



ENGLISH



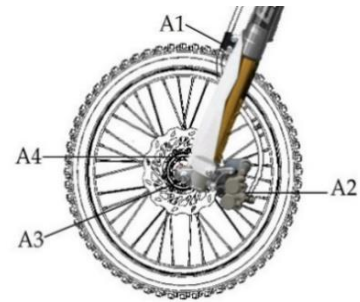
INFORMATION:

To preserve your ENG1 fork in good condition and assure its performance, we recommend to make the first maintenance (change + clean + check parts) after 3 hours of use.

Then it will be necessary to make maintenance every 15 hours of use. During maintenance, we recommend you to use KAYABA 01 oil and ENG1 genuine parts.

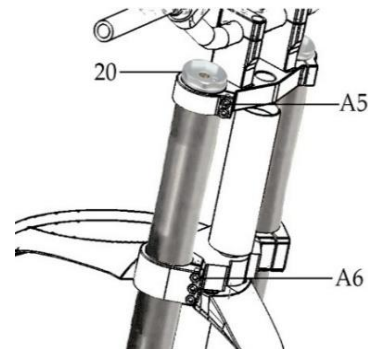
REMOVE THE FORK:

Lift up the clips (A1) off the brake hose and remove the brake caliper (A2).



(A1) CLIPS (A2) BRAKE CALIPER
(A3) WHEEL AXE (A4) BOLTS

Loosen the top crown bolt (A5)



(A5) TOP CROWN BOLT (20) FORK CAP
(A6) BOTTOM CROWN BOLT

Loosen the bottom crown bolt (A6) and remove the fork tube by pulling them down.

DISASSEMBLY:

Remove the bolts (A7) and the fork guard (A8).



(A7) BOLT (A8) FORK GUARD

CAUTION:

Before removing the fork, turn the adjustment screw (22) and compression adjustment screw (85) in the clockwise to get the firmest position (Note clics numbers). Then loosen the adjustment to get the softest position.

ATTENTION: For all these procedures with the mechanical grip, cover the jaws by aluminum protection in order to protect the fork.

Immobilize the outer tube and remove the top cap (20), then slide the outer tube downwards into the wheel axle holder (11).



(20) TOP CAP (11) FOOTLEG LEFT
(22) ADJUSTMENT SCREW
(85) COMPRESSION ADJUSTMENT SCREW

Immobilize the nut (33) and loosen top cap (20) with the ENGI tool (A9).

Pull the top cap (20) slowly upwards and separate the cap from the extender (34).

Remove the fork spring (2), the nut (33), the spring guide (35) and rod (32).

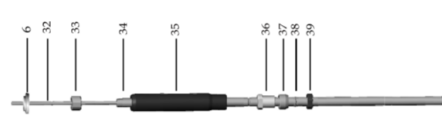
Pump the needle rod down and the outer tube to remove all the oil from the fork.

Remove the inferior spring seat against top cap steel (6) during change.

Grip footleg left (11) to the vice.



(20) TOP CAP (33) NUT (34) EXTENDER (A9) ENGI-FCW



(33) NUT (35) SPRING GUIDE (32) ROD (6) SPRING SEAT AGAINST TOP CAP STEEL



(2) FORK SPRING

CAUTION:
Do not grip too tightly the vice on the footleg.

Loosen and remove the compression cap (F) while immobilising the damper using the ENGI in "T" tool (ENGI-PDR)

Remove complete hydraulic system from the fork.

Pump 8 to 10 times the damper rod to empty the oil in the cylinder tube (62).



(F) COMPRESSION CAP (ENGI-PDR) ENGI "T" TOOL



(62) CYLINDER TUBE

CAUTION:

Make sure you do not scratch the sliding tube.
Remove the scraper (31) and the clip (30).

Check that the shaft (9) slides smoothly in the outertube comp (3).

If it does not, check that the sliding tube is not buckling, then check the outertube comp and the bushings (5/27).

