

YAMALUBE®

A Liquid Engine Component

This Yamalube Oil Change Kit will service the following models:

YZ250F	2003 - 2026	WR250F	2003 - 2025
YZ450F	2010 - 2026	WR450F	2010 - 2025
YZ250FX	2015 - 2025	WR250R	2008 - 2020
YZ450FX	2016 - 2025	WR250X	2008 - 2010

Contained within this document you will find basic instructions and information on how to complete your Yamalube Oil and Genuine Oil Filter replacement.

For complete and detailed servicing instructions please always refer to the Owners Service Manual for your unit. Alternatively please speak to an authorised Yamaha Technician at a Yamaha dealership.



Click on year model below to navigate to the instructions, or scroll through the pages.

YZ250F	2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026
YZ450F	2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026
YZ250FX	2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
YZ450FX	2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
WR250F	2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
WR450F	2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
WR250R	Refer Owners Manual
WR250X	Refer Owners Manual

YAMALUBE®

A Liquid Engine Component

Application chart – Land Products

Yamalube® for 4-stroke Off-Road Motorcycle engines

MODEL	YEAR	4 STROKE OIL					ENGINE OIL	
		RS4GP	FULLY-SYNTHETIC PERFORMANCE	FULLY-SYNTHETIC	SEMI-SYNTHETIC	MINERAL	LITRE*	LITRE**
YZ250F	2003 ~ 2005	◆	◆		△	●	1.0	1.1
YZ250F	2006	◆	◆		△	●	1.15	1.25
YZ250F	2007 ~ 2009	◆	◆		△	●	1.05	1.15
YZ250F	2010 ~ 2013	◆	◆		△	●	0.95	1.05
YZ250F	2013 ~ 2018	◆	◆		△	●	0.71	0.73
YZ250F	2019 ~ 2026	◆	◆		△	●	0.73	0.75
YZ250FX	2015 ~ 2019	◆	◆		△	●	0.83	0.85
YZ250FX	2020 ~ 2025	◆	◆		△	●	0.73	0.75
YZ450F	2010 ~ 2013	◆	◆		△	●	0.95	1
YZ450F	2003 ~ 2005	◆	◆		△	●	1.0	1.1
YZ450F	2006 ~ 2013	◆	◆		△	●	0.95	1.0
YZ450F	2014 ~ 2017	◆	◆		△	●	0.67	0.69
YZ450F	2018 ~ 2019	◆	◆		△	●	0.62	0.64
YZ450F	2020 ~ 2022	◆	◆		△	●	0.63	0.65
YZ450F	2023 ~ 2026	◆	◆		△	●	0.94	0.96
YZ450FX	2016 ~ 2018	◆	◆		△	●	0.67	0.69
YZ450FX	2019 ~ 2020	◆	◆		△	●	0.62	0.64
YZ450FX	2021 ~ 2023	◆	◆		△	●	0.63	0.65
YZ450FX	2024 ~ 2025	◆	◆		△	●	0.94	0.96
WR250F	2003 ~ 2006	◆	◆		△	●	1.2	1.3
WR250F	2007 ~ 2014	◆	◆		△	●	1.1	1.2
WR250F	2015 ~ 2019	◆	◆		△	●	0.83	0.85
WR250F	2020 ~ 2025	◆	◆		△	●	0.73	0.75
WR450F	2010 ~ 2015	◆	◆		△	●	0.95	1
WR450F	2003 ~ 2006	◆	◆		△	●	1.0	1.1
WR450F	2019 ~ 2020	◆	◆		△	●	0.95	1.0
WR450F	2016 ~ 2018	◆	◆		△	●	0.67	0.69
WR450F	2019 ~ 2020	◆	◆		△	●	0.62	0.64
WR450F	2021 ~ 2023	◆	◆		△	●	0.63	0.65
WR450F	2024 ~ 2025	◆	◆		△	●	0.94	0.96
WR250R	2008 ~ 2020	◆	◆		△	●	1.3	1.4
WR250X	2008 ~ 2010	◆	◆		△	●	1.3	1.4

Classification of SAE viscosity.

The common worldwide standard for selecting oil viscosity is a classification system established by SAE. Viscosity is a fluids resistance to flow and as the numbers increase so does the viscosity. The W as in 10W indicates the oils viscosity in low temperatures (W- Winter). The second number after describes how the oil will perform when the engine reaches operating temperature.

We have provided this Yamalube oil application chart to recommend which oil viscosity is best for each model and an optional viscosity. To double check which viscosity is best for your engine, in your conditions, please speak to an authorised service technician at a Yamaha Dealership.

OIL APPLICATION TYPE:

- ◆ Performance Premium
- △ Recommended
- Standard
- ★ Rear Axle Oil

* without oil filter replacement
** with oil filter replacement

CHECKING THE ENGINE OIL LEVEL

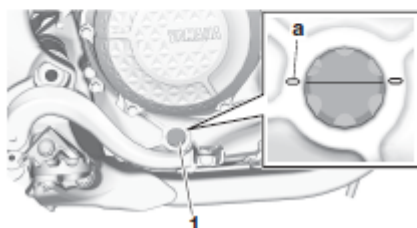
1. Start the engine and warm it up for ten minutes until the engine oil has reached a normal temperature of 60 °C (140 °F), and then turn the engine off.
2. Stand the vehicle upright on a level surface.
3. Start the engine, wait for ten seconds, turn the engine off, and then wait a few minutes.
4. Check:
 - Engine oil level

The engine oil level should be between the minimum level (lower edge of the oil check window "1") and the maximum level mark "a".

Below the minimum level → Add the recommended engine oil to the proper level.

TIP

Before checking the engine oil level, wait a few minutes until the oil has settled.



SCA13361

NOTICE

- Engine oil also lubricates the clutch and the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives or use engine oils with a grade of "CD" or higher and do not use oils labeled "ENERGY CONSERVING II".
 - Do not allow foreign materials to enter the crankcase.
5. Start the engine, warm it up for several minutes, and then turn it off.

6. Check the engine oil level again.

TIP

Before checking the engine oil level, wait a few minutes until the oil has settled.

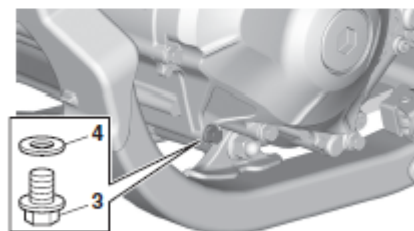
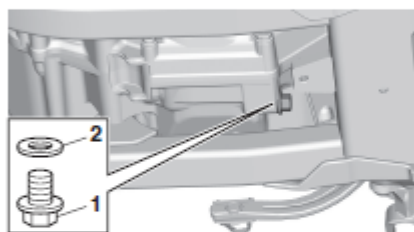


Recommended brand
YAMALUBE
SAE viscosity grades
10W-40, 10W-50, 15W-40,
20W-40 or 20W-50
Recommended engine oil grade
API service SG type or higher,
JASO standard MA

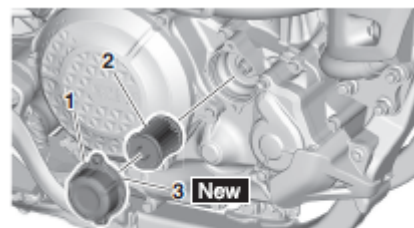
YZ450F

CHANGING THE ENGINE OIL

1. Stand the vehicle upright on a level surface.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Place a container under the engine oil drain bolts.
4. Remove:
 - Oil filler cap (along with the O-ring)
5. Remove:
 - Engine oil drain bolt (crankcase) "1" (along with the gasket "2")
 - Engine oil drain bolt (oil tank) "3" (along with the gasket "4")



6. Drain:
 - Engine oil (completely from the oil tank and crankcase)
7. If the oil filter element is also to be replaced, perform the following procedure.
 - a. Remove the oil filter element cover "1", oil filter element "2".
 - b. Replace the new O-ring "3".



- c. Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 N·m (1.0 kgf-m, 7.4 lb-ft)

8. Install:
 - Engine oil drain bolt (oil tank) (along with the gasket **New**)
 - Engine oil drain bolt (crankcase) (along with the gasket **New**)



Engine oil drain bolt (oil tank)
10 N·m (1.0 kgf-m, 7.4 lb-ft)
Engine oil drain bolt (crankcase)
20 N·m (2.0 kgf-m, 15 lb-ft)

9. Fill:
 - Crankcase (with the specified amount of the recommended engine oil)

10. Install:
 - Engine oil filler cap (along with the O-ring **New**)

11. Check:
 - Oil level

Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-13.

12. Check:
 - Engine oil pressure

- a. Start the engine.

EW419135

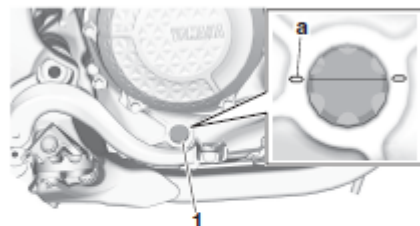
WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

- b. Look at the oil level check window "1", and then make sure that the engine oil flows and that the engine oil level decreases.

TIP

Check the engine oil level while the engine is at idling speed.



- a. Maximum level mark

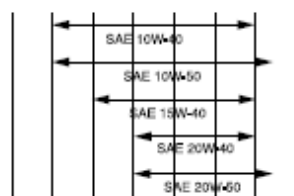
SCA07672

NOTICE

If the engine oil level does not decrease after the engine has been started, immediately turn the engine off. Otherwise, the engine could seize.

- c. If the engine oil level does not decrease at the specified level mark, check the engine oil system for leaks, and the engine oil passages and oil pump for damage.
- d. Check the oil pressure again.

