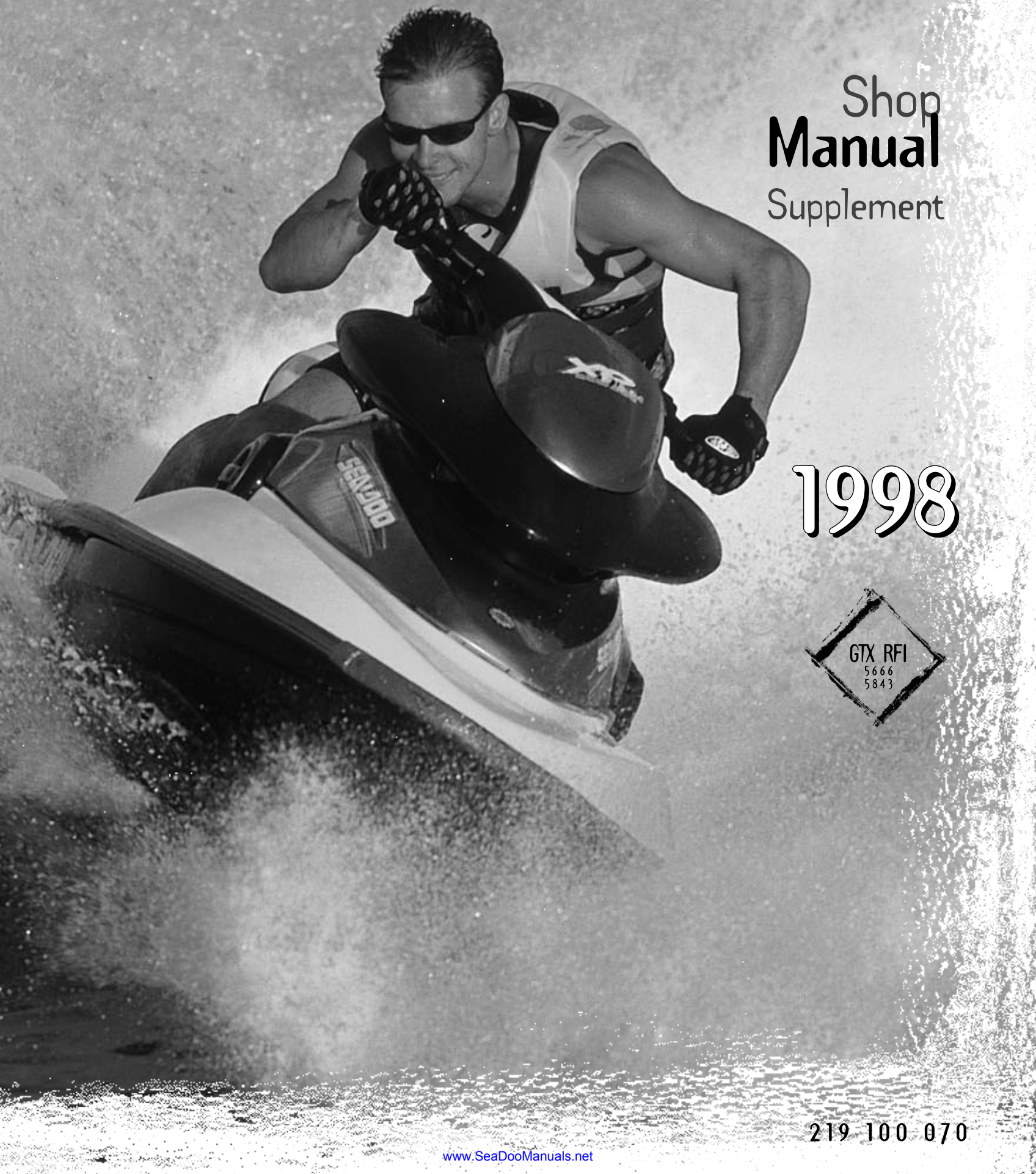
SEA-DOO®



Shop Manual Supplement

1998

GTX RFI
5666
5843

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SAFETY NOTICE

This manual was primarily published to be used by watercraft technicians trained by the manufacturer who are already familiar with all service and maintenance procedures relating to Bombardier made Sea-Doo watercraft.

Please note that the instructions will apply only if proper hand tools and special service tools are used.

It is understood that this manual may be translated into another language. In the event of any discrepancy, the English version shall prevail.

The content depicts parts and/or procedures applicable to the particular product at its time of manufacture. It does not include dealer modifications, whether authorized or not by Bombardier, after manufacturing the product.

The use of Bombardier parts is most strongly recommended when considering replacement of any component. Dealer and/or distributor assistance should be sought in case of doubt.

Torque wrench tightening specifications must be strictly adhered to. Locking devices (ex.: locking disk, lock nut) must be installed or replaced with new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

This manual emphasizes particular information denoted by the wording and symbols:

◆ WARNING

Identifies an instruction which, if not followed, could cause serious personal injury including possibility of death.

▼ CAUTION

Denotes an instruction which, if not followed, could severely damage watercraft components.

NOTE: Indicates supplementary information needed to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use. Always use common shop safety practice.

This information relates to the preparation and use of Bombardier watercraft and has been utilized safely and effectively by Bombardier Inc. However, Bombardier Inc. disclaims liability for all damages and/or injuries resulting from the improper use of the contents. We strongly recommend that any services be carried out and/or verified by a highly skilled professional technician. It is understood that certain modifications may render use of the watercraft illegal under existing federal, provincial and state regulations.

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PERIODIC INSPECTION CHART

NOTE: Servicing period is given in hours. Shaded area shows the maintenance frequency.

DESCRIPTION	FREQUENCY			
	Every 10 hours	Every 25 hours	Every 50 hours	Every 100 hours or seasonally
Lubrication/corrosion protection of metallic components	①			
Engine ignition timing				
Spark plug replacement				
Fuel injector cleaning				
Fuel injection sensors verification				
Throttle cable, inspection/lubrication	①			
Flame arrester inspection				
Throttle cable adjustment				
RAVE valve cleaning				
Engine counterbalance shaft oil level				
Water flow regulator valve inspection				
Oil injection pump adjustment				
Oil filter inspection				
Oil filter replacement				
Engine head bolts, retorque				
Steering system inspection				
Reverse system/reverse cable adjustment				
Fastener tightening (flame arrester support, throttle body, engine mount, exhaust system, etc.)				
Muffler, battery and reservoir fastening devices				
Fuel/oil lines, check valve and hose inspection, fuel system pressurization				
Fuel/vent line pressure relief valve inspection				
Bailer pick up inspection				
Battery condition				
Ground connections (starter, battery, etc.)				
Monitoring beeper				
Jet pump reservoir oil level/oil condition				
Jet pump oil replacement				
Jet pump cover pusher inspection				
Impeller condition and impeller/wear ring clearance		②		
Drive shaft boot/spline condition (both ends)		②		
PTO flywheel lubrication				
Floating ring and boot inspection				
Water intake grate condition		②		
Hull condition				
Cooling system flushing	③			

① Every 10 hours in salt water use.

② These items have to be initially checked after 25 hours. Thereafter, servicing to be made as specified in this chart.

③ Daily flushing in salt water or foul water use.

FLUSHING AND LUBRICATION

GENERAL

Flushing the cooling system with fresh water is essential to neutralize corroding effects of salt or other chemical products present in water. It will help to clean up sand, salt, shells or other particles in water jackets (engine, exhaust manifold, tuned pipe) and/or hoses.

Flushing and engine lubrication should be performed when the watercraft is not expected to be used further the same day or when the watercraft is stored for any extended time.

▼ CAUTION

Failure to flush cooling system, when necessary, will severely damage engine and/or exhaust system. Never flush a hot engine. Make sure engine operates during entire procedure.

PROCEDURE

◆ WARNING

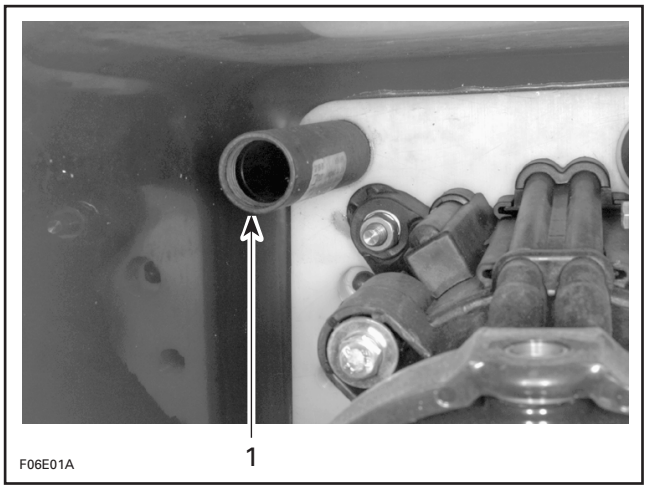
Perform this operation in a well ventilated area. Do not touch any electrical parts or jet pump area when engine is running.

Clean jet pump by spraying water in its inlet and outlet and then spray BOMBARDIER LUBE lubricant.

◆ WARNING

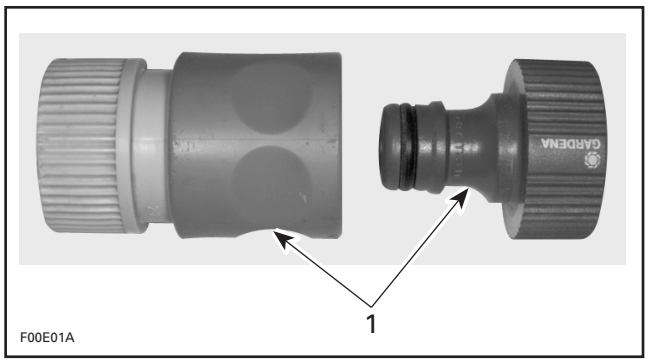
Always remove safety lanyard cap from switch to prevent accidental engine starting before cleaning the jet pump area. Engine must not be running for this operation.

To flush engine, connect a garden hose to the water outlet located at the rear of the watercraft.

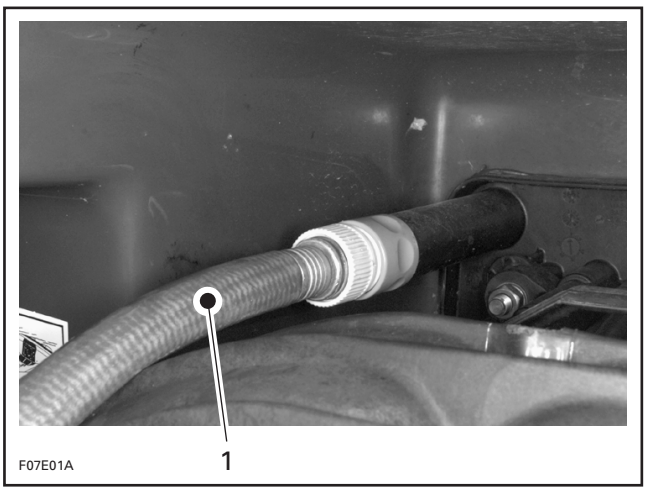


1. Water outlet

NOTE: A quick connect adapter is supplied with the watercraft and can be used to ease garden hose installation.



1. Quick connect adapter



1. Garden hose installed with quick connect adapter

Start the engine **then** immediately open the water tap.

WARNING

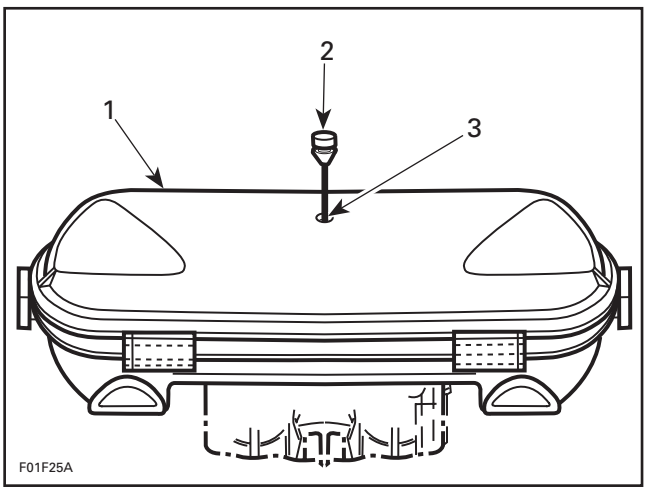
Do not touch any electrical parts or jet pump area when engine is running.

CAUTION

Never flush a hot engine. Always start the engine before opening the water tap. Open water tap immediately after engine is started to prevent overheating.

Run the engine about 3 minutes at a fast idle around 3500 RPM.

Spray BOMBARDIER LUBE lubricant through air intake silencer keeping engine at fast idle.



1. *Air intake silencer*
2. *Pull plug*
3. *Spray BOMBARDIER LUBE here*

NOTE: Lubrication of engine should be done at least for 1 minute.

Close the water tap **then** stop the engine.

CAUTION

Always close the water tap before stopping the engine.

Disconnect the garden hose.

CAUTION

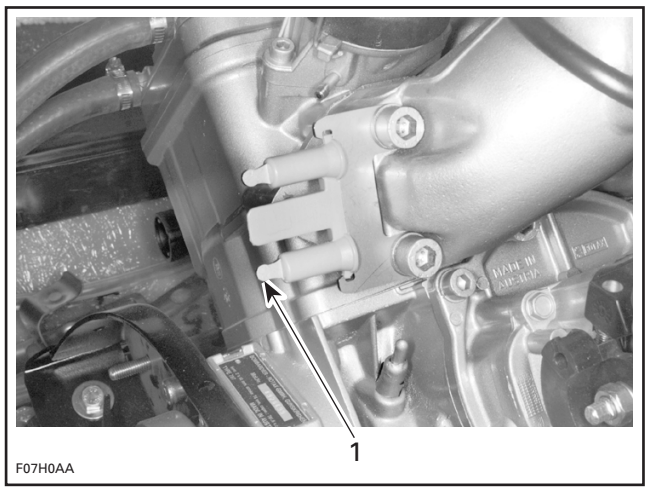
Remove quick connect adapter after flushing operation (if used).