FORK DISASSEMBLY

Heat moderately the outertube comp bottom (3), remove the stop clip (30) seal, take in one hand the sliding tube and the outertube in the other hand, draw heavily on both parts to uncouple them.



(3) OUTERTUBE COMP (9) SHAFT
(30) CLIP (31) SCRAPER

NOTE:

The piston metal (27) is locked in the outer tube, repeat the operation until separation, it must be released by force.

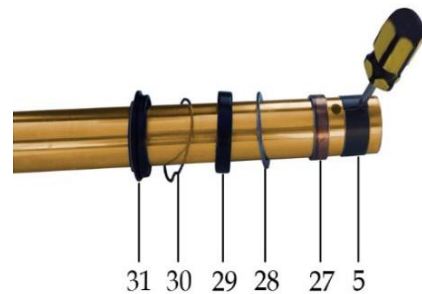
To remove the fork bushes, gently pry them out by inserting a screwdriver into the slot, until you can remove them using your fingers.

CAUTION:

Make sure you do not damage the Teflon coating on the bushes

Do not open the bush more than is necessary.

Remove the slide metal (5), the piston metal (27), the washer (28), the seal (29), the clip (30), and the scraper (31) from the sliding tube.



(5) SLIDE METAL (27) PISTON METAL
(28) WASHER (29) SEAL (30) CLIP
(31) SCRAPER

FORK INSPECTION:

Detent cap/ Adjustment rod

Check the rod for buckling (32), the cap seal condition (20) and also the adjustment screw is working correctly.



(32) ROD (20) TOP CAP

Compression cap

Check that the cap is in good condition and its working adjustment.

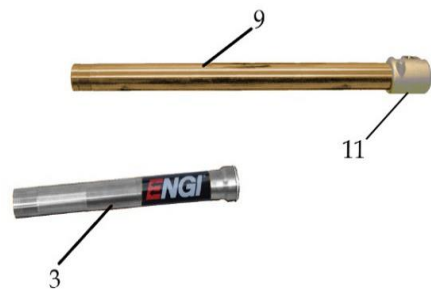
Replace the o-ring (78 - 84), the clamp washer (79) by new ones if necessary. Control the shim impemeability and the nut tightening (63). **Torque: (5 N.mm-0,6 kgs).**



(80) END PIECE (78 - 84) O-RING
(79) CLAMP WASHER (63) NUT

Shaft / Outertube comp

Check the shaft chrome condition (9), also control tube buckling and the footleg left tightening (11).



(3) OUTERTUBE COMP (9) SHAFT
(11) FOOTLEG LEFT

Shaft buckling control:

Put the shaft (9) on V-shaped supports and measure the runout.

LIMIT: 0,2 mm (real roundness = lecture x 0,5)

Inspect the outertube comp surface condition (3) (inside/outside).



(9) SHAFT

Rod

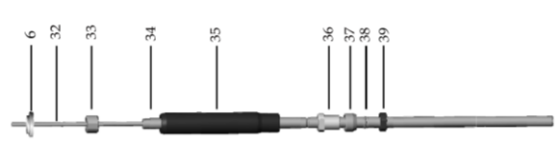
In order to separate the extender (34) of the cylinder tube (62), unscrew the oil lock nut (39) and the oil lock stopper (36) of the oil lock snap ring (37). Remove the buckle (38) and slide the extender (34) in the bottom through the cylinder tube (62).

Check the good condition of these items mentionned above, also control the rebound adjustment good working, the valve impermeability and the nut tightening (60).

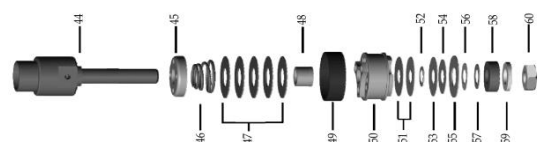
Torque (5 N.mm-0,6 kgs)



(62) CYLINDER TUBE



(32) ROD (33) NUT (34) EXTENDER (35) SPRING GUIDE (36) OIL LOCK STOPPER (37) OIL LOCK SNAP RING (38) BUCKLE
(39) OIL LOCK NUT



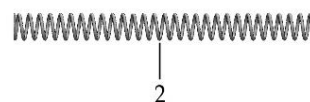
(60) NUT

Uncompressed length of fork spring

Measure the length of the fork spring when uncompressed

LIMIT : 370 mm

Replace the fork spring (2) if it is shorter than the limit.