-20 -10 0 10 20 30 40 50 °C



Engine oil quantity

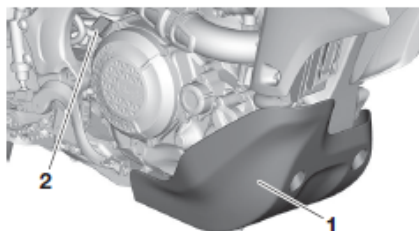
Oil change
0.94 L (0.99 US qt, 0.83 Imp.qt)
With oil filter removal
0.96 L (1.01 US qt, 0.84 Imp.qt)
Quantity (disassembled)
1.20 L (1.27 US qt, 1.06 Imp.qt)

WR450F & YZ450FX

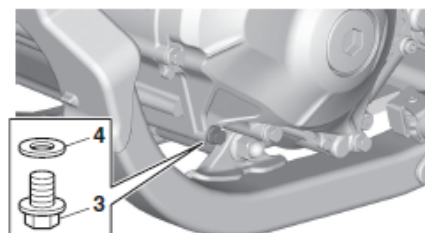
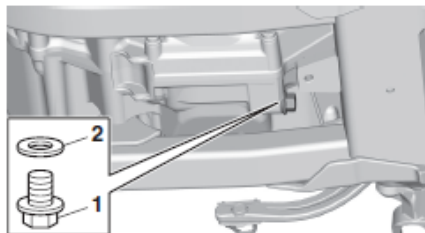
YAM000025

CHANGING THE ENGINE OIL

- Stand the vehicle upright on a level surface.
- Start the engine, warm it up for several minutes, and then turn it off.
- Place a container under the engine oil drain bolts.
- Remove:
 - Engine guard "1"
 - Oil filler cap "2" (along with the O-ring)



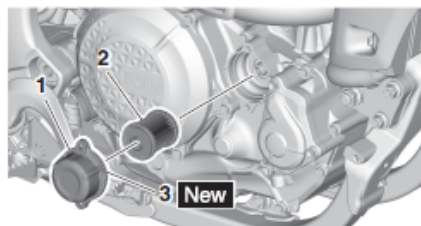
- Remove:
 - Engine oil drain bolt (crankcase) "1" (along with the gasket "2")
 - Engine oil drain bolt (oil tank) "3" (along with the gasket "4")



- Drain:
 - Engine oil

(completely from the oil tank and crankcase)

- If the oil filter element is also to be replaced, perform the following procedure.
 - Remove the oil filter element cover "1", oil filter element "2".
 - Replace the new O-ring "3".



- Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 N-m (1.0 kgf-m, 7.4 lb-ft)

- Install:
 - Engine oil drain bolt (oil tank) (along with the gasket **New**)
 - Engine oil drain bolt (crankcase) (along with the gasket **New**)



Engine oil drain bolt (oil tank)
10 N-m (1.0 kgf-m, 7.4 lb-ft)
Engine oil drain bolt (crankcase)
20 N-m (2.0 kgf-m, 15 lb-ft)

- Fill:
 - Crankcase (with the specified amount of the recommended engine oil)



Engine oil quantity
Oil change
0.94 L (0.99 US qt, 0.83 Imp.qt)
With oil filter removal
0.96 L (1.01 US qt, 0.84 Imp.qt)
Quantity (disassembled)
1.20 L (1.27 US qt, 1.06 Imp.qt)

- Install:
 - Engine oil filler cap (along with the O-ring **New**)
- Check:
 - Oil level
Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-14.
- Check:
 - Engine oil pressure

- Start the engine.

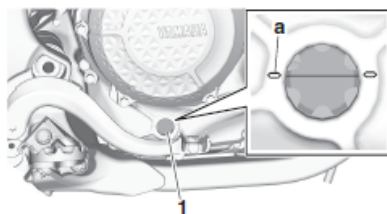
WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

- Look at the oil level check window "1", and then make sure that the engine oil flows and that the engine oil level decreases.

TIP

Check the engine oil level while the engine is at idling speed.



- Maximum level mark

EC026740

NOTICE

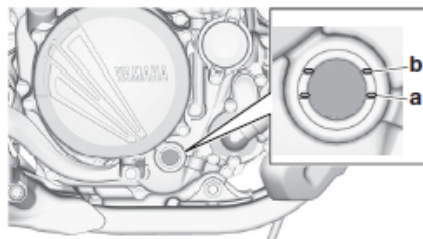
If the engine oil level does not decrease after the engine has been started, immediately turn the engine off. Otherwise, the engine could seize.

- If the engine oil level does not decrease at the specified level mark, check the engine oil system for leaks, and the engine oil passages and oil pump for damage.
- Check the oil pressure again.

CHECKING THE ENGINE OIL LEVEL

- Stand the vehicle upright on a level surface.
- Start the engine, warm this up for 2-3 minutes, and then stop the engine and wait about 1 minute.
- Check:
 - Oil level

The engine oil level should be between the minimum level mark "a" and maximum level mark "b".
Below the minimum level mark → Add the recommended engine oil to the proper level.



EC424290

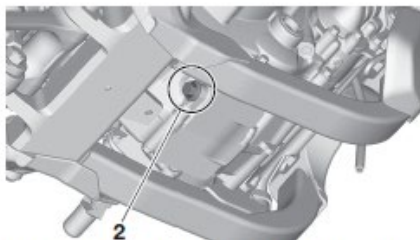
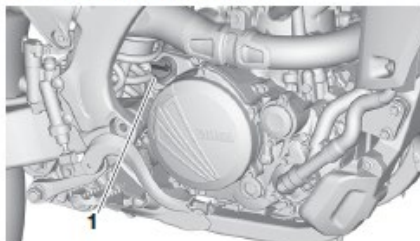
NOTICE

- Since engine oil also lubricates the clutch, the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives.
- Do not allow foreign material to enter the crankcase.

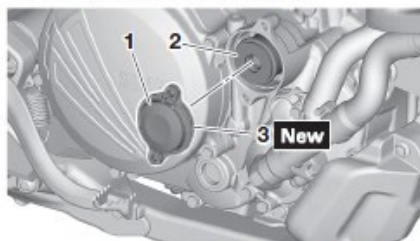
CHANGING THE ENGINE OIL

Stand the vehicle upright on a level surface.

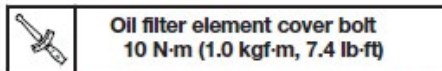
- Start the engine, warm this up for several minutes, and then stop the engine and wait about 5 minutes.
- Place an oil pan under the drain bolt.
- Remove:
 - Oil filler cap "1"
 - Drain bolt (with gasket) "2"



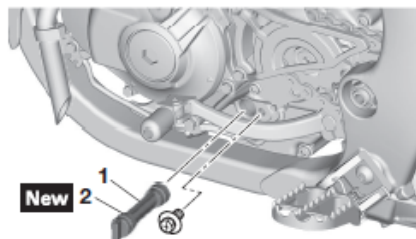
- If the oil filter element is also to be replaced, perform the following procedure.
 - Remove the oil filter element cover "1" and oil filter element "2".
 - Replace the new O-ring "3".



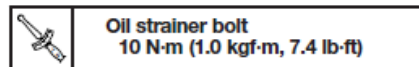
- Install the new oil filter element and the oil filter element cover.



- To check the oil strainer, perform the following procedure.
 - Remove the oil strainer "1".
 - Check the oil strainer.
Damage → Replace.
Clogging due to dirt → Wash with kerosene.
 - Replace the new O-ring "2".



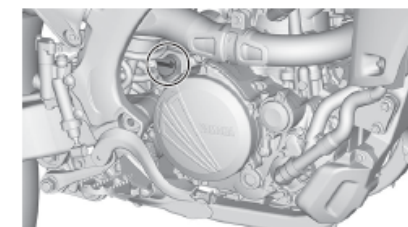
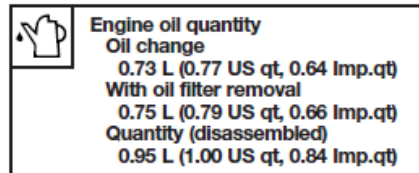
- Install the oil strainer.



- Install:
 - Gasket **New**
 - Drain bolt



- Pour the specified amount of engine oil into the oil filler cap hole.

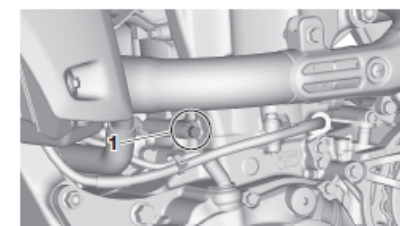


- Install:
 - Oil filler cap
- Check:
 - Oil level
Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-13.
- Check:
 - Engine oil pressure
 - Slightly loosen the oil pressure check bolt "1".

FWA18120

WARNING

When the engine is started with the check bolt removed, oil will spout; therefore, always loosen it before the checkup.



- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt.

FWA18130

WARNING

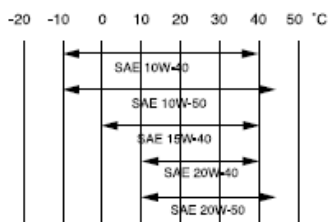
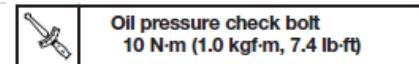
Always keep the engine idling speed during the checkup without increasing the engine speed.

EC425840

NOTICE

If no engine oil seeps out after one minute, immediately turn the engine off so it will not seize.

- If no engine oil seeps out, check the engine oil for leaks, and the engine oil passage and the oil pump for damage.
- Check the oil pressure again.
- Tighten the oil pressure check bolt.



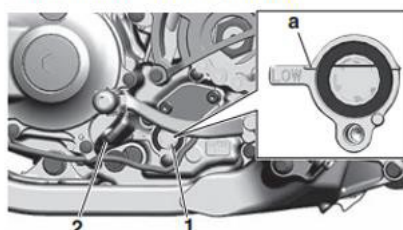
CHECKING THE ENGINE OIL LEVEL

1. Stand the vehicle upright on a level surface.
2. Start the engine, warm this up for 2-3 minutes, and then stop the engine and wait about 1 minute.
3. Check:
 - Oil level

Make sure that the engine oil level is above the minimum level mark "a" shown for the oil level check window "1", and that the engine oil does not come out by removing the oil check bolt "2".

The minimum level mark "a" or below → Add the engine oil until its level exceeds the minimum level mark "a".

Engine oil coming out of the oil check bolt → Drain it until its last drop is out.



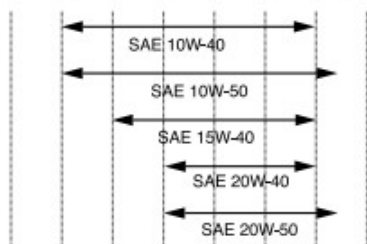
ECA24290

NOTICE

- Since engine oil also lubricates the clutch, the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives.
- Do not allow foreign material to enter the crankcase.

	Recommended brand YAMALUBE SAE viscosity grades 10W-40, 10W-50, 15W-40, 20W-40 or 20W-50 Recommended engine oil grade API service SG type or higher, JASO standard MA
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-20 -10 0 10 20 30 40 50 °C



CHANGING THE ENGINE OIL

Stand the vehicle upright on a level surface.

1. Start the engine, warm this up for several minutes, and then stop the engine and wait about 5 minutes.

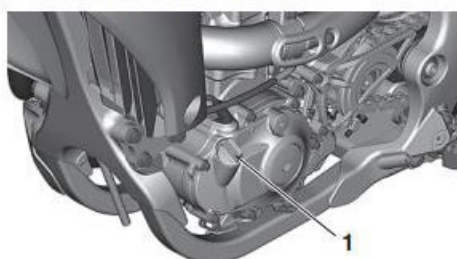
TIP

This model is equipped with an engine auto-stop system. The engine stops automatically if left idling for 7 minutes. If the engine stops, push the start switch to restart the engine.