Wipe up any residual water from the engine.

Remove spark plug cables and connect them on the grounding device near the tuned pipe.

WARNING

Always use spark plug cable grounding device when removing spark plugs.



1. *Grounding device*

Remove both spark plugs and spray BOMBARDIER LUBE lubricant into each cylinder.

NOTE: For the storage period, use Bombardier storage oil (P/N 413 711 600).

Fully apply the throttle lever then depress the start/stop button to crank the engine a few turns to distribute the oil onto cylinder wall.

Apply anti-seize lubricant on spark plug threads then reinstall them.

Reinstall plug on air intake silencer cover.

NOTE: Engine fogging should be done whenever the watercraft is to be stored for a few days or a long period.

CAUTION

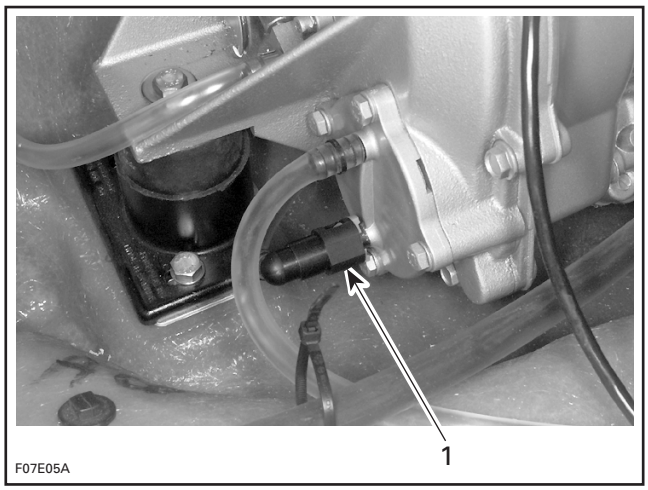
Never leave rags or tools in the engine compartment or in the bilge.

STORAGE

Engine Draining

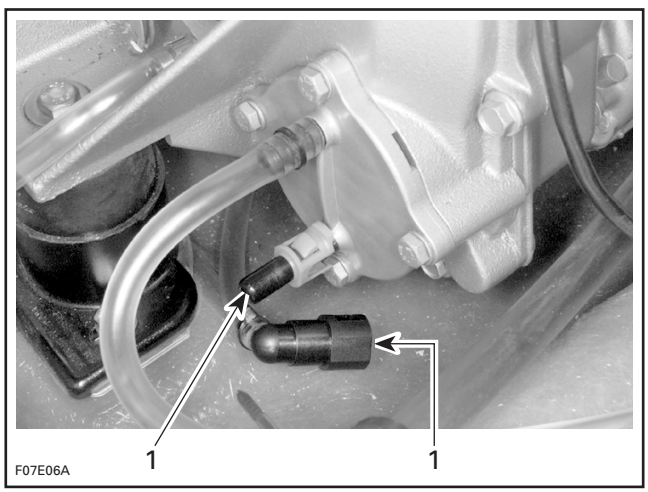
Disconnect the water supply hose used to cool the magneto. It features a quick connect fitting. Press both tabs and pull fitting in order to disconnect hose.

This hose is located at the bottom of the magneto cover beside the engine support.



1. Disconnect this hose

Water should flow out of the fitting (magneto cooling circuit) and hose (crankcase heat exchanger).



1. Make sure water flows out of fitting and hose

▼ CAUTION

Water in engine must be free to flow out. Should water freeze in engine, severe damage will occur.

Fuel System

Sea-Doo Fuel Stabilizer (P/N 413 408 600) should be added in fuel tank to prevent fuel deterioration. Follow manufacturer's instructions for proper use.

NOTE: Fuel stabilizer should be added prior engine lubrication.

◆ WARNING

Fuel is flammable and explosive under certain conditions. Always work in a well ventilated area.

Cooling System Flushing and Engine Internal Lubrication

Cooling system has to be flushed with fresh water to prevent salt, sand or dirt accumulation which will clog water passages.

Engine must be lubricated to prevent corrosion on internal parts.

For proper procedure, refer to FLUSHING AND LUBRICATION 01-03.

Propulsion System

JET PUMP

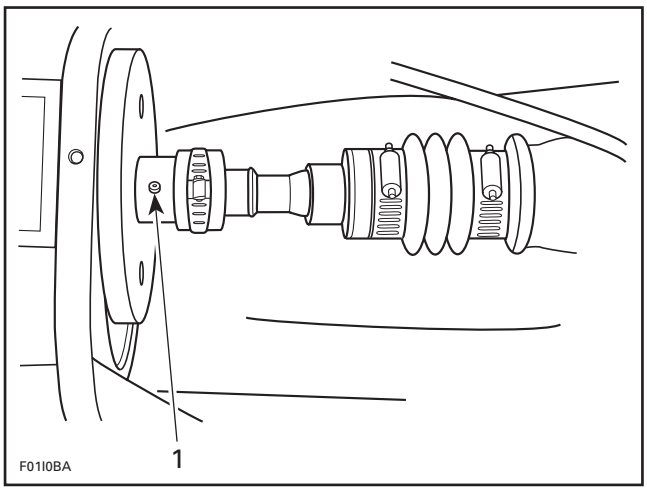
Lubricant in impeller shaft reservoir should be drained. Reservoir should be cleaned and refilled with SEA-DOO synthetic 75W90 GL5 polyolester oil. Refer to the *1998 Sea-Doo Shop Manual* for proper procedure.

PTO FLYWHEEL

Lubricate PTO flywheel at grease fitting with synthetic grease (P/N 293 550 010).

CAUTION

Do not lubricate excessively. Immediately stop when a slight movement is noticed on rubber boot.



1. Grease PTO flywheel

CAUTION

Never leave any clothing, tool or other objects near PTO flywheel and drive shaft.

Battery

For battery removal, cleaning and storage, refer to the *1998 Sea-Doo Shop Manual*.

Watercraft Cleaning

Clean the bilge with hot water and mild detergent or with bilge cleaner. Rinse thoroughly. Lift front end of watercraft to completely drain bilge. If any repairs are needed to body or to the hull, touch up paint and Gelcote® repair kit are available. Replace damaged labels/decals.

Wash the body with soap and water solution (only use mild detergent). Rinse thoroughly with fresh water. Remove marine organisms from the hull. Apply a nonabrasive wax.

CAUTION

Never clean fiberglass and plastic parts with strong detergent, degreasing agent, paint thinner, acetone, etc.

If the watercraft is to be stored outside, cover it with an opaque tarpaulin to prevent sun rays and grime from affecting the plastic components, watercraft finish as well as preventing dust accumulation.

CAUTION

The watercraft must never be left in water for storage. Never leave the watercraft stored in direct sunlight.

Anticorrosion Treatment

Wipe off any residual water in the engine compartment.

Spray BOMBARDIER LUBE lubricant over all metallic components in engine compartment.

Lubricate the throttle cable with BOMBARDIER LUBE lubricant.

The front seat should be partially left opened during storage. This will avoid engine compartment condensation and possible corrosion.

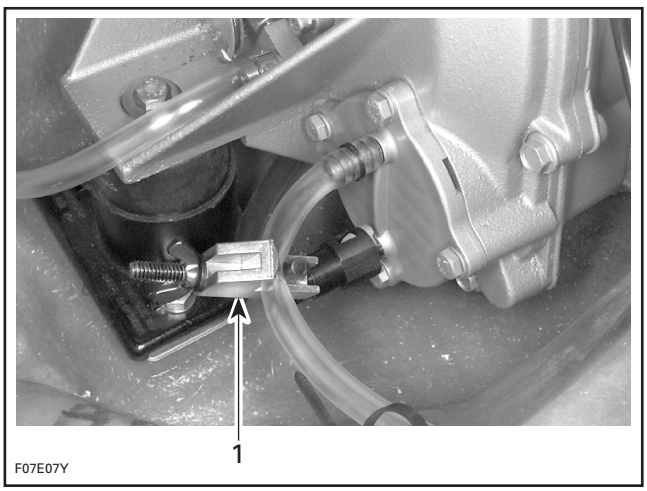
Additional Recommended Protection

In cool regions (where freezing point may be encountered), cooling system should be filled with water and antifreeze solution.

CAUTION

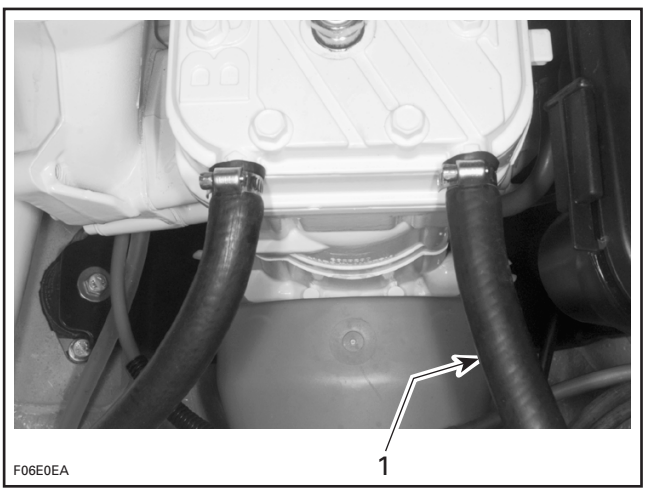
Always use ethylene-glycol antifreeze containing corrosion inhibitors specifically recommended for aluminum engines.

Install a hose pincher to water return hose of the magneto cooling circuit.



1. *Hose pincher to water return hose*

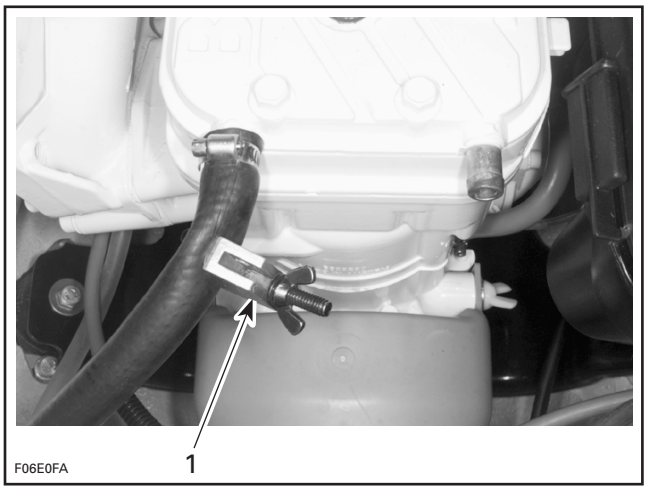
Disconnect engine water return hose.



TYPICAL

1. *Disconnect engine water return hose*

Install a hose pincher to engine water supply hose.



TYPICAL

1. *Hose pincher installed on the engine water supply hose*

Temporarily install a short piece of hose to engine water outlet at cylinder head.

Insert a funnel into hose and pour antifreeze mixed with water in engine until the colored solution appears in the water return hose of the magneto cooling circuit.

Remove temporary hose and reconnect engine water return hose.

Remove hose pinchers.

Most of the antifreeze will drain out from the fitting near the exhaust outlet when removing the hose pinchers. Use a container to recover it. Dispose of antifreeze as per your local laws and regulations.

NOTE: Although antifreeze will mainly drain out, the antifreeze has mixed with the water that was possibly trapped in the cylinder water jackets and thus preventing freezing problems.

At pre-season preparation, drain the remaining antifreeze from cooling system prior using the watercraft.