(2) SPRING

REASSEMBLY:

Before reassembly, clean items with a **neutral** cleaning product to preserve their good condition. Replace the following parts (scraper, seal and bushings) by new ones.

During reassembly, protect the shaft upper extremity in order to not damage the new parts installed.

Install the scraper (31), the clip (30), the seal (29) turning the inscription on the scraper side, the washer (28), the piston metal (27), then the slide metal (5).

Fix the shaft in the vice and install the outertube comp in the tube. Place the ENGI tool (ENGI-OST) between the clip and the seal, hit the seal with the tool to see the clip place to install the parts in the outertube comp. Put the clip in its place and place the scraper in the outertube comp.

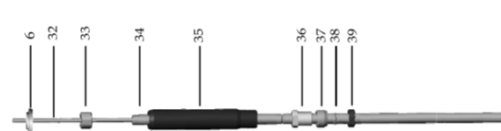


(31) SCRAPER (30) CLIP (29) SEAL
(28) WASHER (27) PISTON METAL (5) SLIDE METAL



(31) SCRAPER (30) CLIP (ENGI-OST) TOOL (29) SEAL

Install the extender (34) in the cylinder tube (62), then immobilize the extender with the ENGI tool (ENGI-DAT). Place the oil lock nut (39), the oil lock snap ring (37) and the oil lock stopper (36) of the hydraulic stop system on the extender (34), put the buckle (38) then grip the nut on the screw to block all together.



(6) SPRING SEAT AGAINST TOP CAP STEEL (32) ROD
(33) NUT (34) EXTENDER
(35) OIL LOCK SNAP RING (38) BUCKLE
(39) OIL LOCK NUT

Replace the cartridge and detent cap in the tube and tighten to the correct torque, while immobilizing the fork rod using the ENGI "T" tool.



(62) CYLINDER TUBE

TORQUE: (45 N.mm - 4,6 Kgs)

Move back the spring seat against top cap steel (6), the plastic guide from the spring guide (35) and the rod (32), then grip the nut (33) of the stop guide.



TOOL (ENGI-PDR)



TOOL (ENGI-DAT)

CONTROL

Slide the rod and the outertube comp up to down to control the fork good friction.

Fully compress the fork, refill with fork oil up to the top of the barrel with the recommended fork oil. (KYB 01)

After filling, slowly pump 10 times at least the damper rod up and down to prime the cartridge.

Refill again up to the top of the barrel, slowly pump the barrel up and down to distribute the fork oil once again.

To correctly adjust the oil level, lower the rod and the outertube comp. With a needle, remove the oil volume recommended here 90 mm.

Oil level: 90 mm volume of air between the oil and the top of the barrel.

Oil quantity : 250ml per tube.

Reassembly :

Manually tighten completely the top cap (20) on the rod, and take it back to the nut (33) contact, then with the ENGI tool (A9) tighten to the specified torque .

Torque : (22N.mm – 2.3 kgs)

Screw the top cap in the outertube comp, then with the ENGI tool (A9) tighten to the good torque .

Torque : (40 N.mm – 4.1 kgs)

Adjusting the fork's hydraulics:

NOTE: The firmness adjusting bolts must be in the closed position (turn the bolt clockwise). Adjust the hydraulics by unscrewing the lower bolts 12 clicks (compression), and the upper ones 8 clicks (detent).

CAUTION:

Clean the fork guard bolt threads.

Fit the fork guards (A8) and tighten the bolts (A7).

