



NB: Our HellCat engine has different design features !

e.g. 0h8 h , cooling, mounting etc.

INSTALLATION, OPERATING, MAINTENANCE—JCV 360



JCV 360



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

CONTENT:

1.	Basic Technical Specifications	3
2.	First start	4
3.	Operation	5
4.	Items requiring periodic renewal	6
5.	Water cooling system—first fill up and working principle	10
6.	Oil system—first fill up and working principle	11
7.	Check before first start:	13
8.	First start	13
9.	Shutting Down the Engine	14
10.	Periodic maintenance	15
11.	Major overhauls	15
12.	Guarantee	15
13.	Appendix	16
14.	Assembly of engine JCV 360	24
15.	Engine parts catalogue JCV 360	50



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

WARNING :

THIS AIRCRAFT ENGINE DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT. THIS IS FOR USE IN EXPERIMENTAL AND MICROLIGHT UNCERTIFIED AIRCRAFT ONLY IN CIRCUMSTANCES IN WHICH ENGINE FAILURE WILL NOT COMPROMISE SAFETY. READ OPERATOR'S MANUAL BEFORE OPERATING THE ENGINE.

1. Basic Technical Specifications

The following notes are the installation, operating and maintenance instructions for the JCV 360 engine. It is highly recommended that users of the engine familiarize themselves with the contents of these pages before installing the engine and adhere to the given instructions fully and in every respect throughout the operational life of the engine.

Type	JCV 360
Displacement	360 cc / 23.06 cubic inches
Bore	63 mm / 2.47 inches
Stroke	58 mm / 2.28 inches
Compression ratio	1:11
Maximum power	35 BHP (25,7 kW) @ 7800 RPM
Max. continuous power	26 BHP (19,1kW) @ 6000 RPM
Torque	33 Nm @ 7000 RPM
Propeller rotation	CCW (tractor propeller)
Weight	dry weight: 26,4 kg (58 lb)
Spark plugs	NGK CR9EK or equivalent
Spark plug gap	0.5 mm (0.02 inch)
Electric starter	18V - 24V / 370W
Generator (alternator)	12V / 100W 50 VAC no load
Lubrication	semi-synthetic 4 stroke motorcycle JASO MA oil
Fuel	motor petrol, octane number 95 (USA 92)
Fuel pump	vacuum Mikuni
Carburetors	2 x Walbro WB-37-1
Reduction drive	2,76 : 1, via belt (width 42 mm, lenght 610 PJ), (USA 240J/18)
Propeller hub	∅75 - 6 x M8, ∅70 - 6 x M6, ∅50 - 6 x M6
Weight	cooler - 0.74 kg, oil 1l ~ 0.8 kg, water 1l ~ 1 kg, exhaust - 1.6 kg



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

NOTE:

IT IS FORBIDDEN TO START THE ENGINE WITHOUT PROPELLER

2. First start

Check before first start:

- Fill engine with recommended type of motor oil. Oil level has to be notable on top scale line of oil level dipstick
- Tightness of entire oil system, including oil cooler
- Fill water cooling system with coolant (specific type according to outside weather conditions), including oil cooler and its deaerating
- Tightness of entire water cooling system
- Tightness of exhaust system
- Tightness of motor mount to engine frame
- Electrical wiring
- Tightness of fuel system
- Operation and symmetry of throttle valves in both carburetors
- Tightness of propeller bolts
- Propeller setting

NOTE:

ALWAYS ADJUST THE PROPELLER BY CANTING THE PROPELLER BLADES SO THAT THE ENGINE SPEED LIMIT DURING LAND ENGINE TESTING DOESN'T EXCEED 7900 RPM. IF USING FIXED-PITCH PROPELLER CHOOSE ONE WITH CORRECT PITCH.

- Fasten aircraft down to protect from unexpected movement
- Secure propeller area to protect from personal injury or another damage

NOTE:

IT IS FORBIDDEN TO TURN OFF THE ENGINE WITH OPEN THROTTLE BUTTERFLY



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

3. Operation

The engine is run-in at the factory for 2 hours and requires no further "breaking in" after installation. All relevant items were adjusted for optimum performance and the carburetor is set to operate satisfactorily between sea level and 2000 meters MSL (6,514 ft MSL) without requiring different jetting or further adjustment. (See note below) Nevertheless, all gauges should be monitored with extra attention during the first few hours of service, with particular attention to the temperature and pressure limitations shown below:

Engine speed:

Maximum speed: 7800 RPM, for 3 minutes maximum

Operating speed: 5500 - 6000 RPM

It is recommended to maintain operating speed within the range of 5500 - 6500 RPM, where power, fuel consumption and engine wear are in ideal configuration.

Water temperature:

Maximum temp : 100 °C (212 deg F) - For 5 minutes maximum!

Operating temp : 75 - 85 deg C (170 - 192 deg F)

Minimum temp : 60 deg C (136 deg F)

It is forbidden to exceed operating temperature 85°C during engine operation. The maximum temperature 100°C can be used only in the state of emergency and for 5 minutes maximum! Head deflection and other accompanying defects can occur when exceeding operating temperature.

The minimum operating temperature 60°C is measured during level horizontal flight and engine operation under lower temperature is forbidden.

Exhaust gas temperature:

Operating temp: 620 - 820 deg.C (1150 - 1300 deg.F)

Note:

For reference only: EGT gauge is not a mandatory requirement for this engine.

Oil temperature and pressure:

Oil pressure: 0.3 - 4.0 kg/cm² (4.35 - 58 psi)

Oil temperature: 50 - 85 °C, (122 - 185 deg F), 100° C (212 deg F) for short time only!

Note:

The oil temperature must reach the minimum temperature shown above before the carburetor throttle is wide open and it is the lowest temperature suitable for engine operation. The highest possible oil temperature during engine operation is 90°C and only in the state of emergency can it be exceeded up to 100°C for a short time.

Carburetor throttle must be reduced to minimum flight worthy revolutions and landing made at the nearest landing place if any of above mentioned values get near or reach maximal mentioned limits. Cause of the problem must to be identified and fixed before next flight.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

4. Items requiring periodic renewal

Some components require periodic renewal throughout the operational life of the engine and these items must be replaced at the intervals specified. Because of a number of operational variables, (atmospheric and weather conditions, frequency of operations, individual preferences, etc.) close and frequent inspection is mandatory to assure that they remain serviceable throughout the recommended replacement interval. Should anything abnormal be noted before the item is due for replacement, it must be replaced without delay. (The remote but realistic possibility of an impending premature failure of the drive belt is an example of this, as discussed below.)

Note:

It is pointed out here that the recommended replacement/renewal periods represent only the reasonably, EXPECTED and not the unconditionally WARRANTED service life of the component in question. In all cases where a component has to be repeatedly replaced sooner than in a specified time, the manufacturer must be notified to investigate the reason and offer a solution for the recurring problem.

Reduction drive belt

The Heavy Duty reduction drive cog-belt requires no maintenance except regular tension check-out and it is not subject to appreciable stretching during the recommended replacement intervals.

The producer is using the belt of kind: type POLY-V 240J/610PJ – width 42mm (USA 240J/18)

Reduction drive belt is tensioned by reduction unit gear shaft. This shaft can be turned after loosening 36S-06-03 and 36S-06-06 screws.

- rotating against engine revolutions – reduction drive belt loose + changing
- rotating by engine revolutions – reduction drive belt tightening

REDUCTION DRIVE BELT HAS TO BE TIGHTENED IN THE DIRECTION OF ENGINE ROTATION!

Tightening strength is about 20 Nm.

Tighten first 36S-06-03 screw for 20 Nm and then screw 36S-06-06 for 12 Nm after reduction drive belt exchange.

Check reduction drive belt tension and visual condition before every flight. Exchange reduction drive belt immediately (also independently of exchanging intervals) in case of any defect.

Squeaking sound after quick acceleration or higher revolutions, than maximal RPM adjusted on specific propeller – is caused by loosened reduction drive belt, which must be tightened immediately.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

Air filter

The air filters should be cleaned in clean solvent periodically. The recommended interval for cleaning the filters in normal conditions is every 25 hours. If the aircraft is operated in exceptionally dusty conditions they should be cleaned more frequently. This is especially true if the aircraft is used for frequent "touch-and-go" operations in which case weekly cleaning of the filters is not out of reason. The pulling torque 3 Nm maximum is used when tightening filter clamps; stronger tightening could cut rubber filter cups.

Fuel filter

The fuel filter should be replaced at 25 hour intervals in situations when no pre-filtered fuel is available (e.g. the fuel is loaded from canisters) or at 50 hour intervals if the fuel is always loaded from a properly maintained and approved aircraft fuel tankers or pump.

NOTE:

THE PRODUCER RECOMMENDS USING ONLY PAPER MESH FILTERS.

Ignition timing

The checking and adjustment of the ignition timing is illustrated in the Appendix. The adjustment is performed with stroboscope lamp in the way that we mark TDC on the starting disc against fixed point on the engine visible during engine run. Set the speed on 3000 RPM after engine start and read the ignition advance value on stroboscope lamp. This value should be within the range of 25 - 27°.

Spark plugs

The spark plugs should be cleaned in degreasing fluid, using only a stiff plastic brush, and they should NOT be cleaned by means of blasting or sand blasting or cleaned with a steel wire brush.

NOTE:

NEVER REMOVE THE PLUGS FROM A HOT ENGINE.

Lubricate the threads of the plug with graphite grease before reinstalling them in the cold engine. Use only spark plugs recommended by a producer; they are checked out in operation tests. For cold and damp environment, it is recommended to use conventional spark plugs with earth electrodes NGK CRBE, NGK 9 EK or Champion RG 94 C, RG 92 DC of hotter values. Engine starting will improve even after longer down time.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

Electronic network, battery:

The engine is using two 12-V batteries that are connected to electronic network.

Wiring diagram is on page 19.

Recommended battery: 2 x 10 cell NiCad – sub C size cells.

Start solenoid, rectifier and voltage regulator are built into the electronic unit. Rectifier/regulator charges both batteries to 12 V. Electric voltage to accessories is 12 V, but there is 24V volts to electric starter for engine starting.

Fuel system:

The engine must be connected to the fuel tank through a fuel filter with paper strainer inside. Fuel tank should be placed above engine – otherwise a check-valve must be installed in fuel hoses. Check-valve prevents drain of fuel back into the fuel tank. Engine electric starter can be overheated and battery can be discharged due to long starting caused by fallen fuel level. A plunge primer is suggested to pre-charge the carburetors.

NOTE:

IN CASE OF ANY ENGINE FAILURE OR LEAKAGE—IT IS FORBIDDEN TO START ENGINE BEFORE FIXING EVERY PROBLEM

Carburetors:

Engine is equipped with two diaphragm carburetors Walbro WB-37-1.

Carburetors are set to operate satisfactorily between the sea level and 2000 meters MSL (6,514 ft MSL). Nevertheless further adjustment is necessary on specific combination of aircraft, propeller and altitude.

Initial Carburetor Adjustment Procedure

For initial adjusting prior to engine start see below (see also illustration on page 21):

1. Idle screw—screw in for 2-3 turns.

Procedure: Loosen idle screw so that screw point is gently touching throttle butterfly lever. Then screw idle screw in for 2-3 turns. Repeat same procedure on both carburetors

2. Lo screw— setting engine run on low RPM—loosen for 4-6 turns.

Procedure: Screw Lo screw in to the limit— carefully or seat can be damaged— then loosen Lo screw for 4-6 turns. Repeat same procedure on both carburetors.

3. Hi screw—set engine to run at maximum RPM—loosen for 3-4 turns.

Procedure: Screw Hi screw in to the limit— carefully or seat can be damaged— then loosen Hi screw for 3-4 turns. Repeat same procedure on both carburetors.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

IT IS FORBIDDEN TO START THE ENGINE WITHOUT PROPELLER TO PROTECT ENGINE OVERREVVING OR OVERHEATING, WHICH CAN CAUSE ENGINE DEFORMATION.

Adjusting carburetors while engine is running:

Set throttle in position, that engine is idling and let it warm up at least for 50°C (122F) - oil and water.

Set idle to 2300—2600 RPM by adjusting idle screw. (engine must run smooth— otherwise increase idle RPM)

Lo, Hi screws adjusting:

Increase throttle and watch engine run. Two options can happen:

- A) Engine is hesitating to speed up and chokes. This is weak mixture case. There is a serious risk of overheating and seizing of the engine. Engine should speed up easily. Loosen LO screw for 1/8 turn and check engine run again.
- B) Engine speeds up easily, but vibrates too much (rough running). This is rich mixture case. Engine has low power and creates too much carbon particles, which can damage piston and cylinder liner. Screw Lo screw in for 1/8 turn and check engine run again.

Lo screw must be adjusted, so that engine can speed up easily and run smoothly. Lo screw mustn't be screwed too much in, because that can cause engine overheating

After the engine has been shut down and cooled, the spark plugs should be removed and the color of the ceramic at the points observed. A correct mixture will show a rusty brown color. Light gray to white color indicates a lean mixture that can result in overheating the engine. Dark brown to black color indicates a rich mixture that can result in excess carbon deposits. Note that the plug color test must be done at both low rpm and WOT (wide open throttle) by running the engine for 30-60 seconds at the rpm to be observed. A normal shutdown should be done by moving the throttle to idle, observing the engine is at idle rpm and then shutting down.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

Hi screw adjusting:

NOTE: THE HI ADJUSTMENT SCREW WORKS MUCH THE SAME AS THE MIXTURE CONTROL ON A CERTIFIED AIRCRAFT ENGINE THAT IS USED TO LEAN THE ENGINE FOR BEST FUEL CONSUMPTION AND POWER. IF AN EGT GAUGE IS PRESENT IT SHOULD SHOW MAXIMUM TEMPERATURE AT THE MAXIMUM RPM.

- Tie aircraft down to protect from unexpected movement.
- Ensure propeller is clear of obstructions.
- After warmup, apply full throttle and turn Hi screw in or out until you find maximum power (RPM) setting (you can usually find maximum power setting by tightening Hi screw from original setting). This will also be the maximum temperature shown on the EGT gauge.
- Tighten Hi screw (lean the mixture) slowly from maximum rpm position until engine suddenly loses power (drop of RPM caused by excessive lean mixture).

CAUTION:

Immediately loosen Hi screw to maximum engine power setting (otherwise engine will overheat and be damaged due to excessive lean condition)!

- Loosen Hi screw for 1/8 of turn from maximal power setting. Never use maximal power setting! Always open (loose) Hi screw for a bit (make richer mixture). Maximal RPM fall about 100 RPM (1/8 Hi screw loosening) compared to maximal RPM setting. (The EGT gauge should show a temperature approximately 100 degrees F less than peak and on the rich side of peak).

5. Water cooling system—first fill up and working principle

WARNING WARNING WARNING: THIS IS A CRITICAL PROCEDURE

The engine is cooled by liquid flowing through cylinders and cylinder heads. The water pump, which is located at the back side of the engine, pushes this liquid into the cylinders and cylinder heads. The thermostat, situated in each cylinder head, opens and redirects the liquid through the radiator and back into the water pump after heating to a certain level. The cooling system must be installed in such way that air bubbles from cylinders and cylinder heads can flow upwards through hose-pipes into the radiator or into the expansion tank.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

The system must to be perfectly deaerated after filling of the engine and radiator with cooling liquid. See also illustration on page 22.

The correct procedure is:

1. Squeeze the hose-pipes until the air bubbles flow into the radiator or expansion tank.
2. Add the cooling liquid as needed.
3. Tilt the engine to one side 30 degrees and again squeeze the hose-pipes till the air bubbles flow out of the system.
4. Put the engine back into the horizontal position and add coolant as needed.
5. Repeat step 3. for 30 degrees tilt to opposite side.
6. Put the engine back into the horizontal position and add coolant as needed.
7. The system is deaerated after this step.

NOTE:

IF YOU DO NOT COMPLY WITH THE DESCRIBED PROCEDURE THEN AIR POCKETS MAY FORM CAUSING THE ENGINE TO BECOME OVERHEATED, BE DEFORMED AND DAMAGED.

6. Oil system—first fill up and working principle

There are two outputs for connecting an oil cooler on the bottom of the engine.

Oil cooler is not an obligatory part of accessories. Oil cooler does not need to be used if the oil temperature never exceeds maximum values. “Tubular organ“ type oil cooler, made of 8 mm diameter pipes. can be used instead classic oil cooler. Tubular organ type oil cooler functions similar to classic oil cooler, but with less efficiency and smaller space demands. Oil cooler should be placed as near to engine as possible and below the oil sump, otherwise oil pump efficiency can be reduced.

Engine can be filled with new oil after oil cooler installation.

NOTE:

SEMI-SYNTHETIC OR FULL-SYNTHETIC TYPE JASO MA CLASS OIL FOR 4 STROKE MOTOR-CYCLES CAN BE USED IN ENGINE ONLY.

Filling quantity is about 1 liter for engine and similar amount for oil pipes and oil cooler capacity. There is an oil level dipstick for checking oil level.

Remove spark plugs and crank engine by hand with ignition turned off after filling engine with oil. This procedure may help remove air pocket in the oil system. Then crank engine by electric starter – without propeller and still with ignition turned off. The oil pressure sensor gauge should turn off within 10 seconds. Stop cranking engine and wait a moment if oil pressure light doesn't turn off by then a moment to allow starter motor to cool and crank engine with electric starter again and watch oil pressure sensor gauge. Always watch electric starter and never let it overheat. Stop cranking engine until electric starter gets cold again in case the electric starter temperature is high. Engine oil system is still aerated if oil pressure light doesn't turn off.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

WARNING WARNING WARNING: THIS IS A CRITICAL PROCEDURE

The correct procedure for deaerating oil system is:

1. Unscrew 36S-07-02 screw from oil filter cover
2. Crank engine by electric starter for 10 seconds. Air from oil system will blow out by the hole in oil filter cover.

NOTE: engine will blow oil from hole in oil filter cover after blowing air inside oil system. Always catch oil in a container to protect environment.

3. Stop cranking engine after first oil blow.
4. Apply Loctite 577 glue on 36S-07-02 screw and screw it gently in
5. Apply graphitic or copper paste on sparkplugs and screw them in
6. Put high voltage cables on sparkplugs
7. Install propeller, torque and lock propeller screws
8. Check if engine satisfies each condition in section "first start". Turn ignition on and start engine.

The oil pressure sensor gauge should turn off after 10 seconds – if it does not turn off repeat above procedure!