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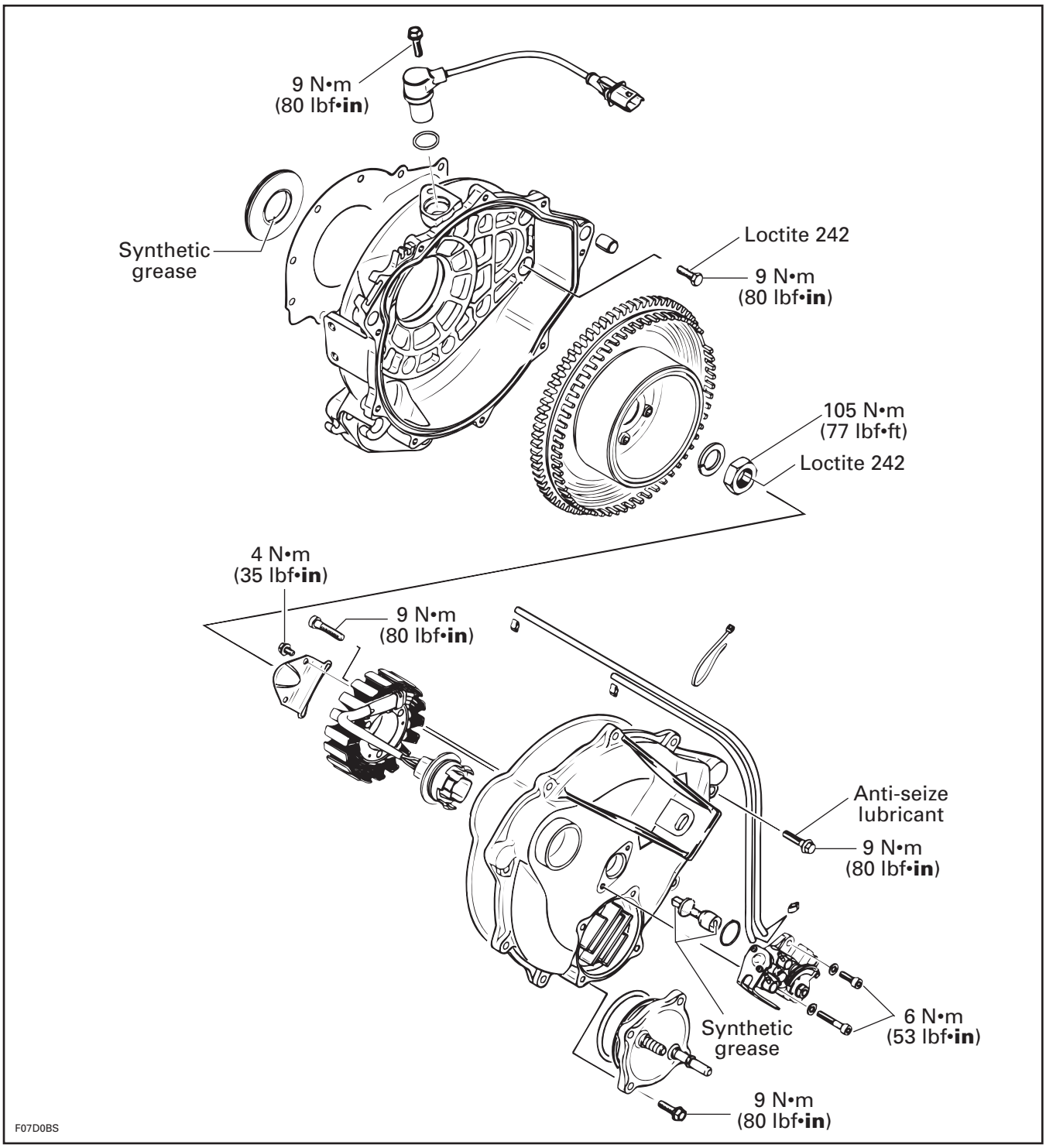
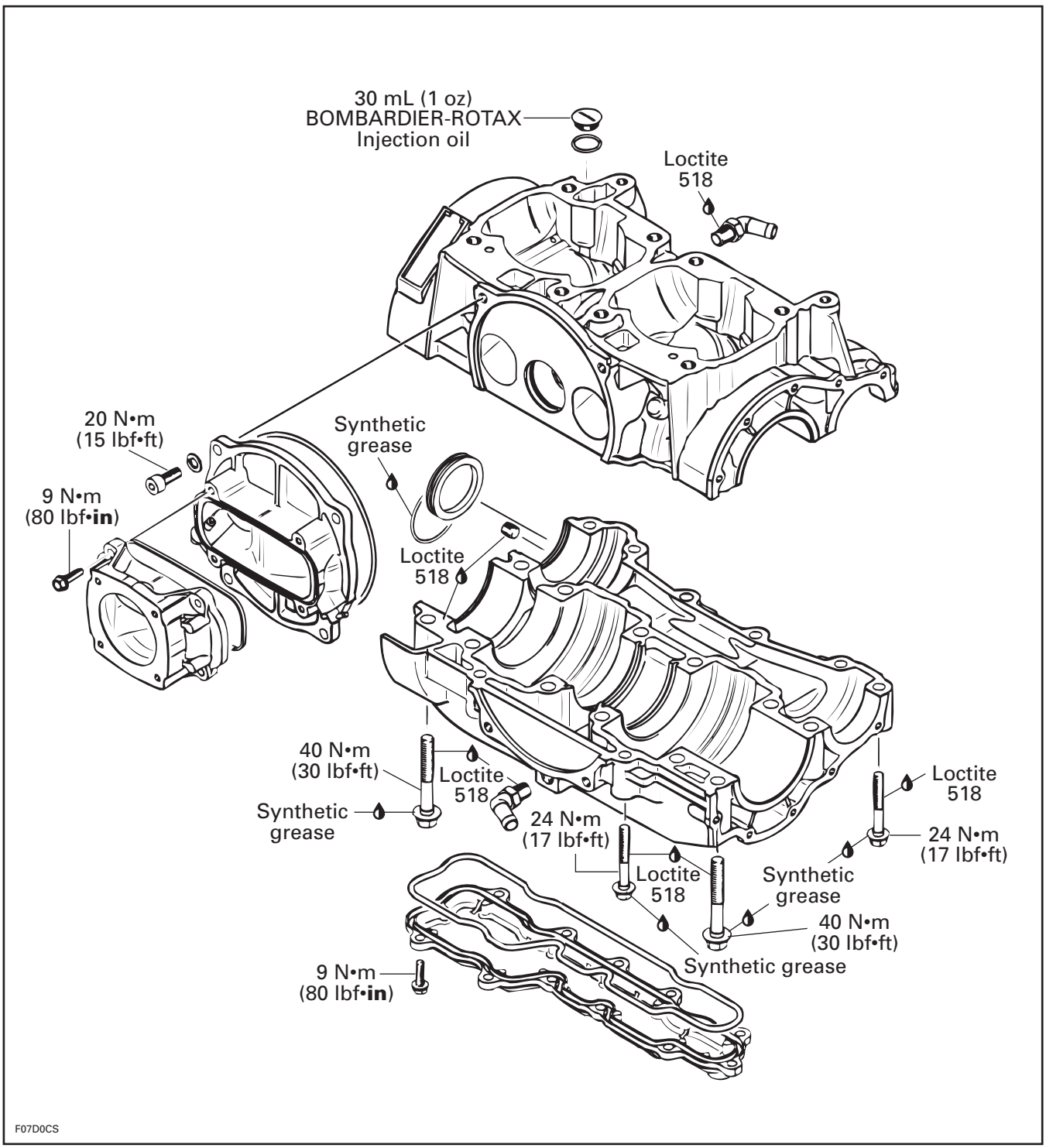
MAGNETO SYSTEM



CRANKCASE



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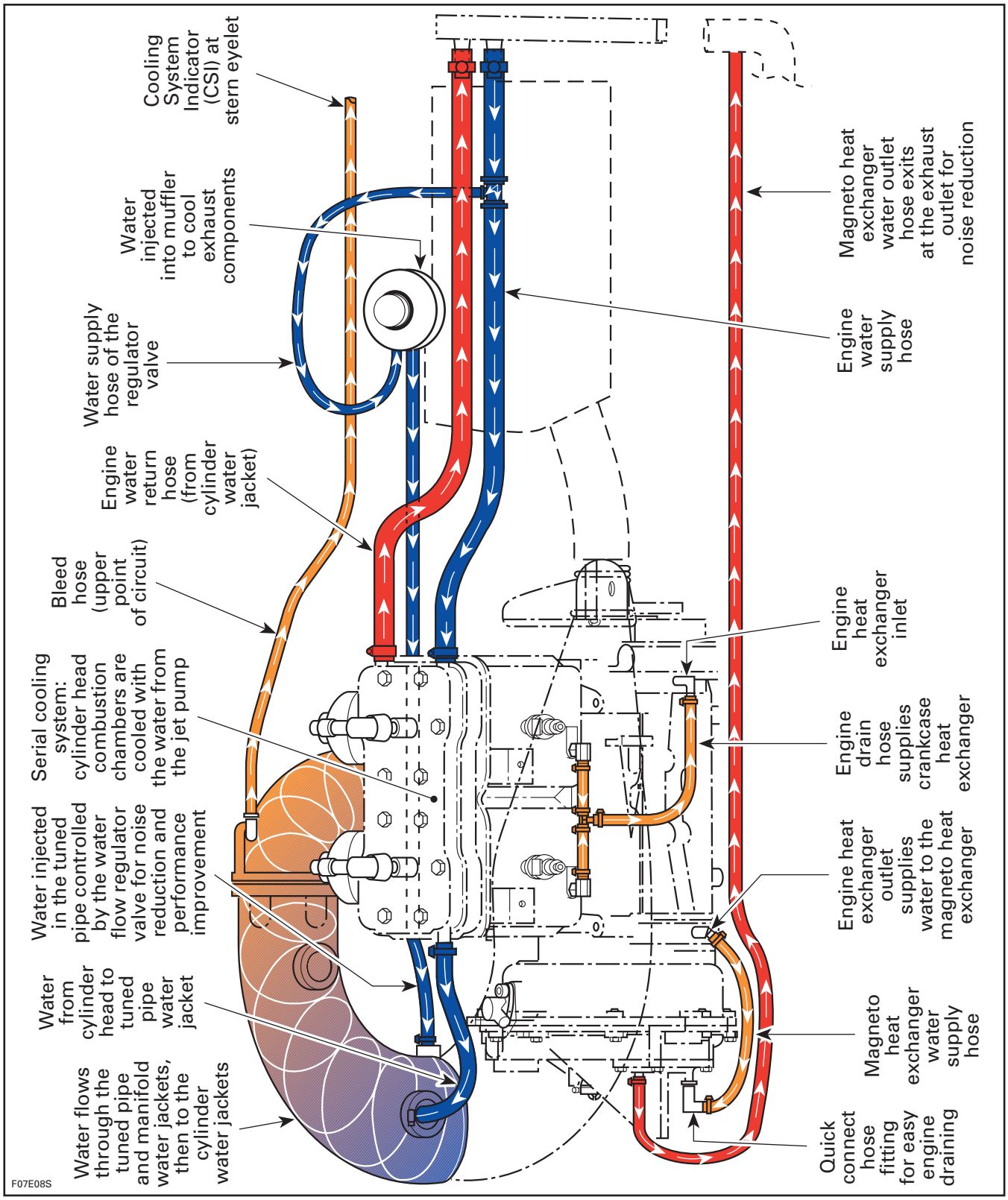
CIRCUIT



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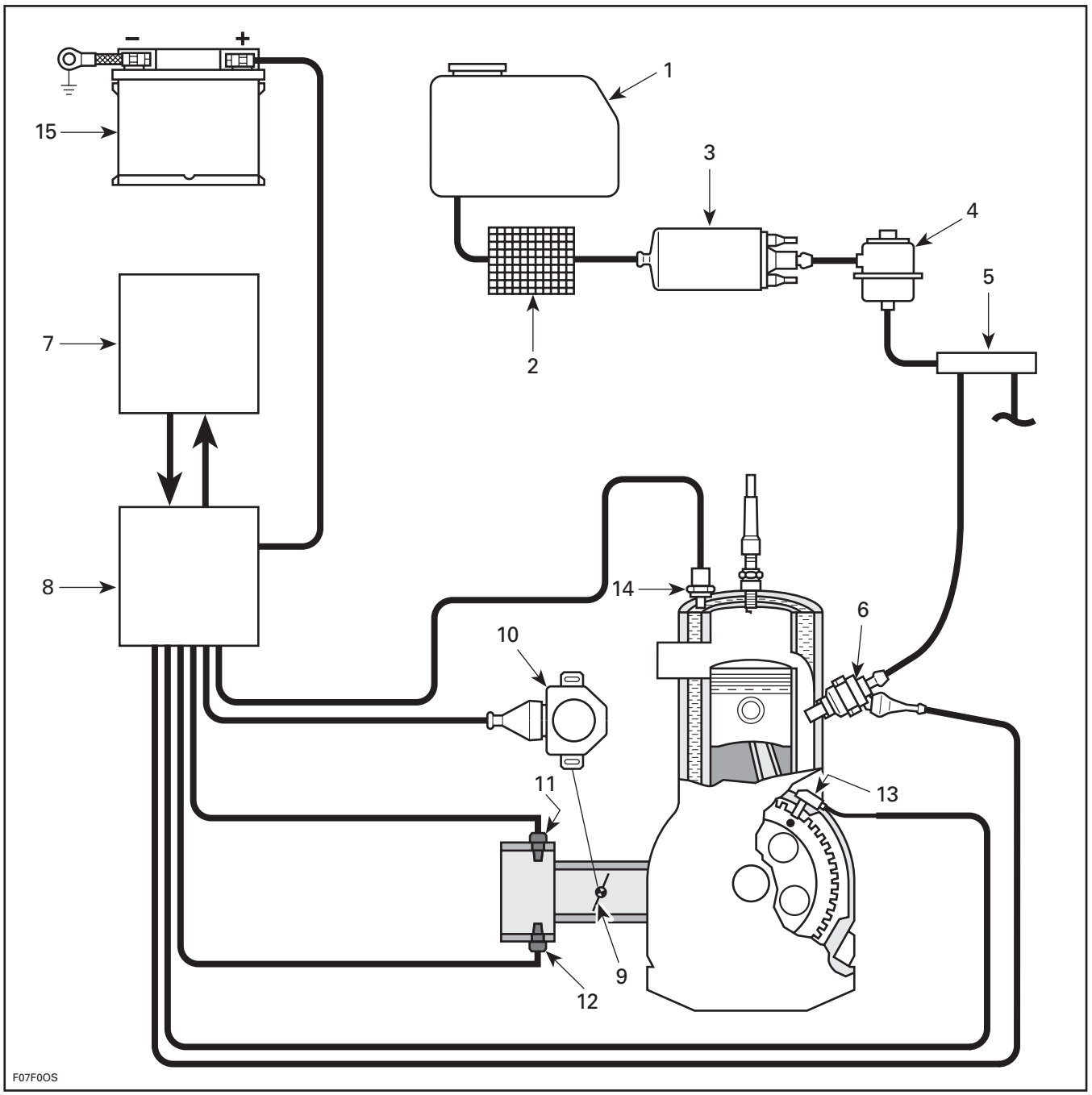
FUEL INJECTION

INTRODUCTION



DESCRIPTION OF THE FUEL INJECTION SYSTEM

1. *Fuel tank*
2. *Fuel filter*
3. *Fuel pump*
4. *Regulator*
5. *Fuel rail*
6. *Fuel injector*
7. *Electronic Control Unit (ECU)*
8. *Multi-Purpose Electronic Module (MPEM)*
9. *Throttle plate*
10. *Throttle Position Sensor (TPS)*
11. *Air Pressure Sensor (APS)*
12. *Air Temperature Sensor (ATS)*
13. *Crankshaft Position Sensor (CPS)*
14. *Water Temperature Sensor (WTS)*
15. *Battery*

The Rotax Fuel Injection (RFI) is a semi-direct electronic fuel injection system.

