoid valve connector Shift solenoid valve or its circuit malfunction Gearshift function does not work (2nd, 4th or reverse gear only) 21-1 (21) Shift spindle angle sensor circuit Low voltage Loose or poor contact of the shift spindle angle sensor connector Shift spindle angle sensor or its circuit malfunction Gearshift function does not work (2nd, 4th or reverse gear only) 24-1 (24) Shift control motor drive circuit Loose or poor contact of the shift control motor connector Control motor or its circuit malfunction Control motor drive circuit malfunction Gearshift function does not work (2nd, 4th or reverse gear only) Honda Foreman 500 problems you may encounter and solutions 1. Shifting issues After you have had problems with shifting, you will need to change gears periodically to keep the flow of the ride going smoothly. The shifting must be excellent, regardless of whether it occurs on mountainous terrain or freezing ground. Recent feedback from customers highlighted many instances of failure. As you prepare to change gears on the motorcycle, the engine suddenly stops working for no apparent reason. In addition, the Honda Foreman 500 exhibits faulty command execution, making the running gear immobile after specific tests. Simply repairing the shifter may provide a temporary solution to the problem. You can temporarily pull it when it is in a fixed gear for a specific time. But if you want the issue to disappear, you'll need extensive cleaning and repair work. In the first place, the problem is caused by any obstruction in the gear wire. In addition, examine the angle sensor to see if an essential adjustment needs to be made. 2. Sudden shocks in the wires The engine will get hotter when you drive a vehicle like the Honda Foreman 500 for an extended period. The wires responsible for controlling the engine and the components are significantly stressed. Having said that, this issue provides you with a sense of internal shock, which might lead to more severe problems in the future. Due to this reason, it is essential to take immediate action when faced with such predicaments. To solve this issue effectively, you should check the wirings of the engine correctly. Connectors are essential components in this context. As a result, you need to check that the wires have been correctly inserted into both the male and the female connections. If there is any leakage or breakage, take immediate action to replace the wires. 3. Broken carburetor There are two ways in which the carburetor of your Honda Foreman 500 might get damaged. Either because the valve inside is blocked or because the carburetor is leaking. Your vehicle will have a significant breakdown in operation if any of the major problems develop in the carburetor. Taking care of the carburetor is the first thing that must be done to prevent events of this kind. Check if there is a hole or any leaking on it. Any issue that arises as a result of such a breakdown must be resolved immediately. You may temporarily stop the leak by covering it with tape or a bandage, and then you can find a more permanent solution. If there is any evidence of blockage within the carburetor, you should remove it and clean it from the inside. To clear the clogs, grease oil and any other relevant component should be used. When the interior of the carburetor is visible, do the necessary repairs. 4. Internal freezing Internal freezing is a common phenomenon that may happen to any vehicle, including the Honda Foreman 500. However, it is the term that refers to the freezing of the engine due to the moisture that accumulates in it over a prolonged period. In other words, when moisture gets into the engine and clogs it up, you may encounter unexpected engine stops and delayed starts. When you start the engine, the humidity does its duty and prevents the engine from becoming more heated. As a result, it does not operate effectively. To solve this issue effectively, we'll recommend you start the bike again and over again as often as necessary to remedy the problem. The heat of the engine will rise as a result. If the wirings are attached correctly, you should be able to get rid of the moisture. In addition, inspect the wires and ensure that the efforts are being made correctly. If any leaking or breakage occurs, the appropriate procedures must be taken. 5. Steering breakage This is the most prevalent concern of all of them. But there is no doubt that something like this does not come up very often. The only thing that prevents the Honda Foreman 500's steering from breaking is a fractured and dislocated steering system. When using the Honda Foreman 500, you may encounter several challenging situations that you will need to overcome. Driving carelessly causes minor damage to your steering, which, in the long run, tends to make it lose its grip on the road. As soon as the steering is allowed to lose, you will no longer have any control over the bike. And as a result, there is a possibility of numerous accidents waiting for you. To eliminate the issue as quickly and efficiently as possible, it is recommended that the steering is inspected regularly. Monthly inspections and maintenance are required for every vehicle. You can perceive the problem through maintenance, and you can respond appropriately. Final words Honda has one of the industry's greatest reputations. They manufacture dependable vehicles and components. The issue with Honda is their quality assurance. Nonetheless, there are a number of things that may go wrong with your Foreman, some of which have been described in this article. For instance, a malfunctioning fuel gauge might cause the gasoline tank to become overfilled. Spark plug failure is a possible additional concern. With that, we've reached the conclusion of this article. Make sure to always check and maintain your vehicle regularly and with that, you are good to go. CarAraC Research The CarAraC research team is composed of seasoned auto mechanics and automotive industry professionals, including individuals with advanced degrees and certifications in their field. Our team members boast prestigious credentials, reflecting their extensive knowledge and skills. These qualifications include: IMI: Institute of the Motor Industry, ASE-Certified Master Automobile Technicians; Coventry University, Graduate of MA in Automotive Journalism; Politecnico di Torino, Italy, MS Automotive Engineering; Ss. Cyril and Methodius University in Skopje, Mechanical University in Skopje; TOC Automotive College; DHA Suffa University, Department of Mechanical Engineering Are you having trouble with your Honda Foreman 500 gear indicator flashing? If so, you're not alone. A gear indicator is a device that displays the current gear selection of a vehicle's transmission. This small but essential component provides drivers with real-time information about the gear they are in. Unfortunately, many Honda Foreman 500 owners have reported this issue, which can be confusing and frustrating. The gear indicator on the Honda Foreman 500 flashes due to problems, including issues with the transmission fluid pressure sensor, wiring problems, faulty angle sensor or throttle position sensor, low transmission fluid, faulty shift solenoid, clogged transmission fluid, or even a broken