

<p style="text-align: center;">LLNL Environmental Restoration Division Standard Operating Procedure</p>	<p style="text-align: center;">TITLE: Four Wheel All Terrain Vehicle (ATV) Operation</p>
<p>APPROVAL Date</p> <p><u>Robert W Bainer</u> <u>10/2/96</u></p> <p>Livermore Site Project Deputy Leader</p>	<p>PREPARERS: J. Kilmer and S. Valley</p> <p>REVIEWERS: J. Greci and J. Cunningham</p>
<p>APPROVAL Date</p> <p><u>W. L. McCarroll</u> <u>11 Oct. 96</u></p> <p>Division Leader</p> <p>CONCURRENCE Date</p> <p><u>Valerie DeBly</u> <u>10/3/96</u></p> <p>QA Implementation Coordinator</p>	<p>PROCEDURE NUMBER: ERD SOP-1.16</p> <p>REVISION: 0</p> <p>EFFECTIVE DATE: September 1996</p> <p style="text-align: center;">Page 1 of 7</p>

1.0 PURPOSE

As a general guide this SOP will cover the basics of safety, startup, and operation of the HONDA FOURTRAX 400 four wheel drive all terrain vehicle (ATV). The ATV can be used for a variety of applications including hauling light equipment and off-road water-level measurements, but is primarily used as a support vehicle for seismic data acquisition, which includes transporting seismic equipment and personnel to and from the field and during field operations.

2.0 APPLICABILITY

The ATV is uniquely appropriate for transporting off-road use and maneuvering light equipment used in the acquisition of seismic data. The ATV must be transported from site to site on a trailer or truck and cannot be operated on public roads. At the site, the ATV can be used to transport equipment and personnel to, from, and during assigned work. All site speed limits and offroad restrictions apply.

3.0 REFERENCES

- 3.1 HONDA, Owners Manual (1996), TRX 400 FW FOURTRAX Foreman 400.
- 3.2 Special Vehicle Institute of America (1991), "Tips and Practice Guide for the ATV Rider," ATV Safety Institute.
- 3.3 Business Services Department, Fleet Management Group (1996), *Honda ATV*, Letter from Sal Ruiz to Robert Bainer, Environmental Restoration Division, Lawrence Livermore National Laboratory, Livermore, Calif., dated July 26, 1996.

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4.0 DEFINITIONS

4.1 Equipment

- ATV – HONDA FOURTRAX 400
- Elastic Wave Generator – EWG
- Helmet - LLNL supplied motorcycle helmet.
- Tool kit - emergency maintenance tools located in rear compartment of ATV.

5.0 RESPONSIBILITIES

5.1 Custodian

The ERD custodian, Robert Bainer, is responsible for on-the-job (OJT) training, operation, maintenance, and proper storage of the ATV.

5.2 Division Leader

The Division Leader's responsibility is to ensure that all activities performed by ERD at the Livermore Site and Site 300 are performed safely and comply with all pertinent regulations and procedures, and provide the necessary equipment and resources to accomplish the tasks described in this procedure.

5.3 ATV Operator

The ATV operator's responsibilities are to complete the required OJT and be approved by the custodian to operate the ATV.

6.0 PROCEDURES

6.1 General

Protective gear (hard hat, safety glasses, hearing protection, and safety shoes) must be worn when operating with the EWG. At a minimum, the helmet must be worn when transporting equipment or moving ATV to and from the work site.

6.2 Office Preparation

- A. Review the HONDA owner's manual, tips, and practice guide.
- B. Locate protective gear (helmet, safety glasses, hard hat, hearing protection, and safety shoes).
- C. Obtain ignition key from custodian.

6.3 Pre Ride Inspection

- A. Set PARKING BRAKE. The parking brake is engaged by pulling the left hand grip and pushing the lever marked Parking Brake.
- B. Check that the transmission is in NEUTRAL.
- C. Brakes. The left hand grip and the right foot pedal are the rear wheel brakes. The right hand grip is the front wheel brake. Check operation. Make sure there is no brake fluid leakage.
- D. Fuel. Fill the fuel tank with unleaded gas when necessary. Check for leaks.
- E. Tires and wheels. Check condition and pressure.
- F. Controls. Check for proper function.
- G. Lights and switches. Check for proper function.
- H. Drive shaft and chassis. Check for damage or leaking fluids.
- I. Steering. Check that the wheels turn properly as you turn the handlebars.
- J. Cargo. Check that all cargo is properly secured.
- K. Headlight and headlight dimmer switches. Check for proper function.
- L. Engine stop switch has three positions. When the switch is in the Run position, the engine will operate. When the switch is in either OFF position, the engine will not operate.
- M. Engine oil level. Check the oil level and add oil if required. Check for leaks.
- N. Throttle. Check for smooth opening and closing in all steering positions.
- O. Nuts, bolts, and fasteners. Check the wheels to see that the axle nuts are tightened. Check the security of all other nuts, bolts, and fasteners.
- P. Underbody and exhaust system. Check for, and remove, any dirt, vegetation, or other debris that could be a fire hazard or interfere with the proper operation of the vehicle.
- Q. Air cleaner housing drain tube. Check for deposits in the drain tube. If necessary, clean the tube and check the air cleaner housing.
- R. Check tool kit.