Fuel is injected into each cylinder through the rear transfer port. With this design, the injector is not exposed to high combustion pressure, temperature and contaminants. The injector should run cleaner and longer service intervals.

This system delivers the following benefits:

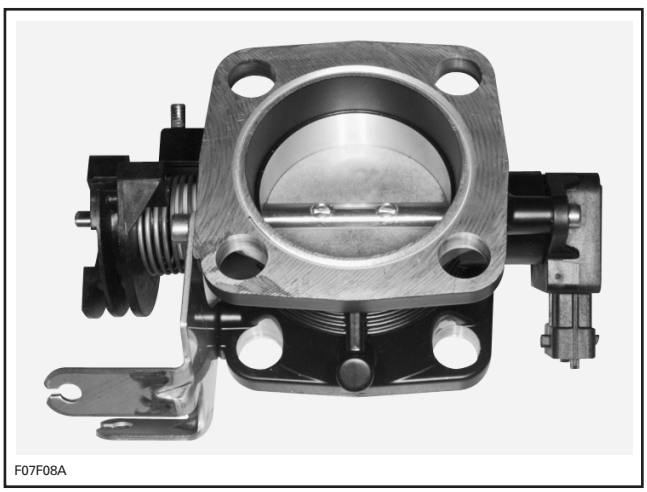
– easier cold engine starting (no choke)
– easier hot engine starting
– better throttle response
– better fuel economy
– no fuel valve

This system has the advantage of optimizing the engine power, fuel economy and emission controls under all engine operating conditions by managing both the fuel injection duration and ignition timing.

The Rotax Fuel Injection (RFI) is composed of the 3 following basic systems: Air Induction, Fuel Delivery and Electronic Management.

AIR INDUCTION

A single throttle body (56 mm) breath through the air intake silencer to provide a sufficient amount of air for the engine operation.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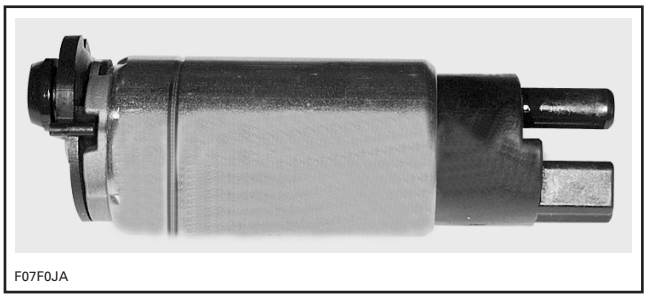
THROTTLE BODY

FUEL DELIVERY

An electric fuel pump supplies the fuel to the fuel rail and injectors.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FUEL PUMP

A regulator maintains a constant fuel pressure of 400-414 kPa (58-60 PSI).


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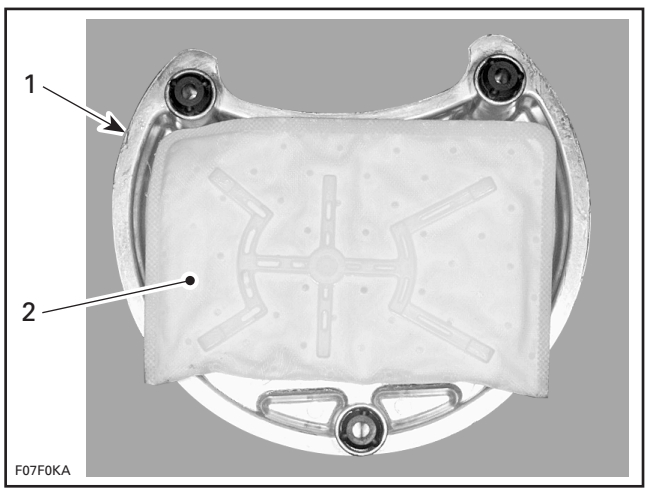
REGULATOR

A dual piece fuel filter protects the fuel pump, regulator and injectors.



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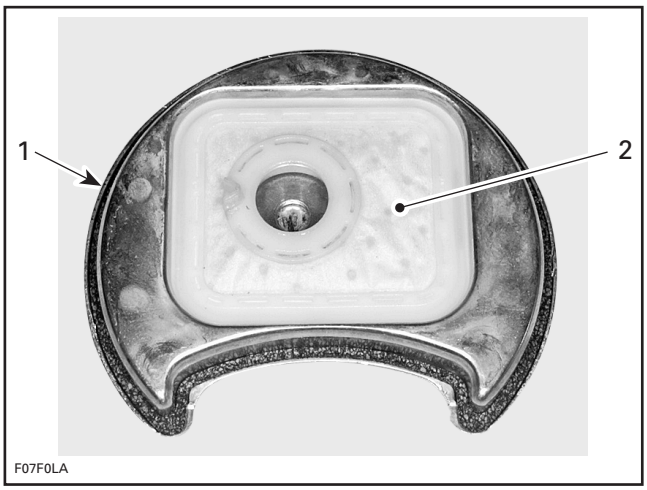
1. *Fuel pump assembly*
2. *External fuel filter*

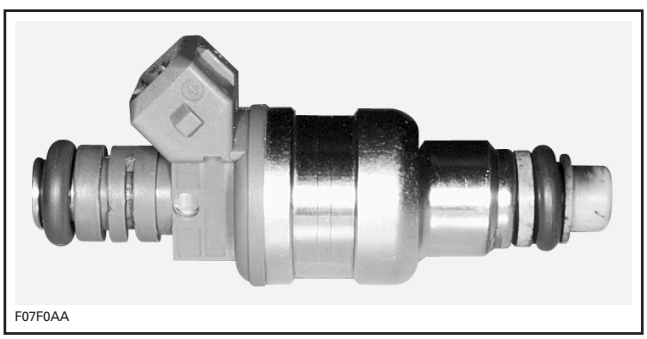


1. *End cap of fuel pump assembly removed*
2. *Internal fuel filter*

All these components are comprised in a single module mounted in the fuel tank. The fuel gauge sender is also mounted on this module.

FUEL PUMP ASSEMBLY

The injectors inject a metered quantity of fuel in the cylinder rear transfer port in accordance with the signal from the Electronic Control Unit (ECU).



INJECTOR

ELECTRONIC MANAGEMENT

Electronic Control Unit (ECU)

The electronic fuel injection is equipped with a Bosch Electronic Control Unit (ECU).

ELECTRONIC CONTROL UNIT (ECU)

The ECU is mounted behind the MPEM in the front of the watercraft, in a watertight box.

The ECU controls the following functions:

1. Electronic fuel injection

The ECU receives the signals from 5 sensors which indicate engine operating conditions at milli-second intervals.

– Throttle Position Sensor (TPS)
– Crankshaft Position Sensor (CPS)
– Air Temperature Sensor (ATS)
– Water Temperature Sensor (WTS)
– Air Pressure Sensor (APS)

These signals are used by the ECU to determine the injection duration required for optimum air-fuel ratio.

2. Ignition timing

The ECU is programmed with data for optimum ignition timing under all operating conditions. Using data provided by the sensors, the ECU controls the ignition timing for best engine operation.

3. Maximum engine speed

The ECU limits the maximum allowable engine speed. The rev limiter is set at 7080 ± 50 RPM.

4. Fail-Safe Function

In the event of a sensor malfunction, the ECU will use a default operating mode to ensure driveability to shore. A message may be displayed on the Info Center to inform the operator.

5. Diagnostic mode

The ECU is able to detect malfunctions in the sensor network. The malfunction is recorded in the memory of the ECU. The memory of the ECU can be checked using the MPEM programmer tool.

Multi-Purpose Electronic Module (MPEM)

The MPEM is also used with the Rotax Fuel Injection system.

MPEM

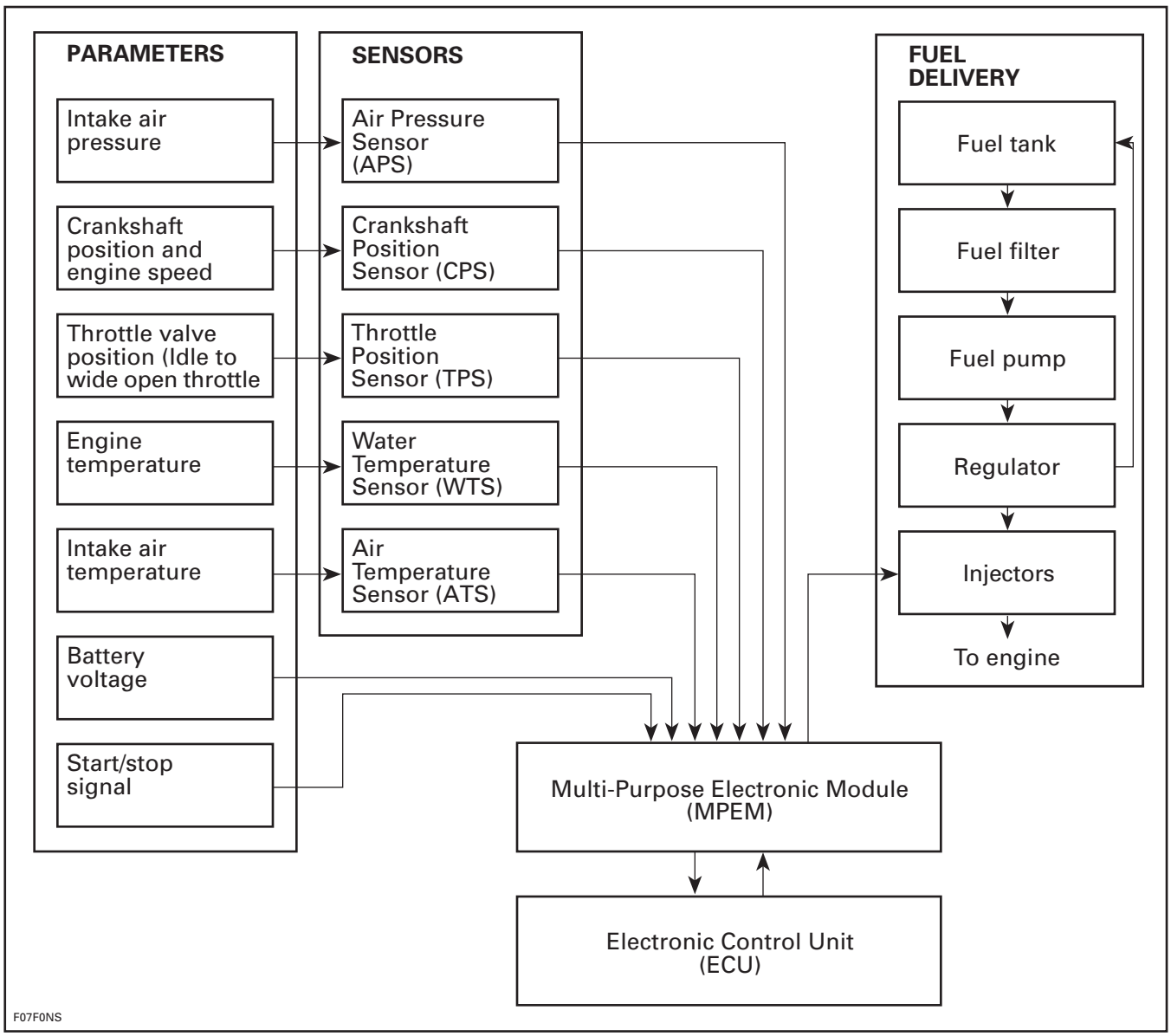
It is responsible of the following electrical functions:

– interpreting information
– distributing information
– start/stop function
– timer
– vehicle hours
– Digitally Encoded Security System (DESS)

The MPEM has a special safety feature to limit engine revolutions when the battery voltage is too low.

For example, when the battery voltage reaches 8.9 volts for at least 30 seconds, engine revolutions are limited to 4480 RPM.

When voltage reaches 7 volts for at least 30 seconds, the engine is automatically shut off by the MPEM.



SIGNAL MANAGEMENT

DIAGNOSTIC PROCEDURES

The MPEM programmer is the primary tool to diagnose fuel injection related problems.

The latest software designed for the RFI model allows sensor inspection, diagnostic options (static and dynamic) and adjustment such as the Throttle Position Sensor (TPS).

NOTE: Make sure your MPEM programmer is updated with the latest software version. For a complete overview of the programmer, refer to the *MPEM Programmer Guide* (P/N 219 700 090).

Diagnostic Option Example

Turn on the programmer and enter your password.

Select VEHICLE INFO from the main menu and press ENTER.

1. CHECK KEYS
2. PROGRAM KEY
3. VEHICLE INFO
4. START VEH.
5. OTHERS

By selecting the VEHICLE INFO you will access a 9-line sub-menu. Select BOSCH SYSTEM from the sub-menu and press ENTER.

1. CUSTOMER NAME
2. DELIVERY DATE
3. VEH. SERIAL #
4. ENGINE PARAM.
5. PROGRAM KEY
6. HOUR INFO.
7. MPEM INFO.
8. BOSCH SYSTEM
9. SAVE + QUIT

By selecting BOSCH MENU you will enter a second sub-menu. Select DIAGNOSIS and press ENTER.

1. DIAGNOSIS
2. START VEHICLE

By selecting DIAGNOSIS the following message "INITIALIZING IN PROCESS" will be displayed a few seconds, then a new menu will appear on the screen.

Select READ FAULT and press ENTER.