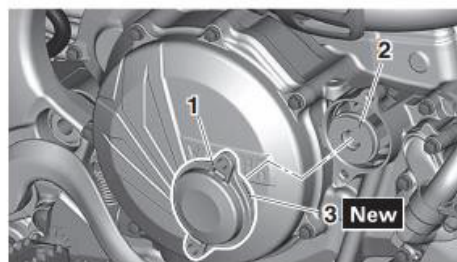
2. Place an oil pan under the drain bolt.

3. Remove:

- Oil filler cap "1"
- Drain bolt (with gasket) "2"



4. If the oil filter element is also to be replaced, perform the following procedure.
 - a. Remove the oil filter element cover "1" and oil filter element "2".
 - b. Replace the new O-ring "3".



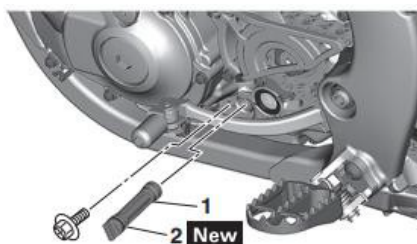
- c. Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 N·m (1.0 kgf·m, 7.4 lb·ft)

5. To check the oil strainer, perform the following procedure.

- a. Remove the oil strainer "1".
- b. Check the oil strainer.
 Damage → Replace.
 Clogging due to dirt → Wash with kerosene.
- c. Replace the new O-ring "2".



- d. Install the oil strainer.



Oil strainer bolt
10 N·m (1.0 kgf·m, 7.4 lb·ft)

6. Install:

- Gasket **New**
- Drain bolt



Drain bolt
20 N·m (2.0 kgf·m, 15 lb·ft)

7. Pour the specified amount of engine oil into the oil filler cap hole.



Engine oil quantity

Oil change

0.63 L (0.67 US qt, 0.55 Imp.qt)

With oil filter removal

0.65 L (0.69 US qt, 0.57 Imp.qt)

Quantity (disassembled)

0.90 L (0.95 US qt, 0.79 Imp.qt)



8. Install:

- Oil filler cap

9. Check:

- Oil level

Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-13.

10. Check:

- Engine oil pressure
- a. Start the engine.

EWA19130

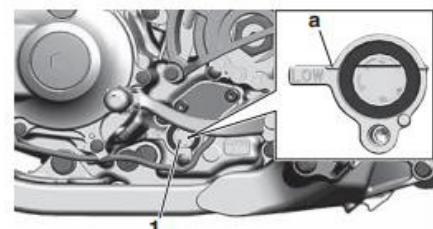
WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

- b. Look at the oil level check window "1", and then make sure that the engine oil flows and that the engine oil level decreases.

TIP

Check the engine oil level while the engine is at idling speed.



- a. Minimum level mark

NOTICE

If the engine oil level does not decrease after the engine has been started, immediately turn the engine off. Otherwise, the engine could seize.

- c. If the engine oil level does not decrease at the specified level mark, check the engine oil system for leaks, and the engine oil passages and oil pump for damage.
- d. Check the oil pressure again.

CHECKING THE ENGINE OIL LEVEL

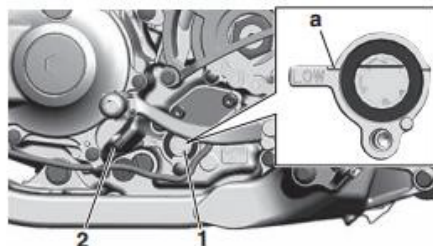
- Stand the vehicle upright on a level surface.
- Start the engine, warm this up for 2-3 minutes, and then stop the engine and wait about 1 minute.
- Check:

Oil level

Make sure that the engine oil level is above the minimum level mark "a" shown for the oil level check window "1", and that the engine oil does not come out by removing the oil check bolt "2".

The minimum level mark "a" or below → Add the engine oil until its level exceeds the minimum level mark "a".

Engine oil coming out of the oil check bolt → Drain it until its last drop is out.



ECA24290

NOTICE

- Since engine oil also lubricates the clutch, the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives.
- Do not allow foreign material to enter the crankcase.



Recommended brand

YAMALUBE

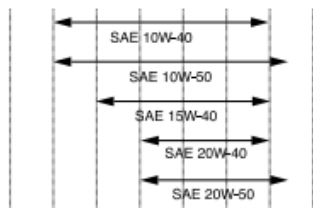
SAE viscosity grades

SAE 10W-40, SAE 10W-50, SAE 15W-40, SAE 20W-40 or SAE 20W-50

Recommended engine oil grade

API service SG type or higher, JASO standard MA

-20 -10 0 10 20 30 40 50 °C



CHANGING THE ENGINE OIL

Stand the vehicle upright on a level surface.

- Start the engine, warm this up for several minutes, and then stop the engine and wait about 5 minutes.

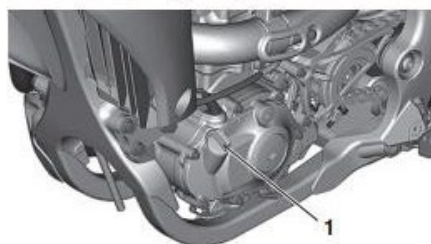
TIP

This model is equipped with an engine auto-stop system. The engine stops automatically if left idling for 7 minutes. If the engine stops, push the start switch or push the start switch to restart the engine.

- Place an oil pan under the drain bolt.

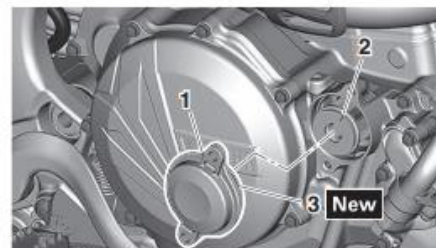
- Remove:

- Oil filler cap "1"
- Drain bolt (with gasket) "2"



- If the oil filter element is also to be replaced perform the following procedure.

- Remove the oil filter element cover "1" and oil filter element "2".
- Replace the O-ring "3".



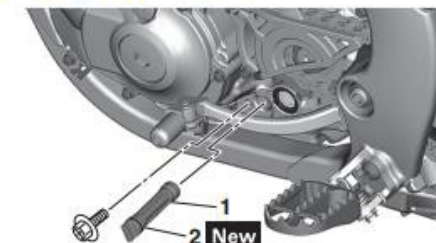
- Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 N·m (1.0 kgf·m, 7.4 lb·ft)

- To check the oil strainer, perform the following procedure.

- Remove the oil strainer "1".
- Check the oil strainer.
Damage → Replace.
Clogging due to dirt → Wash with kerosene.
- Replace the O-ring "2".



- Install the oil strainer.



Oil strainer bolt
10 N·m (1.0 kgf·m, 7.4 lb·ft)

- Install:

- Gasket **New**
- Drain bolt



Drain bolt
20 N·m (2.0 kgf·m, 15 lb·ft)

- Pour the specified amount of engine oil into the oil filler cap hole.



Engine oil quantity

Oil change

0.62 L (0.66 US qt, 0.55 Imp. qt)

With oil filter removal

0.64 L (0.68 US qt, 0.56 Imp. qt)

Quantity (disassembled)

0.90 L (0.95 US qt, 0.79 Imp. qt)



- Install:

- Oil filler cap

- Check:

- Oil level

Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-15.

- Check:

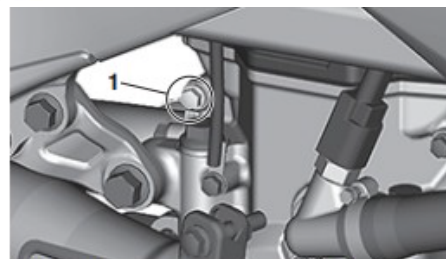
- Engine oil pressure

- Slightly loosen the oil pressure check bolt "1".

EW19130

WARNING

When the engine is started with the check bolt removed, oil will spout; therefore, always loosen it before the checkup.



- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt.

EW19130

WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

ECA25840

NOTICE

If no engine oil seeps out after one minute, immediately turn the engine off so it will not seize.

- If no engine oil seeps out, check the engine oil for leaks, and the engine oil passage and the oil pump for damage.

- Check the oil pressure again.

- Tighten the oil pressure check bolt.

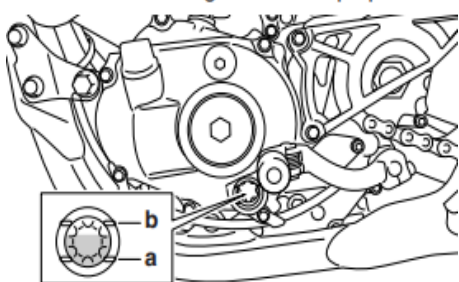


Oil pressure check bolt
10 N·m (1.0 kgf·m, 7.4 lb·ft)

CHECKING THE ENGINE OIL LEVEL

1. Stand the vehicle upright on a level surface.
2. Start the engine, warm this up for 2-3 minutes, and then stop the engine and wait about 5 minute.
3. Check:
 - Oil level

The engine oil level should be between the minimum level mark "a" and maximum level mark "b".
Below the minimum level mark → Add the recommended engine oil to the proper level.



NOTICE

- Since engine oil also lubricates the clutch, the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives.
- Do not allow foreign material to enter the crankcase.

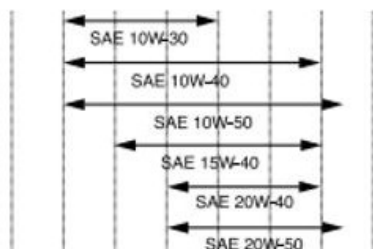


Recommended brand
YAMALUBE

Recommended engine oil type
SAE10W-30, SAE10W-40,
SAE10W-50, SAE15W-40,
SAE20W-40 or SAE20W-50

Recommended engine oil grade
API service SG type or higher,
JASO standard MA

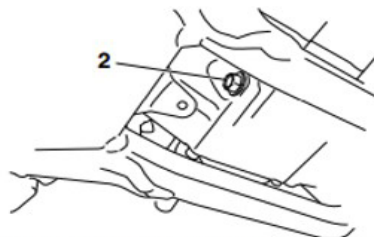
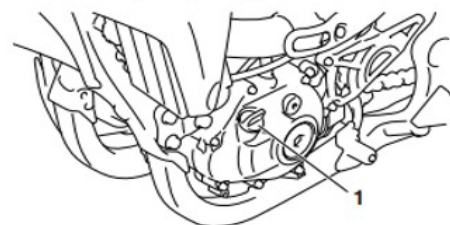
-20 -10 0 10 20 30 40 50 °C



CHANGING THE ENGINE OIL

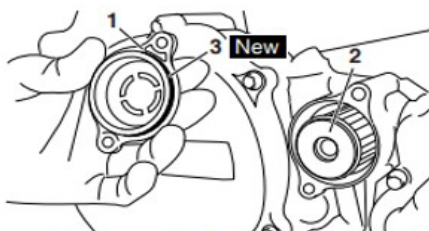
Stand the vehicle upright on a level surface.