Warm engine up for 5 minutes on idle and then turn it off. Check oil level on oil level dipstick and fill if needed (up to upper marker on oil level dipstick).

Always follow maintenance schedule for oil and oil filter exchanges.

Always empty oil from engine by oil hoses. It is strictly forbidden to screw out oil outlet bushings on the bottom of engine.

NOTE: Producer recommends using Loctite 243 for locking screws on each rotating part. Use only thread lockers with low or middle release moment value, because some Loctite products can lock small diameter screws so firmly, that loosening will be very difficult if not impossible without using very high temperatures.

IT IS FORBIDDEN TO START THE ENGINE WITHOUT PROPELLER TO PROTECT ENGINE OVERREVVING OR OVERHEATING, WHICH CAN CAUSE ENGINE DEFORMATION.

THE ENGINE DOES NOT CONTAIN PRESERVATIVE WITHOUT WRITTEN REQUEST AT TIME OF ORDER — ENGINE MUST BE STARTED FOR THE FIRST TIME AT LEAST 1 MONTH AFTER SHIPPING FROM FACTORY. IF THE ENGINE MUST BE STORED FOR MORE THAN ONE MONTH BEFORE FIRST START PRESERVATIVES MUST BE ADDED TO PROTECT ENGINE PARTS FROM OXIDATION AND DAMAGE. IT IS FORBIDDEN TO START ENGINE WHICH FAILS TO MEET THE ABOVE MANDATE. ENGINE WHICH HAVE BEEN PRESERVATED MUST HAVE THE PRESERVATIVE REMOVED BEFORE FIRST START.

ALWAYS SECURE AREA AROUND ENGINE TO PROTECT FROM PERSONAL INJURY OR OTHER DAMAGE.



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

7. Check before first start:

1. Fill engine with recommended type of motor oil (JASO MA 20W-50). Oil level must be up to top scale line of oil level dipstick (see Oil system section). Ensure oil system is de-aerated.
2. Tightness of entire oil system, including oil cooler
3. Fill water cooling system with coolant (specific type and mix according to weather conditions). Ensure water system is de-aerated. (see Water cooling system section)
4. Tightness of entire water cooling system
5. Tightness of exhaust system
6. Tightness and locking engine to engine frame
7. Electrical wiring
8. Tightness of fuel system
9. Operation and symmetry of throttle valves in both carburetors
10. Check torque of propeller bolts
11. Propeller setting (it is forbidden to start engine without propeller to protect engine from over revving, which can cause engine damage)
12. Tie aircraft down to protect from unexpected movement
13. Secure propeller area to protect from personal injury or another damage

NOTE:

IN CASE OF ANY ENGINE FAILURE OR LEAKAGE—IT IS FORBIDDEN TO START ENGINE BEFORE FIXING EVERY PROBLEM

8. First start

1. Hand crank engine at least for three revolutions with switch turned off.
2. Open fuel stopcock.
3. Splash 5 milliliters of fuel in each carburetor over the butterfly valve. (A plunge primer may be installed for this purpose).
4. Set main switch to ON position.
5. Set ignition switch to ON position.
6. Set throttle lever to minimum.
7. Make sure, that nobody is near the propeller before engine start.
8. Start engine.
9. Repeat step 3. if the engine is not able to start within 10 seconds.
10. Start engine and see if engine draws fuel by checking fuel filter .
11. Check oil pressure after engine start. Oil gauge must show required pressure at least 15 seconds after engine start. If oil pressure indicating light is installed, then it must turn off within 15 seconds. If it does not turn of the engine must be turned off and oil lubricating system must be rechecked before another starting. (see Oil system section)



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

NOTE:

LET ENGINE WARM UP

NOTE:

IT IS FORBIDDEN TO TURN OFF THE ENGINE WITH OPEN THROTTLE BUTTERFLY

9. Shutting Down the Engine

It is imperative that the engine is allowed to cool down only gradually, before shutting down, to prevent warping or cracking of the cylinder heads. NEVER (only in the state of emergency) shut the engine down without sufficient cooling period (2 - 3 minutes at minimal speed).

1. Reduce the throttle to 3000 RPM and run the engine at this setting until both cylinder head temperature and cooling water temperature gauges register no more than 80 °C (152 deg F)
2. Switch off all radios and electronics.
3. Carry out the hold off 2 - 3 minutes at 2400 RPM.
4. Reduce the throttle to minimum.
5. Switch off the ignition.
6. Switch off the Master Switch.
7. Close the fuel feed.

NOTE:

CHECK ENGINE FOR FAILURE OR LEAKAGE AFTER EACH FLIGHT — ITS FORBIDDEN TO START ENGINE BEFORE FIXING EVERY PROBLEM

!! IT IS FORBIDDEN TO TURN OFF THE ENGINE WITH OPEN THROTTLE BUTTERFLY !!

ALWAYS ADJUST THE PROPELLER BY CANTING THE PROPELLER BLADES SO THAT THE ENGINE SPEED LIMIT DURING LAND ENGINE TESTING DOESN'T EXCEED 7900 RPM. IN CASE OF USING FIXED-PITCH PROPELLER CHOOSE ANOTHER TYPE.

ACCEPTABLE PROPELLERS FOR ENGINE JCV 360 ARE UP TO 150 CM DIAMETER (63 INCH)



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

10. Periodic maintenance

After the first flight the engine cowling should be removed, followed by a thorough inspection of the engine compartment. Check the engine for signs of any oil leak at the joining faces of the crankcase, cylinder bases, valve covers and shaft seals. All hoses and wiring to and from the engine should be inspected for looseness, chaffing or any discoloration that might indicate these are routed where excessive heat from the engine could cause premature failure. Check that all components mounted onto the engine mount and firewall have remained securely fastened. Should anything be found damaged, loose, or otherwise indicating any abnormality, the reason for it must be found and the condition must be rectified before the next flight.

11. Major overhauls

The current TBO of the engine is 350 hours, with a view on extending this time in the future. For major overhaul of the engine it must be returned to the factory or to the fully authorized repair facility of VERNER-MOTOR in those countries where the manufacturer is represented by such an arrangement. In case the engine is impacted by a propeller strike or otherwise serious damage, it should be repaired by the manufacturer or authorized representative.

12. Guarantee

VERNER-MOTOR - engine manufacturer or its authorized dealers provide engine guarantee for 100 operation hours or 6 months which ever comes first. The guarantee period starts on the day marked in the certificate of warranty as the date of sale.

To exercise a claim, the owner of the engine is obliged to present regular certificates of engine purchase and confirmed certificate of warranty with the date of sale and engine maintenance logbook.

The guarantee cannot be applied on the following:

- damage caused by unauthorized use and not observing the periodic adjustment in accordance with manual on assembly, operation and maintenance of JCV 360 engine
- using components or accessories that are not original products of the engine manufacturer
- engine damage due to engine operation without propeller
- ordinary wear and tear of all components of the engine
- damage due to air crash with the engine installed
- using engine without dashboard instruments delivered with the engine
- unqualified repair work of mechanics that are not stipulated by the manufacturer



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

13. Appendix

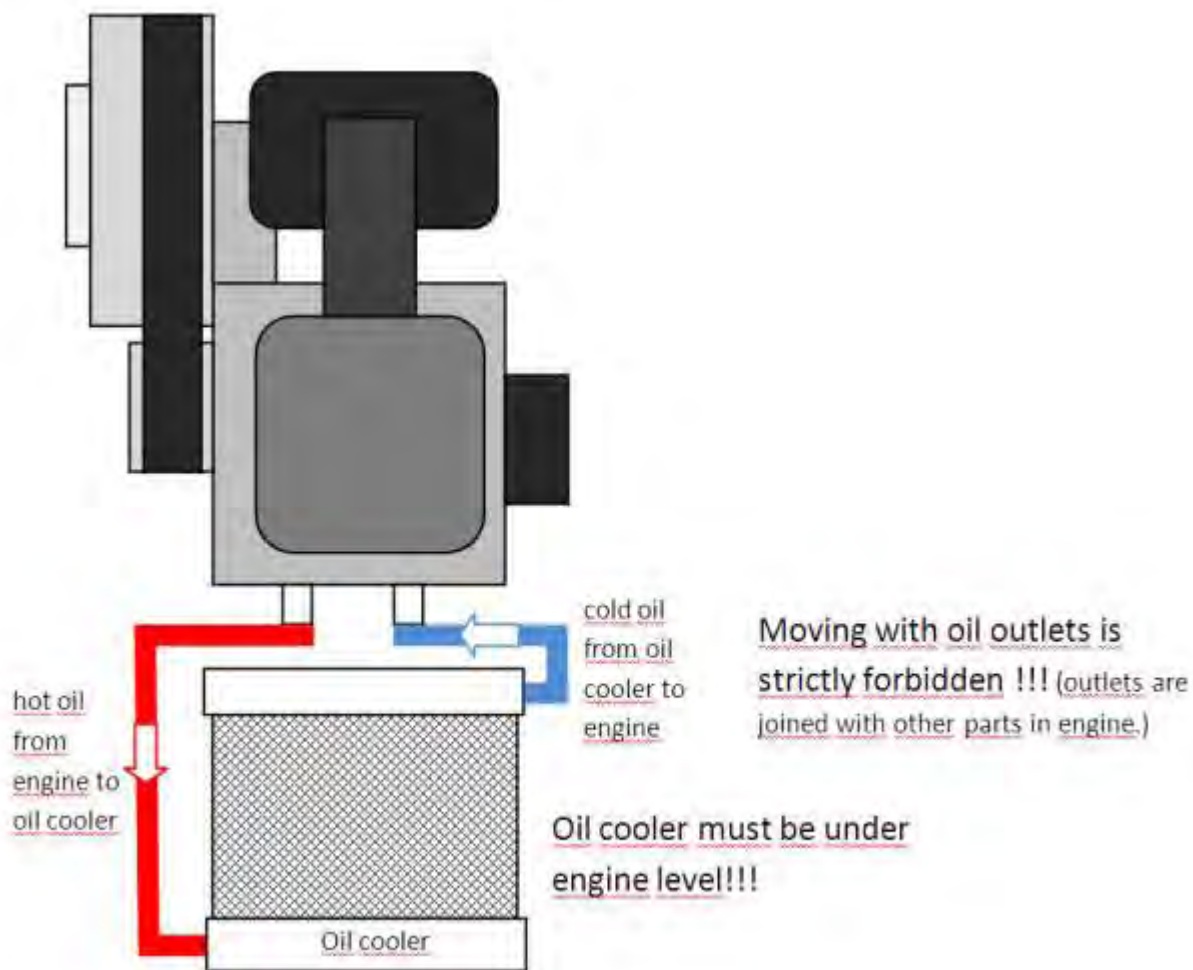
List of illustrations for the installation and maintenance instructions.

1. Oil cooling system	.....	17
2. Water cooling system	.....	18
3. Electrical systems	.....	19
4. Sparkplug exchange procedure	.....	20
5. Carburetor adjusting illustration	.....	21
6. Water cooling system—first fill up illustration	.....	22
7. Regular maintenance and adjustment schedule	.....	23



INSTALLATION, OPERATING, MAINTENANCE—JCV 360

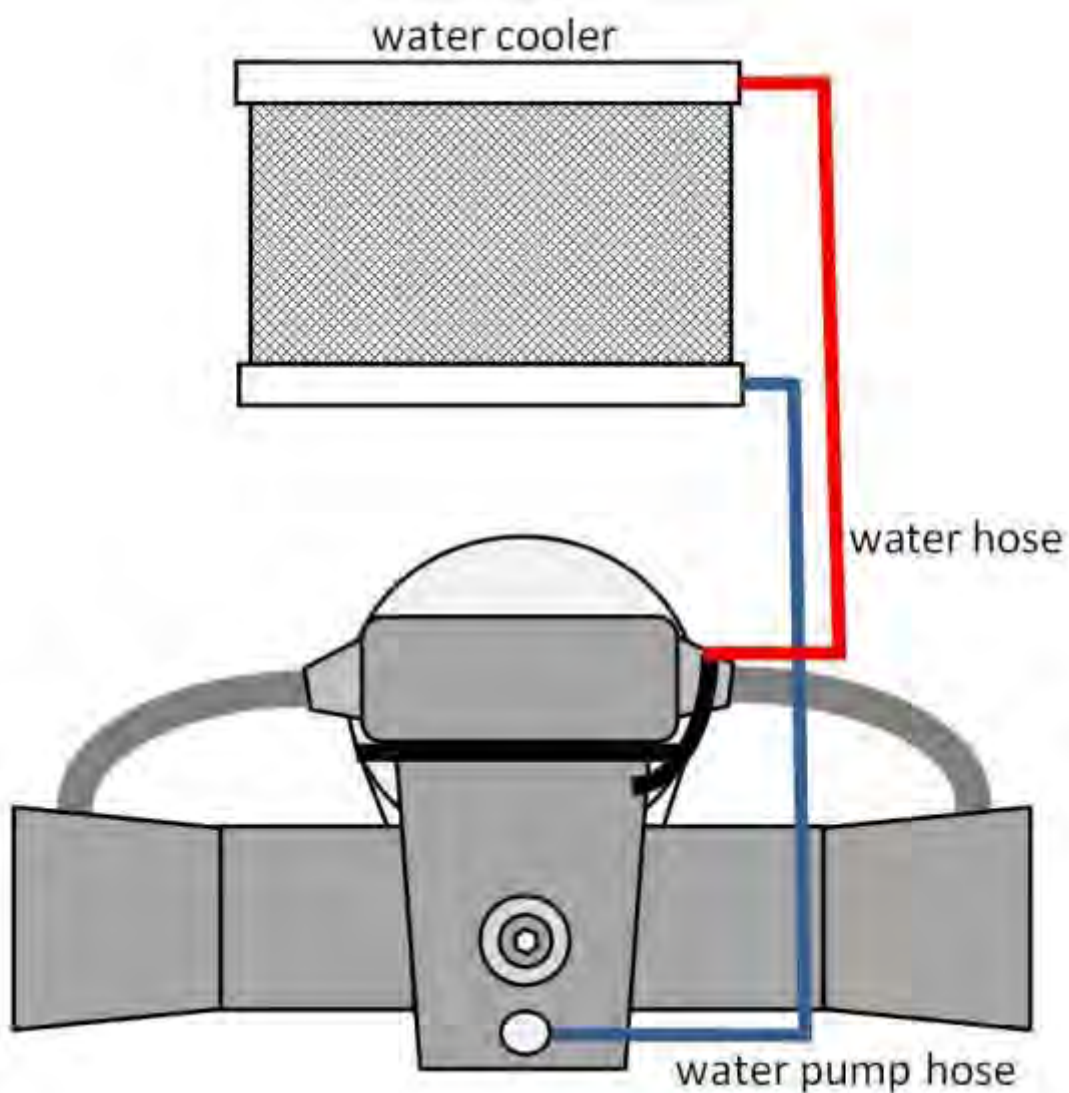
Oil cooling system





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

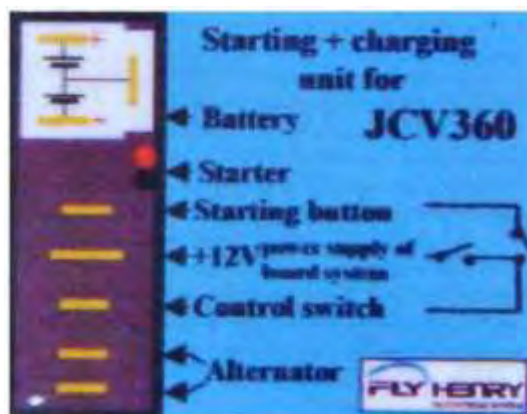
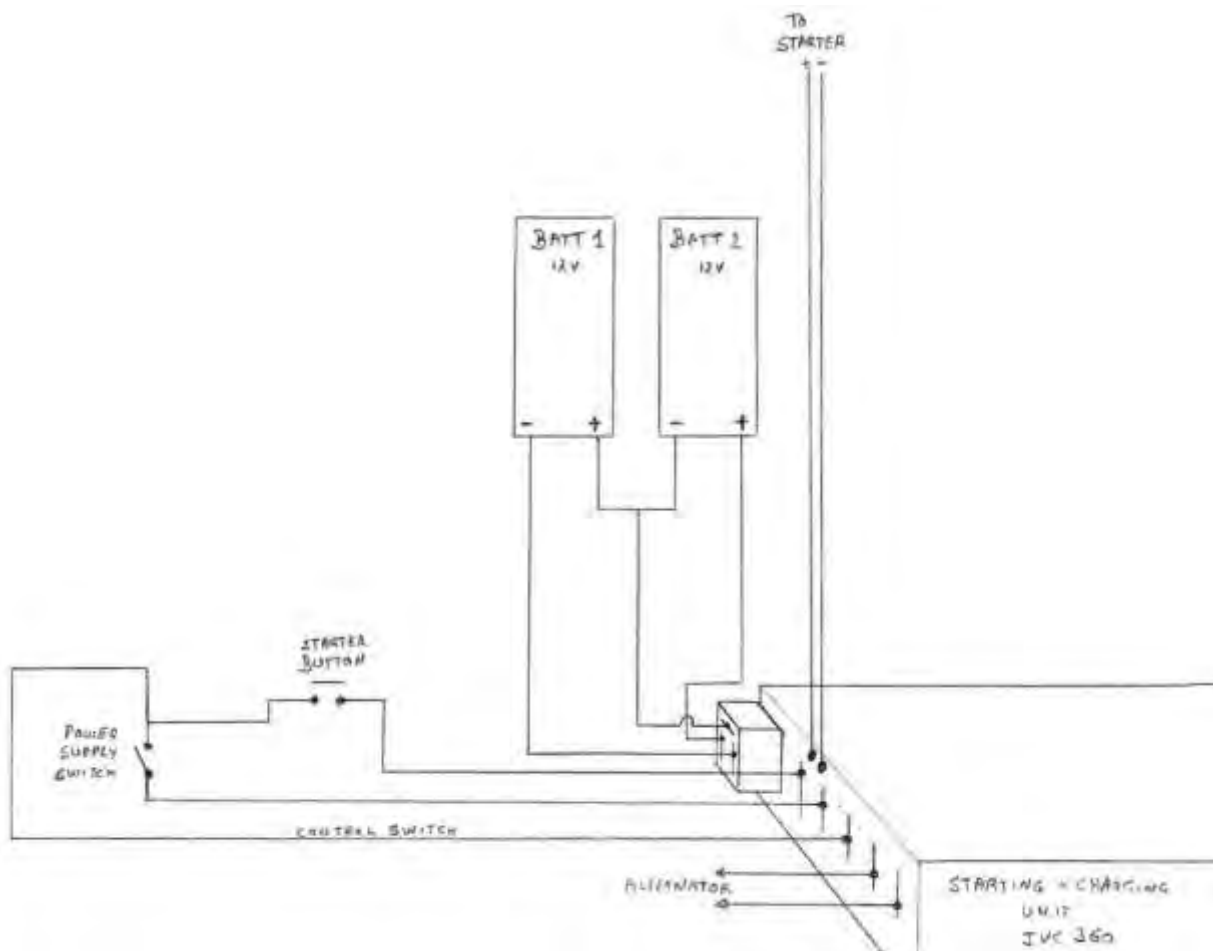
Water cooling system