1. BOSCH INFO
2. READ FAULT
3. ERASE FAULT
4. ADJUSTMENT
5. REAL TIME
6. END DIAGNOSIS

NOTE: Line no. 1 BOSCH INFO will display the identification of the watercraft and the MPEM/ECU.

By selecting READ FAULT, the MPEM programmer will display the number of faults in the ECU memory and the codes related with the fault(s).

The programmer will offer PRESS ANY KEY. If there is more than 1 fault in the ECU memory, the next fault code will be displayed.

NOTE: On this model, there is always at least the 04 FC fault code. Ignore this fault code. Also, when the engine is NOT operating, a fault code will be displayed for the CPS. It should not be considered as a fault in the static mode.

Refer to the tables on next page for the explanation of the fault codes.

After reading the fault codes in the memory of the ECU, PRESS ANY KEY will return the programmer to the latest menu.

By selecting ERASE FAULT in the menu, it will allows you to erase the faults in the ECU memory.

NOTE: The programmer will not allows fault code erasing without first viewing in the READ FAULT.

FAULT CODE TABLES

ECU Faults

FAULT DETECTION	FAULT CODE	TYPE OF FAULT
No fault detected	FF FF	88 = no defect
Electronic Control Unit not OK	FF FF	00 = internal defect 1B = not plausible = EEPROM defect
EEPROM not assembly-line programmed	FF FE	2B = EEPROM not programmed
EEPROM triple inconsistent	FF FD	10 = out of tolerance 25 = defect = all 3 bytes different

Input Signal Faults

FAULT DETECTION	FAULT CODE	TYPE OF FAULT
Supply voltage	02 14	07 = signal too small
Water Temperature Sensor (WTS)	02 0A	1D = short circuit to ground 1E = interruption or short circuit to battery 1B = no plausible signal
Throttle Position Sensor (TPS)	02 06	1F = interruption or short circuit to ground 1C = short circuit to battery
Crankshaft Position Sensor (CPS)	02 1F	23 = do not indicate 06 = signal too large
Crankshaft Position Sensor (CPS)	02 01	03 = no signal (provisional after ignition on) 1B = no plausible signal (tooth gap error)
Air Intake Temperature Sensor (ATS)	02 0F	1D = short circuit to ground 1E = interruption or short circuit to ground
Air Pressure Sensor (APS)	02 10	1D = short circuit to ground 1E = interruption or short circuit to battery

Output Signal Faults

FAULT DETECTION	FAULT CODE	TYPE OF FAULT
Injector 1	04 E1	1C = short circuit to battery 1D = short circuit to ground 1E = interruption or short circuit to battery
Injector 2	04 E2	1C = short circuit to battery 1D = short circuit to ground 1E = interruption or short circuit to battery
Fuel pump	04 EB	1C = short circuit to battery
Not applicable	04 FC	Not applicable
RAVE	04 DB	1C = short circuit to battery 1D = short circuit to ground 1E = interruption or short circuit to battery

COMPONENT INSPECTION

Engine problems are not necessarily related to the electronic fuel injection system.

It is important to check that the electrical system is functioning properly.

– battery
– fuses
– DESS
– ignition (spark)
– ground connections
– wiring connectors

If all of the above mentioned items are functioning correctly, the following verifications can be performed to detect any faulty components.

NOTE: Troubleshooting should be performed using the MPEM programmer tool. See TROUBLESHOOTING in this subsection.

AIR INDUCTION SYSTEM

Throttle Body

Check that the throttle plate moves freely and smoothly.

FUEL DELIVERY

Fuel Filter

To inspect the fuel filter, the fuel pump assembly has to be removed from the fuel tank. See REMOVAL in this subsection for the procedure.

Fuel Pump

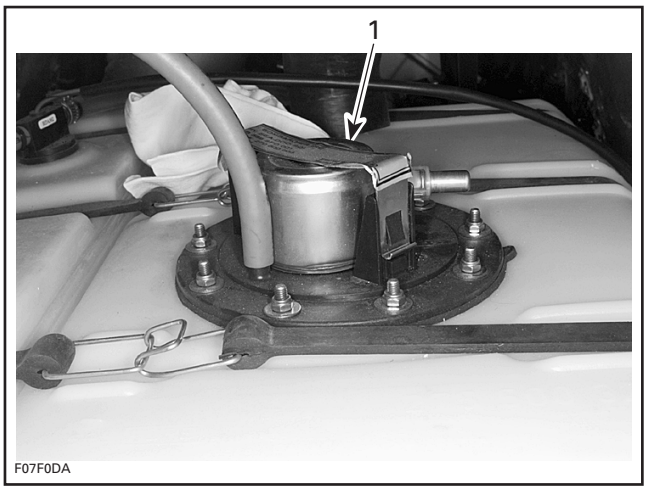
The fuel pump operation can be checked as follows.

Install the safety lanyard cap on the switch. The fuel pump should run for approximately 1 second.

If not, check the 7.5 A fuse on the MPEM module.

Regulator

The regulator is mounted on top of the fuel pump assembly.



1. Regulator

To inspect the regulator, a fuel pressure test must be done.

Check that battery voltage is above 12 volts.

Place a suitable container below the quick connect fitting of the fuel rail.

Cover the quick connect fitting with a shop towel.

Press on both tabs and disconnect the quick connect fitting.

◆ WARNING

Fuel is under pressure. Wipe off any fuel spillage in the bilge.

Install a fuel pressure gauge to the quick connect fitting of the fuel hose.

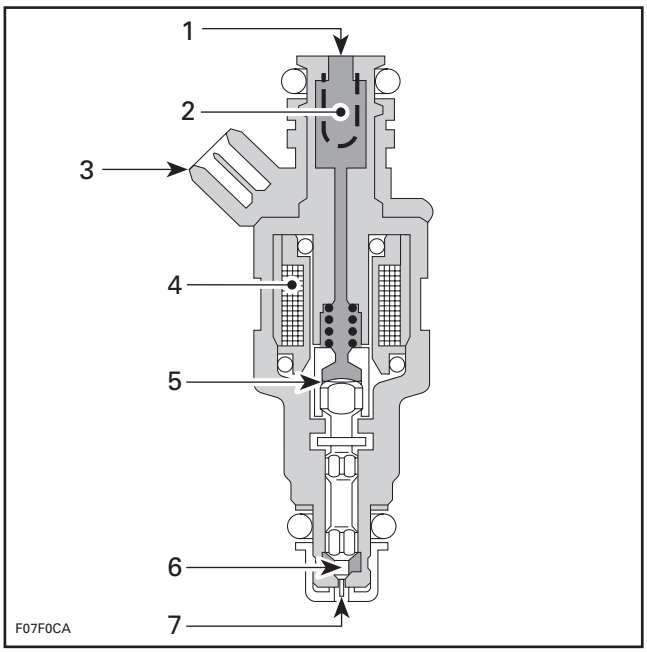
Install the safety lanyard cap on the switch to activate the fuel pump. The fuel pressure should be between 386-414 kPa (56-60 PSI).

If the pressure is too high, replace the regulator.

If the pressure is too low, check the following components:

– fuel hoses and connections
– fuel filter
– fuel pump
– regulator

Fuel Injector



1. *Inlet side*
2. *Filter*
3. *Wiring terminal*
4. *Coil*
5. *Plunger*
6. *Needle valve*
7. *Injection side*

Using a sound scope, it is possible to check the operating noise from each injector.

With the engine running or cranking, check that there is normal operating noise in proportion to engine revolutions.

If there is no noise from the injector, check the wiring connector, injector or the signal from the MPEM.

To check the signal, verify voltage at the injector connector. There should be at least 6 Vdc.

Check the resistance of the fuel injector.

Disconnect the connector of the fuel injector.

Using a multimeter, check resistance between both terminals.

The resistance should be between 2.3 Ω and 2.5 Ω at temperature of 20°C (68°F).

If not within specification, replace the fuel injector.

Leakage Test

To perform a leakage test, the injectors and fuel rail have to be removed. See REMOVAL in this sub-section for the procedure.

Reinstall both injectors to the fuel rail.

Reconnect the wire connector of the injector.

Place each injector in a clean bowl.

Install the safety lanyard cap on the switch to activate the fuel pump.

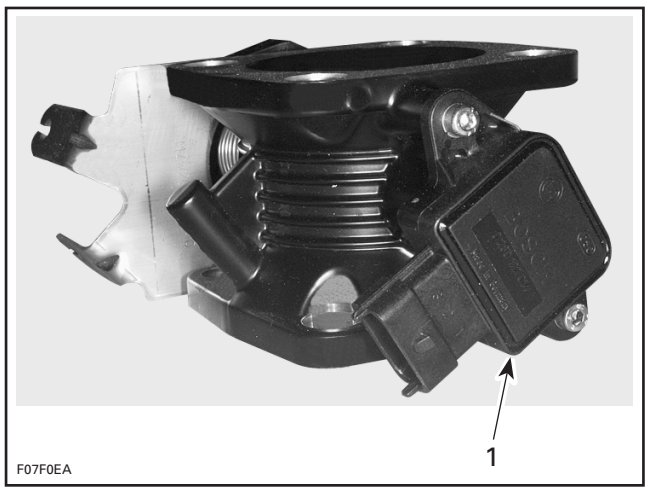
Check for fuel leakage from the injector nozzle. There should be less than 1 fuel drop of fuel per minute.

If not within specification, replace the fuel injector(s).

ELECTRONIC MANAGEMENT

Throttle Position Sensor (TPS)

Check the resistance of the throttle position sensor.



1. *Throttle position sensor (TPS)*

Remove the air intake silencer.

Disconnect the connector of the throttle position sensor.

Using a multimeter, check the resistance between the terminals 1 and 2 of the throttle position sensor.

The resistance should be between 1.6 kΩ and 2.4 kΩ.

Check also the resistance between the terminals 2 and 3 with the throttle plate in idle position.

The resistance should be between 710 Ω and 1380 Ω.

If not within specification, replace the throttle position sensor.

NOTE: As an alternate method, the resistance of the throttle position sensor can also be checked through the connector **no. 4** of the MPEM following this procedure.

Disconnect the AMP plug connector **no. 4** on the MPEM.

Disconnect the connector of the throttle position sensor.

Using a multimeter, check the resistance of the PURPLE/BROWN wire between the AMP plug connector (position 3) and the throttle position sensor connector (terminal 1).

Check the resistance of the BLACK/BROWN wire between the AMP plug connector (position 4) and the throttle position sensor connector (terminal 2).

Check also the resistance of the WHITE/BROWN wire between the AMP plug connector (position 11) and the throttle position sensor connector (terminal 3).

If there is an open circuit, repair the defective wire or terminal. If not, proceed as follows to test the throttle position sensor.

Connect the throttle position sensor connector.

Check the resistance between the PURPLE/BROWN wire (position 3) and the BLACK/BROWN wire (position 4) in the AMP plug connector **no. 4**. Deduct the total resistance value of the wires.

The resistance should be between 1.6 kΩ and 2.4 kΩ.

Check the resistance between the BLACK/BROWN wire (position 4) and the WHITE/BROWN wire (position 11) in the AMP plug connector **no. 4**. Deduct the total resistance value of the wires.

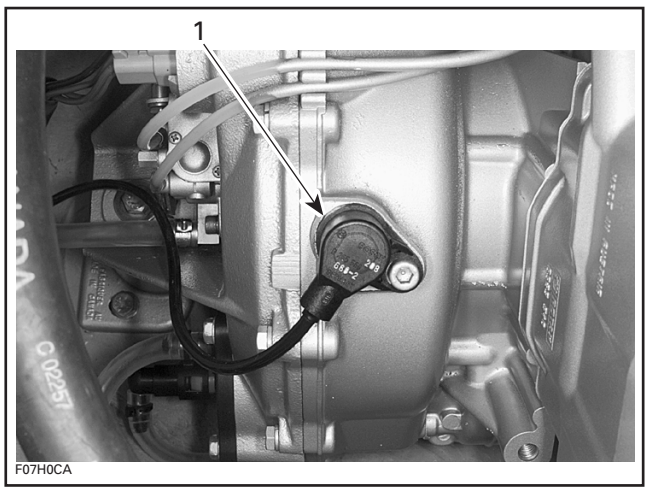
If not within specification, replace the throttle position sensor.

If the sensor test good, check the voltage between the PURPLE/BROWN wire and the BLACK/BROWN wire.

Depress the start/stop button with the safety lanyard removed to activate the timer. There should be 5 Vdc.

Crankshaft Position Sensor (CPS)

Check the resistance of the crankshaft position sensor.



1. Crankshaft position sensor (CPS)

Disconnect the connector of the crankshaft position sensor.

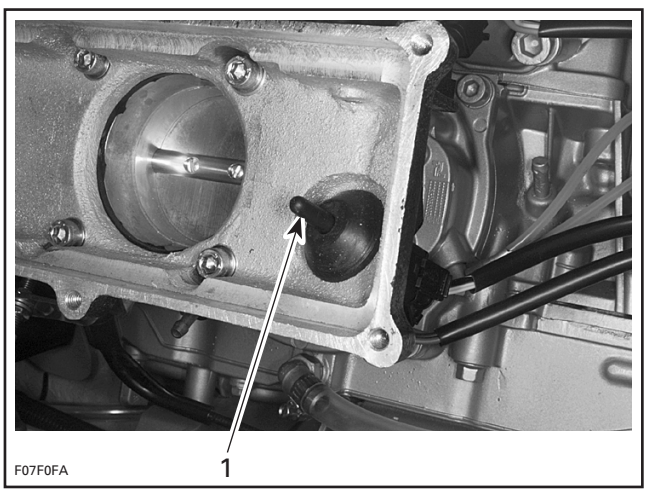
Using a multimeter, check the resistance between both terminals.

The resistance should be between 774 Ω and 946 Ω at temperature above 20°C (68°F).

If not within specification, replace the crankshaft position sensor.