alternator. In this article, I'll discuss why the gear indicator blinks on your Honda Foreman 500 and how to fix it. Read on to find out the cause and solution to this common problem! Now let's head to the most common root causes and fixes corresponding to the gear indicator blinking: One of the most common reasons why the gear indicator light is blinking on the Honda Foreman 500 is a malfunctioned fluid pressure sensor. The fluid pressure sensor helps to regulate the pressure in the clutch system. This pressure is essential for the vehicle's shifting system to function correctly. When the sensor malfunctions, it can cause the gear indicator light to blink. This malfunction usually causes the vehicle to start improperly, and the engine light is usually on too. You will also experience unsmooth shifting of gears. These symptoms indicate that the fluid pressure sensor is not working correctly. The fluid pressure sensor is placed underneath the battery of the vehicle. To replace it, follow the steps below: You can replace the fluid pressure sensor by following the steps: The first step is to remove the battery along with its cover and battery tray. This removal is necessary as the fluid sensor is under the battery section in the vehicle.Unplugging the Electrical ConnectionUnplug the electrical connections after removing the battery. It will help in removing the sensor.Take an adjustable wrench (22 mm) to disconnnect the sensor.Replace the old sensor with a new piece. In this way, you can solve the issue of a faulty fluid pressure sensor that leads to the flashing of the gear indicator on your Honda Foreman 500. One of the primary reasons the gear indicator light blinks on the Honda Foreman 500 is wiring problems. Yes, the fluid pressure sensor needs electric power to function correctly. However, any disturbance in the wiring can lead to the improper functioning of the sensor. This is why it is essential to check the vehicle's electrical wiring when the indicator light flashes on the Honda Foreman 500. That's because any issue with the sensor's voltage can be why the indicator light is blinking. To diagnose and fix the wiring issue, follow the steps below: STEP 1: Remove the sensor and clean the plug STEP 2: Check for any damage on nearby wires and replace them if necessary STEP 3: Reconnect the plug and sensor, ensuring a tight and secure connection STEP 4: Check the transmission fluid pressure sensor 'B' and replace it if necessary. This sensor detects the gear shift and sends a signal to the gear indicator. If the sensor is damaged, it can cause the gear indicator to blink intermittently. In most cases, when the gear indicator on your Honda Foreman 500 starts blinking, it's due to either a faulty angle sensor or throttle position sensor. To determine which of these is causing the problem, you need to know how many times the indicator is blinking. If the indicator blinks 3 times, the most likely cause is a faulty angle sensor. If it blinks 13 times, the problem is probably due to a defective throttle position sensor. Let me also provide you with the troubleshooting table to easily check which part goes wrong, corresponding to the number of gear indicator blinks. Gear Position Indicator BlinksECM (writing and recording circuit)ES shift switch system (up and down)Gear position switch systemECM fail-safe relay circuitECM voltage convert circuitRear VS sensor system (vehicle speed)Gear position switch systemThrottle position (TP) sensor system Let me now compile the steps that you can follow to diagnose and fix this problem: STEP 1: The first step is to check the angle sensor. If it is faulty, it can cause the gear indicator to blink. You can test the angle sensor by checking the resistance in the wires. If the resistance is too high or too low, the angle sensor is likely faulty and should be replaced. STEP 2: The second step is to check the throttle position sensor. If the throttle position sensor is faulty, it can also cause the gear indicator to blink. To test the throttle position sensor, you need to check the voltage. If the voltage is too high or too low, the throttle position sensor is faulty and should be replaced. STEP 3: Once you have determined that the angle sensor and the throttle position sensor cause the blinking gear indicator light, you must fix the issue. The first suggestion would be to remove the connectors, clean them, and reconnect them with some dialectic grease. This is an easy fix and should be done regularly to ensure optimal performance from the angle sensor and throttle position sensor. If that doesn't work, try ohming out your TPS switch. This test will tell you whether or not the switch is good. If the switch is bad, you will need to replace it. Maintaining a minimum fluid level in the transmission chamber at all times is essential to ensure that it operates optimally in all conditions. If the transmission fluid level falls below the minimum required level, the gear indicator light may start blinking in the instrument cluster. Topping up the gear oil chamber to the required level can often resolve this issue. Several signs could indicate low transmission fluid levels in a Honda Foreman 500. These include: Visible leaks of fluid below the pilot Overheating of the transmission accompanied by warning indicators Noisy shifting of the transmission Higher RPM values during gear shifts The vehicle's inability to move in the D or R position If you find that the transmission fluid level in your Honda Foreman 500 is low, it is essential to top it up to prevent any further issues. Here let me lay down a step-by-step guide on how to do it: STEP 1: Park your vehicle on the leveled ground and switch off the engine. STEP 2: Find the fluid dipstick near the back of the engine and pull it out. The fluid should be yellow. STEP 3: Check the fluid level on the dipstick. The fluid must be topped up if the level is lower than mark B. To do this, you must add the right ATF (automatic transmission fluid) until it reaches between the two marks on the dipstick. Ensure you use the type of fluid recommended by the manufacturer to avoid any further issues. STEP 4: After topping up the fluid, start the engine and allow it to run for a few minutes to ensure it has been distributed throughout the transmission system. It is essential to check the transmission fluid level regularly to avoid any issues related to low fluid levels. An expert or mechanic can also help in this regard and can charge anywhere from $70-$120, excluding labor costs. One of the most common reasons the gear indicator blinks is if the shift solenoid fails. The shift solenoid is located in the gearbox and is electrically operated by signals sent by the TCM (Transmission Control Module). The solenoid controls the fluid flow in the gearbox and helps shift the gears at the right time. When the shift solenoid is not functioning correctly, your Foreman 500 will experience some shift delays, or the gears may not shift. In some cases, the gears may even shift at the wrong RPM. One of the most common symptoms of a bad shift solenoid is the gear indicator blinking. This is because the shift solenoid sends the signal to the TCM to indicate the gear selection. The TCM won't receive the signal if the solenoid fails, resulting