Torque: (5 N.mm - 0,6 kgs)

FORK INFORMATION:

COMPRESSION: -12 CLICS

DETENT: -8 CLICS

OIL VOLUME: either 90 mm or 250 ml



(20) TOP CAP (33) NUT (A9) ENGI WRENCH



(A7) BOLT (A8) FORK GUARD

REFITTING ON THE BIKE:

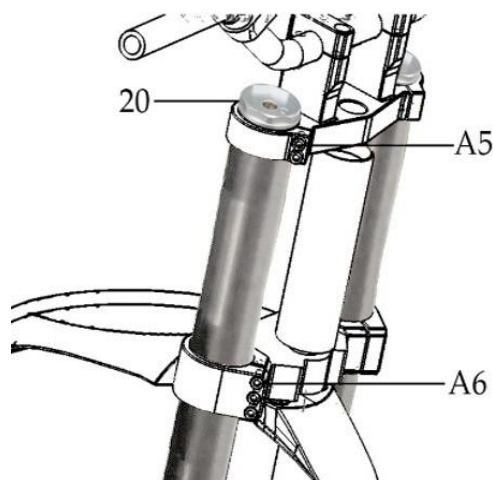
Loosen the lower clamp bolts (A6) and upper ones (A5), move the fork to the correct position.

Tighten the lower crown bolt (A6) and the upper ones (A5) to the correct torque.

Torque: lower (10 N.mm - 1,1 Kgs) upper (12 N.mm - 1,3 kgs)

Excessive tightening of the fork bolts will deform the tubes, they must be replaced if they become deformed.

To facilitate pressure bleeding after fitting the fork assemblies, align the outer tubes in such a way that the bolts are in front of the rebound adjustment device.



(A5) TOP CROWN BOLT (20) TOP CAP
(A6) BOTTOM CROWN BOLT

FIT THE FRONT WHEEL:

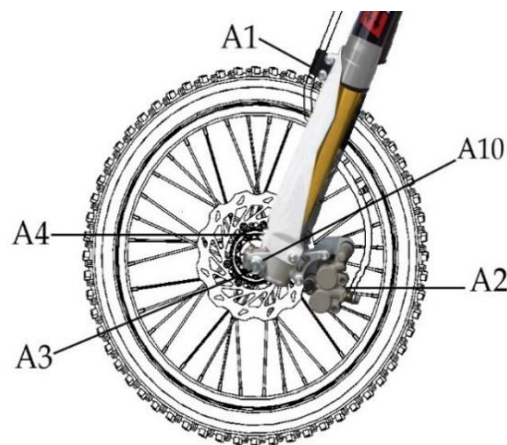
Clean the threads of the caliper bracket bolts and coat them with thread lock or an equivalent product.

Fit the caliper and tighten the bolts to the required torque.

Torque: (15 N.mm - 1,6 kgs)

Replace the hose clips on the brake hose and secure with two bolts: tighten correctly

Install the front wheel on the fork, place the axle (A3) in the wheel, tighten the nut (A10) tighten the footleg screw (A4) to the correct torque (12 N.mm - 1,3 Kgs), moderately, tighten the nut (A10) to the correct torque (50 N.mm - 5,1 Kgs)