Air Temperature Sensor (ATS)

Check the air temperature sensor resistance.



1. Air temperature sensor (ATS)

Disconnect the connector of the air temperature sensor.

Using a multimeter, check the resistance between both terminals.

The resistance should be between 2.280 kΩ and 2.736 kΩ at temperature of 19°C to 21°C (66°F to 70°F).

If not within specification, replace the air temperature sensor.

NOTE: As an alternate method, the resistance of the air temperature sensor can also be checked through the connector **no. 4** of the MPEM following this procedure.

Disconnect the AMP plug connector **no. 4** on the MPEM.

Disconnect the connector of the air temperature sensor.

Using a multimeter, check the resistance of the BLACK/WHITE wire between the AMP plug connector (position 6) and the air temperature sensor connector (terminal 1).

Check also the resistance of the WHITE/GREY wire between the AMP plug connector (position 13) and the air temperature sensor connector (terminal 2).

If there is an open circuit, repair the defective wire or terminal. If not, proceed as follows to test the air temperature sensor.

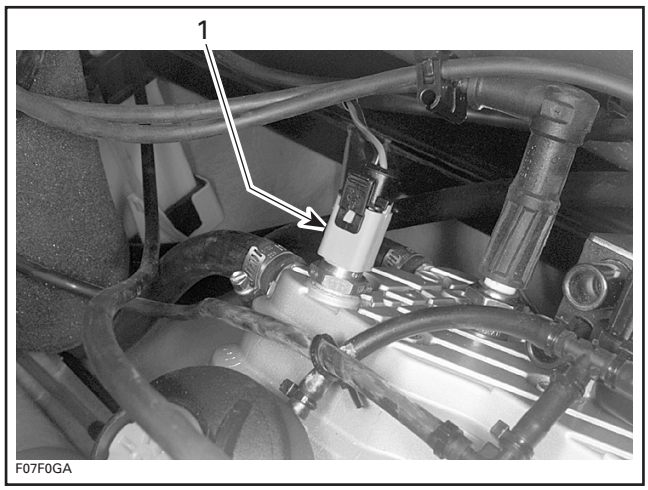
Connect the air temperature sensor connector.

Check the resistance between the BLACK/WHITE wire (position 6) and the WHITHE/GREY wire (position 13) in the AMP plug connector **no. 4**. Deduct the total resistance value of the wires.

If not within specification, replace the air temperature sensor.

Water Temperature Sensor (WTS)

Check the water temperature sensor resistance.



1. Water temperature sensor (WTS)

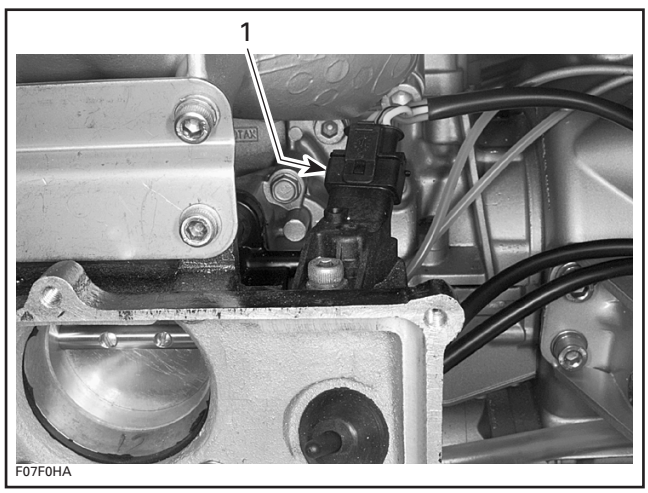
Disconnect the connector of the water temperature sensor.

Using a multimeter, check the resistance between both terminals.

The resistance should be between 2.280 kΩ and 2.736 kΩ at temperature of 19°C to 21°C (66°F to 70°F).

If not within specification, replace the water temperature sensor.

Air Pressure Sensor (APS)

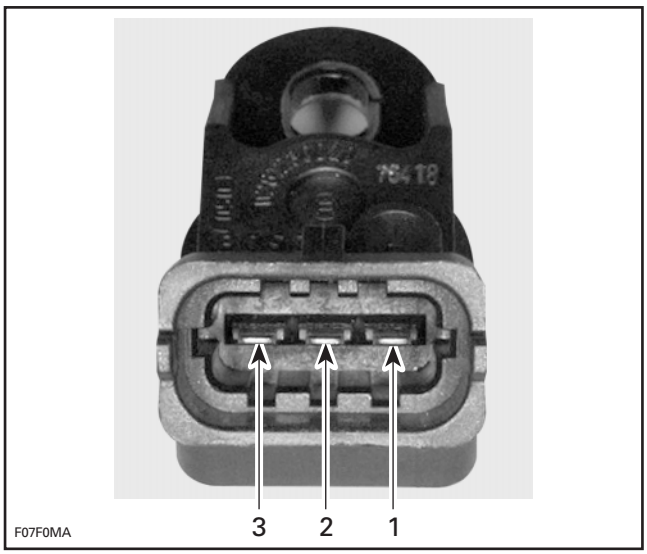


1. Air pressure sensor (APS)

Check the air pressure sensor resistance.

Disconnect the connector of the air pressure sensor.

Using a multimeter, check the resistance between the terminals 1 and 2 of the air pressure sensor.



AIR PRESSURE SENSOR

1. *Terminal 1*
2. *Terminal 2*
3. *Terminal 3*

The resistance should be between 3.4 kΩ and 8.2 kΩ.

Check also the resistance between the terminals 2 and 3 of the air pressure sensor.

The resistance should be between 2.4 kΩ and 8.2 kΩ.

If not within specification, replace the air pressure sensor.

If the sensor test good, check the voltage between the PURPLE/BLUE wire and the BLACK/BLUE wire.

Depress the start/stop button with the safety lanyard removed to activate the timer. There should be 5 Vdc.

TROUBLESHOOTING SUMMARY

ENGINE DOES NOT START

If the engine does not start, the following items should be verified in this order:

– fuses
– ignition (spark)
– fuel pump
– check fault codes in the ECU memory

Flooded Engine Feature

If the engine does not start and it is flooded, proceed as follows:

Remove spark plug cables and connect them on the grounding device.

◆ WARNING

Always use spark plug cable grounding device when removing spark plugs.

Remove spark plugs and dry them using a rag.

Cover spark plug holes with a rag.

Depress and hold the throttle lever at full throttle position.

Install the safety lanyard cap on the switch.

Depress the start/stop button to crank the engine approximately 10 seconds.

NOTE: Proceeding in this order, no fuel is injected and the accumulated fuel in the engine will be expelled.

Reinstall spark plugs and connect cables.

Start engine normally without applying the throttle.

Spark Plug Inspection

Whenever replacing the spark plugs, always use NGK BR8ES with the resistor feature. The spark plug gap is set at 0.6 - 0.8 mm (.024 - .031 in).

To check for ignition, attach an inductive timing light to the high tension lead while turning the engine with the starter.

◆ WARNING

Always use spark plug cable grounding device when removing spark plug cables.

Reversed high tension cables will not allow the RFI to run. Unlike other Sea-Doo models, the spark plugs spark independently on each piston stroke. Reversed high tension cables will cause backfires.

ECU Fault Codes

Fault codes in the ECU memory will identify potential problems with the RFI system. When checking fault codes without engine in operation, the CPS fault code will always appear. Also, the 04 FC fault code will always appear.

Disconnecting the battery will erase the fault codes in the ECU memory.

ENGINE STARTS BUT RUNS POORLY

If the engine starts but runs poorly, the following items should be verified in this order:

– check spark plug condition
– check fault codes in the ECU memory
– check fuel pressure
– check TPS adjustment

If some work has been performed on the unit, make sure injector wire connectors were not mixed. It is also possible that the RAVE solenoid connector be mixed with one of the injector connector. Refer to the wiring diagram for wire colors and positions.

▼ CAUTION

If wires are mixed, engine will run but could be damaged.

ENGINE STARTS BUT STALLS AFTER APPROXIMATELY 30 SECONDS

The RPM signal (GREY wire) is short circuit to the ground. Check wire condition. If the wire test good, either the tachometer or Info Center is defective.

ENGINE CANNOT REACH MAXIMUM REVOLUTIONS

Check battery voltage. When voltage is too low, the MPEM limits the engine revolutions.

ADJUSTMENT

THROTTLE POSITION SENSOR (TPS)

This adjustment is very important. The setting of the TPS will determine the basic parameters for all fuel mapping.

▼ CAUTION

An improperly adjusted TPS may lead to serious engine damage.

The adjustment of the TPS is performed using the MPEM programmer.

Closed TPS

To perform this adjustment, proceed as follows:

Access the BOSCH SYSTEM in the MPEM programmer. Then, select ADJUSTMENT in the submenu.

Choose CLOSE TPS in the ADJUSTMENT menu.

The screen will display the actual adjustment of the TPS in degrees and it will also offer to adjust it.

▼ CAUTION

Do not select "YES" until the idle speed screw is loosened to allow the throttle plate to close.

Loosen the lock nut of the idle speed screw.

Loosen the idle speed screw until it does not contact the throttle plate stopper.

Selecting "YES" will instantly readjust the close throttle position adjustment to the new setting.

NOTE: If the ECU is replaced, the TPS must be readjusted.

Idle Speed

Turn idle speed screw until it touches the stopper.

Turn idle speed screw 2-3/4 turns as a preliminary adjustment.

For a precise adjustment of the idle speed, it should be finalized in water.

Idle speed in water is 1400 ± 50 RPM.

NOTE: The ECU is programmed to maintain idle speed at 1400 RPM. The ECU has the learning capacity to compensate if the idle speed is not precisely set at 1400 RPM. The ECU will correct the idle speed, step by step, each time the engine is started. Trying to set idle speed different than specified may cause rough idling.

REMOVAL AND INSTALLATION

THROTTLE POSITION SENSOR (TPS)

Remove the air intake silencer.

Remove the flame arrester.

Remove the air temperature sensor to ease removal of the TPS.

Disconnect the connector of the TPS.

Loosen 2 Allen screws retaining the TPS.

Remove TPS.

AIR TEMPERATURE SENSOR (ATS)

Remove the air intake silencer.

Remove the flame arrester.

Disconnect the connector of the ATS.

Pull the ATS from the grommet retaining it.

AIR PRESSURE SENSOR (APS)

Remove the air intake silencer.

Disconnect the connector of the APS.

Loosen Allen screw retaining the APS.

Remove the APS.

At installation, apply Loctite 242 (blue) on screw threads.

WATER TEMPERATURE SENSOR (WTS)

Disconnect the connector of the WTS.

Loosen the WTS from the cylinder head.

At installation, apply Loctite 518 on threads of the WTS.

CRANKSHAFT POSITION SENSOR (CPS)

Disconnect the connector of the CPS.

Loosen Allen screw retaining the CPS.

Remove the CPS.

At installation, apply Loctite 242 (blue) on the Allen screw.

NOTE: Clean treads prior installing screw.

FUEL PUMP ASSEMBLY

Open the front storage compartment cover.

Remove the storage basket.

Remove the glove box.

Disconnect the wire connector from the fuel pump assembly.

Disconnect fuel vent hose from fuel pump assembly.

Cover the quick connect fitting with a shop towel.

Press on both tabs and disconnect the quick connect fitting.

◆ WARNING

Fuel is under pressure. Wipe off any fuel spillage in the bilge. Fuel is flammable and explosive under certain conditions. Always work in a well ventilated area.

Loosen nuts retaining the fuel pump assembly to the fuel tank.

1. Loosen nuts

Remove fuel pump assembly from fuel tank.

Regulator

The regulator is not serviceable. Replace the fuel pump assembly if the regulator is defective.

Fuel Filter

The fuel filter is not serviceable. Replace the fuel pump assembly if the fuel filter must be replaced.

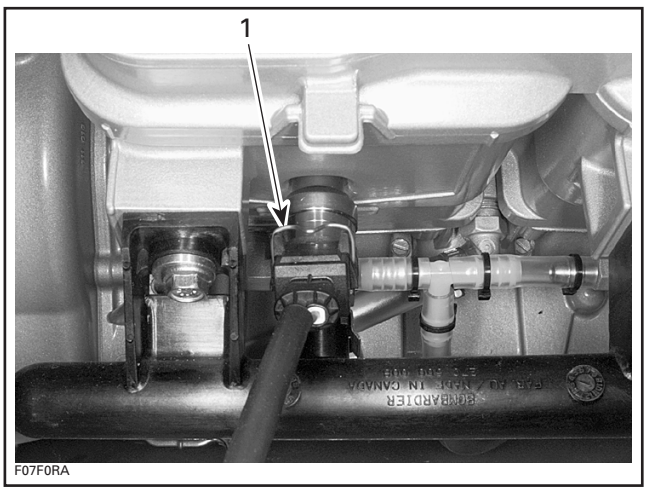
FUEL INJECTOR

Place a suitable container below the quick connect fitting of the fuel rail.

Cover the quick connect fitting of the fuel rail with a shop towel.

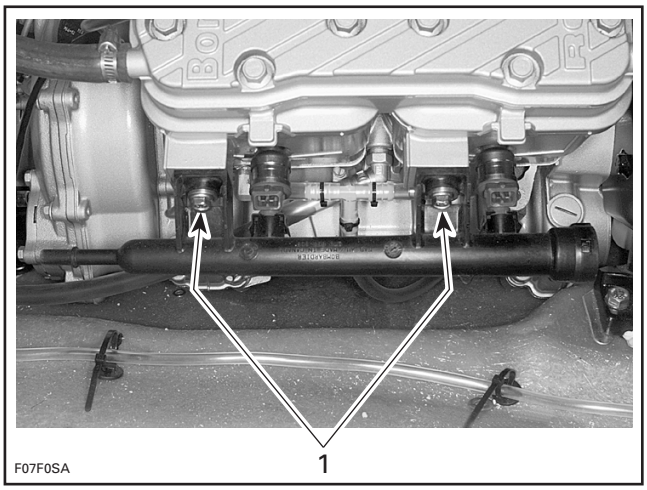
Press on both tabs and disconnect the quick connect fitting.