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

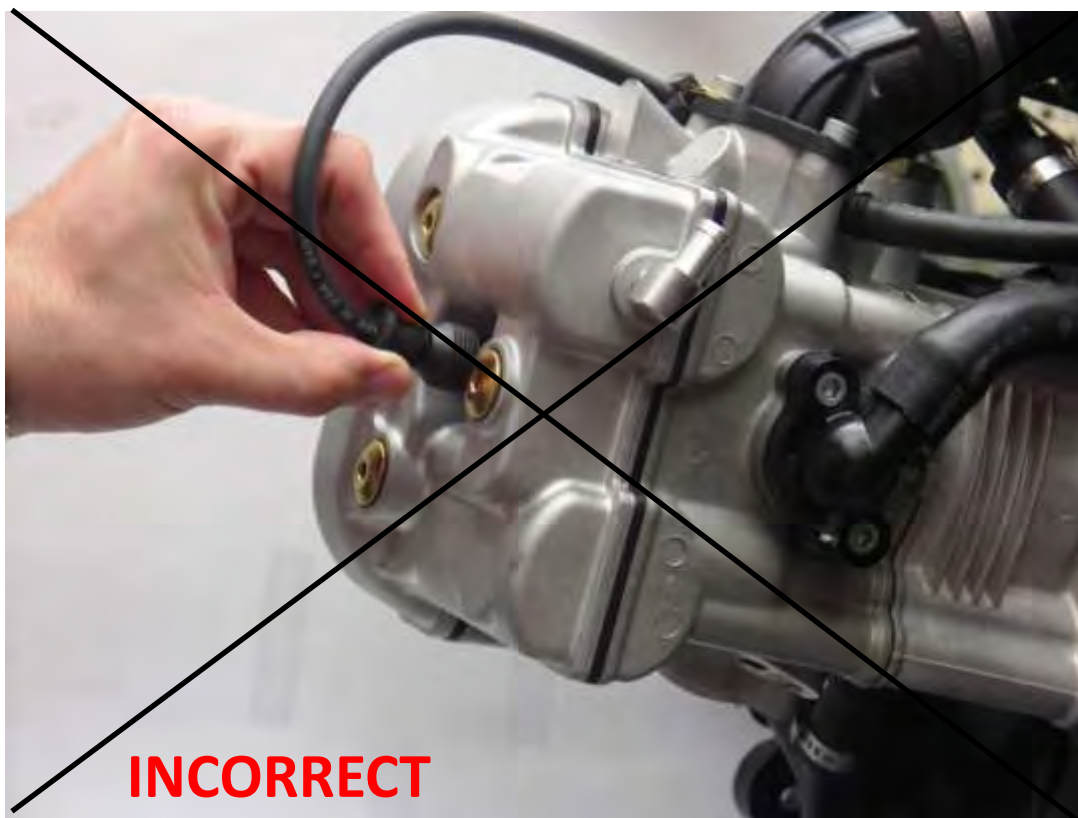
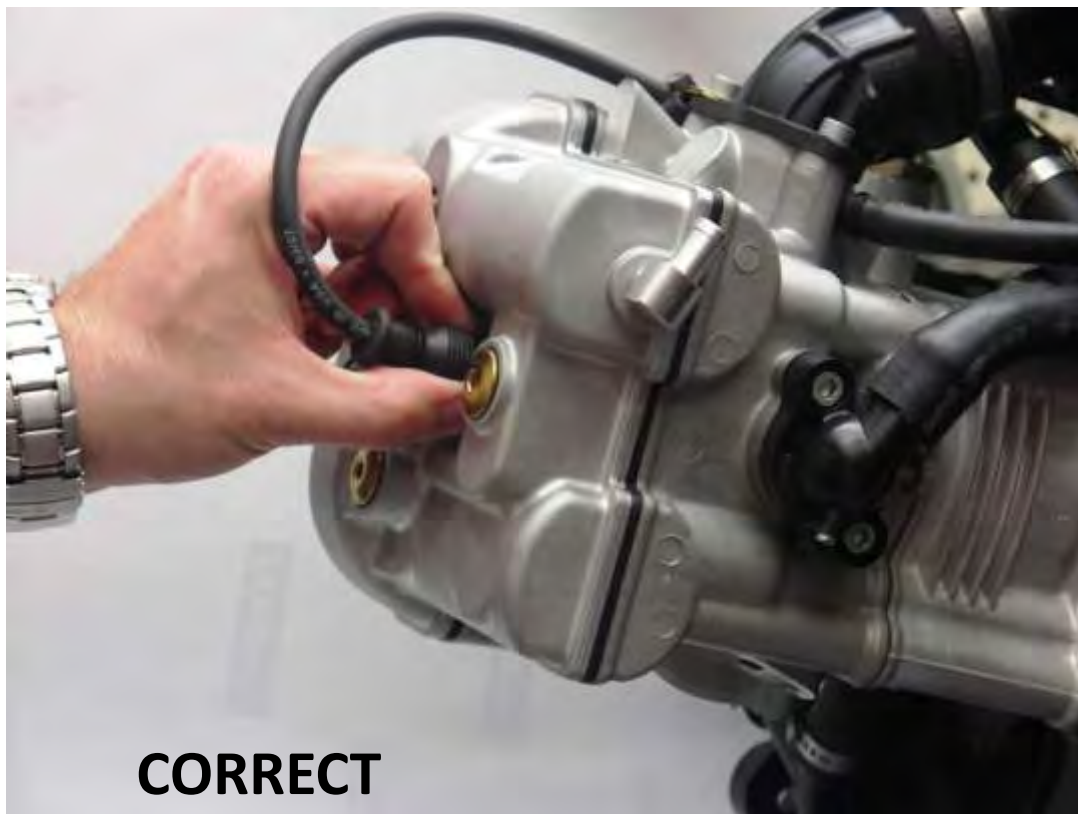
Electrical systems





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

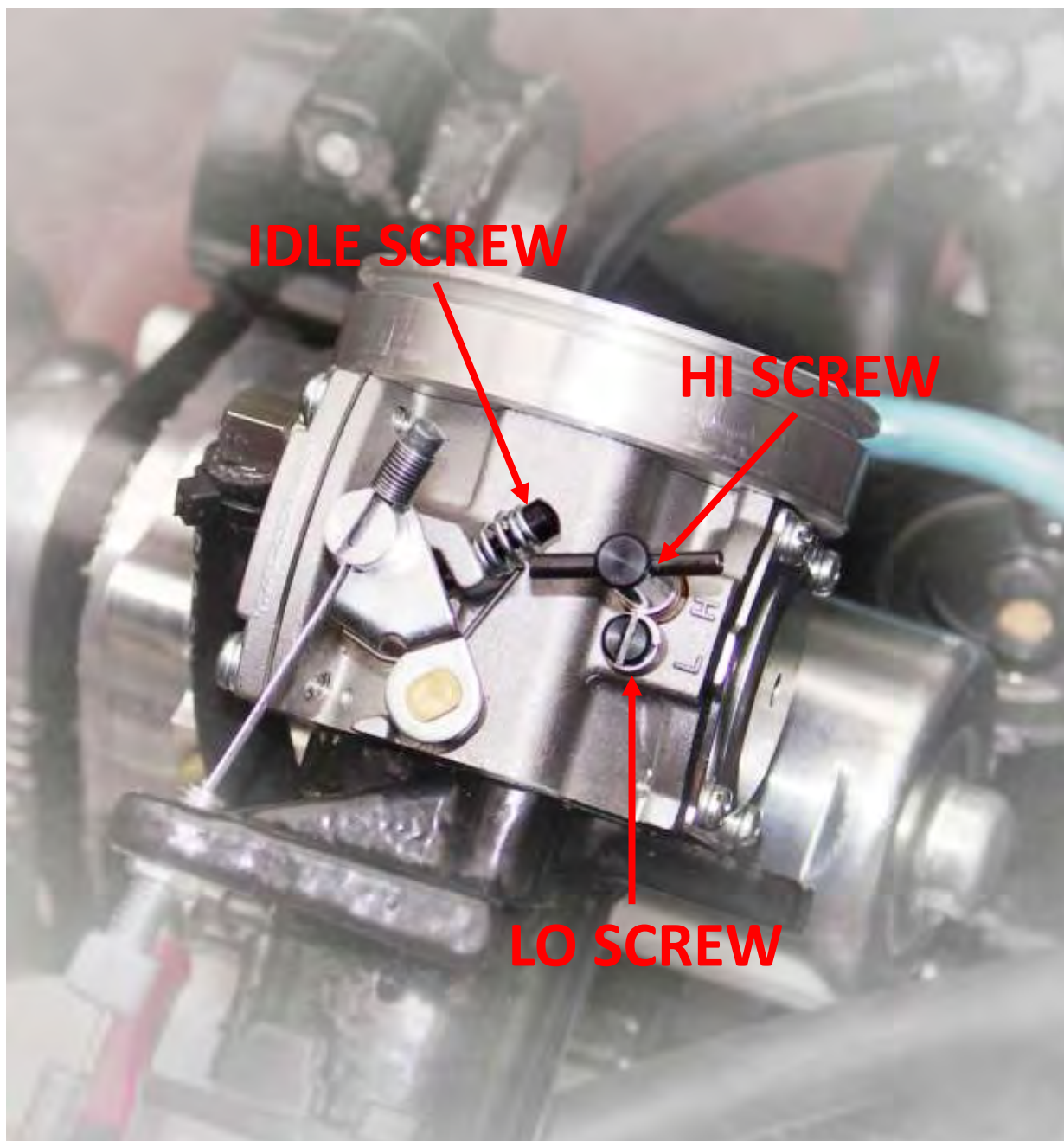
Sparkplug exchange procedure





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

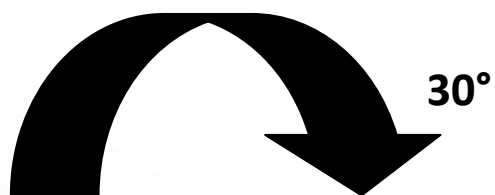
Carburetor adjusting illustration



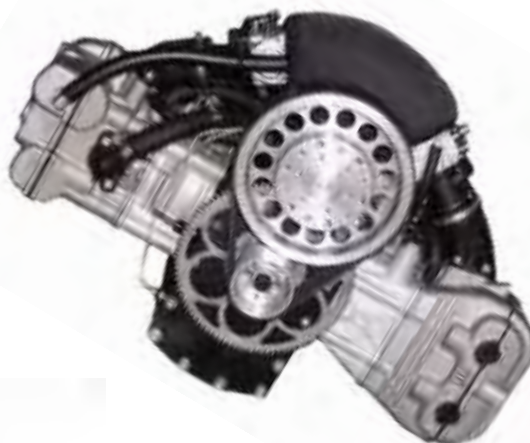


INSTALLATION, OPERATING, MAINTENANCE—JCV 360

Water cooling system—first fill up illustration



30°



30°





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

MAINTENANCE SCHEDULE

Regular maintenance for limited working life components - required operations

Part	Daily	25 hour	50 hour	100 hour	250 hour	Note
Spark plugs	-	Clean	Replace	Clean	Clean	See notes in manual
Drive belt	Check	Check	Replace	Replace	Replace	Replace after each 2 years
Intake filter	Check	Clean	Replace	Replace	Replace	Clean each week if you fly in dry and dusty climate
Fuel filter	-	Replace	Replace	Replace	Replace	Replace after each 25 hours if you use fuel from canister
Oil	Check	Replace	Replace	Replace	Replace	Replace after each 50 hours
Oil filter	-	Replace	Replace	Replace	Replace	Replace with each replacing of oil
Oil hoses	Check	Check	Check	Check	Replace	Replace after each 3 years
Fuel hoses	Check	Check	Check	Check	Replace	Replace after each 3 years
Coolant	Check	Check	Check	Check	Replace	Replace after each 3 years

MAINTENANCE AND ADJUSTMENT SCHEDULE

Regular maintenance and adjustment for components requiring adjustment - required operations

Part	Daily	25 hour	50 hour	100 hour	250 hour	Note
Camshaft driving chain	-	Check + adjust	Check + adjust	Check + adjust	Replace	See schematic description
Valve clearance	-	Check + adjust	Check + adjust	Check + adjust	Check + adjust	See schematic description
Pre-ignition	-	-	Check + adjust	Check + adjust	Check + adjust	See schematic description
Retorque propeller bolts	-	Check	Check	Check	Check	Retorque on required torque if necessary
Compression	-	Check	Check	Check	Check	9 - 12 atm. Maximal difference between cylinder is 3 atm.
Reduction unit main bolt	-	Check + adjust on required torque	Check + adjust on required torque	Check + adjust on required torque	Check + adjust on required torque	80 Nm

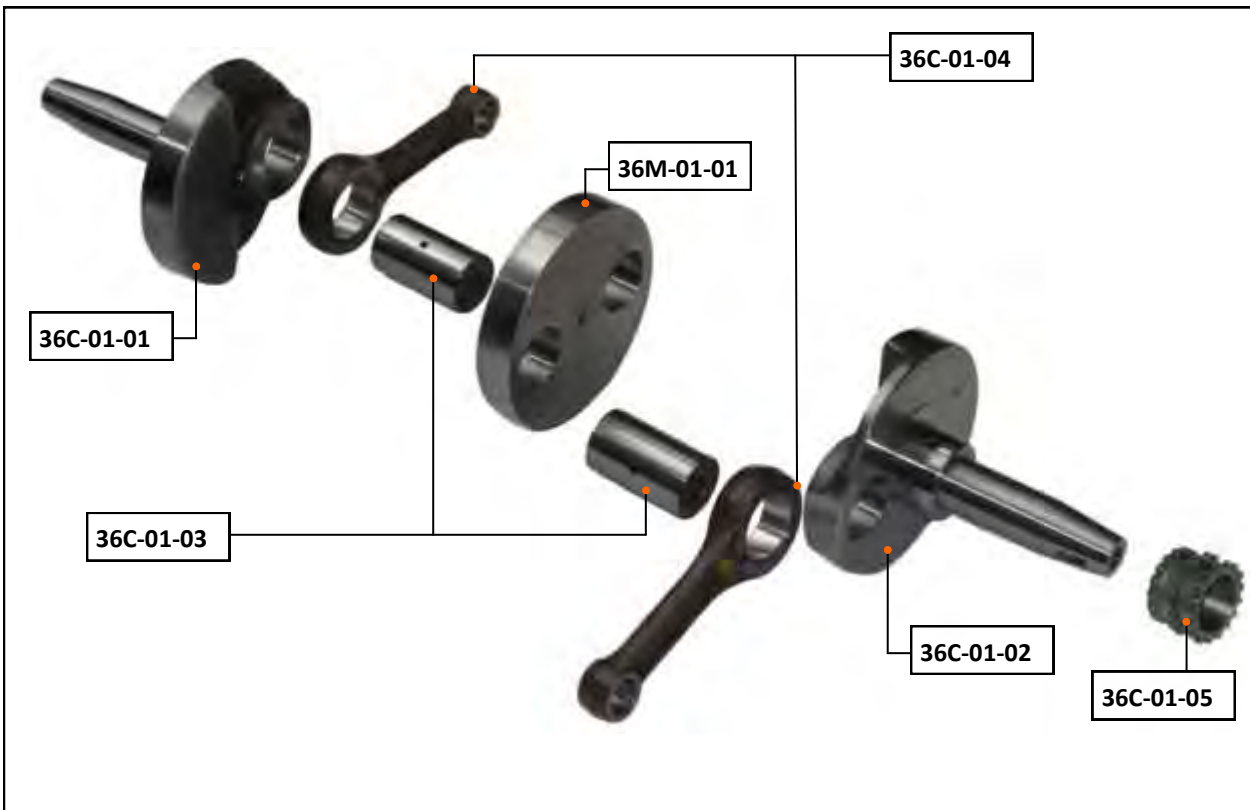


ASSEMBLY OF ENGINE JCV 360





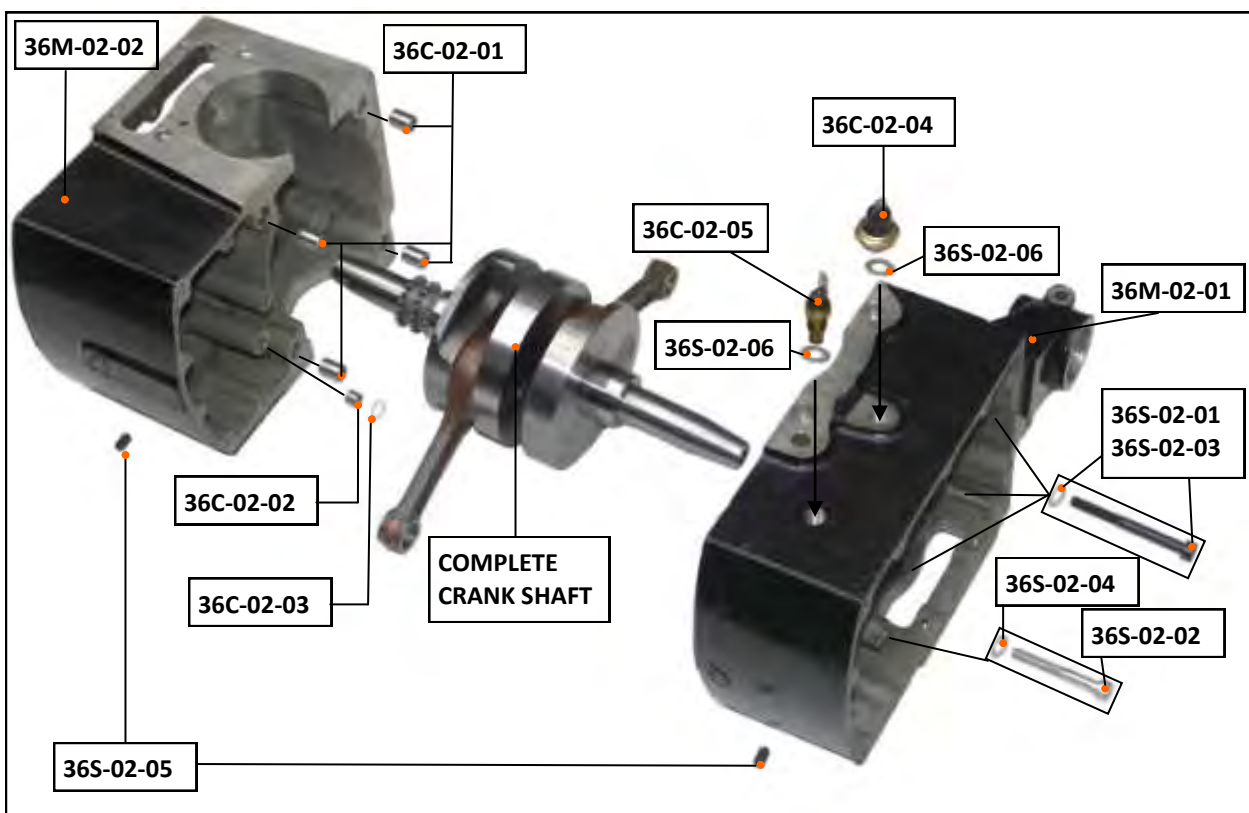
ASSEMBLY : CRANK SHAFT



<p>36C-01-01</p>  <p>CRANK SHAFT FRONT SHAFT 1 pc</p>	<p>36C-01-02</p>  <p>CRANK SHAFT BACK SHAFT 1 pc</p>	<p>36C-01-03</p>  <p>CRANK SHAFT PIN 2 pcs</p>	<p>36C-01-04</p>  <p>CONNECTING ROD 2 pcs</p>	<p>36C-01-05</p>  <p>COG WHEEL 1 pc</p>
<p>36M-01-01</p>  <p>CRANK SHAFT CENTRE SECTION 1 pc</p>				