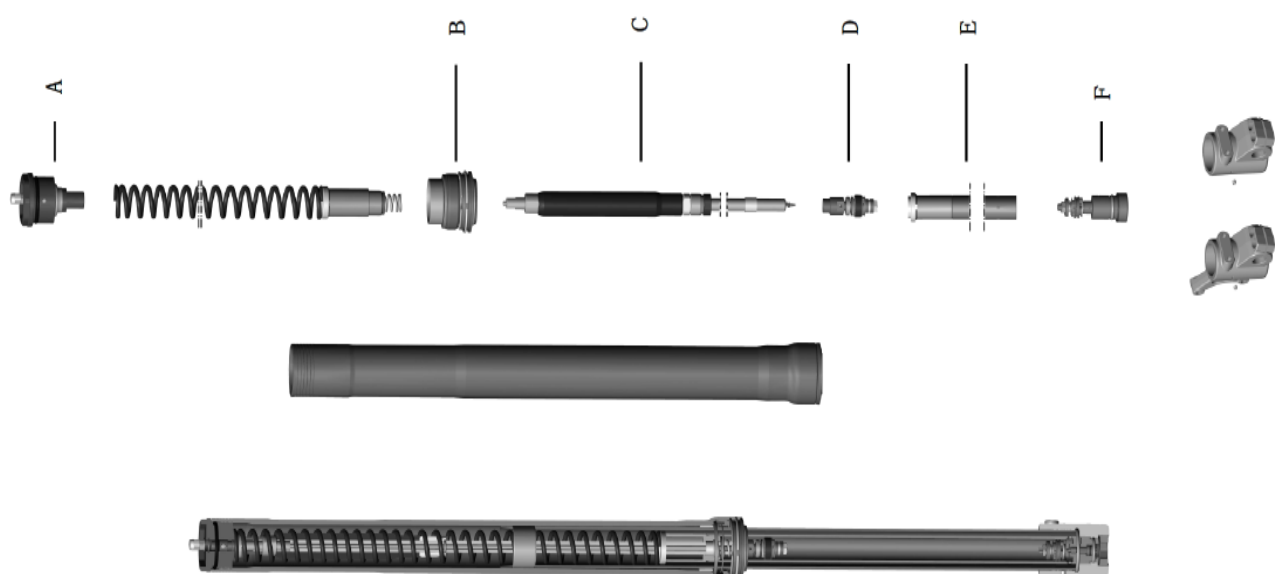
(A1) CLIPS (A2) BRAKE CALIPER
(A3) FRONT WHEEL AXE (A10) NUT
(A4) FOOTLEG SCREW

Caution:

While assembling the front wheel, respect the shaft alignment before tighten the footleg screw (A4) to assure that your ENGI fork is working.

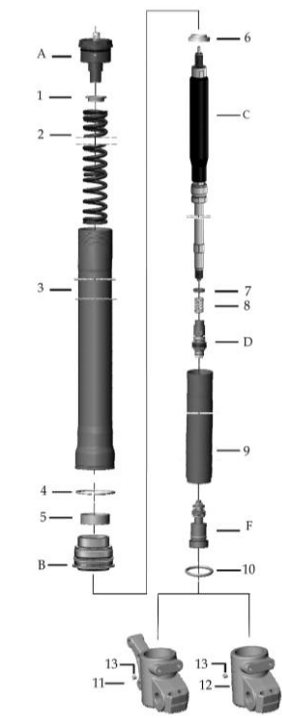


PART LIST



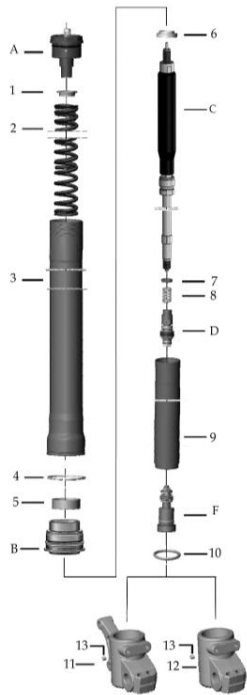
ENGI FORK ASSEMBLY PROCESS

No	QTY	Ref.	English	Francais
A	1	EF03-000A-01	TOP CAP ASSY	BOUCHON FOURCHE
1	1	EF03-0001-01	SPRING SEAT AGAINST TOP CAP STEEL Φ29×Φ21×5.5	RONDELLE BUTEE RESSORT Φ29×Φ21×5.5
2	1	EF03-0002-02	SPRING L=328 (Fork 660 mm)	RESSORT L=328 (Fork 660 mm)
2	1	EF03-0002-01	SPRING L=383 (Fork 735 / 775 / 800 mm)	RESSORT L=383 (Fourche 735 / 775 / 800 mm)
3	1	EF03-0003-03	OUTERTUBE COMP L=426 (Fork 660 mm)	FOURREAU FOURCHE L=426 (Fourche 660 mm)
3	1	EF03-0003-01	OUTERTUBE COMP L=481 (Fork 775 / 735 mm)	FOURREAU FOURCHE L=481 (Fourche 775 / 735 mm)
3	1	EF03-0003-02	OUTERTUBE COMP L=516 (Fork 800 mm)	FOURREAU FOURCHE L=481 2015 (Fourche 800 mm)
4	1	EF03-0004	SNAP RING OIL SEAL 52×2	CLIP FOURREAU 52×2
5	1	EF03-0005	SLIDE METAL 36×38×19.7L	BAGUE COULISSANTE 36×38×19.7L
B	1	EF03-0027-ZC	BUSHING KIT ASSEMBLY	BAGUE ASSEMBLÉE
6	1	EF03-0006-01	SPRING SEAT AGAINST TOP CAP STEEL 21×31×7.5L	RONDELLE BUTEE RESSORT 21×31×7.5L