Disconnect the wire connectors of both fuel injectors.



1. Press retaining clip to unlock the connector

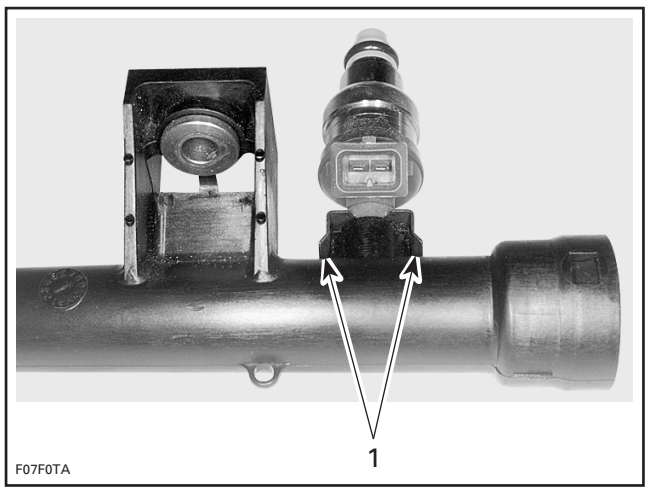
Loosen both screws retaining the fuel rail to the cylinders.



1. Loosen screws retaining the fuel rail

Remove the fuel rail with both fuel injectors.

To remove the fuel injector from the fuel rail, pry off the retaining clip.



1. Pry the clip

When reinstalling the fuel injector, install the retaining clip to the injector, then insert the injector to the fuel rail.

TABLE OF CONTENTS

IGNITION SYSTEM

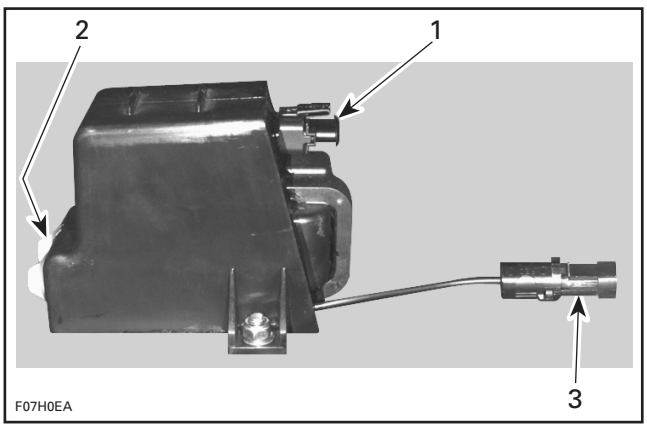
GENERAL

On this ignition system, the spark plugs spark independently.

The Electronic Control Unit (ECU) controls the ignition timing and signals the ignition coil at the right time for optimum engine performance.

INSPECTION

Ignition Coil



IGNITION COIL

1. *Primary side*
2. *Secondary side*
3. *Ground wire*

Primary Winding

Disconnect the wire connector on the primary side of the ignition coil.

Using a multimeter, check the resistance between the terminals 1 and 2. Repeat a resistance test between terminals 2 and 3.

The resistance should be 0.41 ± 0.05 Ω at 20°C.

If not within specification, replace the ignition coil.

If the ignition coil test good, check the power supply on the primary side.

There should be 12 Vdc between the RED and WHITE/BLUE wires or between the RED and WHITE/GREEN wires while starting the engine.

If there is no voltage, either the MPEM or the wiring harness is defective.

Secondary Winding

Due to the integrated diode, it is not possible to take any resistance measurement.

IGNITION TIMING

Adjustment

To perform this adjustment, proceed as follows:

NOTE: For the static and dynamic tests, refer to the *1998 Sea-Doo Shop Manual*.

Access the BOSCH SYSTEM in the MPEM programmer. Then, select ADJUSTMENT in the submenu.

Choose IGNITION in the ADJUSTMENT menu.

The screen will display the actual adjustment of the ignition timing in degrees and it will also offer to adjust it.

Unlike the other models, the number in the MPEM programmer corrects the ignition timing in 0.75° increments.

TIMING CORRECTION CHART	
PROGRAMMER NUMBER (MPEM)	IGNITION TIMING CORRECTION
4	3°
3	2.25°
2	1.50°
1	0.75°
0	0
-1	-0.75°
-2	-1.50°
-3	-2.25°
-4	-3°

Ignition timing is set at 11° BTDC at 3300 RPM.

CHARGING SYSTEM

GENERAL

Magneto

The purpose of the charging system is to keep the battery at a full state of charge.

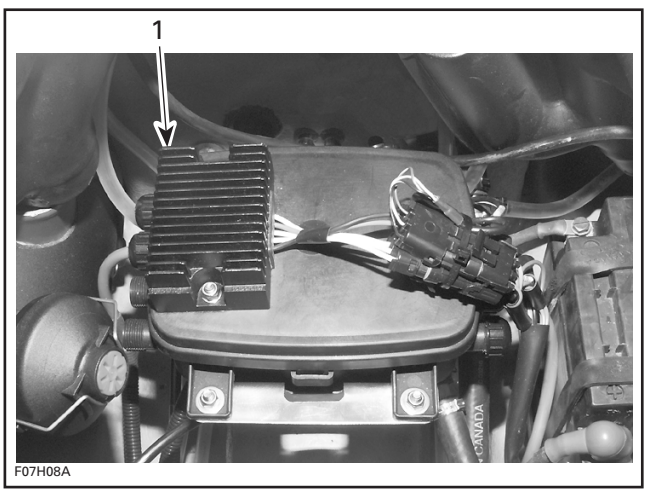
The magneto is the primary source of electrical energy. It transforms magnetic field into electric current (AC).

The magneto has a 3 phase, delta wound stator on 18 poles. Capacity is 270 watts.

Rectifier/Regulator

The unit used is a 3 phase in series rectifier/regulator. It transforms the alternating current (AC) from the magneto into direct current (DC) to allow battery charging.

Included in the same unit, a regulator keeps voltage at a steady level of 14.2 volts to prevent any damage to components.



1. Rectifier/regulator

Battery

The battery is the DC source for the electric starter, the Multi-Purpose Electronic Module (MPEM), the Electronic Control Unit (ECU) and all accessories.

Fuse

The charging system is protected by 2 fuses.

A 15 A fuse is mounted on the MPEM and a 20 A fuse is located in the rear electrical box.

TESTING PROCEDURE

NOTE: First, ensure that battery is in good condition prior to performing the following tests.

Rectifier/Regulator

STATIC TEST: CONTINUITY

1. Due to internal circuitry, there is no static test available.

DYNAMIC TEST

Voltage Test

Proceed as follows:

– Start engine.

– Connect a multimeter to battery posts. Set multimeter to Vdc scale.

– Bring engine to approximately 5500 RPM.

If multimeter reads over 15 volts, regulator is defective. Replace it.

NOTE: If it is continually necessary to add distilled water to the battery, this indicates an over voltage situation, requiring replacement of the rectifier/regulator. If, on the other hand, the battery will not stay charged, the problem can be any of the charging circuit components. If these all check good, you would be accurate in assuming the problem to be in the rectifier/regulator.

If there is no charging at the battery with the preceding voltage test, check the output of the magneto.

Magneto

STATIC TEST: CONTINUITY

1. Disconnect the magneto wiring harness connector.
2. Install the 4-pin magneto harness adapter (P/N 295 000 131).
3. Check resistance between the YELLOW/BLACK and the BLACK wires of the 4-pin magneto harness adpater. The resistance should be between 0.1 to 1.0 ohm.
4. Place either meter lead into the RED/BLACK wire and note the resistance (same as step no. 3). If the readings are out of specification, the stator will need to be replaced.

STATIC TEST: INSULATION

1. Disconnect the magneto wiring harness connector.
2. Install the 4-pin magneto harness adapter (P/N 295 000 131).
3. Insert multimeter positive (+) probe to the YELLOW/BLACK wire of the 4-pin magneto harness adapter.
4. Ground the multimeter negative (-) probe to the engine or the stator iron core and note the reading.
5. Repeat test with the other BLACK and RED/BLACK wires of the 4-pin magneto harness adapter.

NOTE: There should be no continuity (infinity) between the stator insulated coils and ground. If there is a reading, the stator coils and/or the wiring from the coils is grounded and needs to be replaced or repaired.

DYNAMIC TEST

1. Disconnect the magneto wiring harness connector.
2. Install the 4-pin magneto harness adapter (P/N 295 000 131).
3. Connect test probes of the multimeter to the YELLOW/BLACK and RED/BLACK wires of the 4-pin magneto harness adapter.
4. Set multimeter to Vac scale.
5. Start and rev engine to 3500 RPM. The obtained value should be between 45 and 70 Vac.
6. Repeat test with the BLACK wire and either the RED/BLACK or YELLOW/BLACK wires of the 4-pin magneto harness adapter.
7. If the stator is out of specification, replace it.

GTX RFI MODEL

ENGINE		GTX RFI (5666/5843)
Engine type		BOMBARDIER-ROTAX 787
Induction type		Rotary valve
Exhaust system	Type	Water cooled, water injected with regulator
	Water injection fitting (head)	3.5 mm (.139 in)
	Water injection fitting (cone)	Not applicable
	Water injection fitting (muffler)	3.5 mm (.139 in)
Exhaust valve		Rotax Adjustable Variable Exhaust (RAVE)
Starting system		Electric start
Lubrication	Fuel/oil mixture	VROI (Variable Rate Oil Injection)
	Oil injection pump	Direct driven
	Oil injection type	Formula XP-S (synthetic)
Number of cylinders		2
Bore	Standard	82 mm (3.228 in)
	First oversize	82.25 mm (3.238 in)
	Second oversize	Not applicable
Stroke		74 mm (2.91 in)
Displacement		781.6 cm^3 (47.7 in^3)
Corrected compression ratio		6.0: 1
Combustion chamber volume		36.3 ± 1.6 cc
Cylinder head warpage (maximum)		0.05 mm (.002 in)
Piston ring type and quantity		1 Semi-trapez — 1 Rectangular
Ring end gap	New	0.40 - 0.55 mm (.016 - .022 in)
	Wear limit	1.00 mm (.039 in)
Ring piston groove	New	0.025 - 0.070 mm (.001 - .003 in)
	Wear limit	0.2 mm (.008 in)
Piston/cylinder wall clearance	New (minimum)	0.15 mm (.006 in)
	Wear limit	0.20 mm (.008 in)
Cylinder taper (maximum)		0.10 mm (.004 in)
Cylinder out of round (maximum)		0.08 mm (.003 in)
Connecting rod big end axial play	New	0.230 - 0.617 mm (.009 - .024 in)
	Wear limit	1.2 mm (.047 in)
Crankshaft deflection		MAG side: 0.050 mm (.002 in); PTO side: 0.030 mm (.001 in)
Rotary valve timing	Opening	147° ± 5 BTDC
	Closing	63.5° ± 5 ATDC
Rotary valve duration		159°
Rotary valve/cover clearance		0.25 - 0.35 mm (.010 - .014 in)
Connecting rod/crankshaft pin radial clearance	New	0.023 - 0.034 mm (.0009 - .0013 in)
	Wear limit	0.050 mm (.002 in)
Connecting rod/piston pin radial clearance	New	0.003 - 0.012 mm (.00012 - .00047 in)
	Wear limit	0.015 mm (.00059 in)
ADDITIONAL INFORMATION:		

ELECTRICAL SYSTEM		GTX RFI (5666/5843)
Magneto generator output		270 W @ 6000 RPM
Ignition system type		Digital, inductive type
Spark plug	Make and type	NGK BR8ES
	Gap	0.6 - 0.8 mm (.024 - .031 in)
Ignition timing (BTDC)	mm (in)	0.858 (.0338)
	Degrees	11° @ 3300 RPM
Battery charging coil		0.1 Ω - 1 Ω
Ignition coil	Primary	0.41 Ω ± 0.05 Ω
	Secondary	Not applicable
Engine rev limiter setting		7080 (± 50) RPM
Battery		12 V, 19 A•h (Yuasa/Exide)
Fuse	Starting system	5 A
	Charging system	15 A (1) 20 A (1)
	Fuel pump	7.5 A
	MPEM	5 A
ADDITIONAL INFORMATION:		

FUEL SYSTEM		GTX RFI (5666/5843)
Fuel injection type		Rotax Fuel Injection, semi-direct, single throttle body (56 mm)
Idle speed (in water)		1400 (± 50) RPM
Throttle Position Sensor (TPS)		1.6 kΩ - 2.4 kΩ (terminals 1-2) 710 Ω - 1380 Ω (terminals 2-3)
Crankshaft Position Sensor (CPS)		774 Ω - 946 Ω
Air Temperature Sensor (ATS)		2.375 kΩ - 2.625 kΩ
Water Temperature Sensor (WTS)		2.375 kΩ - 2.625 kΩ
Air Pressure Sensor (APS)		3.4 kΩ and 8.2 kΩ (terminals 1-2) 2.4 kΩ and 8.2 kΩ (terminals 2-3)
Fuel injector		2.3 Ω - 2.5 Ω
Fuel	Type	Regular unleaded gasoline
	Minimum octane no.	87
ADDITIONAL INFORMATION:		

COOLING	GTX RFI (5666/5843)
Type	Open circuit — Direct flow from jet propulsion unit
Thermostat	None
Monitoring beeper setting	86-94°C (187-201°F)
ADDITIONAL INFORMATION:	

PROPULSION		GTX RFI (5666/5843)
Propulsion system		Bombardier Formula Pump
Jet pump type		Axial flow single stage
Impeller rotation (seen from rear)		Counterclockwise
Transmission		Direct drive
Coupling type		Crown splines
Oil type		SEA-DOO JET PUMP SYNTHETIC POLYOLESTER OIL 75W90 GL5
Steering nozzle pivoting angle		23°
Minimum required water level		90 cm (35 in)
Drive shaft deflection (maximum)		0.5 mm (.020 in)
Impeller outside diameter		139.5 mm (5.490 in)
Impeller/wear ring clearance	New	0.0 - 0.4 mm (.000 - .016 in)
	Wear limit	1.00 mm (.040 in)
Impeller shaft end play (new)		0.12 - 0.54 mm (.005 - .021 in)
Impeller shaft radial play		0.05 mm (.002 in)
Impeller pitch/material		Progressive pitch 12° - 25°/stainless steel
ADDITIONAL INFORMATION: Do not mix different brands or oil types.		