1. Start the engine, warm this up for several minutes, and then stop the engine and wait about 5 minutes.
2. Place an oil pan under the drain bolt.
3. Remove:
 - Oil filler cap "1"
 - Drain bolt (with gasket) "2"



4. If the oil filter element is also to be replaced, perform the following procedure.

- a. Remove the oil filter element cover "1" and oil filter element "2".
- b. Replace the O-rings "3".



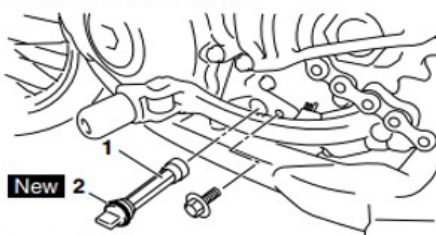
- c. Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

5. To check the oil strainer, perform the following procedure.

- a. Remove the oil strainer "1".
- b. Check the oil strainer.
Damage → Replace.
Clogging due to dirt → Wash with kerosene.
- c. Replace the O-rings "2".



- d. Install the oil strainer.



Oil strainer bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

6. Install:

- Gaskets **New**
- Drain bolt



Drain bolt
20 Nm (2.0 m·kgf, 14 ft·lbf)

7. Pour the specified amount of engine oil into the oil filler cap hole.

YZ250F

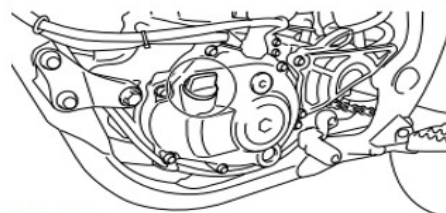


Engine oil quantity
Without oil filter element replacement
0.71 L (0.75 US qt, 0.62 Imp.qt)
With oil filter element replacement
0.73 L (0.77 US qt, 0.64 Imp.qt)
Quantity (disassembled)
0.90 L (0.95 US qt, 0.79 Imp.qt)

WR250F & YZ250FX



Engine oil quantity
Without oil filter element replacement
0.83 L (0.88 US qt, 0.73 Imp.qt)
With oil filter element replacement
0.85 L (0.90 US qt, 0.75 Imp.qt)
Quantity (disassembled)
1.10 L (1.16 US qt, 0.97 Imp.qt)



8. Install:
 - Oil filler cap
9. Check:
 - Oil level

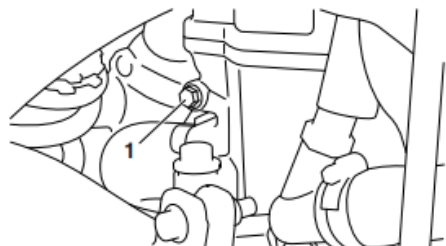
Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-14.

10. Check:
 - Engine oil pressure

- a. Slightly loosen the oil pressure check bolt "1".

WARNING

When the engine is started with the check bolt removed, oil will spout; therefore, always loosen it before the checkup.



Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt.

WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

NOTICE

If no engine oil seeps out after one minute, immediately turn the engine off so it will not seize.

- b. If no engine oil seeps out, check the engine oil for leaks, and the engine oil passage and the oil pump for damage.
- c. Check the oil pressure again.
- d. Tighten the oil pressure check bolt.



Oil pressure check bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

CHECKING THE ENGINE OIL LEVEL

1. Stand the vehicle upright on a level surface.
2. Start the engine, warm this up for 2-3 minutes, and then stop the engine and wait about 1 minute.

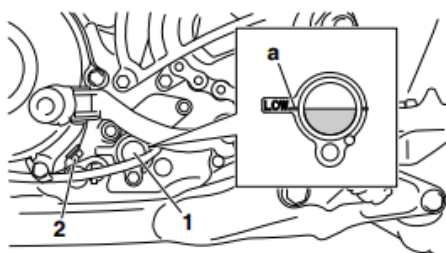
3. Check:

- Oil level

Make sure that the engine oil level is above the minimum level mark "a" shown for the oil level check window "1," and that the engine oil does not come out by removing the oil check bolt "2."

The minimum level mark "a" or below → Add the engine oil until its level exceeds the minimum level mark "a."

Engine oil coming out of the oil check bolt → Drain it until its last drop is out.



NOTICE

- Since engine oil also lubricates the clutch, the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives.
- Do not allow foreign material to enter the crankcase.

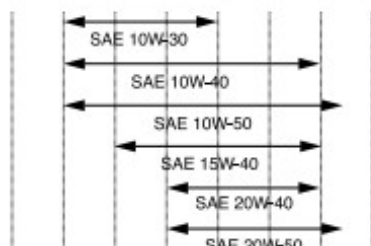


Recommended brand YAMALUBE

Recommended engine oil type
SAE10W-30, SAE10W-40,
SAE10W-50, SAE15W-40,
SAE20W-40 or SAE20W-50

Recommended engine oil grade
API service SG type or higher,
JASO standard MA

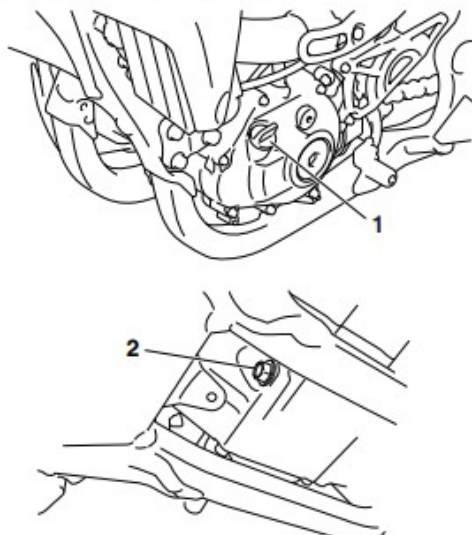
-20 -10 0 10 20 30 40 50 °C



CHANGING THE ENGINE OIL

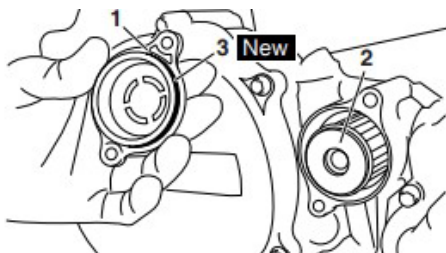
Stand the vehicle upright on a level surface.

1. Start the engine, warm this up for several minutes, and then stop the engine and wait about 5 minutes.
2. Place an oil pan under the drain bolt.
3. Remove:
 - Oil filler cap "1"
 - Drain bolt (with gasket) "2"



4. If the oil filter element is also to be replaced, perform the following procedure.

- a. Remove the oil filter element cover "1" and oil filter element "2."
- b. Replace the O-rings "3."



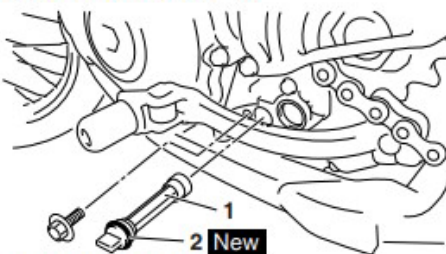
- c. Install the new oil filter element and the oil filter element cover.



Oil filter element cover bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

5. To check the oil strainer, perform the following procedure.

- a. Remove the oil strainer "1".
- b. Check the oil strainer.
Damage → Replace.
Clogging due to dirt → Wash with kerosene.
- c. Replace the O-rings "2".



- d. Install the oil strainer.



Oil strainer bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

6. Install:

- Gaskets **New**
- Drain bolt

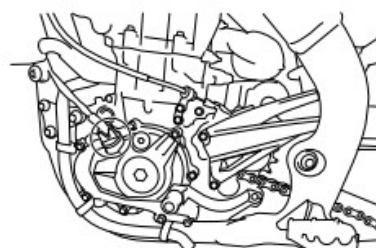


Drain bolt
20 Nm (2.0 m·kgf, 14 ft·lbf)

7. Pour the specified amount of engine oil into the oil filler cap hole.



Engine oil quantity
With oil filter element replacement
0.69 L (0.73 US qt, 0.61 Imp. qt)
Quantity (disassembled)
0.95 L (1.00 US qt, 0.84 Imp. qt)



8. Install:

- Oil filler cap

9. Check:

- Oil level
Refer to "CHECKING THE ENGINE OIL LEVEL" on page 3-14.

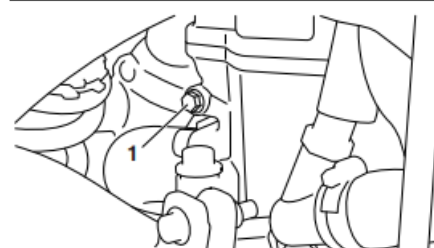
10. Check:

- Engine oil pressure

- a. Slightly loosen the oil pressure check bolt "1."

WARNING

When the engine is started with the check bolt removed, oil will spout; therefore, always loosen it before the checkup.



Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt.

WARNING

Always keep the engine idling speed during the checkup without increasing the engine speed.

NOTICE

If no engine oil seeps out after one minute, immediately turn the engine off so it will not seize.

- b. If no engine oil seeps out, check the engine oil for leaks, and the engine oil passage and the oil pump for damage.

- c. Check the oil pressure again.

- d. Tighten the oil pressure check bolt.



Oil pressure check bolt
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

CHECKING THE ENGINE OIL LEVEL

1. Stand the machine on a level surface.

TIP

- When checking the oil level make sure that the machine is upright.
- Place the machine on a suitable stand.

2. Start the engine, warm it up for 2–3 minutes at engine idling speed, and then stop the engine and wait approximately 1 minute.
3. Inspect:

• Oil level

Make sure that the engine oil level is between the maximum level line "a" and minimum level line "b" shown for the oil level check window.

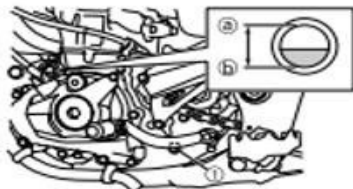
Above the upper limit "a" → Check that no oil comes out when the check bolt "1" for the oil quantity upper limit is removed.

If any engine oil comes out, drain it until its last drop is out.

Below the level mark "b" → Add sufficient oil and idle run the engine, and after stopping the engine, recheck through the oil inspection window that the oil is at the specified level.

TIP

- Check the oil quantity within 5 minutes after the engine is shut off. Over 5 minutes, idle the engine again and recheck the oil quantity.
- Do not leave the check bolt for the oil quantity upper limit removed. Otherwise, the oil level drops with time in the engine, allowing the oil to flow out.