ENGI FORK ASSEMBLY PROCESS

No	QTY	Ref.	English	Francais
C	1	EF03-000C-01	CYLINDER ASSY	GUIDE ASSEMBLÉ
7	1	EF03-0007	WASHER 11.5×20.8×2	RONDELLE 11.5×20.8×2
8	1	EF03-0008	SPRING	RESSORT
D	1	EF03-000D-01	BASE VALVE REBOUND	KIT VALVE DÉTENTE
9	1	EF03-0009-02	SHAFT L=452 with hole (Fork 660 mm)	TUBE DE FOURCHE L=452 (Fork 660 mm)
9	1	EF03-0009-01	SHAFT L=505 with hole (Fork 735 / 775 mm)	TUBE DE FOURCHE L=505 (Fourche 735 / 775 mm)
9	1	EF03-0009-01	SHAFT L=542 with hole (Fork 800 mm)	TUBE DE FOURCHE L=542 (Fork 800 mm)
F	1	EF03-000F-01	COMPRESSION VALVE ASSEMBLY	KIT VALVE COMPRESSION
10	1	EF03-0010	O-RING 34×3X40	JOINT TORIQUE 34×3×40
11	1	EF03-0011	FOOTLEG LEFT	PIED DE FOURCHE GAUCHE
12	1	EF03-0012	FOOTLEG RIGHT	PIED DE FOURCHE DROIT
13	1	EF03-0013	SCREW M4×0.7×4L	VIS M4×0.7×4L



A

PLUG UNIT ASSEMBLY

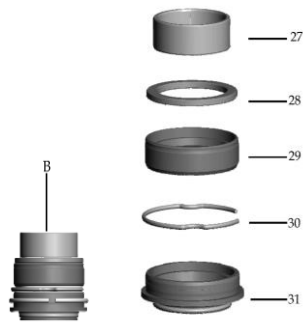
No	QTY	Ref.	English	Francais
A	1	EF03-000A-01	TOP CAP ASSY	BOUCHON FOURCHE
16	1	EF03-0016-01	VALVE M5	VALVE M5
18	1	EF03-0018-01	O-RING 3.5×1.5	JOINT TORIQUE 3.5×1.5
19	1	EF03-0019-01	O-RING 7×2	JOINT TORIQUE 7×2
20	1	EF03-0020-01	TOP CAP	BOUCHON FOURCHE
21	1	EF03-0021	O-RING 37×3	JOINT THORIQUE 37×3
22	1	EF03-0022-01	ADJUSTMENT SCREW L=24.8	VIS REGLAGE DÉTENTE L=24.8
23	1	EF03-0023	SCREW M4×5	VIS M4×5
24	1	EF03-0024	SPRING 2×0.5×8L	RESSORT 2×0.5×8L
25	1	EF03-0025	BALL Φ3	BILLE Φ3
26	1	EF03-0026-01	CLIP 11×0.8 2015	CLIP 11×0.8 2015