in the gear indicator blinking. To fix this issue, the shift solenoid will need to be replaced. This can be done by a professional mechanic or yourself if you have the experience, tools, and knowledge. Replacing the shift solenoid will allow the ATV to shift gears properly, and the blinking light should be eliminated. Contacting a professional mechanic is best if you need clarification on what you're doing. This will help ensure the problem is fixed correctly, and your ATV will run smoothly in no time. If the transmission fluid is not changed timely, it becomes contaminated with dirt, dust, and other residues. This leads to a clogged transmission fluid, making the gear indicator light blink. The most common symptom of clogged transmission fluid is a gear shift delay. This is because the gear is trying to move but cannot due to the lack of lubrication. If this is left unaddressed, the gear indicator light will continuously flash. You need to regularly change the transmission fluid to prevent your gear indicator from blinking. This means draining the old fluid and topping up the compartment with fresh fluid. Changing the fluid after 25000-30000 miles is generally recommended. When changing the transmission oil in your Honda Foreman 500, it is essential to use the correct type of oil to avoid any potential damage to the engine and transmission system. Using the wrong oil can lead to premature wear and tear, reduced performance, and even engine failure. It is recommended to use JASO MA oil for the engine and transmission system in Honda Foreman 500. However, it is essential to refrain from using car oils as they are not designed to meet the specific needs of the engine and transmission system. The preferred viscosity for the engine/trans oil is 10W-30. However, you can also use 0W-40 Synthetic oil for your Honda Foreman 500, which provides better performance and protection against wear and tear. Synthetic oil offers better performance and extended oil change intervals. Regarding the front and rear differentials, it is recommended to use 75W-90 gear lube. Synthetic 75W-90 gear lube is better for superior performance and longer-lasting protection. Synthetic gear lube offers better performance and protection against wear and tear and has a longer lifespan. When an alternator fails on a Honda Foreman 500, it can cause the gear indicator to start blinking. This is because the alternator produces the electricity needed to power the vehicle's electrical components, including the gear indicator. Without the electricity from the alternator, the gear indicator won't be able to operate correctly. The main cause of the broken alternator is usually a dead battery. When the battery dies, it can cause the alternator to overheat and eventually fail. There are a few ways to test the battery in your Honda Foreman 500 to see if it's the cause of the blinking gear indicator. The most common is to use a multimeter to measure the battery's voltage. If the measured voltage is less than 12V, the battery is likely the cause of the blinking gear indicator. If the battery is the cause of the broken alternator, you'll need to replace it as soon as possible. It's also a good idea to check the alternator to ensure it's still in good condition. A broken alternator can also cause the gear indicator to blink, so ensuring it's functioning properly is essential. It is unsafe to continue driving a Honda Foreman 500 when the gear indicator blinks. This warning signal indicates an issue with the transmission or the sensors, requiring immediate attention to avoid further damage and potential safety hazards. Driving a vehicle with a malfunctioning transmission can lead to severe consequences such as loss of control, stalling, or complete transmission failure. Therefore, it is highly recommended to stop the vehicle as soon as possible when the gear indicator starts blinking and seek help from a qualified technician. Ignoring the warning sign can result in costly repairs and potentially cause accidents, which can harm the driver, passengers, and other road users. Hence, it is always better to take preventive measures and check the transmission regularly to avoid unforeseen issues while driving. The Honda Foreman 500 is a great machine, but troubleshooting it can be tricky when the gear indicator starts blinking. However, with the proper knowledge and a little effort, you can get to the root of the issue and identify the correct solution. It is essential always to check the inspection plates and look for the causes of the issue before attempting any repairs. By doing this, you can save time and money and get your Foreman back up and running as soon as possible. Also Read: 8 Most Common Odes Dominator 800 Problems- How to Fix The blinking of the gear indicator states the presence of a problem in the transmission. The issue can be mechanical, such as difficulty in shifting the solenoid, and electrical issues, like transmission speed sensor. The Honda Foreman 500 weighs about 772 pounds and holds 28 hp. It has a 475c engine and can offer a top speed of 54 mph. PS means electronic power steering in Honda Foreman 500. It is an indicator that remains on until or unless the engine is not started after checking the initial lamp. First, you can check the oil by removing and cleaning the dipstick. After cleaning: Set it back in the crankcase without threading Remove the dipstick and recheck the oil level in the vehicle If the level is low, top it again and reinstall the dipstick In this way, you can check the oil level in your Foreman 500. You can fix the fast-blinking turn signal by following measures: Check and fix the wiring in case of any damage Clean the signal components and the surrounding areas Change the fuse of the signal if needed Replace or check the working of the battery Replace the old bulbs with the new ones The average base price of the Honda Foreman 500 is $7000, with an average retail price of $6000. This is Surya. I am an experienced off-roader. I have been off-roading for many years across several terrains. I am passionate about 4×4 driving and want to share my knowledge and experience with others. My goal is to provide you with the most comprehensive and unbiased information about off-roading. I curated this article through my personal experience and expertise, and I hope it helps you with what you are looking for. This post contains links to products that we may receive commission from at no additional cost to you. If you own a Honda Foreman 500, then you know that it is a powerful and reliable workhorse. But even the most well-made machines sometimes need a little help to get back on track. In this article, we will share all of the trouble codes (DTCs) for the Honda Foreman 500, so that you can easily diagnose the problem and get your ATV back on the trails. Let's get started! Retrieving Trouble Codes on the Foreman 500 Usually, we use an OBD2 port to connect to the vehicle in order to retrieve fault codes and troubleshoot a problem, however, that is not the case with the Foreman 500 as there is no OBD2 port. Instead, the Foreman 500 provides trouble codes by blinking the corresponding indicator light on the dash when the ignition is on. Normally, all of the lights on the dash stay on for a