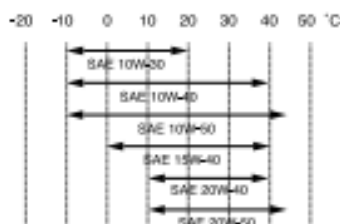
NOTICE

- Engine oil also lubricates the clutch and the wrong oil types or additives could cause clutch slippage. Therefore, do not add any chemical additives or use engine oils with a grade of CD or higher and do not use oils labeled "ENERGY CONSERVING II".
- Do not allow foreign material to enter the crankcase.

Recommended brand:
YAMALUBE

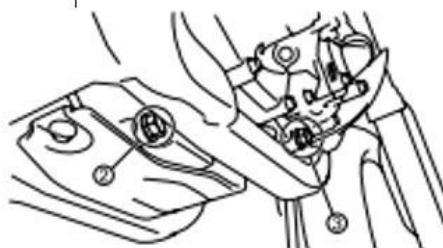
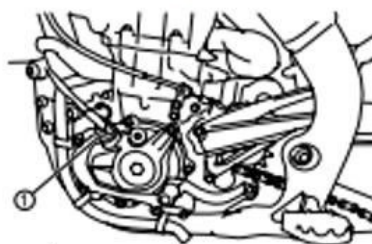
Recommended engine oil type
SAE10W-30, SAE 10W-40, SAE10W-50, SAE 15W-40, SAE 20W-40 or SAE 20W-50

Recommended engine oil grade
API service SG type or higher, JASO standard MA



CHANGING THE ENGINE OIL

1. Start the engine and let it warm up for several minutes.
2. Stop the engine and place an oil pan under the drain bolt.
3. Remove:
 - Oil filler cap "1"
 - Drain bolt (with gasket) "2"
 - Drain bolt (with gasket) "3"
 Drain the engine oil.

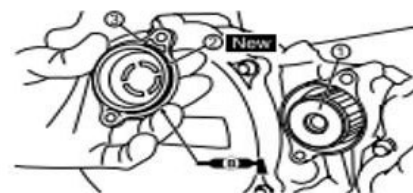


4. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- a. Remove the oil filter element cover "1" and oil filter element "2".
- b. Check the O-rings "3", if cracked or damaged, replace them with a new one.
- c. Install the oil filter element and oil filter element cover.

Oil filter element cover:
10 Nm (1.0 m•kg, 7.2 ft•lb)



5. Install:
 - Gaskets **New**
 - Oil drain bolt (oil pan)

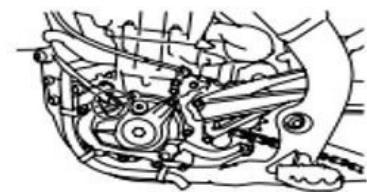
Oil drain bolt (oil pan):
20 Nm (2.0 m•kg, 14 ft•lb)

- Oil drain bolt (oil tank)

Oil drain bolt (oil tank):
20 Nm (2.0 m•kg, 14 ft•lb)

6. Fill:
 - Engine oil

Oil quantity:
Periodic oil change:
0.95 L (0.84 Imp qt, 1.00 US qt)
With oil filter replacement:
1.0 L (0.88 Imp qt, 1.06 US qt)
Total amount:
1.2 L (1.06 Imp qt, 1.27 US qt)



7. Install:
 - Oil filler cap
8. Inspect:
 - Engine (for oil leaks)
 - Oil level

CHECKING THE OIL PRESSURE

1. Check:

- Oil pressure

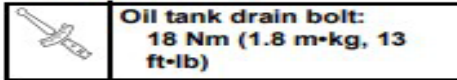
Checking steps:

- Slightly loosen the oil pressure check bolt "1".
- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil pressure check bolt.

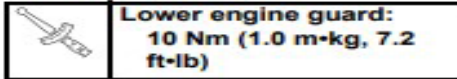
	Oil pressure check bolt: 10 Nm (1.0 m•kg, 7.2 ft•lb)
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- Oil tank drain bolt

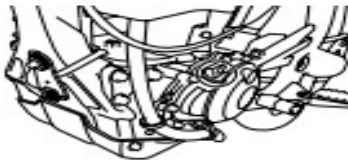
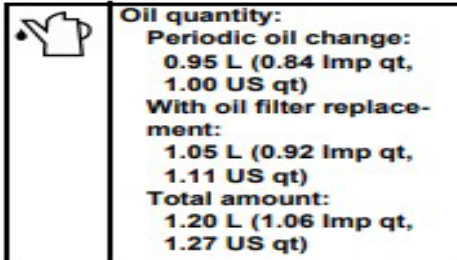


- Lower engine guard



10. Fill:

- Engine oil

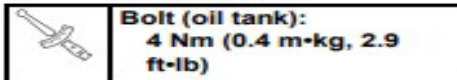


11. Check:

- Oil leakage

12. Install:

- Oil filler cap
- Washer (oil tank)
- Bolt (oil tank)



13. Check:

- Engine oil level

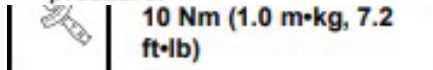
CHECKING THE OIL PRESSURE

1. Check:

- Oil pressure

Checking steps:

- Slightly loosen the oil pressure check bolt "1".
- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.



ENGINE OIL LEVEL INSPECTION

1. Stand the machine on a level surface.

NOTE:

- When checking the oil level make sure that the machine is upright.
- Place the machine on a suitable stand.

⚠ WARNING

Never remove the oil tank cap just after high speed operation. The heated oil could spurt out, causing danger. Wait until the oil cools down to approximately 70 °C (158 °F).

2. Idle the engine more than 3 minutes while keeping the machine upright. Then stop the engine and inspect the oil level.

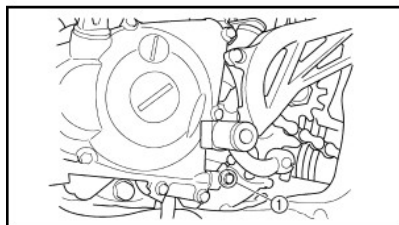
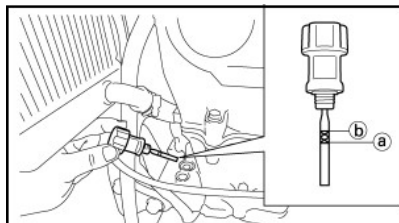
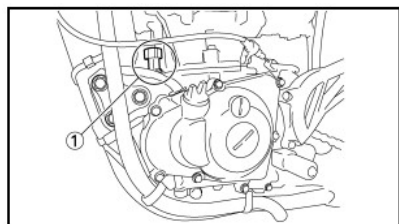
3. Remove:
 - Oil tank cap ①

4. Inspect:
 - Oil level

Remove the oil tank cap and check that engine oil is above the level mark ③. Below the level mark ③ → Add oil above the level mark ③. Above the level mark ③ → Remove the check bolt ① and drain the oil until it stops coming out.

NOTE:

When inspecting the oil level, do not screw the oil level gauge into the oil tank. Insert the gauge lightly.



5. Start the engine and let it warm up for several minutes.

CAUTION:

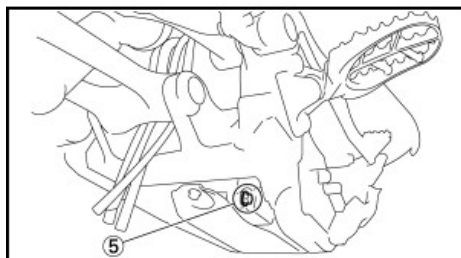
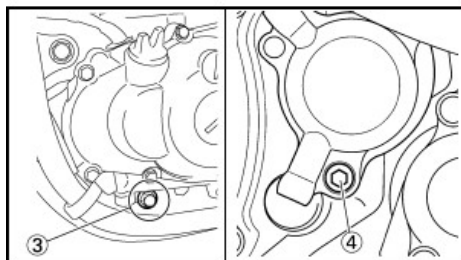
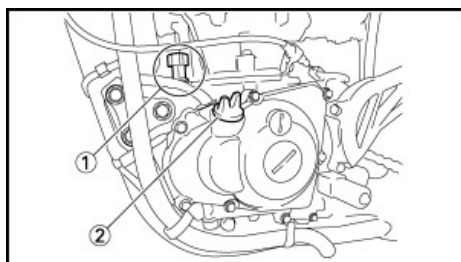
When the oil tank is empty, never start the engine.

6. Idle the engine more than 10 seconds while keeping the machine upright. Then stop the engine and add the oil to the maximum level.
7. Install:
 - Oil tank cap

ENGINE OIL REPLACEMENT

1. Start the engine and let it warm up for several minutes.
2. Stop the engine and place an oil pan under the drain bolt.
3. Remove:
 - Oil tank plug ①
 - Oil filler cap ②
 - Drain bolt (with gasket) ③
 - Oil filter drain bolt (O-ring) ④
 - Drain bolt (with gasket) ⑤

Drain the crankcase and oil tank of its oil.



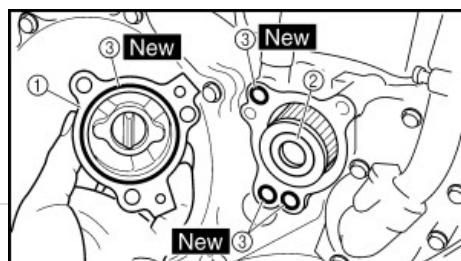
4. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- Remove the oil filter cover ① and oil filter element ②.
- Check the O-rings ③, if cracked or damaged, replace them with a new one.
- Install the oil filter element and oil filter cover.



Oil filter cover:
10 Nm (1.0 m • kg, 7.2 ft • lb)



5. Install:

- Gaskets **New**
- Oil filter drain bolt

10 Nm (1.0 m • kg, 7.2 ft • lb)

- Drain bolt (crankcase right)

20 Nm (2.0 m • kg, 14 ft • lb)

- Drain bolt (crankcase left)

20 Nm (2.0 m • kg, 14 ft • lb)

6. Fill:

- Crankcase



Oil quantity:

Periodic oil change:

0.95 L (0.84 Imp qt, 1.00 US qt)

With oil filter replacement:

1.0 L (0.88 Imp qt, 1.06 US qt)

Total amount:

1.2 L (1.06 Imp qt, 1.27 US qt)

7. Install:

- Oil filler cap

8. Inspect:

- Engine (for oil leaks)
- Oil level

Refer to "ENGINE OIL LEVEL INSPECTION".

9. Check:

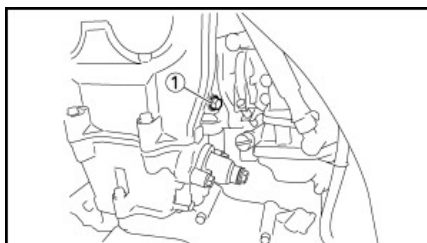
- Oil pressure

Checking steps:

- Slightly loosen the oil gallery bolt ①.
- Start the engine and keep it idling until oil starts to seep from the oil gallery bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages, oil filter and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil gallery bolt to specification.