6.4 Field Procedures

6.4.1 Starting the Engine

- A. Lock the parking brake and make sure the transmission is in neutral.
Note: starter will not operate unless the transmission is in neutral.
- B. Turn the fuel valve and the ignition switch ON.
- C. Turn the engine stop switch to RUN.
- D. Move the choke level all the way to the ON position. Keep the throttle fully closed.
- E. Press the starter button. After starting motor turn off choke.

6.4.2 Shifting Gears

- A. To prevent injury, always keep your feet on the footrests while riding.
- B. Be sure that the engine is sufficiently warmed up before you begin riding.
- C. With the transmission in neutral, release the parking brake, but continue squeezing the front brake lever.
- D. With the throttle released, raised the gearshift pedal one full stroke to shift into SL (super low) gear.
- E. Release the rear brake lever and increase engine speed by gradually opening the throttle.
- F. When speed increases, release the throttle and shift to first gear by raising the gearshift pedal one full stroke.
- G. Repeat this sequence to progressively shift to second, third, and fourth (top) gear.
- H. To downshift, reverse this sequence. Remember to release the throttle each time you shift to the next lower gear.

6.4.3 Riding in Reverse

- A. First, bring the vehicle to a complete stop and make sure the transmission is in neutral.
- B. While pushing the reverse selector knob (located on the left handlebar) in, squeeze the left brake lever, then depress the gearshift pedal.
- C. Release the left brake lever.
- D. Open the throttle gradually and ride slowly. Do not open the throttle suddenly or make abrupt turns.
- E. To stop, release the throttle and gradually apply both the front and rear brakes. Do not abruptly apply the rear brake by itself.
- F. To shift from reverse to neutral, raise the gearshift pedal one stroke.

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6.4.4 Transporting Equipment

Note: Never transport additional personnel on the ATV.

- A. The EWG and other trailer-mounted light equipment may be hauled by the ATV at a work site.
- B. Attach trailer hitch to ball jack and secure.
- C. Ensure that equipment does not exceed the recommended weight towage capacity as described in owner's manual.
- D. Follow all posted traffic rules and wear the helmet.
- E. When off road, take extreme care to avoid uneven terrain, and operate at a safe speed.

6.5 Field Post Operation

- A. Lock the parking brake and make sure the transmission is in neutral.
- B. Turn the fuel valve and the ignition switch off.
- C. Turn the engine stop switch to OFF.
- D. Turn all auxiliary switches off.
- E. Check for damages and leaks.

6.6 Office Post Operation

- A. Return protective gear to proper storage.
- B. Return ATV to designated storage area.
- C. Return ignition key to custodian, and report any damages or malfunctions that may have occurred during use.

6.7 Summary

Serious injury can result from improper use of ATVs, but with preparation and practice, you can safely develop and expand your riding skills. ATVs handle differently from other vehicles, such as motorcycles and cars. A collision or rollover can occur quickly. Proper instruction and practice are important.

7.0 QUALITY ASSURANCE RECORDS

- 7.1 Documentation of completed OJT.

8.0 ATTACHMENTS

- 8.1 Attachment A—Correspondence Letter - Business Services Department, Fleet Management Group

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Attachment A

Correspondence Letter—LLNL Business Services Department

Interdepartmental letterhead

Mail Station L- 695

Ext: 2-7482

BUSINESS SERVICES DEPARTMENT
Fleet Management Group

July 26, 1996

To : Bob Bainer
From: Sal Ruiz
Subject : Honda ATV

Attached are copies of the Honda dealer documents I signed when the ATV was delivered on July 9, 1996. These documents are required by the dealer, however, we do not have to take any action on the DMV registration or the Application for Original Registration. Included in the package is a form titled "ATV Rider Training Certificate". This form covers the ATV safety and training requirements. You may want to keep all of these forms on file at your office.

I covered the safety recommendations/requirements with Richard Stanley at the time of delivery. I would recommend that you review the safety information on the document and ensure that all operators are aware of the information. Specifically, please note and observe the warning "Never drive an ATV on a public road, even a dirt or gravel one". Also, all of the on-site traffic rules, i.e. speed limits, directional signs etc., apply to the ATV and should be observed by the operators of the ATV.

Fleet Management will be responsible for scheduling and performing the maintenance on the unit. We would ask your cooperation in ensuring that the unit is brought in to the garage upon receiving a planned maintenance notice.

Please call me at 2-7482 with any questions.

University of California

 Lawrence Livermore
National Laboratory