second or two to give you a chance to see if any of the bulbs in the dash are out. However, if there is a fault code stored in the EEPROM, then after the dash lights go out, one or a few of them will start blinking. For example, if the EPS indicator light is blinking, then it means that your Foreman 500 has a malfunction with the Electric Power Steering system and a DTC (Diagnostic Trouble Code) is stored. It's pretty easy to read stored fault codes, as the blinking system is easy to understand. The indicator lights can either blink for 1 second (long) or 1/4th of a second (short). A single long blink stands for 10, while a single short blink stands for 1. Let's say that the EPS light blinks long two times and then follows with four short blinks. The two long blinks stand for 20, while the four short blinks stand for 4. Now you have to add them together and get 24, which can be found in the DTC list below. It stands for an Engine Speed Signal malfunction. Now, there is no gear indicator light on the dash, but the LCD screen on the dash shows which gear is currently selected. When a fault code is stored in the ESP (Electric Shift Program) or the DTC, then the number of the currently selected gear will be replaced by a dash (-) and then the dash will be used to blink out a DTC. Note: All of the troubleshooting processes for each of the fault codes can be found in the owner's manual of your specific Honda Foreman 500. Honda Foreman 500 Codes (DTCs) List 2005-2011 Models Gear Position Indicator BlinksCheck Part and/or System1ECM (writing & recording circuit2ES shift switch system (up & down)3Angle sensor system4Gear position switch system5ECM motor driver circuit6ECM fail-safe relay circuit7ECM voltage convert circuit8Angle sensor system9Angle sensor system10CKP sensor system11Rear VS sensor system 12Gear position switch system13Throttle position (TP) sensor system 4WD indicator blinksCheck part & system2Front VS sensor3Rear VS sensor4System voltage5Front final clutch system DTCFunction FailureSystem/Fail-safe functionLatch/Reset/Revest11-01Excessive change of the vehicle speed signal (Regular diagnosis)Indicator ON/Subsistution control of the engine RPMRevest11-02Comparison between the vehicle speed and the engine speed signal (Regular diagnosis)Indicator ON/Subsistution control of the engine RPMRevest13-01EPS ECU internal circuit (Lower FET stuck ON) (Initial diagnosis)Indicator ON/Halt steering 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diagnosis)Indicator blink (DTC will not store in the EPS ECU)/Halt steering assist until the torque sensor is initializedLatch23-01Low/high voltage for the torque sensor (VT1 and VT@) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-02Torque sensor (VT3 Differential-amplification Function) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-03Torque sensor (VT1, VT2 rapid change) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-04Torque sensor (Temperature sensor) (Regular diagnosis)Indicator ON/Halt steering assist immediately Reset 23-05Torque sensor (Sensor Coil) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch24-01Engine speed signal (Regular diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest31-01Low/high IG1-terminal voltage (Initial diagnosis)Indicator ON/Halt steering assist under the Specified condition 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(Power relay stuck open)Indicator ON/Disables steering assist immediately RegularReset15-012WD/4WD select signal blinkingDifferential lock and 4WD indicators blink (EPS indicator will not come ON)/2WD assist power stabilized RegularReset15-022WD/4WD select signal input lineIndicator ON/2WD assist power stabilized or EPS operating normallyRegularRevest16-01EPS ECU internal circuit (Direction determine logic circuit)Indicator On/Disables steering assist immediately RegularReset16-02EPS ECU internal circuit (INH output circuit)Indicator On/Disables steering assist immediately InitialReset17-01EPS ECU internal circuit (Voltage raise transformation circuit)Indicator On/Disables steering assist immediately InitialReset17-02EPS ECU internal circuit (Voltage raise transformation circuit)Indicator On/Disables steering assist under the Specified conditionRegularReset18-01EPS ECU internal circuit (Current sensor)Indicator On/Disables steering assist immediately InitialReset18-02EPS ECU internal 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torque sensor (VT1 and VT2)Indicator ON/Disables steering assist until the DTC is erasedRegularLatch23-02Torque sensor (VT3 Differential-amplification Function)Indicator ON/Disables steering assist until the DTC is erasedRegularLatch23-03Torque sensor (VT1, VT2 rapid change)Indicator ON/Disables steering assist until the DTC is erasedRegularLatch23-04Torque sensor (Temperature sensor)Indicator On/Disables steering assist immediately RegularReset23-05Torque sensor (Sensor Coil)Indicator ON/Disables steering assist until the DTC is erasedRegularLatch24-01Engine speed signalIndicator On/Disables steering assist under the Specified conditionRegularRevest31-01Low/high IG-1 terminal voltageIndicator On/Disables steering assist under the Specified conditionInitialRevest31-02Low/high IG-1 terminal voltageIndicator On/Disables steering assist under the Specified conditionRegularRevest32-01Low/high VBU voltageIndicator On/Disables steering assist under the Specified conditionRegularReset33-02EPS ECU internal circuit (EEPROM)Indicator On/Disables steering assist immediately Initial Reset35-01EPS ECU internal circuit (CPU)Indicator On/Disables steering assist immediately Initial and RegularReset35-03EPS ECU internal circuit (CPU communication)Indicator On/Disables steering assist immediately Initial Reset35-04EPS ECU internal circuit (CPU communication)Indicator On/Disables steering assist under the Specified conditionRegularReset DTC ("-" blinks)Function Failure Symptom/Fail-safe function8-1 (8)TP sensor circuit low voltage (less than 0.22 V)• TP sensor or its circuit malfunction• Poor engine acceleration• Fail-safe value: O°• ESP does not work8-2 (8)TP sensor circuit High voltage (more than 4.93 V) • Loose or poor contact of the TP sensor connector • TP sensor or its circuit malfunction • Poor engine acceleration• Fail-safe value: O°• ESP does not work11-1 (11)VS sensor no signal • Loose or poor contact of the Rear VS sensor connector• Rear VS sensor or its circuit malfunction• Engine operates normally • ESP does not work21-1 (21)Shift angle sensor circuit low voltage (less than 0.37 V)• Shift angle sensor or its circuit malfunction• ESP does not work21-2 (21)Shift angle sensor circuit High voltage (more than 4.62 V)• Loose or poor contact of the Sub-gearshift spindle angle sensor connector• Shift angle sensor or its circuit malfunction• ESP does not work22-1 (22)Shift angle sensor response (Control motor lock) • PCM activates the motor but the angle sensor voltage does not change in middle position• Control motor or its circuit malfunction• Shift angle sensor or its circuit malfunction• ESP does not work22-2 (22)Shift angle sensor response (Control motor stuck) • PCM does not activate the motor but angle sensorvoltage stays out of middle position (195 – 3.05 V)• Control motor or its circuit malfunction• Shift angle sensor