Oil gallery bolt:
10 Nm (1.0 m • kg, 7.2 ft • lb)



ENGINE OIL LEVEL INSPECTION

1. Stand the motorcycle on a level surface.

NOTE:

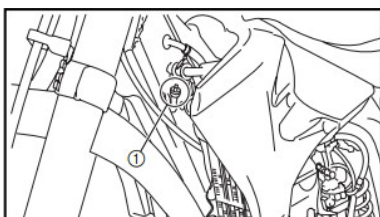
- When checking the oil level make sure that the motorcycle is upright.
- Place the motorcycle on a suitable stand.

WARNING

Never remove the oil tank cap just after high speed operation. The heated oil could spurt out, causing danger. Wait until the oil cools down to approximately 70 °C (158 °F).

2. Idle the engine more than 3 minutes while keeping the motorcycle upright. Then stop the engine and inspect the oil level.

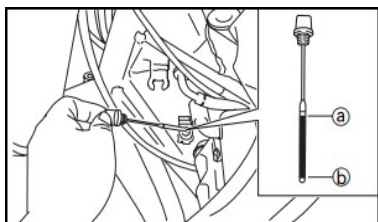
3. Remove:
 - Oil tank cap ①



4. Inspect:
 - Oil level

Oil level should be between maximum ③ and minimum ⑤ marks.
Oil level low → Add oil to proper level.

NOTE:
When inspecting the oil level, do not screw the oil level gauge into the oil tank. Insert the gauge lightly.



5. Start the engine and let it warm up for several minutes.

CAUTION:

When the oil tank is empty, never start the engine.

6. Idle the engine more than 10 seconds while keeping the motorcycle upright. Then stop the engine and add the oil to the maximum level.
7. Install:
 - Oil tank cap



Recommended oil:

Refer to the following chart for selection of oils which are suited to the atmospheric temperatures.
Recommended engine oil classification:

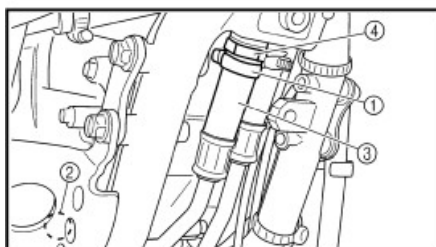
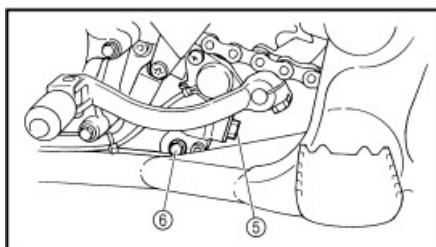
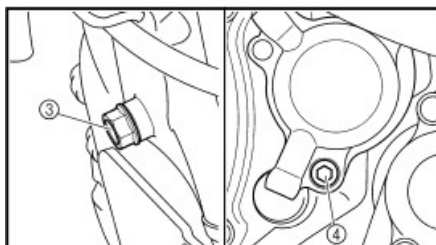
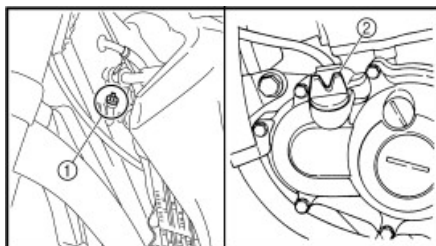
API STANDARD:

API "SG" or higher grade
(Designed primarily for motorcycles)

ENGINE OIL REPLACEMENT

1. Start the engine and let it warm up for several minutes.
2. Stop the engine and place an oil pan under the drain bolt.
3. Remove:
 - Oil tank plug ①
 - Oil filler cap ②
 - Drain bolt (with gasket) ③
 - Oil filter drain bolt (O-ring) ④
 - Drain bolt (with gasket) ⑤
 - Drain bolt (with gasket) ⑥

Drain the crankcase and oil tank (frame) of its oil.
4. Remove:
 - Engine skid plate
 - Engine oil hose clamp ①
 - Bolt (engine oil hose) ②
 - Engine oil hose ③
 - Oil strainer (frame) ④
5. Clean:
 - Oil strainer (frame)



6. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- Remove the exhaust pipe.
- Remove the oil filter cover ① and oil filter element ②.
- Check the O-rings ③, if cracked or damaged, replace them with a new one.
- Install the oil filter element and oil filter cover.



Oil filter cover:

10 Nm (1.0 m • kg, 7.2 ft • lb)

7. Install:

- Plain washer ① **New**
- Oil strainer (frame) ②

90 Nm (9.0 m • kg, 65 ft • lb)

- Engine oil hose ③
- Bolt (engine oil hose) ④

10 Nm (1.0 m • kg, 7.2 ft • lb)

- Engine oil hose clamp ⑤

2 Nm (0.2 m • kg, 1.4 ft • lb)

- Engine skid plate

8. Install:

- Gaskets **New**
- Oil filter drain bolt

10 Nm (1.0 m • kg, 7.2 ft • lb)

- Drain bolt (crankcase rear)

20 Nm (2.0 m • kg, 14 ft • lb)

- Drain bolt (crankcase left)

10 Nm (1.0 m • kg, 7.2 ft • lb)

- Drain bolt (frame)

23 Nm (2.3 m • kg, 17 ft • lb)

9. Fill:

- Crankcase



Oil quantity:

Total amount:

1.2 L (1.06 Imp qt, 1.27 US qt)

Periodic oil change:

1.0 L (0.88 Imp qt, 1.06 US qt)

With oil filter replacement:

1.1 L (0.97 Imp qt, 1.16 US qt)

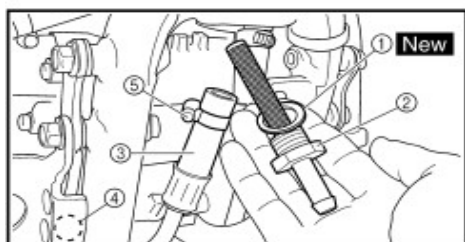
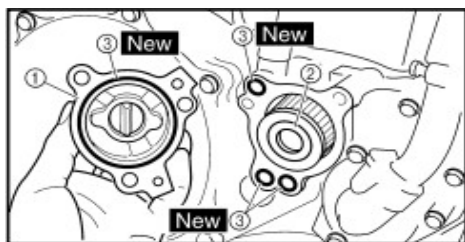
10. Install:

- Oil filler plug

11. Inspect:

- Engine (for oil leaks)
- Oil level

Refer to "ENGINE OIL LEVEL INSPECTION".



12. Check:

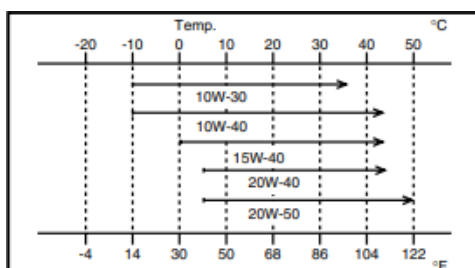
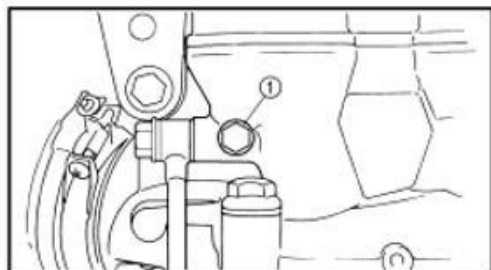
- Oil pressure

Checking steps:

- Slightly loosen the oil gallery bolt ①.
- Start the engine and keep it idling until oil starts to seep from the oil gallery bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages, oil filter and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil gallery bolt to specification.



Oil gallery bolt:
 10 Nm (1.0 m • kg, 7.2 ft • lb)

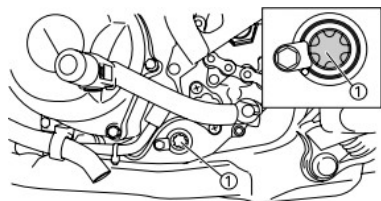


CHECKING THE ENGINE OIL LEVEL

1. Start the engine, warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it up on upright position by placing the suitable stand under the engine.
3. Inspect:
 - Oil level
Oil should be up to the full level in the check window "1".
Level check window is not full. → Add 0.2 L (0.18 Imp qt, 0.21 US qt) of oil.
4. Install:
 - Oil tank cap
5. Start the engine and let it warm up for several minutes.
6. Turn off the engine and inspect the oil level once again.

NOTE:

Wait a few minutes until the oil settles before inspecting the oil level.



CAUTION:

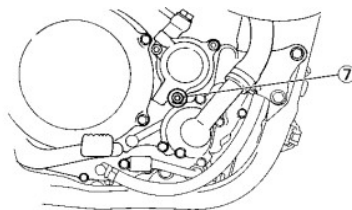
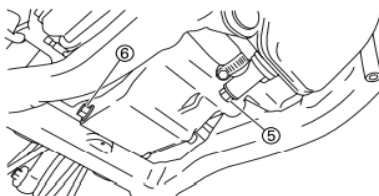
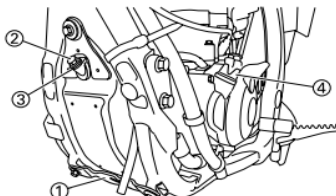
- Do not add any chemical additives. Engine oil also lubricates the clutch and additives could cause clutch slippage.
- Do not allow foreign material to enter the crankcase.



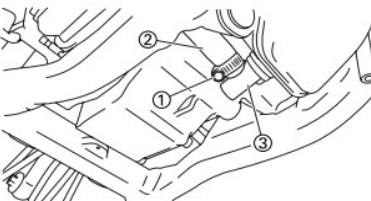
Recommended oil:
SAE10W30,
SAE10W40,
SAE15W40, SAE20W40
or SAE20W50
API service SG type or
higher, JASO standard
MA

CHANGING THE ENGINE OIL

1. Start the engine and warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it on upright position by placing the suitable stand under the engine.
3. Place a suitable container under the engine.
4. Remove:
 - Lower engine guard "1"
 - Bolt (oil tank) "2"
 - Washer "3"
 - Oil filler cap "4"
 - Oil tank drain bolt "5"
 - Crankcase oil drain bolt "6"
 - Oil filter element drain bolt "7"
 Drain the crankcase and oil tank of its oil.



5. Remove:
 - Oil hose clamp "1"
 - Bolt (oil hose)
 - Oil hose "2"
 - Oil strainer "3"



6. Inspect:
 - Oil strainer
Clogged → Blow.

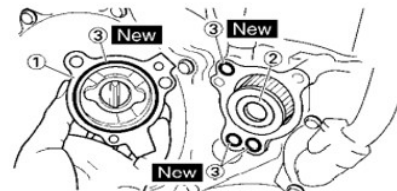
7. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- a. Remove the oil filter element cover "1" and oil filter element "2".
- b. Check the O-rings "3", if cracked or damaged, replace them with a new one.
- c. Install the oil filter element and oil filter element cover.