B

BUSHING KIT ASSEMBLY

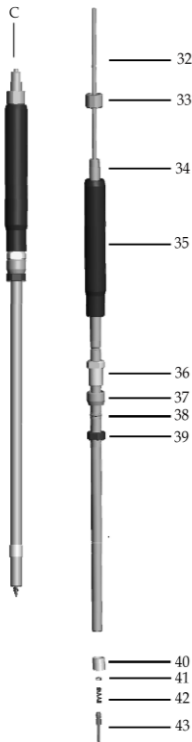
No	QTY	Ref.	English	Francais
B	1	EF03-000B-01	BUSHING KIT ASSEMBLY	BAGUE ASSEMBLÉE
27	1	EF03-0027-ZC	PISTON METAL 37×41×12L	BAGUE FIXE 37×41×12L
28	1	EF03-0028	WASHER 38×48.5×2.5	RONDELLE 38×48.5×2.5
29	1	EF03-0009-01	SEAL 36×50×11	JOINT SPY FOURCHE 36×50×11
30	1	EF03-0030-01	CLIP	CLIP
31	1	EF03-0011-01	SCRAPER 34.6×54.9×13	CACHE POUSSIÈRE 34.6×54.9×13



C

HYDRAULIC KIT ASSEMBLY

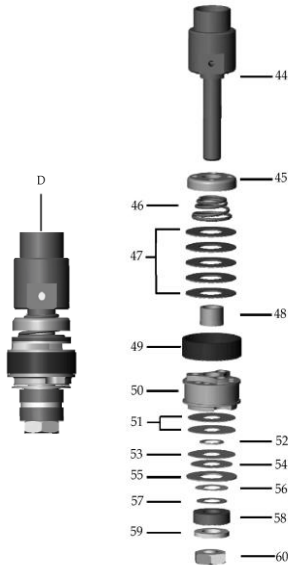
No	QTY	Ref.	English	Francais
C	1	EF03-000C-01	CYLINDER ASSY	GUIDE ASSEMBLÉ
32	1	EF03-0032-01	ROD 3.15×420	TIGE REGLAGE DETENTE 3.15×420
32	1	EF03-0032-02	ROD 3.15×418	TIGE REGLAGE DETENTE 3.15×418
33	1	EF03-0033-01	NUT M10	ECROU M10
34	1	EF03-0034-01	EXTENDER L=440 (Fork 735 / 775 / 800 mm)	TIGE DE DÉTENTE L=440 (Fourche 735 / 775 / 800 mm)
34	1	EF03-0034-02	EXTENDER L=385 (Fork 660 mm)	TIGE DE DÉTENTE L=385 (Fourche 660 mm)
35	1	EF03-0035-01	SPRING GUIDE L=124 (Fork 775 / 800 mm)	GUIDE RESSORT L=124 (Fourche 775 / 800 mm)
35	1	EF03-0035-02	SPRING GUIDE L=157 (Fork 735 mm)	GUIDE RESSORT L=124 (Fourche 735 mm)
35	1	EF03-0035-03	SPRING GUIDE L=119 (Fork 660 mm)	GUIDE RESSORT L=119 (Fourche 660 mm)
36	1	EF03-0036-01	OIL LOCK STOPPER M14	VIS DE FREIN HYDRAULIQUE M14
37	1	EF03-0037-01	OIL LOCK SNAP RING 15×19.75×12L	SEGMENT HYDRAULIQUE 15×19.75×12L
38	1	EF03-0038-01	C BUCKLE 9.4×11.4	C BOUCLE 9.4×11.4
39	1	EF03-0039-01	OIL LOCK NUT M14	ECROU FREIN HYDRAULIQUE M14
40	1	EF03-0040-01	SPACER 11×13×10L	ENTRETOISE 11×13×10L
41	1	EF03-0041-01	O-RING 3×1.5	JOINT TORIQUE 3×1.5
42	1	EF03-0042-01	SPRING L=15	RESSORT L=15
43	1	EF03-0043-01	NEEDLE INSIDE REBOUND PISTON ROD L=34	AIGUILLE DÉTENTE L=34