or its circuit malfunction• ESP does not work23-1 (23)Shift angle sensor response (Voltage variation)• PCM does not activate the motor but angle sensor voltage varies constantly• Shift angle sensor installation problem• Shift angle sensor or its circuit malfunction• Control motor or its circuit malfunction• ESP does not work24-1 (24)Shift control motor drive circuit• Control motor or its circuit malfunction• Control motor drive circuit malfunction• ESP does not work32-1 (32)Fail-safe relay circuit• Fail-safe relay circuit malfunction • ESP does not work33-2 (33)EEPROM malfunction• Engine operates normally41-1 (41)Gear position switch circuit • Gear position switch circuit malfunction (Short)• Engine does not start• ESP does not work• Gear position indicator blinks "-"41-2 (41)Gear position switch circuit• Gear position switch circuit malfunction (Open)• ESP does not work• Gear position indicator blinks "-"42-1 (42)Gearshift (UP/DOWN) switch circuit• Gearshift (UP/DOWN) switch circuit malfunction (Short) • ESP does not work DTCFunction FailureSymptom/Fail-safe function1-1MAP sensor circuit low voltage (less than 0.195 V) • MAP sensor or its circuit malfunction• Engine operates normally • Pre-program value: 64 kPa1-2MAP sensor circuit high voltage (more than 3.804 V)• Loose or poor contact of the MAP sensor connector• MAP sensor or its circuit malfunction• Engine operates normally • Pre-program value: 64 kPa7-1ECT sensor circuit low voltage (less than 0.015 V)• ECT sensor or its circuit malfunction• Hard to start at low temperature• Pre-program value: 78.6°C/173.5°F• Cooling fan turns on7-2ECT sensor circuit high voltage (more than 4.981 V)• Loose or poor contact of the ECT sensor connect • ECT sensor or its circuit malfunction• Hard to start at low temperature• Pre-program value: 78.6°C/173.5°F• Cooling fan turns on8-1TP sensor circuit low voltage (less than 0.107 V)• Loose or poor contact of the TP sensor connector • TP sensor or its circuit malfunction• Poor engine acceleration• Pre-program value: 0°• ESP does not work8-2TP sensor circuit high voltage (more than 4.981 V)• TP sensor or its circuit malfunction• Poor engine acceleration• Pre-program value: 0°• ESP does not work9-1IAT sensor circuit low voltage (less than 0.015 V)• IAT sensor or its circuit malfunction• Engine operates normally • Pre-program value: 34.8°C/94.6°F9-2IAT sensor circuit high voltage (more than 4.981 V)• Loose or poor contact of the IAT sensor connector• IAT sensor or its circuit malfunction• Engine operates normally • Pre-program value: 34.8°C/94.6°F11-1VS sensor no signal• Loose or poor contact of the IAT sensor connector• IAT sensor or its circuit malfunction• Engine operates normally • ESP does not work12-1Fuel Injector circuit malfunction• Loose or poor contact of the fuel injector connector• Fuel injector or its circuit malfunction• Engine does not start• Fuel injector, fuel pump and ignition shut down21-1O2 sensor malfunction• Loose or poor contact of the O2 sensor connector • O2 sensor or its circuit malfunction• Engine operates normally23-1O2 sensor heater circuit malfunction• Loose or poor contact of the O2 sensor heater connector • O2 sensor or its circuit malfunction• Engine operates normally29-1IACV circuit malfunction• Loose or poor contact of the IACV connector • IACV or its circuit malfunction• Engine stalls, hard to start, rough idling41-1Except FA: Gear position switch/FA: Shift drum position switch malfunction• Loose or poor contact of the gear/shift drum position switch connector• Gear/shift position switch or its circuit malfunction• Engine operates normally• ESP does not work• Gear position indicator blinks "-"54-1Bank angle sensor circuit low voltage• Bank angle sensor or its circuit malfunction• Engine operates normally• Bank angle sensor stops the control54-2Bank angle sensor circuit high voltage• Loose or poor contact of the bank angle sensor connector• Bank angle sensor or its circuit malfunction• Engine operates normally• Bank angle sensor stops the control66-1 (FAmodelsonly)Rear VS sensor no signal• Loose or poor contact of the rear VS sensor connector • Rear VS sensor or its circuit malfunction• Engine operates normally• Gearshift function does not work (2nd, 4th or reverse gear only)67-1(FAmodelsonly)Front VS sensor no signal• Loose or poor contact of the front VS sensor connector• Front VS sensor or its circuit malfunction• Engine operates normally• Gearshift function does not work (2nd, 4th or reverse gear only) DTC Function FailureSymptom/Fall-safe function91-1Differential lock motor continuous operation (more than 3.2 seconds) in positive rotation• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system91-2Differential lock motor continuous operation (more than 3.2 seconds) in negative rotation• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system92-1Differential lock motor both terminals high voltage (more than 2.99 V)• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system94-1Unusual voltage input pattern on differential lock motor terminal• Differential lock system parts or its circuit malfunction• Differential lock/4WD indicators blink/Disables differential lock system95-1Differential lock motor operation in negative rotation without operating the pull back relay in changing to differential lock• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system97-1Fail-safe relay stuck ON• Fail-safe relay or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system DTC ("-" blin

(over current)) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset14-01EPS ECU internal circuit (Power relay stuck ON) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset14-02EPS ECU internal circuit (Fail-safe relay 1 stuck ON) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset14-03EPS ECU internal circuit (Fail-safe relay 2 stuck ON) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset14-04EPS ECU internal circuit (Power relay stuck open) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset15-014WD selectable system blinking communication line (Regular diagnosis)4WD indicator blink (EPS indicator will not come ON)/2WD assist power stabilizedRevest15-024WD selectable system communication line voltage (Regular diagnosis)Indicator ON/2WD assist power stabilized or EPS operating is normallyRevest16-01EPS ECU internal circuit (Direction determine logic circuit) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset16-02EPS ECU internal circuit (INH output circuit) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset17-01EPS ECU internal circuit (Voltage raise transformation circuit) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset17-02EPS ECU internal circuit (Voltage raise transformation circuit) (Regular diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest18-01EPS ECU internal circuit (Current sensor) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset18-02EPS ECU internal circuit (Current sensor off set) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset18-03EPS ECU internal circuit (Current sensor stuck low) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset18-04EPS ECU internal circuit (Current sensor stuck low) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset18-05EPS ECU internal circuit (Motor current