Oil filter element cover:
10 Nm (1.0 m•kg, 7.2 ft•lb)



8. Install:

- O-ring "1" **New**
- Oil strainer "2"



Oil strainer:
9 Nm (0.9 m•kg, 6.5 ft•lb)

- Oil hose
- Bolt (oil hose)



Bolt (oil hose):
8 Nm (0.8 m•kg, 5.8 ft•lb)

- Oil hose clamp

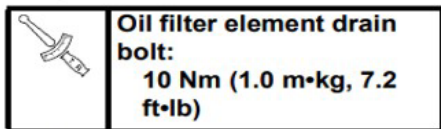


Oil hose clamp:
2 Nm (0.2 m•kg, 1.4 ft•lb)

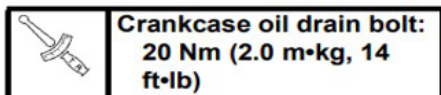


9. Install:

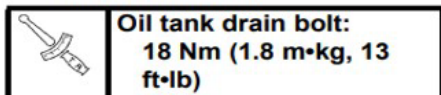
- Copper washer **New**
- Oil filter element drain bolt



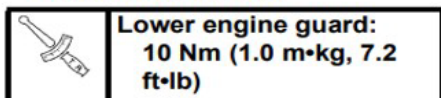
- Crankcase oil drain bolt



- Oil tank drain bolt



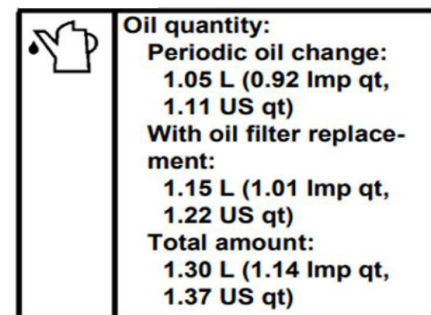
- Lower engine guard



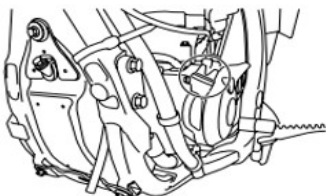
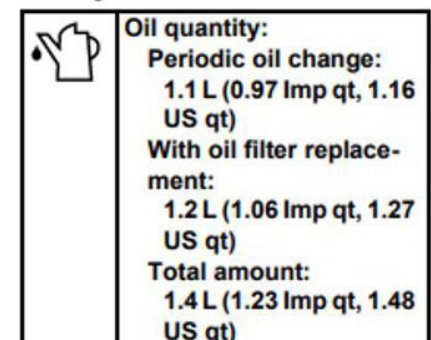
10. Fill:

- Engine oil

YZ250F



WR250F



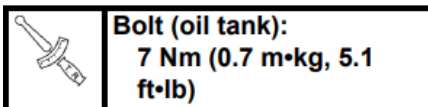
11. Check:

- Oil leakage

12. Install:

- Oil filler cap
- Washer (oil tank)

- Bolt (oil tank)



13. Check:

- Engine oil level

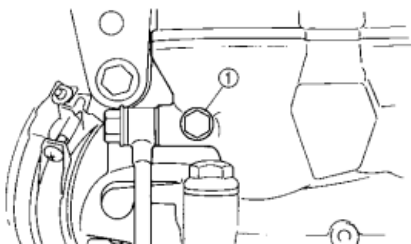
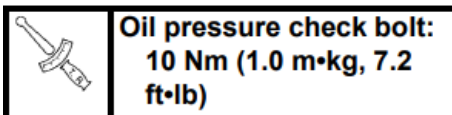
CHECKING THE OIL PRESSURE

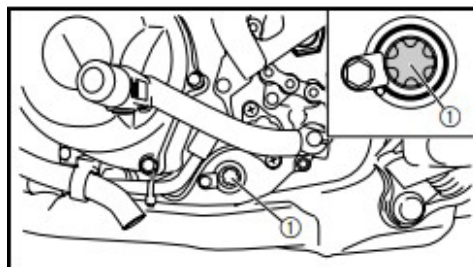
1. Check:

- Oil pressure

Checking steps:

- Slightly loosen the oil pressure check bolt "1".
- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil pressure check bolt.





ENGINE OIL LEVEL INSPECTION

1. Start the engine, warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it up on upright position by placing the suitable stand under the engine.

3. Inspect:

- Oil level

Oil should be up to the full level in the check window ①.

Level check window is not full. → Add 0.2 L (0.18 Imp qt, 0.21 US qt) of oil.

CAUTION:

- Do not add any chemical additives or use oils with a grade of CD ^a or higher.
- Do not use oils labeled "ENERGY CONSERVING II" ^b or higher. Engine oil also lubricates the clutch and additives could cause clutch slippage.
- Do not allow foreign materials to enter the crankcase.

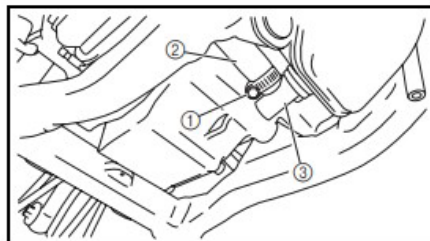
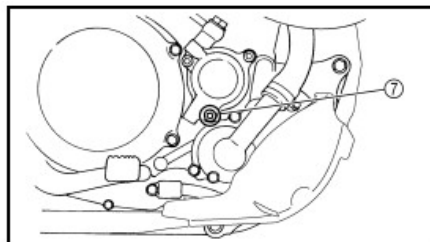
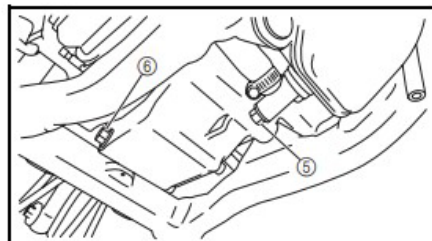
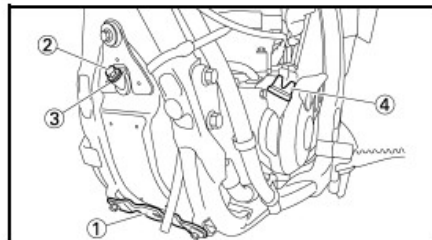
4. Install:

- Oil tank cap

5. Start the engine and let it warm up for several minutes.
6. Turn off the engine and inspect the oil level once again.

NOTE:

Wait a few minutes until the oil settles before inspecting the oil level.



ENGINE OIL REPLACEMENT

1. Start the engine and warm it up for several minutes, and then turn off the engine and wait for five minutes.

2. Place the machine on a level place and hold it on upright position by placing the suitable stand under the engine.

3. Place a suitable container under the engine.

4. Remove:

- Lower engine guard ①
- Bolt (oil tank) ②
- Washer ③
- Oil filler cap ④
- Oil tank drain bolt ⑤
- Crankcase oil drain bolt ⑥
- Oil filter element drain bolt ⑦

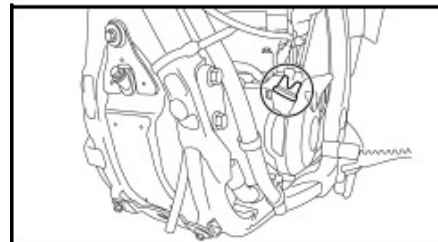
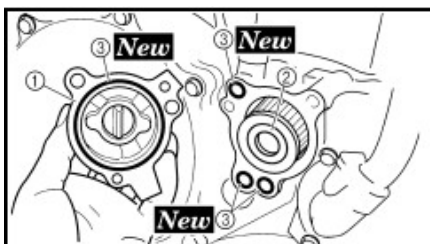
Drain the crankcase and oil tank of its oil.

5. Remove:

- Oil hose clamp ①
- Bolt (oil hose) ②
- Oil hose ③
- Oil strainer ④

6. Inspect:

- Oil strainer Clogged Blow.



7. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- Remove the oil filter element cover ① and oil filter element ②.
- Check the O-rings ③, if cracked or damaged, replace them with a new one.
- Install the oil filter element and oil filter element cover.



Oil filter element cover:
10 Nm (1.0 m • kg, 7.2 ft • lb)

8. Install:

- O-ring ① **New**
- Oil strainer ②

9 Nm (0.9 m • kg, 6.5 ft • lb)

- Oil hose

- Bolt (oil hose)

8 Nm (0.8 m • kg, 5.8 ft • lb)

- Oil hose clamp

2 Nm (0.2 m • kg, 1.4 ft • lb)

9. Install:

- Copper washer **New**
- Oil filter element drain bolt

10 Nm (1.0 m • kg, 7.2 ft • lb)

- Crankcase oil drain bolt

20 Nm (2.0 m • kg, 14 ft • lb)

- Oil tank drain bolt

18 Nm (1.8 m • kg, 13 ft • lb)

- Lower engine guard

10 Nm (1.0 m • kg, 7.2 ft • lb)

10. Fill:

- Engine oil



Oil quantity:

Periodic oil change:

1.05 L (0.92 Imp qt, 1.11 US qt)

With oil filter replacement:

1.15 L (1.01 Imp qt, 1.22 US qt)

Total amount:

1.30 L (1.14 Imp qt, 1.37 US qt)

11. Check:

- Oil leakage

12. Install:

- Oil filler cap
- Washer (oil tank)
- Bolt (oil tank)

7 Nm (0.7 m • kg, 5.1 ft • lb)

13. Check:

- Engine oil level

OIL PRESSURE INSPECTION

1. Check:

- Oil pressure

Checking steps:

- Slightly loosen the oil pressure check bolt ①.
- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil pressure check bolt.



Oil pressure check bolt:
10 Nm (1.0 m • kg, 7.2 ft • lb)

ENGINE OIL LEVEL INSPECTION

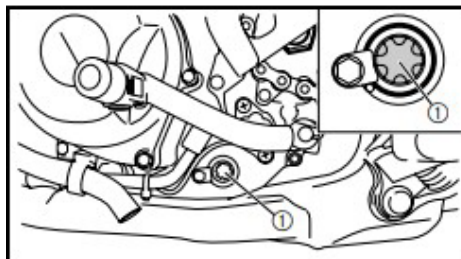
1. Start the engine, warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it up on upright position by placing the suitable stand under the engine.

3. Inspect:

• Oil level

Oil should be up to the full level in the check window ①.

Level check window is not full. → Add 0.2 L (0.18 Imp qt, 0.21 US qt) of oil.



CAUTION:

- Do not add any chemical additives or use oils with a grade of CD ③ or higher.
- Do not use oils labeled "ENERGY CONSERVING II" ⑤ or higher. Engine oil also lubricates the clutch and additives could cause clutch slippage.
- Do not allow foreign materials to enter the crankcase.