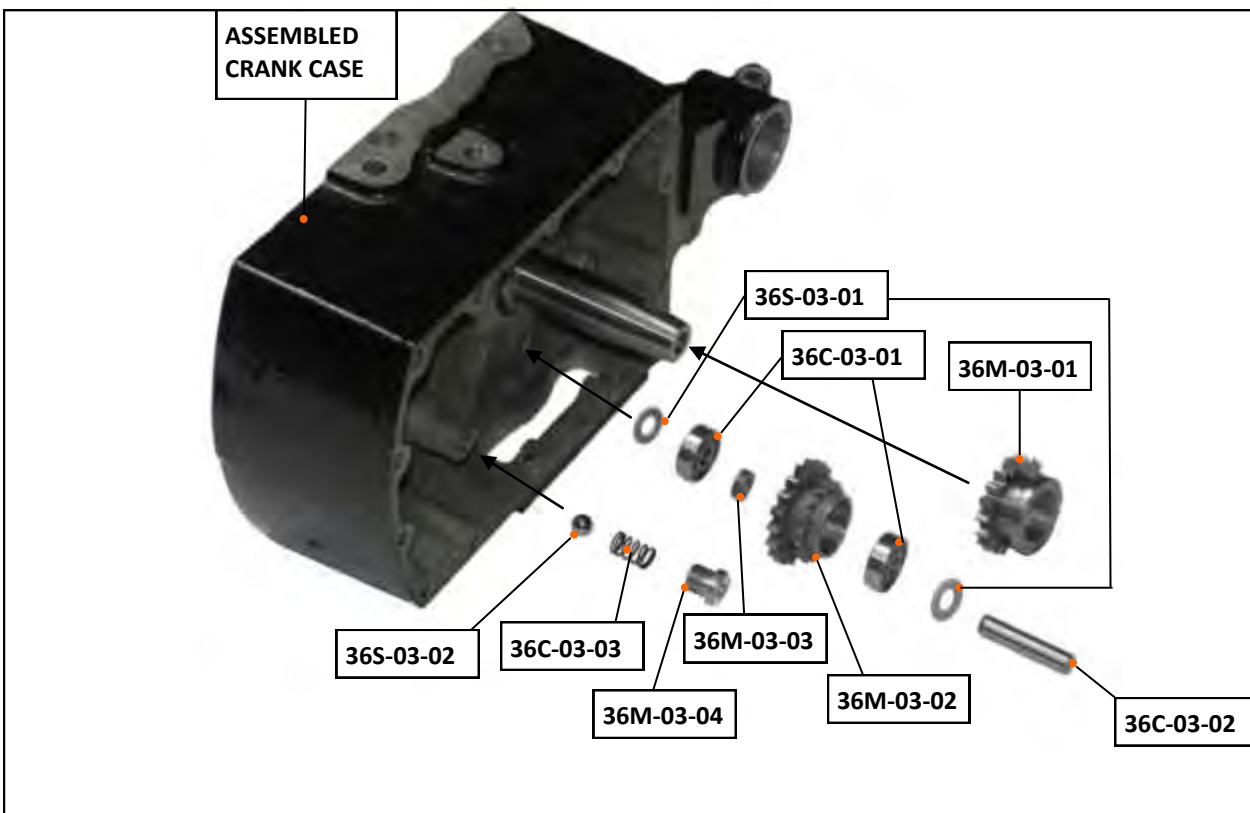
ASSEMBLY : CRANK CASE






<p>36M-02-01</p>  <p>HALF CRANK CASE FRONT 1 pc</p>	<p>36M-02-02</p>  <p>HALF CRANK CASE REAR 1 pc</p>	<p>36C-02-01</p>  <p>CENTRING PIN Ø 10 x 13 4 pcs</p>	<p>36C-02-02</p>  <p>CENTRING PIN Ø 7 x 9,4 1 pc</p>	<p>36C-02-03</p>  <p>O-RING Ø 7 x 1,5 1 pc</p>
<p>36C-02-04</p>  <p>OIL PRESSURE SENSOR 1 pc</p>	<p>36C-02-05</p>  <p>OIL TEMPERATURE SENSOR 1 pc</p>	<p>36S-02-01</p>  <p>SCREW IMBUS M6 x 65 4 pcs 14 Nm</p>	<p>36S-02-02</p>  <p>SCREW IMBUS M6 x 50 1 pc 14 Nm</p>	<p>36S-02-03</p>  <p>FLAT SHIM M6 5 pcs</p>
<p>36S-02-04</p>  <p>FLAT SHIM Ø10 x 1 2 pcs</p>	<p>36S-02-05</p>  <p>SCREW WORM M6 x 10 2 pcs</p>	<p>36S-02-06</p>  <p>ALUMINIUM SEAL M10 2 pcs</p>		



ASSEMBLY : FRONT DISTRIBUTION



<p>36M-03-01</p>  <p>GEAR 1 pc</p>	<p>36M-03-02</p>  <p>GEAR 1 pc</p>	<p>36M-03-03</p>  <p>RING 1 pc</p>	<p>36M-03-04</p>  <p>SCREW M10 x 1—9 1 pc 10 Nm</p>	<p>36C-03-01</p>  <p>BEARING 608 2 pcs</p>
<p>36C-03-02</p>  <p>SHAFT Ø8 x 36 1 pc</p>	<p>36C-03-03</p>  <p>SPRING 1 pc</p>	<p>36S-03-01</p>  <p>FLAT SHIM M8 2 pcs</p>	<p>36S-03-02</p>  <p>BALL Ø8 1 PC</p>	



ASSEMBLY : FRONT DISTRIBUTION



36M-02-03

CRANK CASE FRONT 1 pc

36M-04-01

BEARING HOLDER 1 pc

36C-04-01

BEARING 63/22C3 1 pc

36C-04-02

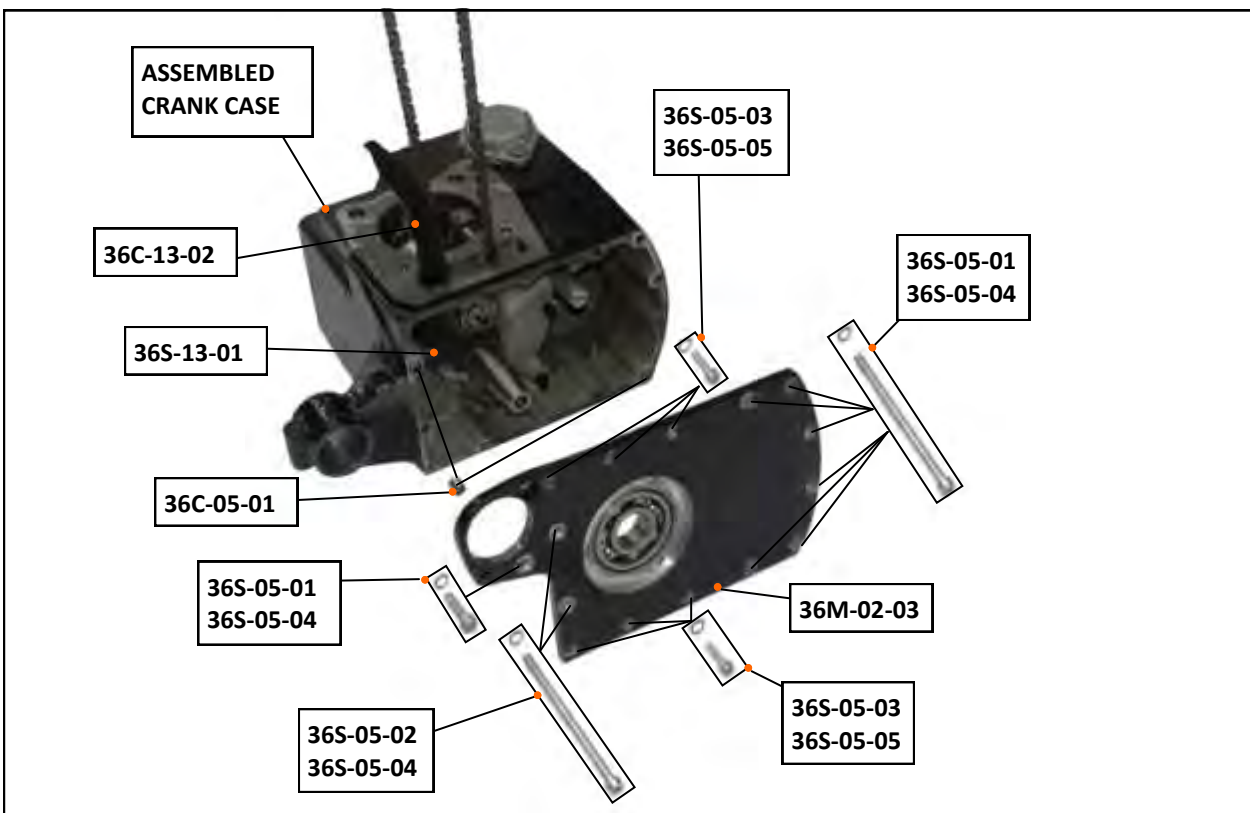
SEALING RING CR 30x42x7 V 1 pc

36S-04-01

SCREW IMBUS M5 x 10 3 pcs 10 Nm



ASSEMBLY : FRONT DISTRIBUTION



36M-02-03
CRANK CASE FRONT 1 pc

36C-05-01
CENTERING PIN Ø8 * 6,7 2 pcs

36C-11-02
CHAIN GUIDE RAIL 1 pc

36S-11-01
SPECIAL SCREW IMBUS 1 pc 12 Nm

36S-05-01
SCREW IMBUS M6 x 100 8 pcs 14 Nm

36S-05-02
SCREW IMBUS M6 x 16 1 pc 14 Nm

36S-05-03
SCREW IMBUS M5 x 16 6 pcs 10 Nm

36S-05-04
LOCK WASHER M6 9 pcs

36S-05-05
LOCK WASHER M5 6 pc

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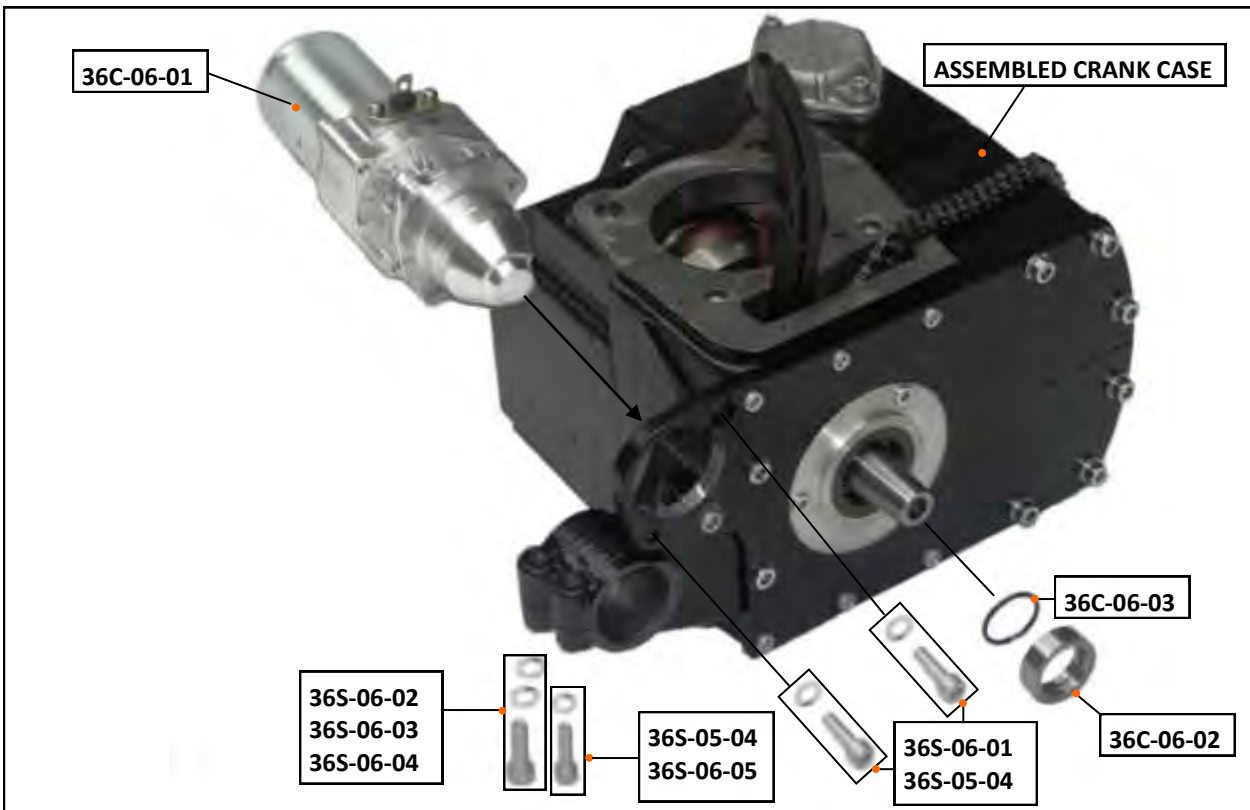
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ASSEMBLY : ELECTRIC STARTER