deflection) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset18-06EPS ECU internal circuit (IM2) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset21-01Abnormal motor terminal voltage (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset21-02Abnormal motor terminal voltage (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset21-03Open in the motor harness (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset22-01Failure to initialize the torque sensor (Initial diagnosis)Indicator blink (DTC will not store in the EPS ECU)/Halt steering assist until the torque sensor is initializedLatch23-01Low/high voltage for the torque sensor (VT1 and VT@) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-02Torque sensor (VT3 Differential-amplification Function) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-03Torque sensor (VT1, VT2 rapid change) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch23-04Torque sensor (Temperature sensor) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset23-05Torque sensor (Sensor Coil) (Regular diagnosis)Indicator ON/Halt steering assist until the DTC is erasedLatch24-01Engine speed signal (Regular diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest31-01Low/high IG1-terminal voltage (Initial diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest31-02Low/high IG1-terminal voltage (Regular diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest32-01Low/high VBU voltage (Regular diagnosis)Indicator ON/Halt steering assist under the Specified conditionRevest33-02EPS ECU internal circuit (EEPROM) (Regular diagnosis)Indicator ON/Halt steering assist immediatelyReset35-01EPS ECU internal circuit (CPU) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset35-02EPS ECU internal circuit (CPU communication) (Initial diagnosis)Indicator ON/Halt steering assist immediatelyReset35-03EPS ECU internal circuit (CPU communication) (Regular diagnosisIndicator ON/Halt steering assist under the Specified conditionRevestDTCFunction FailureSymptom/Fail-safe functionDetection timingType11-01Excessive change of vehicle speed signalIndicator ON/Substitution control of the engine RPMRegularRevest11-02Comparison between vehicle speed and engine speed signalIndicator ON/Substitution control of the engine RPMRegularRevest13-01EPS ECU internal circuit (Lower FET stuck ON)Indicator ON/Disables steering assist immediatelyInitialReset13-02EPS ECU internal circuit (Upper FET stuck ON)Indicator ON/Disables steering assist immediatelyInitialReset13-03EPS ECU internal circuit (FET stuck ON)Indicator ON/Disables steering assist immediatelyRegularReset13-04EPS ECU internal circuit (FET stuck ON (VM))Indicator ON/Disables steering assist immediatelyRegularReset13-05EPS ECU internal circuit (FET stuck ON (over current >accumulated>))Indicator ON/Disables steering assist immediatelyRegularReset14-01EPS ECU internal circuit (Power relay stuck ON)Indicator ON/Disables steering assist immediatelyInitialReset14-02EPS ECU internal circuit(Fail-safe relay 1 stuck ON)Indicator ON/Disables steering assist immediatelyInitialReset14-03EPS ECU internal circuit(Fail-safe relay 2 stuck ON)Indicator ON/Disables steering assist immediatelyInitialReset14-04EPS ECU internal circuit (Power relay stuck open)Indicator ON/Disables steering assist immediatelyRegularReset15-012WD/4WD select signal blinkingDifferential lock and 4WD indicators blink (EPS indicator will not come ON)/2WD assist power stabilizedRegularRevest15-022WD/4WD select signal input lineIndicator ON/2WD assist power stabilized or EPS operating normallyRegularRevest16-01EPS ECU internal circuit (Direction determine logic circuit)Indicator On/Disables steering assist immediatelyRegularReset16-02EPS ECU internal circuit 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the DTC is erasedRegularLatch24-01Engine speed signalIndicator On/Disables steering assist under the Specified conditionRegularRevest31-01Low/high IG-1 terminal voltageIndicator On/Disables steering assist under the Specified conditionInitialRevest31-02Low/high IG-1 terminal voltageIndicator On/Disables steering assist under the Specified conditionRegularRevest32-01Low/high VBU voltageIndicator On/Disables steering assist under the Specified conditionRegularReset33-02EPS ECU internal circuit (EEPROM)Indicator On/Disables steering assist immediatelyInitialReset35-01EPS ECU internal circuit (CPU)Indicator On/Disables steering assist immediatelyInitial and RegularReset35-03EPS ECU internal circuit (CPU communication)Indicator On/Disables steering assist immediatelyInitialReset35-04EPS ECU internal circuit (CPU communication)Indicator On/Disables steering assist under the Specified conditionRegularResetDTC (“-” blinks)Function FailureSymptom/Fail-safe function8-1 (8)TP sensor circuit low voltage (less than 0.22 V)• TP sensor or its circuit malfunction• Poor engine acceleration• Fail-safe value: O°• ESP does not work8-2 (8)TP sensor circuit High voltage (more than 4.93 V)• Loose or poor contact of the TP sensor connector• TP sensor or its circuit malfunction• Poor engine acceleration• Fail-safe value: O°• ESP does not work11-1 (11)VS sensor no signal• Loose or poor contact of the Rear VS sensor connector• Rear VS sensor or its circuit malfunction• Engine operates normally• ESP does not work21-1 (21)Shift angle sensor circuit low voltage (less than 0.37 V)• Shift angle sensor or its circuit malfunction• ESP does not work21-2 (21)Shift angle sensor circuit High voltage (more than 4.62 V)• Loose or poor contact of the Sub-gearshift spindle angle sensor connector• Shift angle sensor or its circuit malfunction• ESP does not work22-1 (22)Shift angle sensor response (Control motor lock)• PCM activates the motor but the angle sensor voltage does not change in middle position• Control motor or its circuit malfunction• Shift angle sensor or its circuit malfunction• ESP does not work22-2 (22)Shift angle sensor response (Control motor stuck)• PCM does not activate the motor but angle sensorvoltage stays out of middle position (195 – 3.05 V)• Control motor or its circuit malfunction• Shift angle sensor or its circuit malfunction• ESP does not work23-1 (23)Shift angle sensor response (Voltage variation)• PCM does not activate the motor but angle sensor voltage varies constantly• Shift angle sensor installation problem• Shift angle sensor or its circuit malfunction• Control motor or its circuit malfunction• ESP does not work24-1 (24)Shift control motor drive circuit• Control motor or its circuit malfunction• Control motor drive circuit malfunction• ESP does not work32-1 (32)Fail-safe relay circuit• Fail-safe relay circuit malfunction• ESP does not work33-2 (33)EEPROM malfunction• Engine operates normally41-1 (41)Gear position switch circuit• Gear position switch circuit malfunction (Short)• Engine does not start• ESP does not work• Gear position indicator blinks “-”41-2 (41)Gear position switch circuit• Gear position switch circuit malfunction (Open)• ESP does not work• Gear position indicator blinks “-”42-1 (42)Gearshift (UP/DOWN) switch circuit• Gearshift (UP/DOWN) switch circuit malfunction (Short)• ESP does not workDTCFunction FailureSymptom/Fail-safe function1-1MAP sensor circuit low voltage (less than 0.195 V)• MAP sensor or its circuit