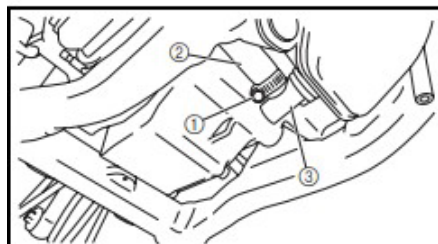
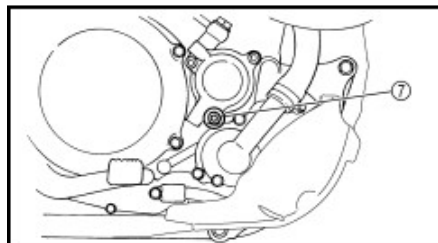
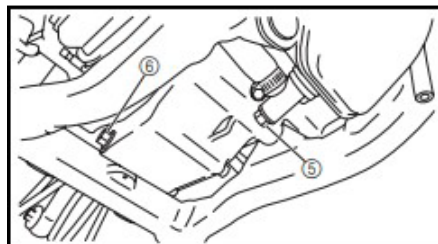
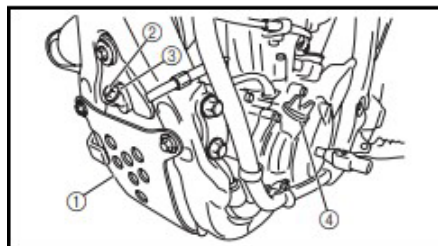
4. Install:

- Oil tank cap

5. Start the engine and let it warm up for several minutes.
6. Turn off the engine and inspect the oil level once again.

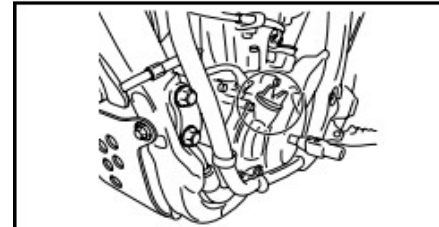
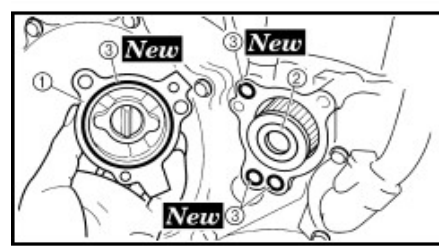
NOTE:

Wait a few minutes until the oil settles before inspecting the oil level.



ENGINE OIL REPLACEMENT

1. Start the engine and warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it on upright position by placing the suitable stand under the engine.
3. Place a suitable container under the engine.
4. Remove:
 - Lower engine guard ①
 - Bolt (oil tank) ②
 - Washer ③
 - Oil filler cap ④
 - Oil tank drain bolt ⑤
 - Crankcase oil drain bolt ⑥
 - Oil filter element drain bolt ⑦
 Drain the crankcase and oil tank of its oil.
5. Remove:
 - Oil hose clamp ①
 - Bolt (oil hose) ②
 - Oil hose ③
 - Oil strainer ④
6. Inspect:
 - Oil strainer
 Clogged → Blow.



7. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- Remove the oil filter element cover ① and oil filter element ②.
- Check the O-rings ③, if cracked or damaged, replace them with a new one.
- Install the oil filter element and oil filter element cover.



Oil filter element cover:
10 Nm (1.0 m • kg, 7.2 ft • lb)

8. Install:

- O-ring ① **New**
- Oil strainer ②
9 Nm (0.9 m • kg, 6.5 ft • lb)
- Oil hose
- Bolt (oil hose)
8 Nm (0.8 m • kg, 5.8 ft • lb)
- Oil hose clamp
2 Nm (0.2 m • kg, 1.4 ft • lb)

9. Install:

- Copper washer **New**
- Oil filter element drain bolt
10 Nm (1.0 m • kg, 7.2 ft • lb)
- Crankcase oil drain bolt
20 Nm (2.0 m • kg, 14 ft • lb)
- Oil tank drain bolt
18 Nm (1.8 m • kg, 13 ft • lb)
- Lower engine guard
10 Nm (1.0 m • kg, 7.2 ft • lb)

10. Fill:

- Engine oil



Oil quantity:
Periodic oil change:
 1.15 L (1.01 Imp qt, 1.22 US qt)
With oil filter replacement:
 1.25 L (1.10 Imp qt, 1.32 US qt)
Total amount:
 1.40 L (1.23 Imp qt, 1.48 US qt)

11. Check:

- Oil leakage

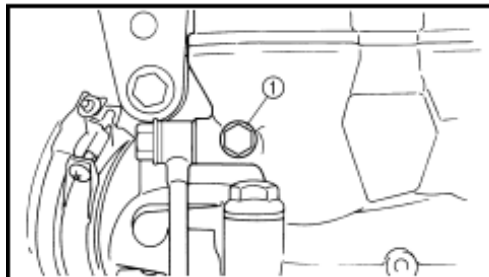
12. Install:

- Oil filler cap
- Washer (oil tank)
- Bolt (oil tank)

 7 Nm (0.7 m • kg, 5.1 ft • lb)

13. Check:

- Engine oil level



OIL PRESSURE INSPECTION

1. Check:

- Oil pressure

Checking steps:

- Slightly loosen the oil pressure check bolt ①.
- Start the engine and keep it idling until oil starts to seep from the oil pressure check bolt. If no oil comes out after one minute, turn the engine off so it will not seize.
- Check oil passages and oil pump for damage or leakage.
- Start the engine after solving the problem(s) and recheck the oil pressure.
- Tighten the oil pressure check bolt.



Oil pressure check bolt:
 10 Nm (1.0 m • kg, 7.2 ft • lb)

ENGINE OIL LEVEL INSPECTION

1. Start the engine, warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it up on upright position by placing the suitable stand under the engine.
3. Remove:
 - Oil tank cap ①
4. Inspect:
 - Oil level
Oil level should be between maximum ⑧ and minimum ⑤ marks.
Oil level is low → Add oil to proper level.

NOTE:

When inspecting the oil level, do not screw the oil tank cap into the oil tank. Insert the gauge lightly.

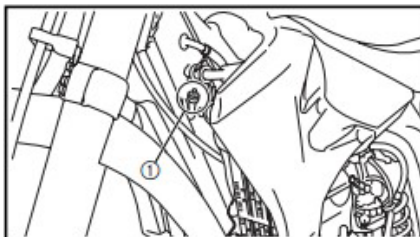
CAUTION:

- Do not add any chemical additives or use oils with a grade of CD ③ or higher.
- Do not use oils labeled "ENERGY CONSERVING II" ⑤ or higher. Engine oil also lubricates the clutch and additives could cause clutch slippage.
- Do not allow foreign materials to enter the crankcase.

5. Install:
 - Oil tank cap
6. Start the engine and let it warm up for several minutes.
7. Turn off the engine and inspect the oil level once again.

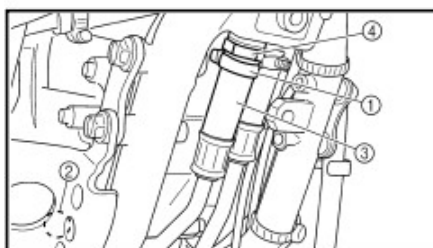
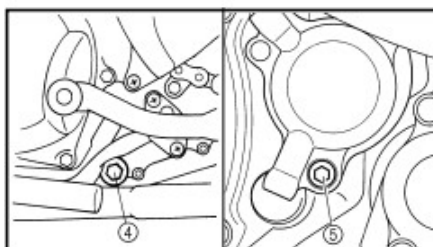
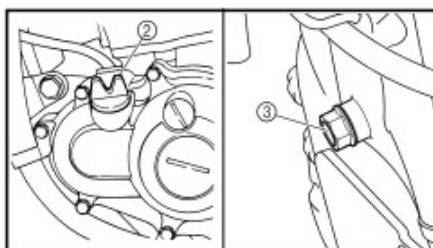
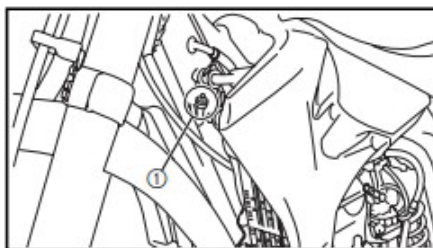
NOTE:

Wait a few minutes until the oil settles before inspecting the oil level.



ENGINE OIL REPLACEMENT

1. Start the engine and warm it up for several minutes, and then turn off the engine and wait for five minutes.
2. Place the machine on a level place and hold it on upright position by placing the suitable stand under the engine.
3. Place a suitable container under the engine.
4. Remove:
 - Oil tank cap ①
 - Oil filler cap ②
 - Frame oil drain bolt ③
 - Crankcase oil drain bolt ④
 - Oil filter element drain bolt ⑤
 Drain the crankcase and oil tank (frame) of its oil.
5. Remove:
 - Lower engine bracket
 - Oil hose clamp ①
 - Bolt (oil hose) ②
 - Oil hose ③
 - Oil strainer (frame) ④
6. Inspect:
 - Oil strainer (frame)
Clogged → Blow.



7. If the oil filter is to be replaced during this oil change, remove the following parts and reinstall them.

Replacement steps:

- Remove the oil filter element cover ① and oil filter element ②.
- Check the O-rings ③, if cracked or damaged, replace them with a new one.
- Install the oil filter element and oil filter element cover.



Oil filter element cover:
10 Nm (1.0 m • kg, 7.2 ft • lb)

8. Install:
 - Copper washer ① **New**
 - Oil strainer (frame) ②
70 Nm (7.0 m • kg, 50 ft • lb)
 - Oil hose ③
 - Bolt (oil hose) ④
10 Nm (1.0 m • kg, 7.2 ft • lb)
 - Oil hose clamp ⑤
2 Nm (0.2 m • kg, 1.4 ft • lb)
 - Lower engine bracket
10 Nm (1.0 m • kg, 7.2 ft • lb)
9. Install:
 - Copper washer **New**
 - Oil filter element drain bolt
10 Nm (1.0 m • kg, 7.2 ft • lb)
 - Crankcase oil drain bolt
20 Nm (2.0 m • kg, 14 ft • lb)
 - Frame oil drain bolt
23 Nm (2.3 m • kg, 17 ft • lb)
10. Fill:
 - Engine oil
11. Check:
 - Oil leakage
12. Install:
 - Oil tank cap
13. Check:
 - Engine oil level



Oil quantity:
Periodic oil change:
1.0 L (0.88 Imp qt, 1.06 US qt)
With oil filter replacement:
1.1 L (0.97 Imp qt, 1.27 US qt)
Total amount:
1.2 L (1.06 Imp qt, 1.27 US qt)