36C-06-01
ELECTRIC STARTER 1 pc

36C-06-02
CENTERING RING 1 pc

36C-06-03
RUBBER GASKET Ø 22 x 2 1 pc

36S-05-04
LOCK WASHER M 6 3 pcs

36S-06-01
SCREW IMBUS M6 x 20 2 pcs 12 Nm

36S-06-02
SCREW IMBUS M8 x 35 1 pcs 20 Nm

36S-06-03
FLAT SHIM M 8 1 pc

36S-06-04
LOCK WASHER M 8 1 pc

36S-06-05
SCREW IMBUS M6 x 35 1 pc 12 Nm

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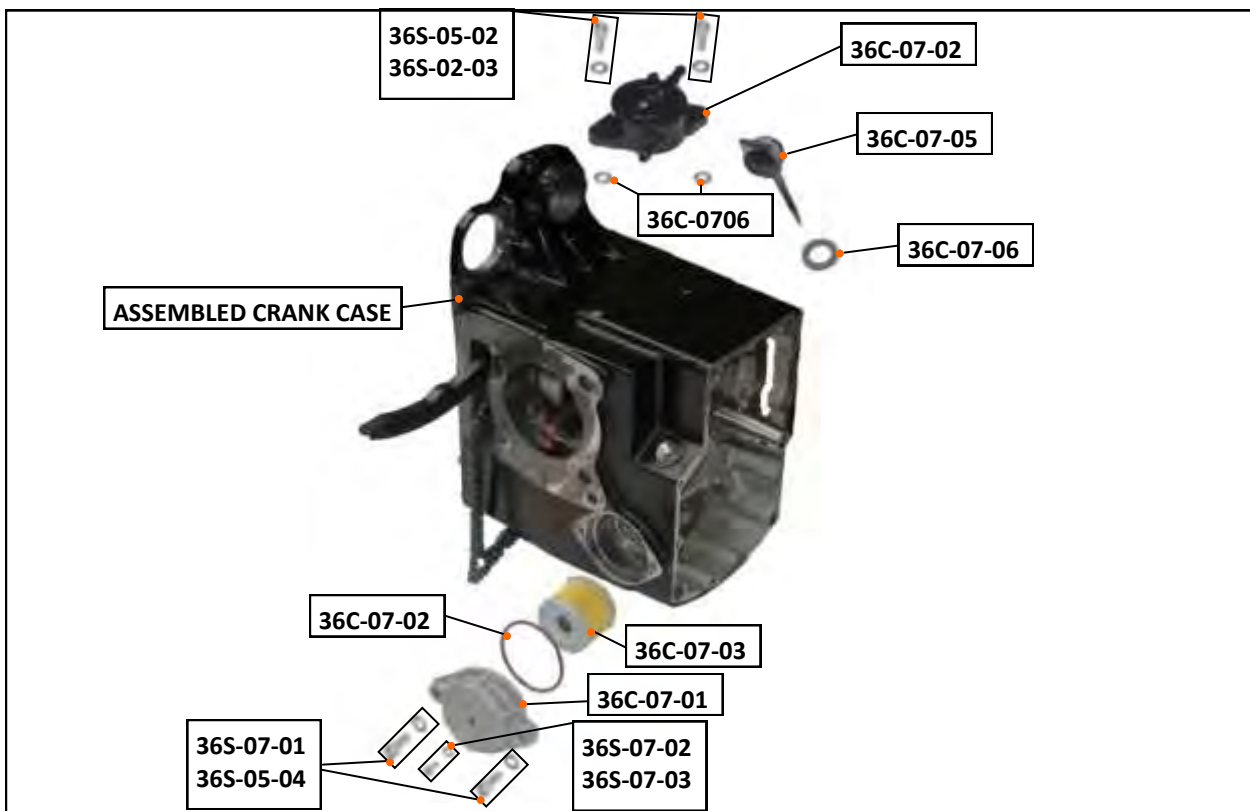
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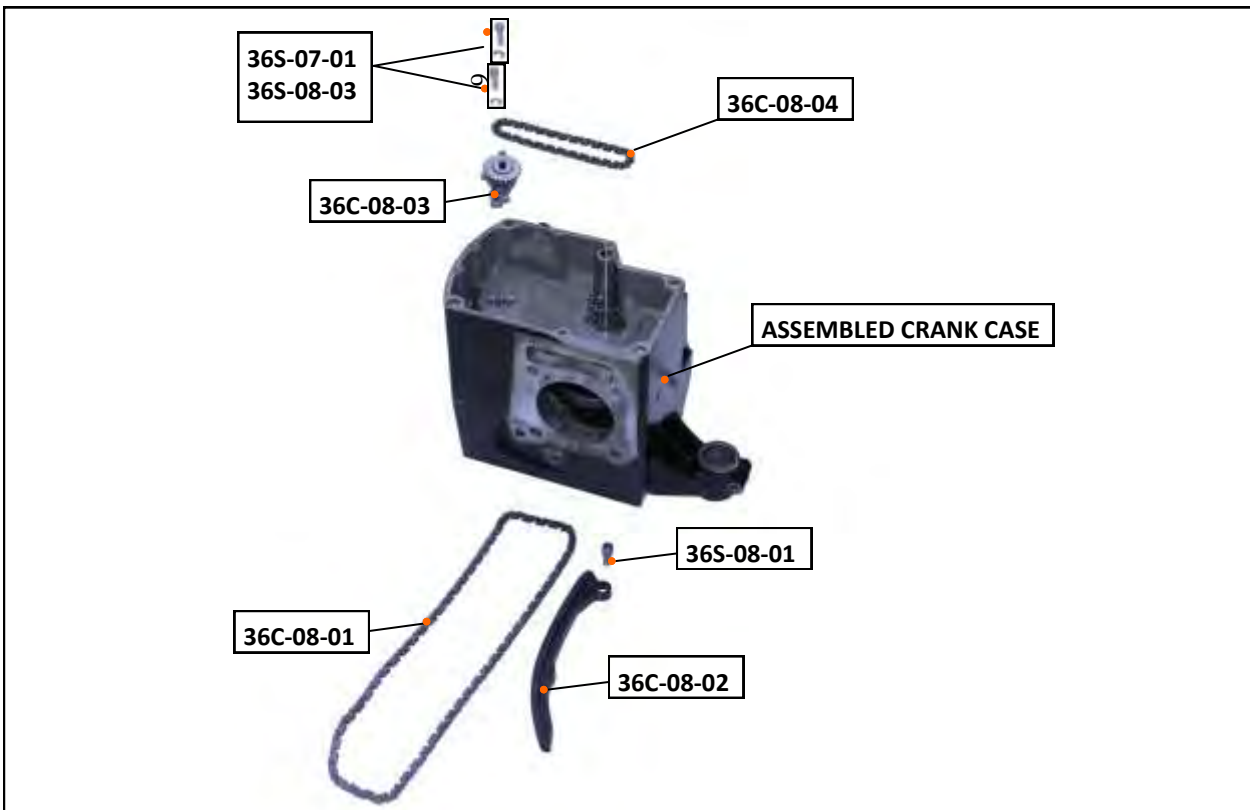
ASSEMBLY : FILTERS










36C-07-01  OIL FILTER COVER 1 pc	36C-07-02  OIL FILTER COVER SEAL Ø47 x 2,5 V 1 pc	36C-07-03  OIL FILTER 1 pc	36C-07-04  FUEL PUMP 1 pc	36C-07-05  OIL LEVEL DIPSTICK 1 pc
36C-07-06  OIL LEVEL DIPSTICK SEAL 1 pc	36S-02-03  FLAT WASHER M6 2 pcs	36S-05-02  SCREW M6 x 16 2 pcs 10 Nm	36S-05-04  LOCK WASHER M6 4 pcs	36S-07-01  SCREW M6 x 25 4 pcs 12 Nm
36S-07-02  SCREW M4 x 5 1 pc 3 Nm	36S-07-03  LOCK WASHER M4 1 pc			



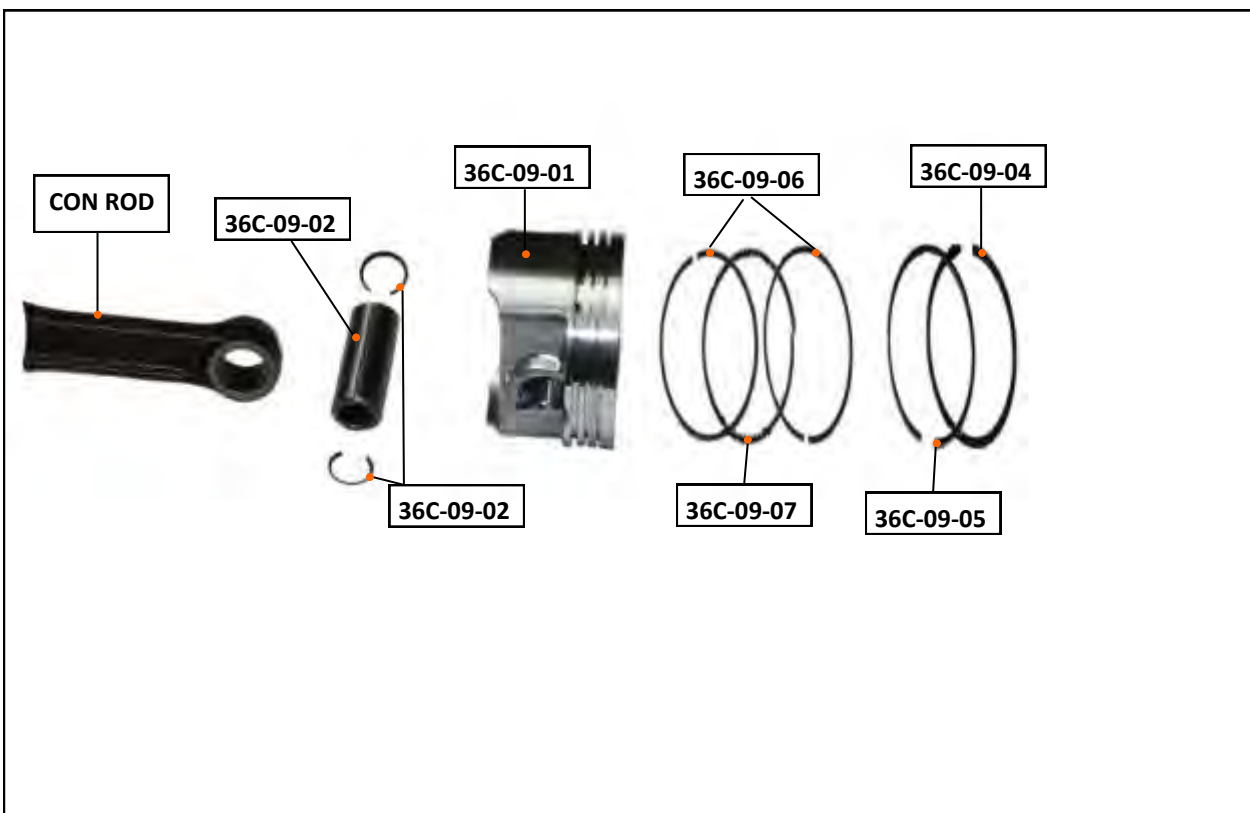
ASSEMBLY : OIL PUMP










<p>36C-08-01</p>  <p>DISTRIBUTION CHAIN 1 pc</p>	<p>36C-08-02</p>  <p>CHAIN GUIDE RAIL 1 pc</p>	<p>36C-08-03</p>  <p>OIL PUMP 1 pc</p>	<p>36C-08-04</p>  <p>OIL PUMP CHAIN 1 pc</p>	<p>36S-05-04</p>  <p>LOCK WASHER M6 2 pcs</p>
<p>36S-07-01</p>  <p>SCREW M6 x 25 2 pcs 12 Nm</p>	<p>36S-08-01</p>  <p>SPECIAL SCREW IMBUS 1 pc 12 Nm</p>			



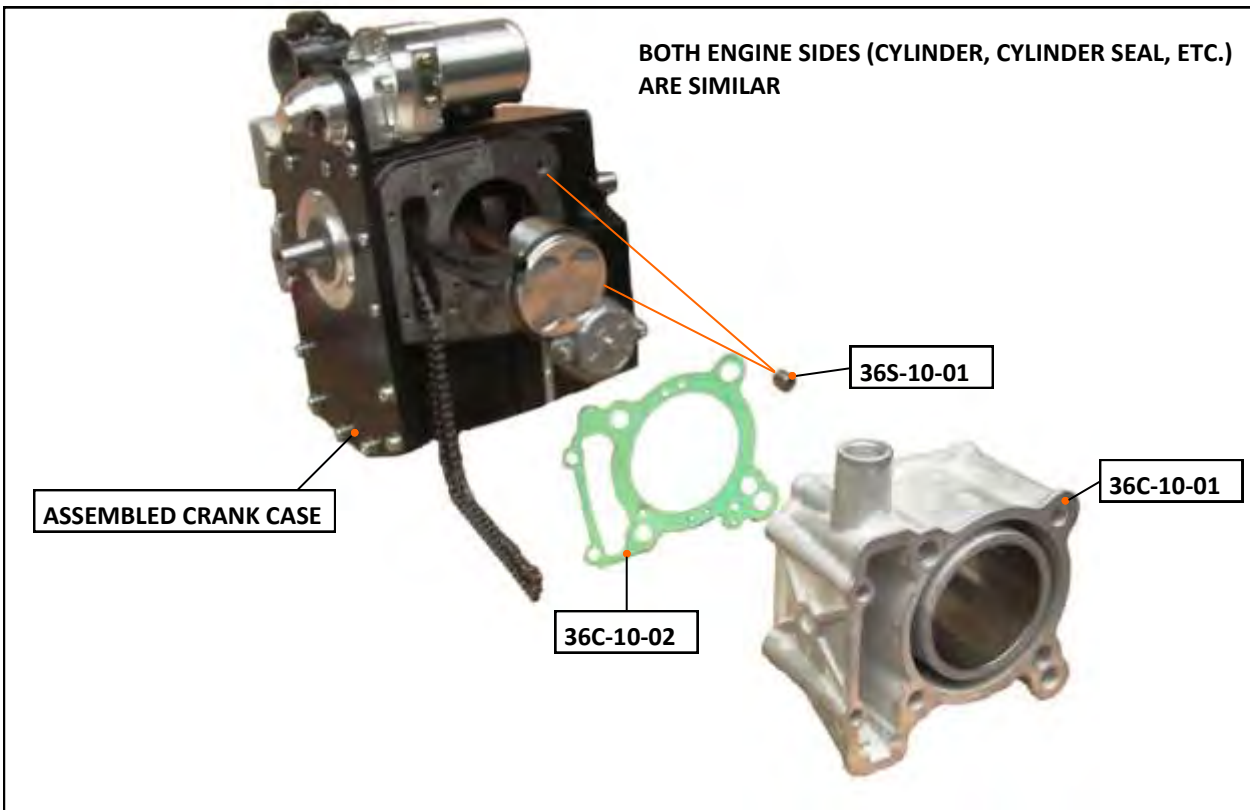
ASSEMBLY : PISTON






<p>36C-09-01</p>  <p>PISTON 1 pc</p>	<p>36C-09-02</p>  <p>PISTON PIN 1 pc</p>	<p>36C-09-03</p>  <p>WIRE SNAP RING 2 pcs</p>	<p>36C-09-04</p>  <p>PISTON RING I. 1 pc</p>	<p>36C-09-05</p>  <p>PISTON RING II. 1 pc</p>
<p>36C-09-06</p>  <p>PISTON RING III. 2 pcs</p>	<p>36C-09-07</p>  <p>PISTON RING IV. 1 pc</p>			



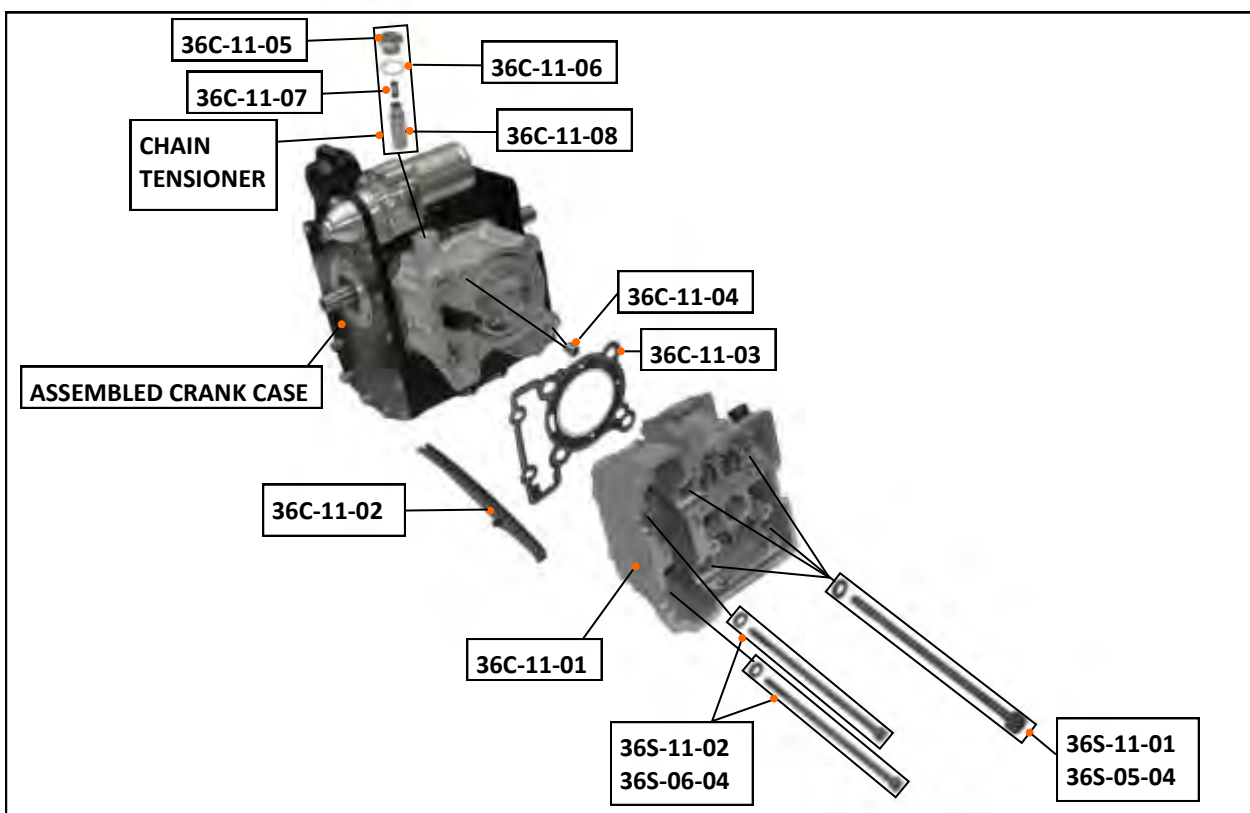
ASSEMBLY : CYLINDER



<p>36C-10-01</p>	<p>36C-10-02</p>	<p>36S-10-01</p>		
				
<p>CYLINDER 1 pc</p>	<p>CYLINDER SEAL 1 pc</p>	<p>CENTRING PIN Ø 12 x 13 2 pcs</p>		



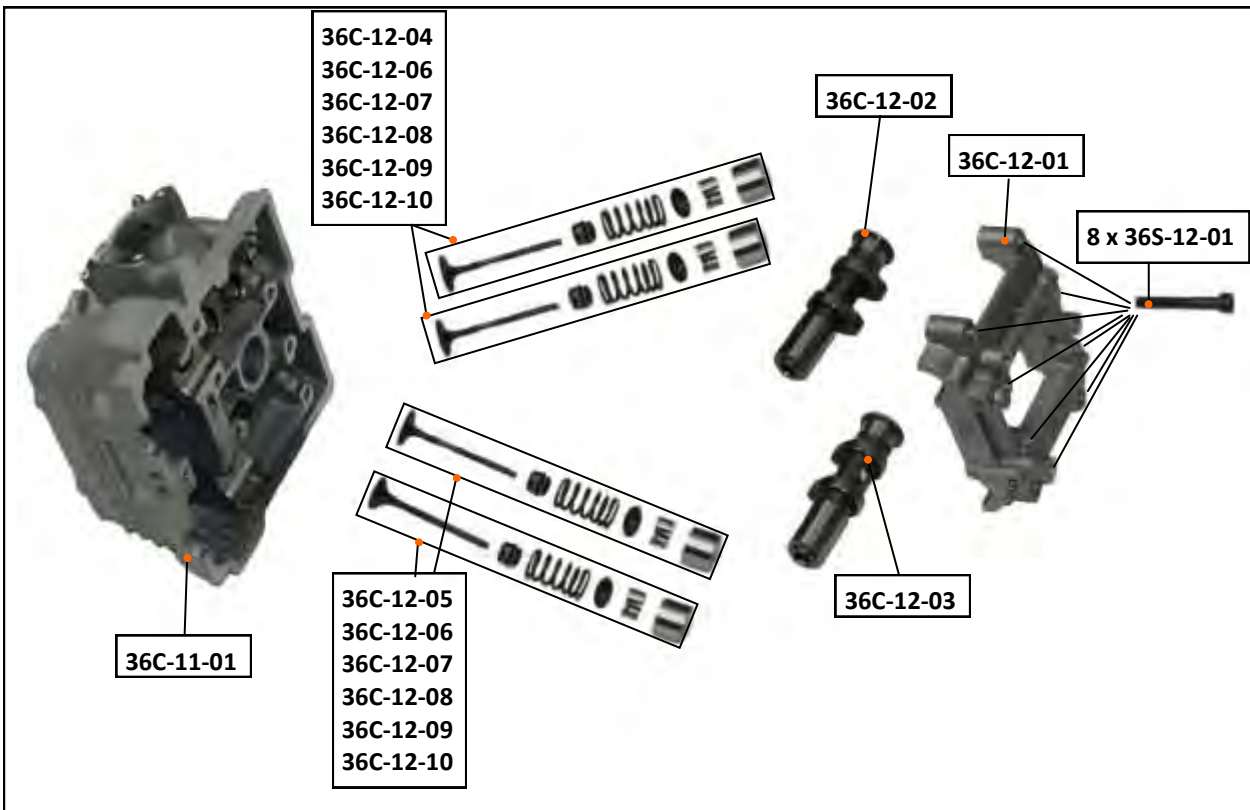
ASSEMBLY : CYLINDER HEAD








<p>36C-11-01</p>  <p>CYLINDER HEAD 1 pc</p>	<p>36C-11-02</p>  <p>CHAIN GUIDE RAIL 1 pc</p>	<p>36C-11-03</p>  <p>CYLINDER HEAD SEAL 1 pc</p>	<p>36C-11-04</p>  <p>CENTRING PIN Ø 12 x 13 2 pcs</p>	<p>36C-11-05</p>  <p>BOLT M18 x 1,5 1 pc 25 Nm</p>
<p>36C-11-06</p>  <p>FLAT WASHER M18 x 24 x 1 1 pc</p>	<p>36C-11-07</p>  <p>SPRING SMALL 1 pc</p>	<p>36C-11-08</p>  <p>CHAIN TENSIONER 1 pc</p>	<p>36S-05-04</p>  <p>LOCK WASHER M 8 4 pcs</p>	<p>36S-06-04</p>  <p>LOCK WASHER M 6 4 pcs</p>
<p>36S-11-01</p>  <p>SPECIAL BOLT M 8 x 165 4 pcs 25 Nm + 90°</p>	<p>36S-11-02</p>  <p>BOLT M6 x 130 2 pcs 12 Nm</p>			