malfunction• Engine operates normally• Pre-program value: 64 kPa1-2MAP sensor circuit high voltage (more than 3.804 V)• Loose or poor contact of the MAP sensor connector• MAP sensor or its circuit malfunction• Engine operates normally• Pre-program value: 64 kPa7-1ECT sensor circuit low voltage (less than 0.015 V)• ECT sensor or its circuit malfunction• Hard to start at low temperature• Pre-program value: 78.6°C/173.5°F• Cooling fan turns on7-2ECT sensor circuit high voltage (more than 4.981 V)• Loose or poor contact of the ECT sensor connect• ECT sensor or its circuit malfunction• Hard to start at low temperature• Pre-program value: 78.6°C/173.5°F• Cooling fan turns on8-1TP sensor circuit low voltage (less than 0.107 V)• Loose or poor contact of the TP sensor connector• TP sensor or its circuit malfunction• Poor engine acceleration• Pre-program value: 0°• ESP does not work8-2TP sensor circuit high voltage (more than 4.981 V)• TP sensor or its circuit malfunction• Poor engine acceleration• Pre-program value: 0°• ESP does not work9-1IAT sensor circuit low voltage (less than 0.015 V)• IAT sensor or its circuit malfunction• Engine operates normally• Pre-program value: 34.8°C/94.6°F9-2IAT sensor circuit high voltage (more than 4.981 V)• Loose or poor contact of the IAT sensor connector• IAT sensor or its circuit malfunction• Engine operates normally• Pre-program value: 34.8°C/94.6°F11-1VS sensor no signal• Loose or poor contact of the IAT sensor connector• IAT sensor or its circuit malfunction• Engine operates normally• ESP does not work12-1Fuel Injector circuit malfunction• Loose or poor contact of the fuel injector connector• Fuel injector or its circuit malfunction• Engine does not start• Fuel injector, fuel pump and ignition shut down21-1O2 sensor malfunction• Loose or poor contact of the O2 sensor connector• O2 sensor or its circuit malfunction• Engine operates normally23-1O2 sensor heater circuit malfunction• Loose or poor contact of the O2 sensor heater connector• O2 sensor or its circuit malfunction• Engine operates normally29-1IACV circuit malfunction• Loose or poor contact of the IACV connector• IACV or its circuit malfunction• Engine stalls, hard to start, rough idling41-1Except FA: Gear position switch/FA: Shift drum position switch malfunction• Loose or poor contact of the gear/shift drum position switch connector• Gear/shift position switch or its circuit malfunction• Engine operates normally• ESP does not work• Gear position indicator blinks “-”54-1Bank angle sensor circuit low voltage• Bank angle sensor or its circuit malfunction• Engine operates normally• Bank angle sensor stops the control54-2Bank angle sensor circuit high voltage• Loose or poor contact of the bank angle sensor connector• Bank angle sensor or its circuit malfunction• Engine operates normally• Bank angle sensor stops the control66-1(FAmodelsonly)Rear VS sensor no signal• Loose or poor contact of the rear VS sensor connector• Rear VS sensor or its circuit malfunction• Engine operates normally• Gearshift function does not work (2nd, 4th or reverse gear only)67-1(FAmodelsonly)Front VS sensor no signal• Loose or poor contact of the front VS sensor connector• Front VS sensor or its circuit malfunction• Engine operates normally• Gearshift function does not work (2nd, 4th or reverse gear only)DTCFunction FailureSymptom/Fail-safe function91-1Differential lock motor continuous operation (more than 3.2 seconds) in positive rotation• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system91-2Differential lock motor continuous operation (more than 3.2 seconds) in negative rotation• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system92-1Differential lock motor both terminals high voltage (more than 2.99 V)• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system94-1Unusual voltage input pattern on differential lock motor terminal• Differential lock system parts or its circuit malfunction• Differential lock/4WD indicators blink/Disables differential lock system95-1Differential lock motor operation in negative rotation without operating the pull back relay in changing to differential lock• Differential lock system parts or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock system97-1Fail-safe relay stuck ON• Fail-safe relay or its circuit malfunction• Faulty PCM/ECM• Differential lock/4WD indicators blink/Disables differential lock systemDTC (“-” blinks)Function FailureSymptom/Fail-safe functionMIL blinks4-1 (4)Dual clutch PC solenoid valve Low input• Loose or poor contact of the dual clutch PC solenoid valve connector• Dual clutch PC solenoid valve or itscircuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–4-2 (4)Dual clutch PC solenoid valve High input• Dual clutch PC solenoid valve or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–4-3 (4)Dual clutch PC solenoid valve drive circuit• Dual clutch PC solenoid valve or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–8-1 (8)TP sensor circuit Low voltage• TP sensor or its circuit malfunction• Loose or poor contact of the TP sensor connector• Poor engine acceleration• Fail-safe value: 0°• Gearshift function does notwork (2nd, 4th or reversegear only)88-2 (8)TP sensor circuit High voltage• TP sensor or its circuit malfunction• Poor engine acceleration• Fail-safe value: 0°• Gearshift function does notwork (2nd, 4th or reversegear only)815-1 (15)Shift solenoid valve circuit• Loose or poor contact of the shift solenoid valve connector• Shift solenoid valve or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–21-1 (21)Shift spindle angle sensor circuit Low voltage• Loose or poor contact of the shift spindle angle sensor connector• Shift spindle angle sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–21-2 (21)Shift spindle angle sensor circuit High voltage• Shift spindle angle sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–22-1 (22)Shift spindle operation malfunction (while operating gearshift mechanism)• Control motor or its circuit malfunction• Shift spindle angle sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–23-1 (23)Shift spindle operation malfunction (after operating gearshift mechanism)• Shift spindle angle sensor installation problem• Shift spindle angle sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–24-1 (24)Shift control motor drive circuit• Loose or poor contact of the shift control motor connector• Control motor or its circuit malfunction• Control motor drive circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–32-1 (32)Fail-safe relay circuit• Fail-safe relay circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–41-1 (41)Shift drum position switch circuit• Shift drum position switch or its circuit malfunction (Short)• Gearshift function does notwork (2nd, 4th or reversegear only)4142-1 (42)Gearshift switch circuit• Gearshift switch or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)–44-1 (44)EOT sensor circuit low voltage (less than 0.08 V)• EOT sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)• Cooling fan turns on4444-2 (44)EOT sensor circuit high voltage (more than 4.92 V)• Loose or poor contact of the EOT sensor connector• EOT sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)4466-1 (66)Rear VS sensor no signal• Loose or poor contact of the rear VS sensor connector• Rear VS sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)6667-1 (67)Front VS sensor no signal• Loose or poor contact of the front VS sensor connector• Front VS sensor or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)6781-1 (81)Sub-transmission switches malfunction (Low and drive switches remain ON simultaneously for more than 1.5 seconds)• Sub-transmission switch or its circuit malfunction• Gearshift function does notwork (2nd, 4th or reversegear only)– Honda 2002 and up ES and all Rubicon models use codes to identify shift and tranmission problems. The codes are different for each type/model so make sure you are following the correct procedure; ES models are listed first, followed by the Rubicon First thing to check is the volage from the battery. It should be a minimum of 12.4 volts. Check all main and accessory fuses. 