DIMENSIONS	GTX RFI (5666/5843)
Number of passenger (driver incl.)	3
Overall length	312 cm (122.8 in)
Overall width	119 cm (47 in)
Overall height	94 cm (37 in)
Dry weight	288 kg (635 lb)
Load limit (passenger and 10 kg (22 lb) luggage)	242 kg (534 lb)
ADDITIONAL INFORMATION:	

CAPACITIES		GTX RFI (5666/5843)
Fuel tank		56.5 L (15 U.S. gal)
Oil injection reservoir		6 L (1.6 U.S. gal)
Jet pump impeller shaft reservoir	Capacity	100 mL (3.4 U.S. oz)
	Oil level height	Up to plug
ADDITIONAL INFORMATION:		

MATERIALS	GTX RFI (5666/5843)
Hull	Composite
Inlet grate	Aluminum
Impeller housing/stator/venturi/nozzle	Plastic/plastic/plastic/aluminum
Air intake silencer	Thermoplastic
Flame arrester	Multi-layer wire screen
Exhaust muffler	Aluminum
Resonator	Plastic
Steering padding	Thermoplastic with polyethylene foam
Fuel tank	Polyethylene
Oil injection reservoir	Polyethylene
Seat	Polyurethane foam
ADDITIONAL INFORMATION:	

STANDARD EQUIPMENT	GTX RFI (5666/5843)
Safety lanyard	Standard
Digitally Encoded Security System	Standard
Fuel tank reserve	Not applicable
Monitoring beeper	Standard
Speedometer	Standard
Tachometer	Standard
Info Center	Standard
Ajustable handlebar	Standard
Reverse	Standard
Storage compartment	Standard
Glove box	Standard
Rear grab handle	Standard
Boarding step	Standard
Extinguisher holder	Standard
Tool kit	Standard
ADDITIONAL INFORMATION:	

PERFORMANCE	GTX RFI (5666/5843)
Maximum fuel consumption at wide open throttle	41.5 L/h (11 U.S. gal/h)
Cruising time at full throttle	1 hour 20 minutes
ADDITIONAL INFORMATION:	

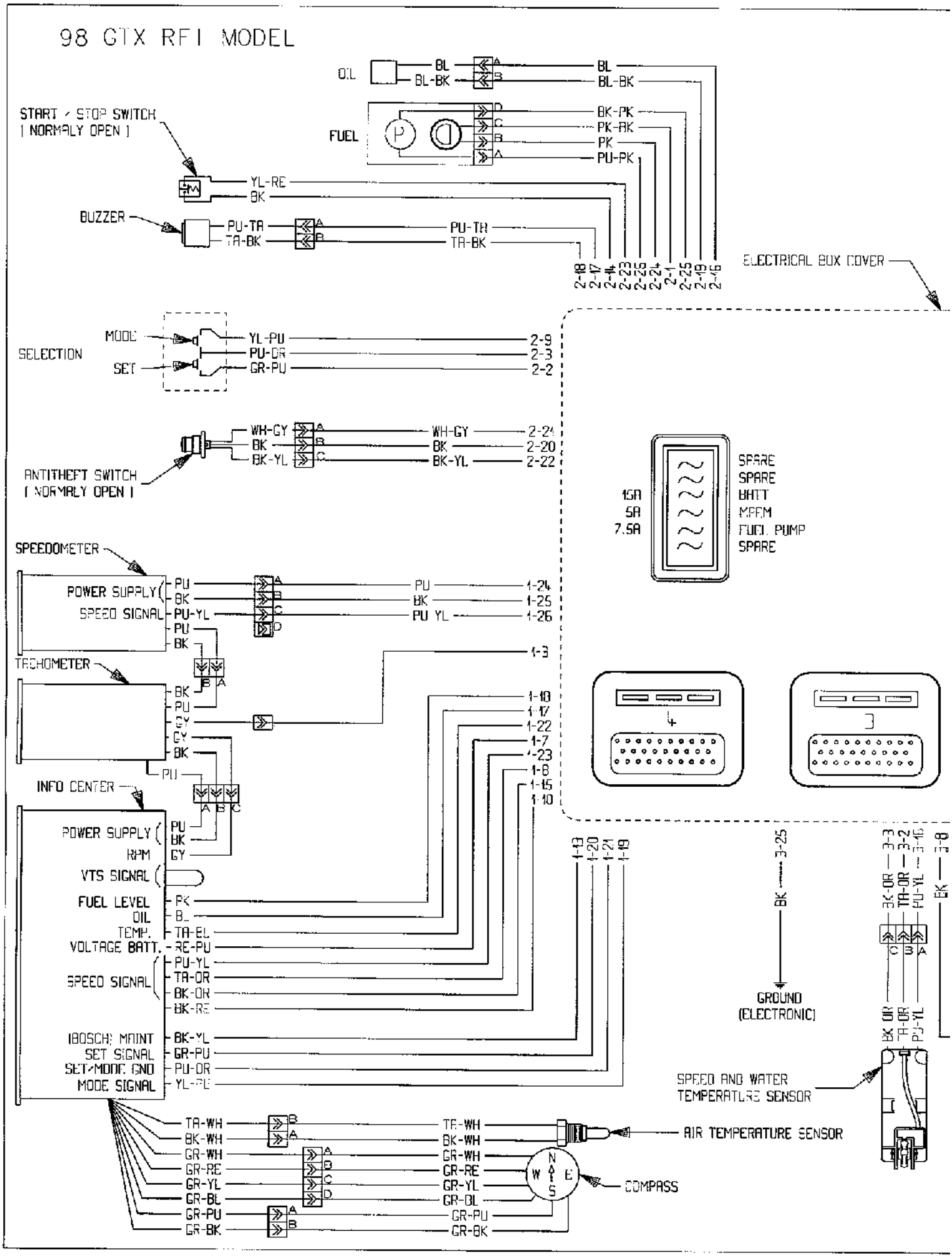
TIGHTENING TORQUES			GTX RFI (5666/5843)		
ENGINE	Exhaust manifold screw		40 N•m	(30 lbf•ft)	(3) (4)
	Magneto flywheel nut		105 N•m	(77 lbf•ft)	(1)
	Flywheel (PTO side)		110 N•m	(81 lbf•ft)	(5)
	Crankcase screws	M8	24 N•m	(17 lbf•ft)	(3) (4)
		M10	40 N•m	(30 lbf•ft)	(3) (4)
	Crankcase/engine support nuts		35 N•m	(26 lbf•ft)	(1)
	Engine mount/hull		25 N•m	(18 lbf•ft)	(1)
	Cylinder head screws		24 N•m	(17 lbf•ft)	(1) (4)
	Crankcase/cylinder screws		40 N•m	(30 lbf•ft)	(3) (4)
	Tuned pipe flange screws/nut		40 N•m	(30 lbf•ft)	(1)
	Tuned pipe fixation screws		25 N•m	(18 lbf•ft)	(1)
	Flame arrester screws		10 N•m	(89 lbf•**in**)	(1)
	Magneto housing cover screws		9 N•m	(80 lbf•**in**)	(5)
	Starter mounting screws		22 N•m	(16 lbf•ft)	(1)
	Spark plugs		24 N•m	(17 lbf•ft)	(5)
JET PUMP	Impeller		70 N•m	(52 lbf•ft)	(2)
	Pump/hull nuts		31 N•m	(23 lbf•ft)	(1)
	Venturi/pump housing screws		21 N•m	(16 lbf•ft)	(1)
	Pump housing cover screws		4 N•m	(35 lbf•**in**)	(1)
	Inlet grate screws		8 N•m	(71 lbf•**in**)	(1)
	Riding plate screws		22 N•m	(16 lbf•ft)	(1)
STEERING	Cable retaining block bolts		6 N•m	(53 lbf•**in**)	
	Steering cable/stem arm bolt		3 N•m	(26 lbf•**in**)	
	Steering stem arm bolts		6 N•m	(53 lbf•**in**)	
	Handlebar clamp bolts		26 N•m	(19 lbf•ft)	
	Steering cable ball joint bolt (nozzle)		7 N•m	(62 lbf•**in**)	
	Steering support bolts		15 N•m	(11 lbf•ft)	(1)
	Handlebar grip screw		13 N•m	(10 lbf•ft)	

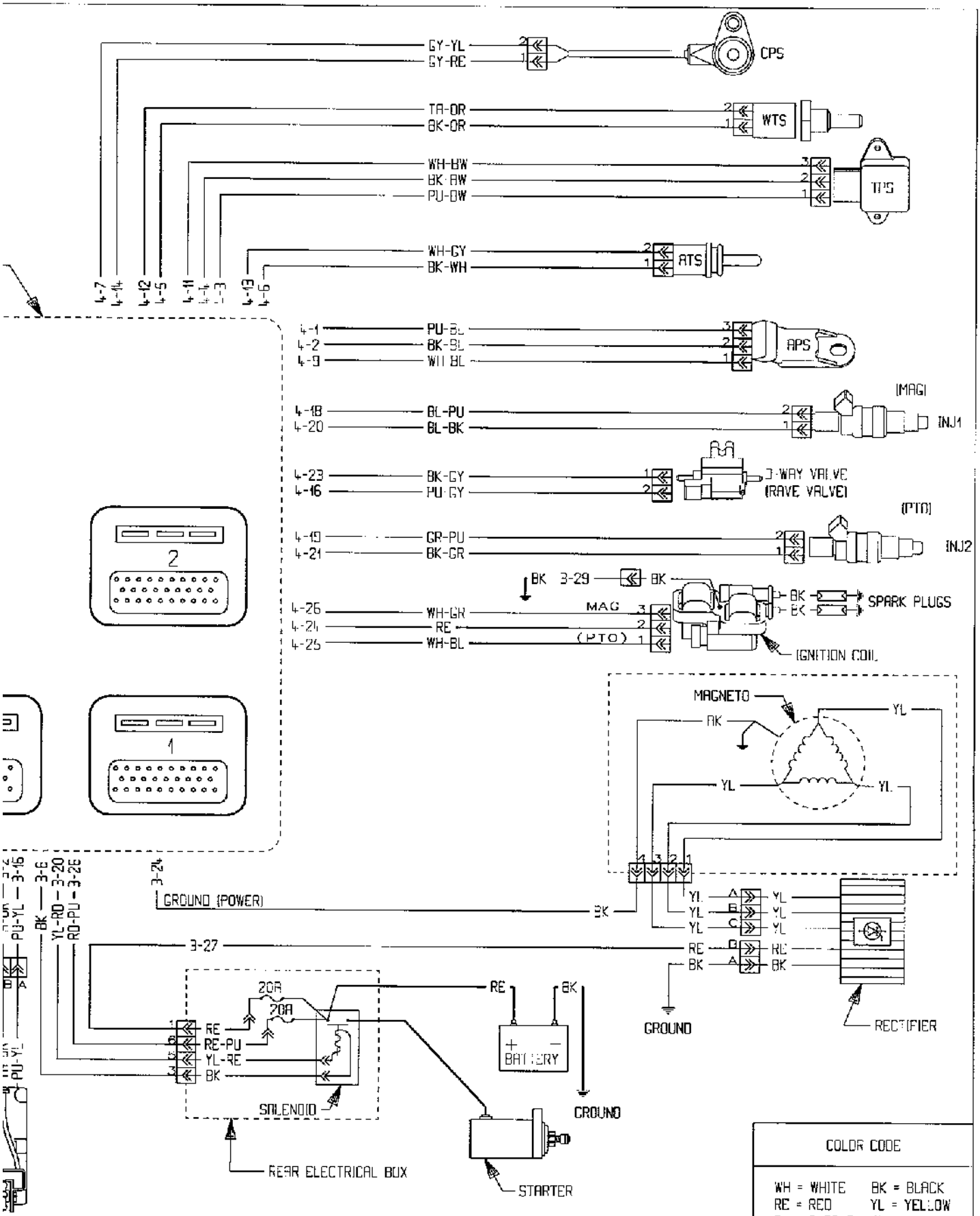
ADDITIONAL INFORMATION: Apply where indicated; (1) Loctite 242 (blue)
(2) Loctite 271 (red)
(3) Loctite 518
(4) Synthetic grease
(5) Anti-seize lubricant

◆ WARNING

Correct torques and use of Loctite must be strictly followed.

GTX RFI MODEL 5666/5843





COLOR CODE

WH = WHITE	BK = BLACK
RE = RED	YL = YELLOW
PU = PURPLE	TN = TAN
GR = GREEN	BW = BROWN
GY = GREY	BL = BLUE
PK = PINK	OR = ORANGE

WARNING ENSURE ALL TERMINALS ARE PROPERLY CRIMPED ON THE WIRES AND ALL CONNECTOR HOUSING ARE PROPERLY FASTENED.

BOMBARDIER
RECREATIONAL PRODUCTS