ASSEMBLY : CYLINDER HEAD



<p>36C-11-01</p> 	<p>36C-12-01</p> 	<p>36C-12-02</p> 	<p>36C-12-03</p> 	<p>36C-12-04</p> 
<p>CYLINDER HEAD 1 pc</p>	<p>CAMSHAFT HOLDER 1 pc</p>	<p>INTAKE CAMSHAFT 1 pc</p>	<p>EXHAUST CAMSHAFT 1 pc</p>	<p>INTAKE VALVE 2 pcs</p>
<p>36C-12-05</p> 	<p>36C-12-06</p> 	<p>36C-12-07</p> 	<p>36C-12-08</p> 	<p>36C-12-09</p> 
<p>EXHAUST VALVE 2 pcs</p>	<p>VALVE GUIDE SEAL 4 pcs</p>	<p>VALVE SPRING 4 pcs</p>	<p>VALVE SPRING SHIM 4 pcs</p>	<p>VALVE SPRING KEY 8 pcs</p>
<p>36C-12-10</p> 	<p>36S-12-01</p> 			
<p>VALVE GUIDE BUSHING 4 pcs</p>	<p>SCREW M6 x 40 8 pcs 12 Nm</p>			



ASSEMBLY : CYLINDER HEAD



36C-13-01

CAMSHAFT GEAR 2 pcs

36S-13-01

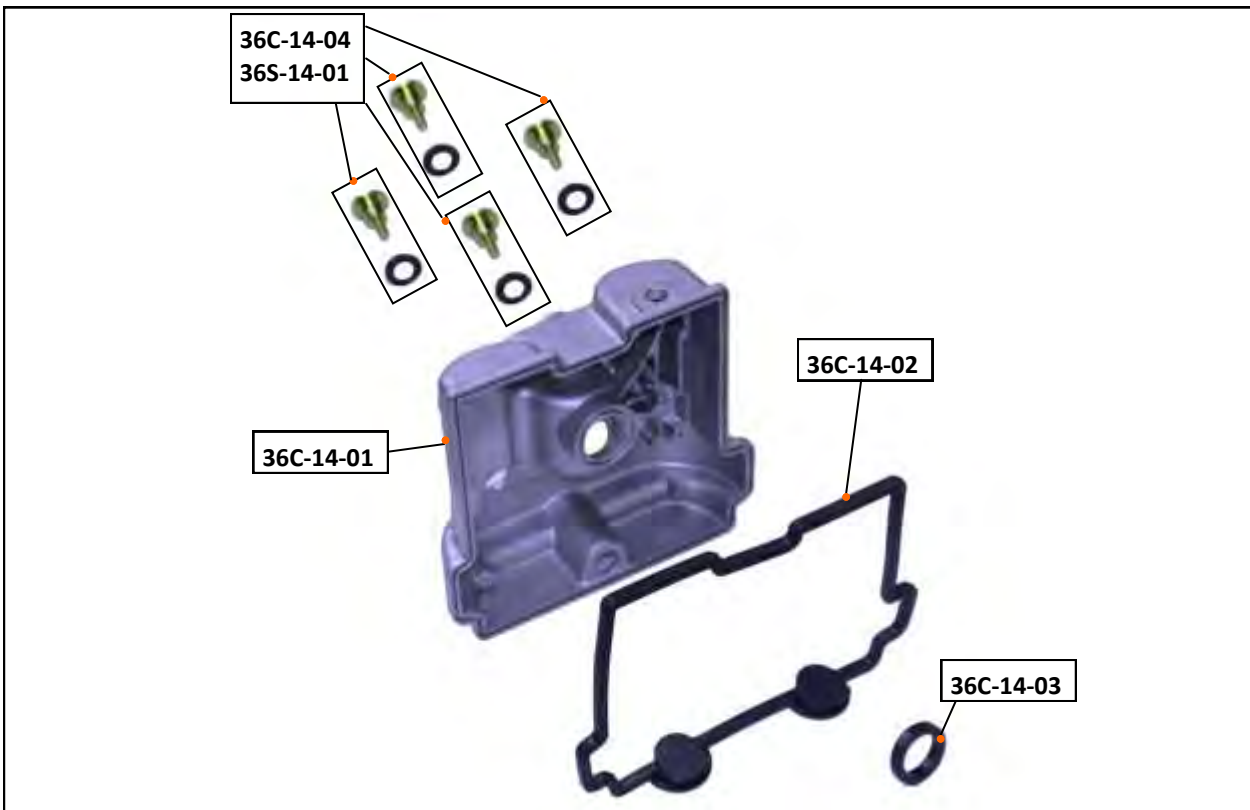
SCREW M8 x 1 – 20 2 pcs 28 Nm






36S-13-02

FLAT WASHER M8—SPECIAL 2 pcs



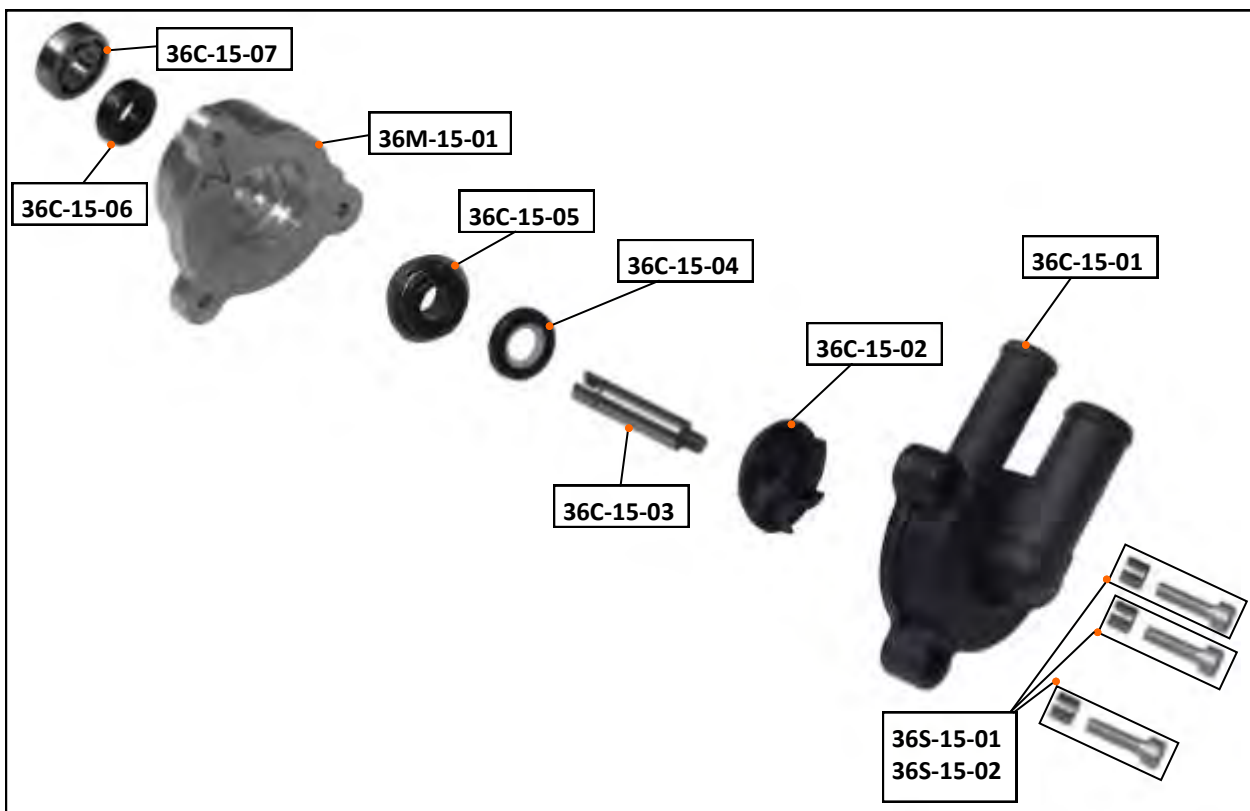
ASSEMBLY : CYLINDER HEAD COVER



36C-14-01	36C-14-02	36C-14-03	36C-14-04	36S-14-01
				
<p>CYLINDER HEAD COVER 1 pc</p>	<p>CYLINDER HEAD COVER SEAL 1 pc</p>	<p>HEAD COVER SEAL 1 pc</p>	<p>SPECIAL SCREW SEAL 4 pcs</p>	<p>SCREW IMBUS SPECIAL 4 pcs 14 Nm</p>



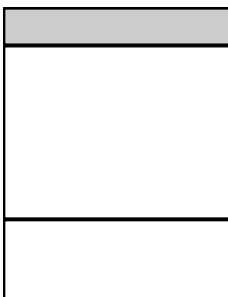
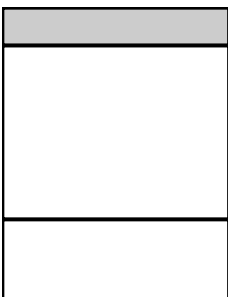
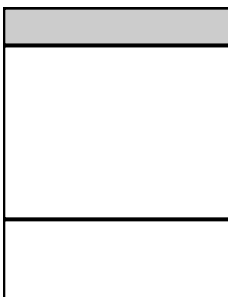
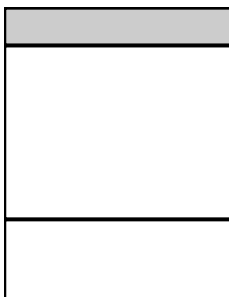
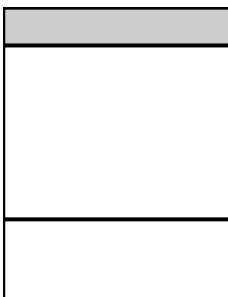
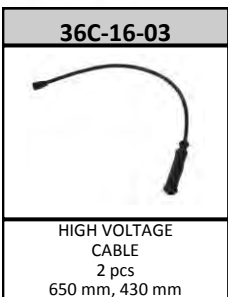
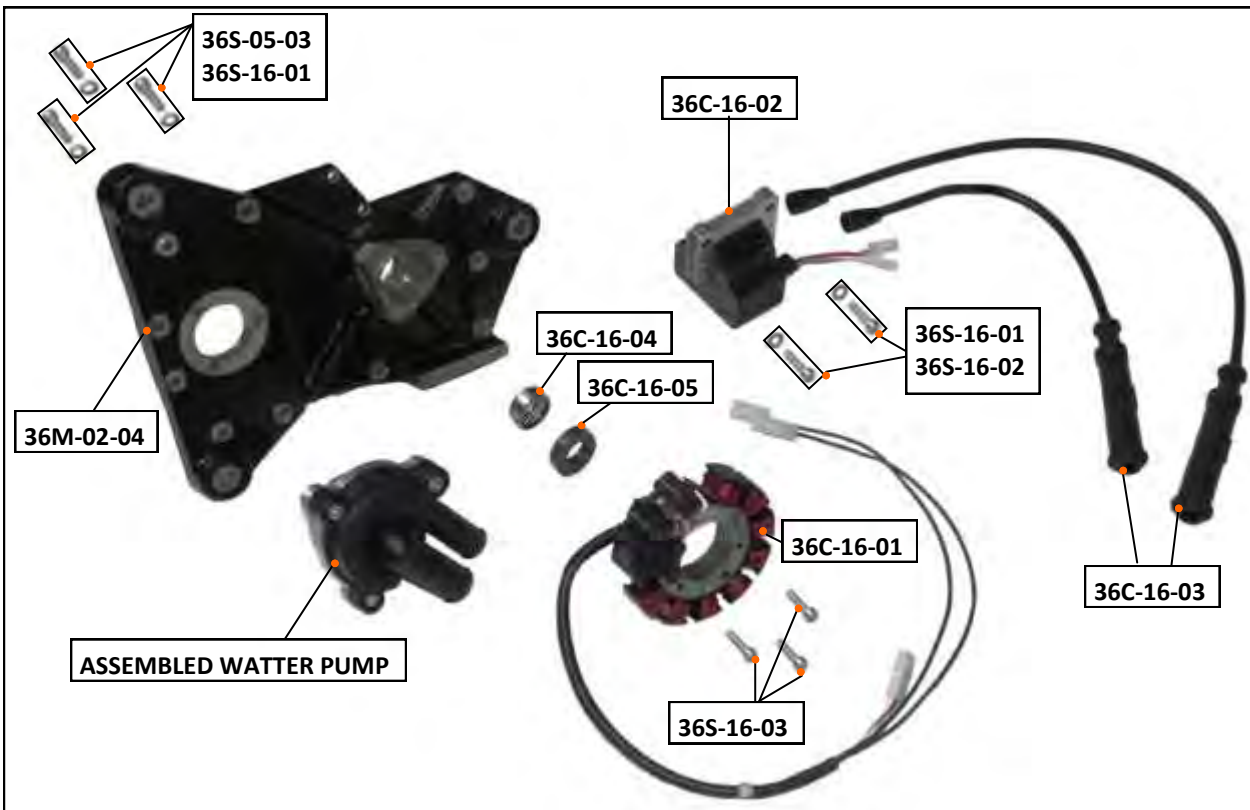
ASSEMBLY : WATTER PUMP



<p>36M-15-01</p>  <p>WATER PUMP CAGE 1 pc</p>	<p>36C-15-01</p>  <p>WATER PUMP BODY 1 pc</p>	<p>36C-15-02</p>  <p>WATER PUMP PROPELLER 1 pc</p>	<p>36C-15-03</p>  <p>WATER PUMP DRIVE SHAFT 1 pc</p>	<p>36C-15-04</p>  <p>WATER PUMP DRIVE SHAFT SEAL 1 pc</p>
<p>36C-15-05</p>  <p>WATER PUMP DRIVE SHAFT SEAL 1 pc</p>	<p>36C-15-06</p>  <p>WATER PUMP DRIVE SHAFT SEAL 10 x 22 x 7 1 pc</p>	<p>36C-15-07</p>  <p>BEARING 6000 1 pc</p>	<p>36S-15-01</p>  <p>SCREW M5 x 18 3 pcs 10 Nm</p>	<p>36S-15-02</p>  <p>CENTRING PIN Ø 7—9,4 3 pcs</p>
<p> </p>	<p> </p>	<p> </p>	<p> </p>	<p> </p>