2002 and newer ES Models If the gear indicator isnt flashing , you can manually interogate for codes. 1 Turn ignition to off 2 Place tranny in neutral 3 Put on parking brake so the quad does not move. 4 Press both shift buttons (up and down), and hold them in, while turning the key to on. Make sure the N appears for gear position. Release the buttons. 5 Wait 5 secs,and then press both the switches again.and hold them in for at least 3 seconds, then release the switches. 5 The problem code is displayed by a certain number of blinks “ - - “ on the gear indicator, which indicates the problem code by the number of blinks. If “N” (neutral) stays ON on the position indicator, the retrieval process was not correctly performed. Repeat the procedures from step one at this time.) 6 When the problem code(s) displays, release the shift switches. You should see “ - - “ for approximately 3 seconds then off, then the “ - - “ should flash, once for code one, twice for code two and so on. The engine control module (ECM) can store two different codes. If your ECM has stored two different codes, the first code displayed is the most recent and the second code is the earlier code. Write them all down. 7 To delete an old code, Press the switches when the code if flashed No flashing, no problem. The codes point to a system with in the ES. It doesnt necesarily mean the component is bad, but that theres a fault in that circuitry. Could be a disconnected wire, shorted wire, or high resistance in the wiring, or it could be the component. The service manual gives a process of trouble shooting, to nail down where the problem is if it is a wiring/connection problem. 1 flash, euc (writing and recording circuit) , probable faulty part ECU 2 flashes ES shift switch system (up and down) probable faulty part, shift switch, related wiring harness, or ECU 3 flashes,angle sensor system, probable faulty part, angle sensor, or incorrectly installed,related wiring, or ECU 4 flashes,gear position switch system, probable faulty part,gear position switch or related wiring or ECU 5 flashes,ECU motor driver circuit, probable faulty part,ECU 6 flashes, ECU fail safe relay circuit, probable faulty part,ECU 7 flashes, ECU voltage convent system, probable faulty part, ECU 8 flashes, angle sensor system, probable faulty part,angle sensor, or control motor, or related wiring, or ECU 9 flashes, angle sensor system, probable faulty part,angle sensor(short or open), or related wiring , or ECU 10 flashes, ignition pulse generator system, probable faulty part, ignition pulse generator or related wiring 11 flashes,speed sensor system(vehicle speed), probable faulty part speed sensor or related wiring or ECU 12 flashes, gear position switch system, probable faulty partgear position switch or related wiring, or ECU Rubicon Models 1. Put the gear shift lever in neutral (be sure the neutral indicator comes on) and the ignition switch OFF (vehicle at a stop). 2. While pushing the UP and DOWN shift switches (ESP) simultaneously, turn the ignition key to the on position. 3. Release the UP and DOWN switches immediately, then at the same time push both the UP and DOWN shift switches again and hold for more than 2 seconds. 4. The problem code is displayed by a certain number of blinks “ - - “ on the gear indicator, which indicates the problem code by the number of blinks. If “N” (neutral) stays ON on the position indicator, the retrieval process was not correctly performed. Repeat the procedures from step one at this time.) 5. When the problem code(s) displays, release the shift switches. You should see “ - - “ for approximately 3 seconds then off, then the “ - - “ should flash, once for code one, twice for code two and so on. The engine control module (ECM) can store two different codes. If your ECM has stored two different codes, the first code displayed is the most recent and the second code is the earlier code. Write them all down. To Erase the Problem Codes 1. Push and hold the UP and DOWN shift switches simultaneously for 3 seconds of more while the problem code is being displayed (i.e., “ - - “ blinking on the gear position indictor). 2. When the erasure is completed, the blinking pattern changes to the erasure confirmation blink. 3. Turn the ignition off. Initial Setting Procedure Note: · After replacement of any of the following parts, perform the initial setting procedure below. - ECM - Throttle sensor* - Angle sensor *Also, perform the initial setting procedure if the throttle cable is disconnected (i.e., carburetor removal/installation, cable replacement etc.). · The gear position blinks in Indicator Mode 2 when the initial setting was not made properly. Repeat the procedure from step 2. 1. Start the engine and let it idle about one minute with the sub-transmission in neutral. Stop the engine. 2. Make sure the gearshift lever is in the neutral position (be sure the neutral indicator comes on) and turn the ignition switch off. 3. Turn the ignition switch ON while pushing the UP and DOWN shift switches (ESP shift switches) simultaneously. 4. Release both the UP and DOWN shift switches immediately, then push and release the shift switches in the order of UP, DOWN, and UP. Do not hold the switches in). 5. A constant “ - - “ indication stays ON on the gear selector indicator. (If the gear position indicator shows a continuous “N”, repeat the procedure from step 2.) 6. Move the throttle lever to the fully closed position, then to the fully open position, and then move it to the fully closed position again immediately (within 10 seconds) after “ - - “ comes ON on the gear position indicator. 7. Check the control motor operation sound (the control motor should function at this time to adjust the angle sensor). 8. When the initial setting procedure is complete, the indication on the gear selector indicator changes from the continuous lighting of “ - - “ to the continuous lighting of “N”. Code 1 - Ignition Pulse Generator system Code 2 - Speed Sensor System Code 3 - Gear Position Switch System Code 4 - Throttle Sensor System Code 5 - Angle Sensor System (Motor lock i.e., angle sensor, wiring, ECM, control motor, motor transmission section, transmission unit) Code 6 - Angle Sensor System (swash plate angle sensor / wiring) Code 7 - ESP shift switch system Code 8 - ECM EEPROM Code 9 - ECM voltage converter circuit Code 10 - ECM fail-safe relay circuit Code 11 - ECM motor drive circuit Code 12 - ECM CPU