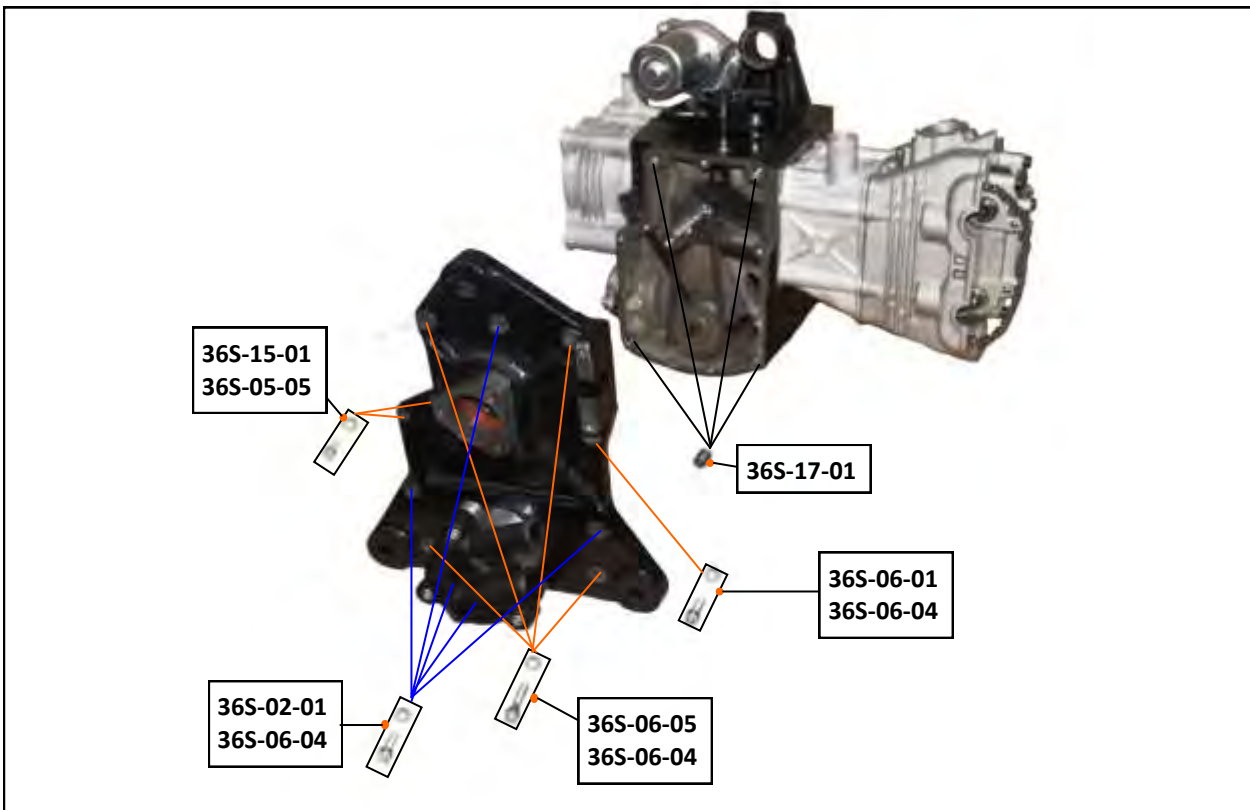









ASSEMBLY : IGNITION SYSTEM





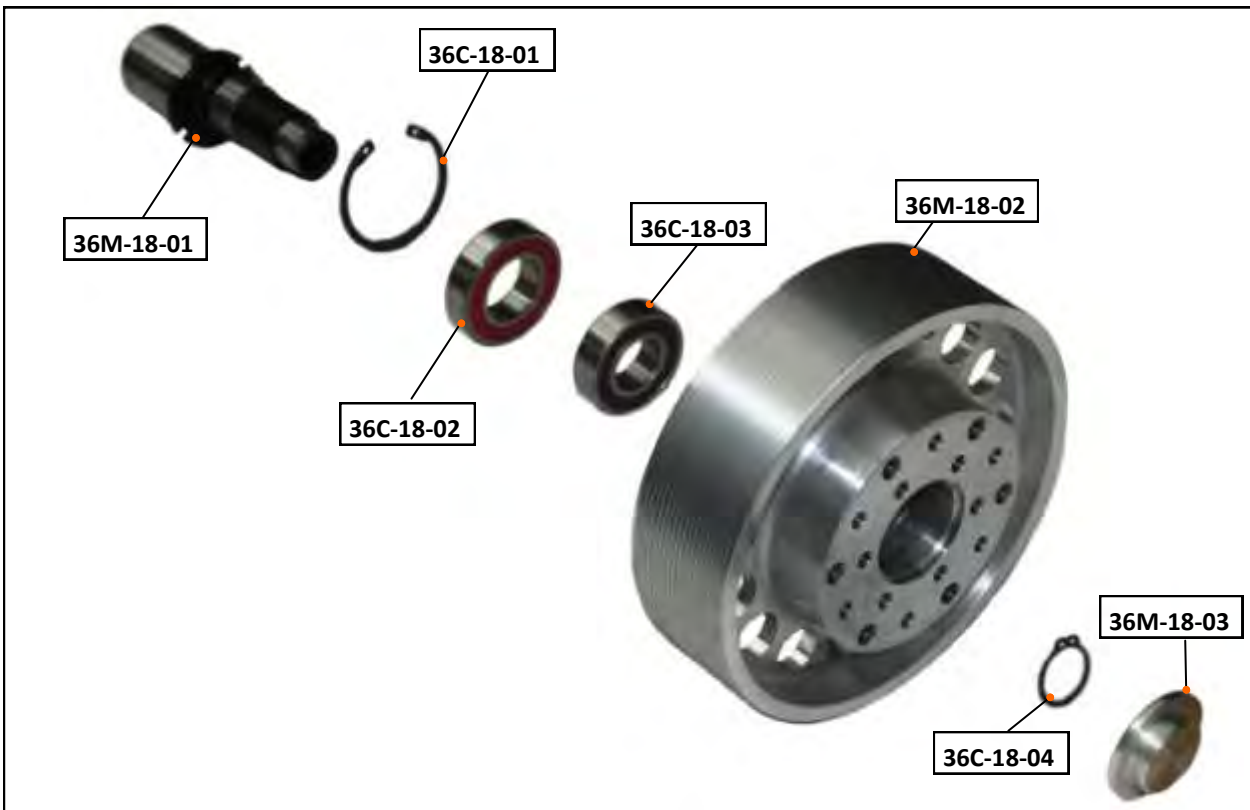
ASSEMBLY : CRANKCASE BACK COVER



36S-17-01	36S-02-01	36S-05-05	36S-06-01	36S-06-04
				
CENTRING PIN Ø 10 x 13 4 pcs	SCREW M6 x 25 5 pcs 14 Nm	LOCK WASHER M5 2 pcs	SCREW M6 x 20 1 pc 14 Nm	LOCK WASHER M6 2 pcs
36S-06-05	36S-15-01			
				
SCREW M6 x 35 4 pcs 14 Nm	SCREW M5 x 18 2 pcs 10 Nm			



ASSEMBLY : REDUCTION UNIT GEAR



36M-18-01



REDUCTION GEAR
SHAFT
1 pc

36M-18-02



REDUCTION UNIT
UPPER GEAR
1 pc

36M-18-03



PROPELLER
CENTERING RING
1 pc

36C-18-01



SEGER SNAP RING
INNER Ø 47
1 pc

36C-18-02



BALL BEARING
6005 2RS
1 pc

36C-18-03



BALL BEARING
6004 2RS
1 pc

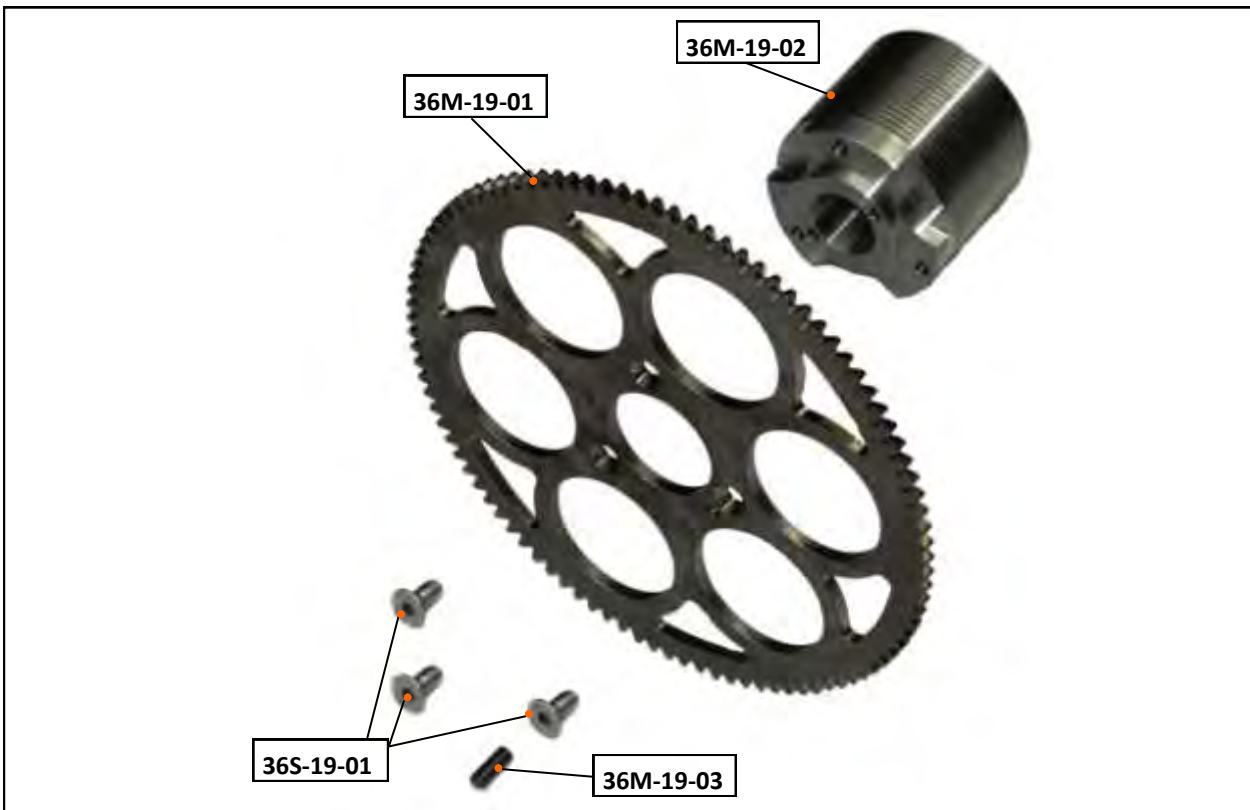
36C-18-04







SEGER
SNAP RING Ø 20
1 pc



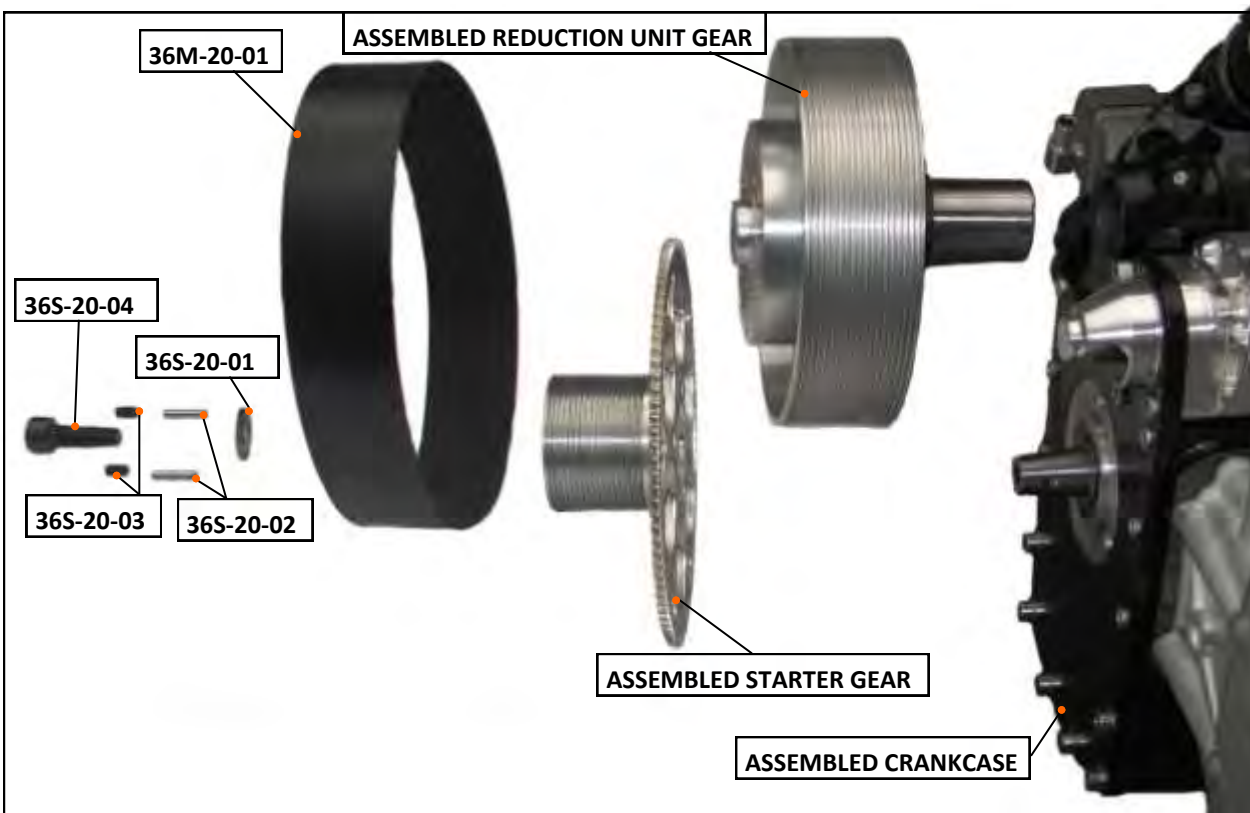
ASSEMBLY : STARTER GEAR



36M-19-01	36M-19-02	36M-19-03	36S-19-01	
				
<p>STARTER GEAR 1 pc</p>	<p>REDUCTION UNIT LOWER GEAR 1 pc</p>	<p>STARTER GEAR SAFETY PIN Ø 5 x 14 1 pc</p>	<p>SCREW M6 x 10 3 pcs 12 Nm</p>	



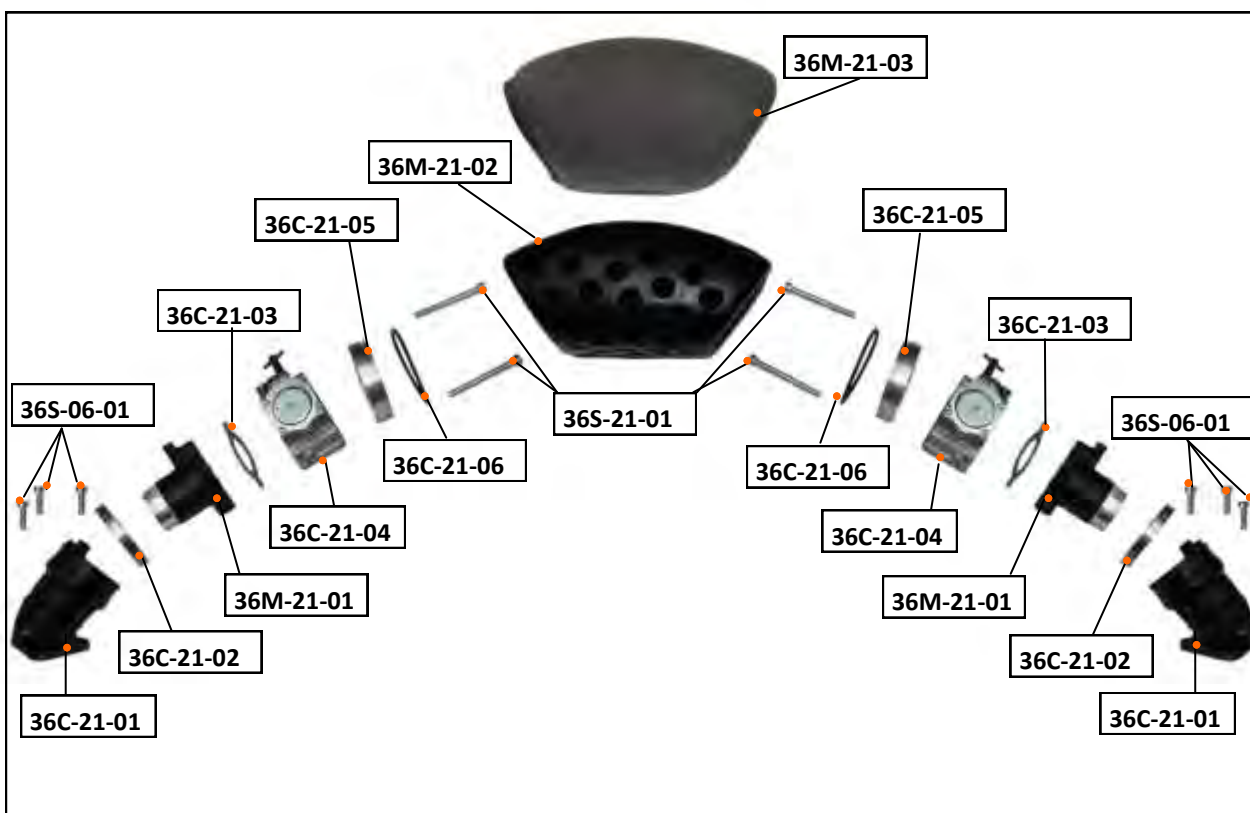
ASSEMBLY : REDUCTION UNIT



36M-20-01	36S-20-01	36S-20-02	36S-20-03	36S-20-04
REDUCTION UNIT BELT 1 pc	LOCK WASHER M10 1 pc	STARTER GEAR SAFETY PIN \varnothing 4 x 20 2 pcs	SCREW WORM M5 x 10 2 pcs	SCREW M10 x 1 x 20 1 pc 80 Nm



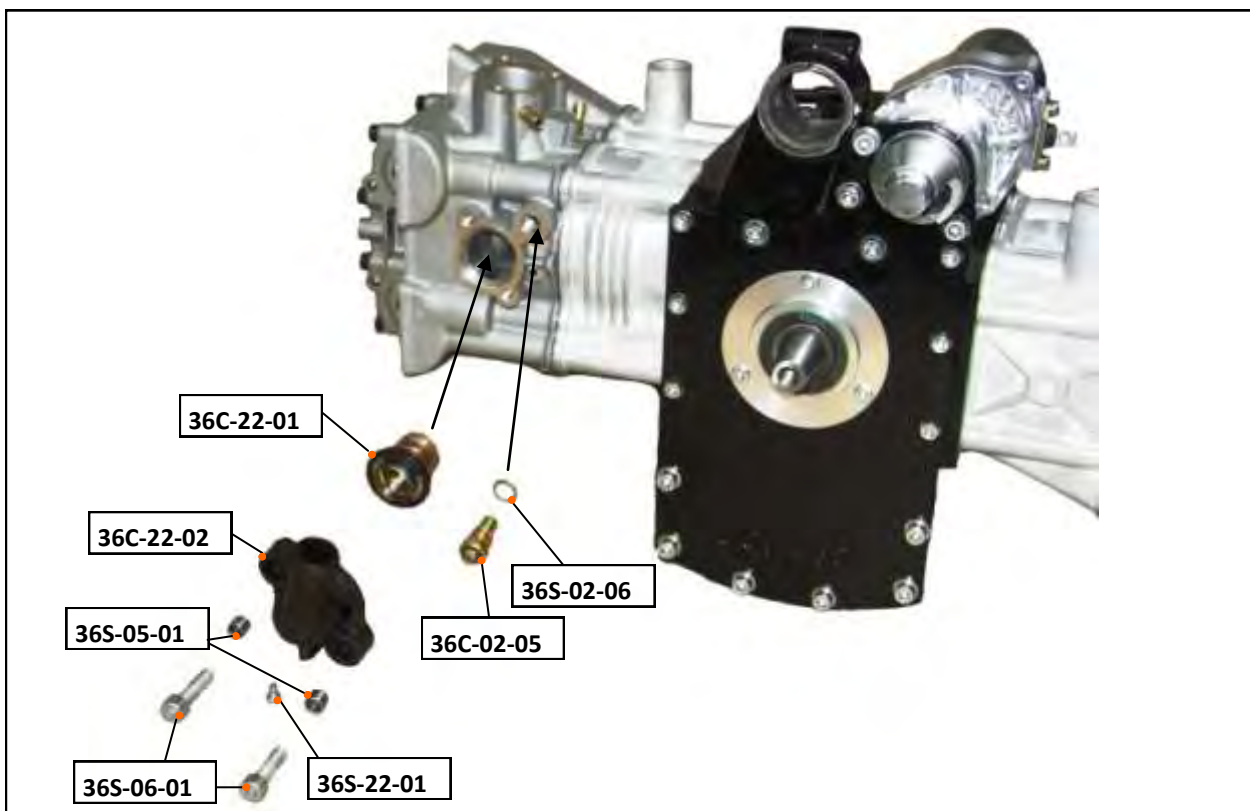
ASSEMBLY : INTAKE










36M-21-01  INTAKE MANIFOLD 2 pcs	36M-21-02  INTAKE FILTER BODY 1 pc	36M-21-03  INTAKE FILTER FOAM 1 pc	36C-21-01  INTAKE MANIFOLD RUBBER 2 pcs	36C-21-02  MANIFOLD CLAMP Ø 50 2 pcs
36C-21-03  INLET SEAL 2 pcs	36C-21-04  CARBURATOR TYPE 2 pcs	36C-21-05  INLET SPACER RING 2 pcs	36C-21-06  INLET RUBBER SEAL Ø 56—2,5 2 pcs	36S-06-01  SCREW M6 x 20 6 pcs 12 Nm
36S-21-01  SCREW M 5 x 55 4 pcs 10 Nm				



ASSEMBLY : COOLANT THERMOSTAT



<p>36C-22-01</p>  <p>THERMOSTAT UNIT 1 pc</p>	<p>36C-22-02</p>  <p>THERMOSTAT COVER BODY 1 pc</p>	<p>36C-02-05</p>  <p>OIL TEMPERATURE SENSOR 1 pc</p>	<p>36S-02-06</p>  <p>ALUMINIUM SEAL M10 1 pc</p>	<p>36S-05-01</p>  <p>CENTRING PIN Ø 8 x 6,7 2 pcs</p>
<p>36S-06-01</p>  <p>SCREW M6 x 20 2 pcs 12 Nm</p>	<p>36S-22-01</p>  <p>SCREW M3 x 10 1 pc 2 Nm</p>			



ASSEMBLY : OIL OUTLET



36M-23-01

OIL BUSHING SCREW 1 pc

36M-23-02

OIL BUSHING SCREW 1 pc

36M-23-03

OIL BUSHING BODY 1 pc

36M-23-04

OIL BUSHING BODY 1 pc

36S-23-01

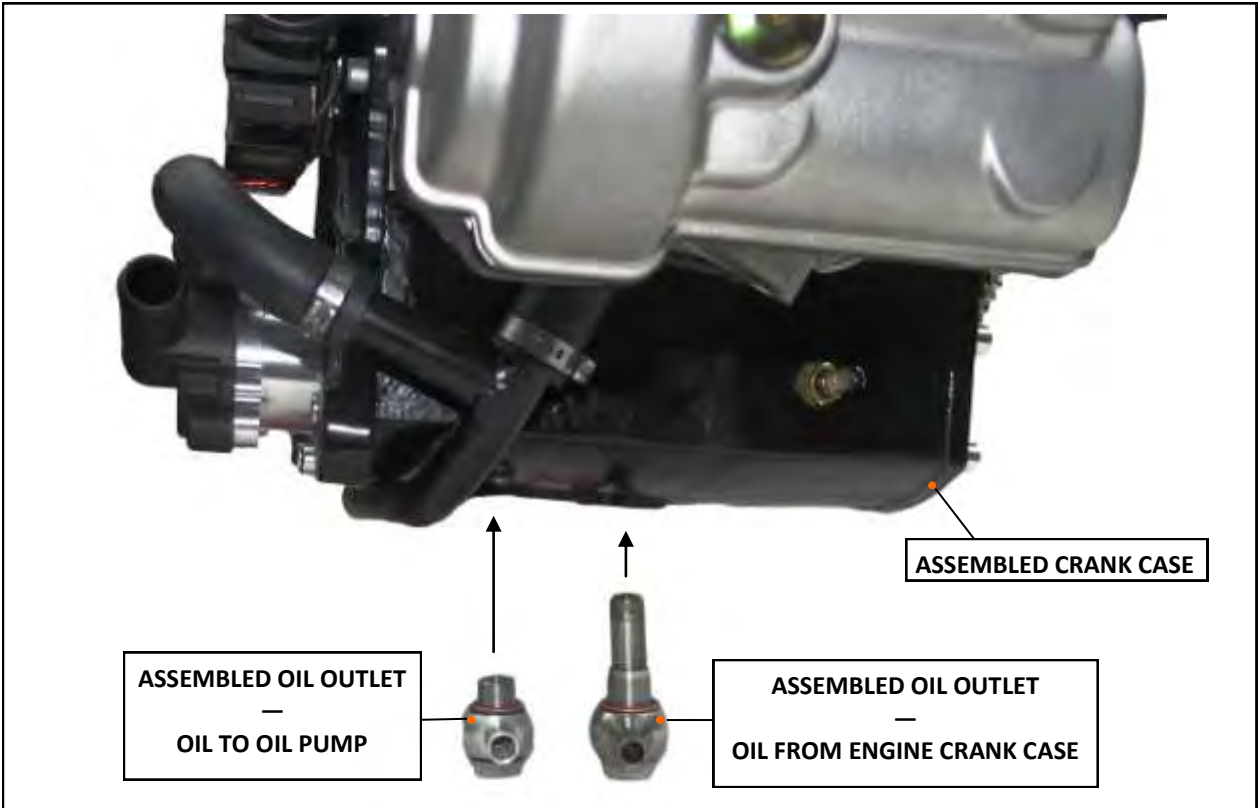
COPPER SEAL M 16 2 pcs

36S-23-02

COPPER SEAL M 14 2 pcs

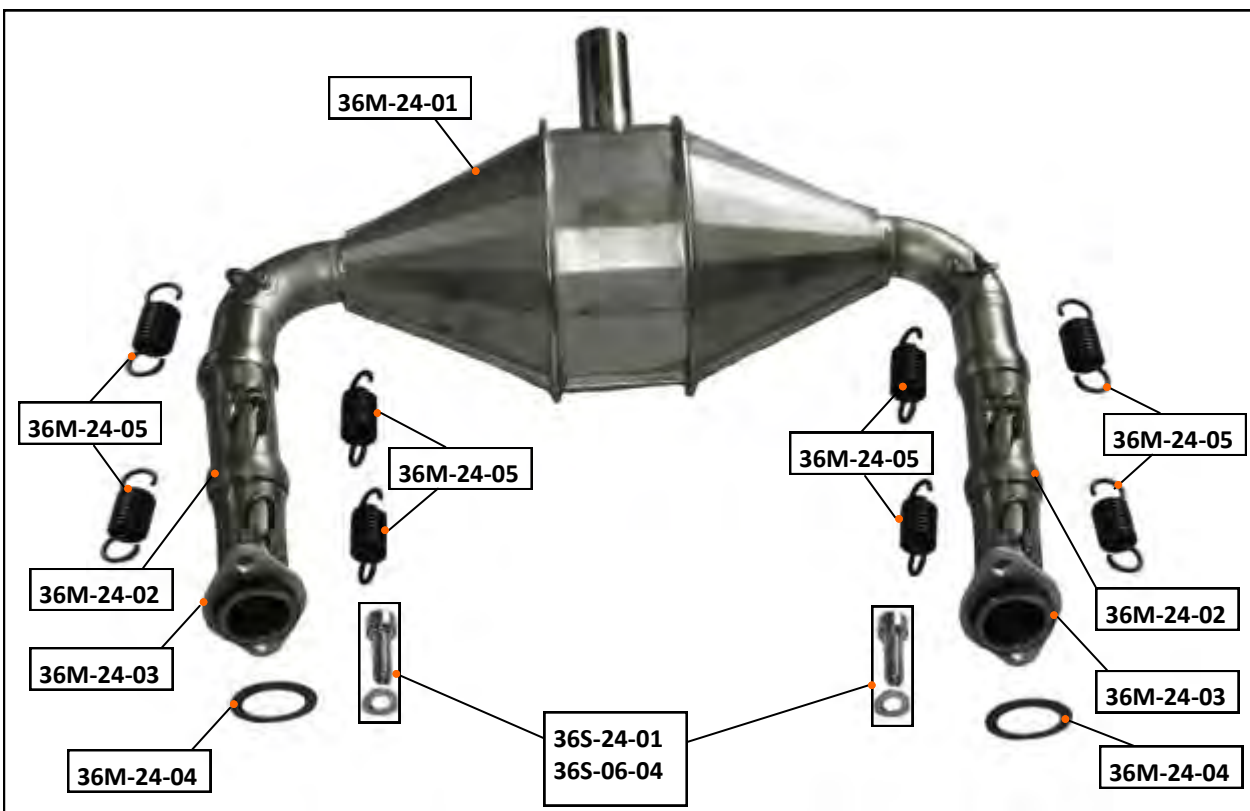








ASSEMBLY : OIL OUTLET





ASSEMBLY : EXHAUST SYSTEM



<p>36M-24-01</p>  <p>EXHAUST SILENCER 1 pc</p>	<p>36M-24-02</p>  <p>EXHAUST MANIFOLD I 2 pcs</p>	<p>36M-24-03</p>  <p>EXHAUST MANIFOLD II 2 pcs</p>	<p>36M-24-04</p>  <p>EXHAUST SEAL 2 pcs</p>	<p>36M-24-05</p>  <p>EXHAUST SPRING 8 pcs</p>
<p>36S-06-04</p>  <p>LOCK WASHER M 8 4 pcs</p>	<p>36S-24-01</p>  <p>SCREW M 8 x 20 4 pcs 22 Nm</p>			



ENGINE PARTS CATALOGUE JCV 360





INSTALLATION, OPERATING, MAINTENANCE—JCV 360

CONTENT

1.	Parts group 36M	.....	52
2.	Parts group 36C	.....	55
3.	Parts group 36S	.....	63



ENGINE PARTS CATALOGUE - 36M GROUP

36M-01-01



CRANK SHAFT CENTRE SECTION

36M-02-01



HALF CRANK CASE FRONT

36M-02-02



HALF CRANK CASE REAR

36M-02-03



CRANK CASE FRONT

36M-02-04



CRANK CASE BACK

36M-03-01



GEAR

36M-03-02



GEAR

36M-03-03



RING

36M-03-04



SCREW M10 x 1—9

36M-04-01



BEARING HOLDER

36M-15-01



WATTER PUMP CAGE

36M-18-01



REDUCTION GEAR SHAFT



ENGINE PARTS CATALOGUE - 36M GROUP

36M-18-02



REDUCTION UNIT UPPER GEAR

36M-18-03



PROPELLER CENTERING RING

36M-19-01



STARTER GEAR

36M-19-02



REDUCTION UNIT LOWER GEAR

36M-19-03



STARTER GEAR SAFETY PIN $\varnothing 5 \times 14$

36M-20-01



REDUCTION UNIT BELT

36M-21-01



INTAKE MANIFOLD

36M-21-02



INTAKE FILTER BODY

36M-21-03



INTAKE FILTER FOAM

36M-23-01



OIL BUSHING SCREW

36M-23-02



OIL BUSHING SCREW

36M-23-03



OIL BUSHING BODY



ENGINE PARTS CATALOGUE - 36M GROUP

36M-23-04



OIL BUSHING BODY

36M-24-01



EXHAUST SILENCER

36M-24-02



EXHAUST MANIFOLD I

36M-24-03



EXHAUST MANIFOLD II

36M-24-04



EXHAUST SEAL

36M-24-05



EXHAUST SPRING



ENGINE PARTS CATALOGUE - 36C GROUP

36C-01-01



CRANK SHAFT FRONT SHAFT

36C-01-02



CRANK SHAFT BACK SHAFT

36C-01-03



CRANK SHAFT PIN

36C-01-04



CRANK SHAFT PIN

36C-01-05



COG WHEEL

36C-02-01



CENTRING PIN \varnothing 10 x 13

36C-02-02



CENTRING PIN \varnothing 7 x 9,4

36C-02-03



O-RING \varnothing 7 x 1,5

36C-02-04



OIL PRESSURE SENSOR

36C-02-05



OIL TEMPERATURE SENSOR

36C-03-01



BEARING 608

36C-03-02



SHAFT \varnothing 8 x 36



ENGINE PARTS CATALOGUE - 36C GROUP

36C-03-03



SPRING

36C-04-01



BEARING 63/22C3

36C-04-02



SEALING RING CR 30x42x7 V

36C-05-01



CENTERING PIN Ø8 * 6,7

36C-06-01



ELECTRIC STARTER

36C-06-02



CENTERING RING

36C-06-03



RUBBER GASKET Ø 22 x 2

36C-07-01



OIL FILTER COVER

36C-07-02



OIL FILTER COVER SEAL

36C-07-03



OIL FILTER

36C-07-04



FUEL PUMP

36C-07-05



OIL LEVEL DIPSTICK



ENGINE PARTS CATALOGUE - 36C GROUP

36C-07-06



OIL LEVEL DIPSTICK SEAL

36C-08-01



DISTRIBUTION CHAIN

36C-08-02



CHAIN GUIDE RAIL

36C-08-03



OIL PUMP

36C-08-04



OIL PUMP CHAIN

36C-09-01



PISTON

36C-09-02



PISTON PIN

36C-09-03



WIRE SNAP RING

36C-09-04



PISTON RING I.

36C-09-05



PISTON RING II.

36C-09-06



PISTON RING III.

36C-09-07



PISTON RING IV.



ENGINE PARTS CATALOGUE - 36C GROUP

36C-10-01



CYLINDER

36C-10-02



CYLINDER SEAL

36C-11-01



CYLINDER HEAD

36C-11-02



CHAIN GUIDE RAIL

36C-11-03



CYLINDER HEAD SEAL

36C-11-04



CENTRING PIN \varnothing 12 x 13

36C-11-05



BOLT M18 x 1,5

36C-11-06



FLAT WASHER M18 x 24 x 1

36C-11-07



SPRING SMALL

36C-11-08



CHAIN TENSIONER

36C-12-01



CAMSHAFT HOLDER

36C-12-02



INTAKE CAMSHAFT



ENGINE PARTS CATALOGUE - 36C GROUP

36C-12-03



EXHAUST CAMSHAFT

36C-12-04



INTAKE VALVE

36C-12-05



EXHAUST VALVE

36C-12-06



VALVE GUIDE SEAL

36C-12-07



VALVE SPRING

36C-12-08



VALVE SPRING SHIM

36C-12-09



VALVE SPRING KEY

36C-12-10



VALVE GUIDE BUSHING

36C-13-01



CAMSHAFT GEAR

36C-14-01



CYLINDER HEAD COVER

36C-14-02



CYLINDER HEAD COVER SEAL

36C-14-03



HEAD COVER SEAL



ENGINE PARTS CATALOGUE - 36C GROUP

36C-14-04



SPECIAL SCREW SEAL

36C-15-01



WATER PUMP CAGE

36C-15-02



WATER PUMP BODY

36C-15-03



WATER PUMP PROPELLER

36C-15-04



WATER PUMP DRIVE SHAFT

36C-15-05



WATER PUMP DRIVE SHAFT SEAL

36C-15-06



WATER PUMP DRIVE SHAFT SEAL

36C-15-07



WATER PUMP DRIVE SHAFT SEAL

36C-15-08



BEARING 6000

36C-16-01



ALTERNATOR UNIT STATOR

36C-16-02



IGNITION COIL

36C-16-03



HIGH VOLTAGE CABLE



ENGINE PARTS CATALOGUE - 36C GROUP

36C-16-04



NEEDLE BEARING HK 2212

36C-16-05



SEALING RING CR 22 x 32 x 7 V

36C-18-01



SEGER SNAP RING INNER Ø 47

36C-18-02



BALL BEARING 6005 2RS

36C-18-03



BALL BEARING 6004 2RS

36C-18-04



SEGER SNAP RING Ø 20

36C-21-01



INTAKE MANIFOLD RUBBER

36C-21-02



MANIFOLD CLAMP Ø 50

36C-21-03



INLET SEAL

36C-21-04



INLET SPACER RING

36C-21-05



INLET RUBBER SEAL Ø 56—2,5

36C-22-01



THERMOSTAT UNIT



ENGINE PARTS CATALOGUE - 36C GROUP

36C-22-02



THERMOSTAT COVER BODY



ENGINE PARTS CATALOGUE - 36S GROUP

36S-02-01



SCREW IMBUS M6 x 65

36S-02-02



SCREW IMBUS M6 x 50

36S-02-03



FLAT SHIM M6

36S-02-04



FLAT SHIM Ø10 x 1

36S-02-05



SCREW WORM M6 x 10

36S-02-06



ALUMINIUM SEAL M10

36S-03-01



FLAT SHIM M8

36S-03-02



BALL Ø8

36S-04-01



SCREW IMBUS M5 x 10

36S-05-01



SCREW IMBUS M6 x 100

36S-05-02



SCREW IMBUS M6 x 16

36S-05-03



SCREW IMBUS M5 x 16



ENGINE PARTS CATALOGUE - 36S GROUP

36S-05-04



LOCK WASHER M6

36S-05-05



LOCK WASHER M5

36S-06-01



SCREW IMBUS M6 x 20

36S-06-02



SCREW IMBUS M8 x 35

36S-06-03



FLAT SHIM M 8

36S-06-04



LOCK WASHER M 8

36S-06-05



SCREW IMBUS M6 x 35

36S-07-01



SCREW M6 x 25

36S-07-02



SCREW M4 x 5

36S-07-03



LOCK WASHER M4

36S-08-01



SPECIAL SCREW IMBUS

36S-10-01



CENTRING PIN Ø 12 x 13



ENGINE PARTS CATALOGUE - 36S GROUP

36S-11-01



SPECIAL BOLT M 8 x 165

36S-11-02



BOLT M6 x 130

36S-12-01



SCREW M6 x 40

36S-13-01



SCREW M8 x 1 - 20

36S-13-02



FLAT WASHER M8—SPECIAL

36S-14-01



SCREW IMBUS SPECIAL

36S-15-01



SCREW M5 x 18

36S-15-02



CENTRING PIN Ø 7—9,4

36S-16-01



FLAT WASHER M5

36S-16-02



SCREW M5 x 20

36S-16-03



SCREW M4 x 25

36S-17-01



CENTRING PIN Ø 10 x 13



ENGINE PARTS CATALOGUE - 36S GROUP

36S-19-01



SCREW M6 x 10

36S-20-01



LOCK WASHER M10

36S-20-02



STARTER GEAR SAFETY PIN \varnothing 4 x 20

36S-20-03



SCREW WORM M5 x 10

36S-20-04



SCREW M10 x 1 x 20

36S-21-01



SCREW M 5 x 55

36S-22-01



SCREW M3 x 10

36S-23-01



COPPER SEAL M 16

36S-23-02



COPPER SEAL M 14

36S-24-01



SCREW M 8 x 20