D

REBOUND VALVE ASSEMBLY

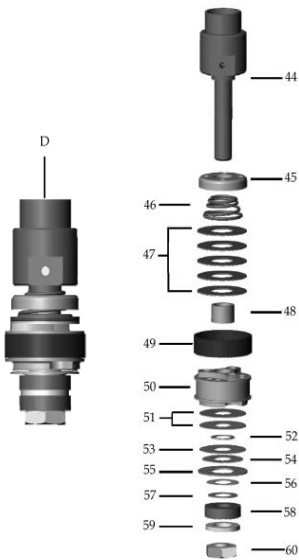
No	QTY	REF.	English	Francais
D	1	EF03-000D-01	BASE VALVE REBOUND	KIT VALVE DÉTENTE
44	1	EF03-0044-01	PISTON HOLDER M10 Φ15	SUPPORT PISTON REBON M10 Φ15
45	2	EF03-0045	SPRING SEAT AGAINST TOP CAP STEEL	RONDELLE BUTEE RESSORT
46	2	EF03-0046	SPRING	RESSORT
47	6	EF03-0047-01	SHIM 8×17×0.3 4PCS + 8×17×0.2 2PCS	CLAPET 8×17×0.3 4PCS + 8×17×0.2 2PCS
48	2	EF03-0048	WASHER 6×7.8×5L	ENTRETOISE 6×7.8×5L
49	1	EF03-0049	FREE PISTON METAL BOTTOM 18.4×19.9×5L	SEGMENT DETENTE 18.4×19.9×5L
50	1	EF03-0050-01	REBOUND PISTON 3.3×6×19.5×9.4L	PISTON DE DETENTE 3.3×6×19.5×9.4L
51	2	EF03-0051	SHIM Φ6×Φ16×0.15	CLAPET Φ6×Φ16×0.15



D

REBOUND VALVE ASSEMBLY

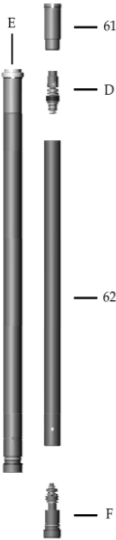
No	QTY	REF.	English	Francais
52	2	EF03-0052-01	SHIM Φ6×Φ8×0.1	CLAPET Φ6×Φ8×0.1
53	1	EF03-0053	SHIM Φ6×Φ16×0.1	CLAPET Φ6×Φ16×0.1
54	1	EF03-0054	SHIM Φ6×Φ14×0.1	CLAPET Φ6×Φ14×0.1
55	1	EF03-0055	SHIM Φ6×Φ12×0.15	CLAPET Φ6×Φ12×0.15
56	1	EF03-0056	SHIM Φ6×Φ11×0.15	CLAPET Φ6×Φ11×0.15
57	1	EF03-0057	SHIM Φ6×Φ10×0.2	CLAPET Φ6×Φ10×0.2
58	1	EF03-0058	WASHER 6×12.5×3.0T	RONDELLE 6×12.5×3.0T
60	1	EF03-0060-01	NUT M6×5	ECROU M6×5



E

CYLINDER TUBE ASSEMBLY

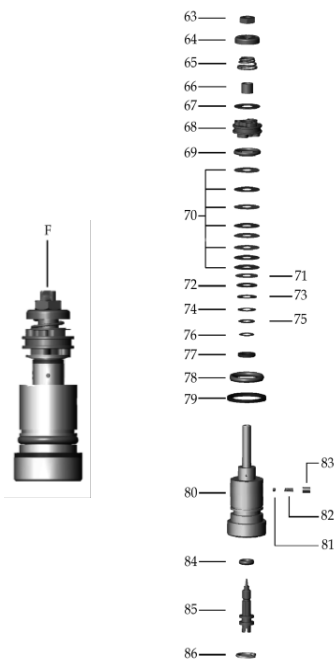
No	QTY	Ref.	English	Francais
E	1	EF03-000E-01	CYLINDER COMPLETE	CARTOUCHE HYDRAULIQUE
61	1	EF03-0061-01	CYLINDER TUBE CAP L=40.5	TETE DE CYLINDRE L=40.5
D	1	EF03-000D-01	BASE VALVE REBOUND	KIT VALVE DÉTENTE
62	1	EF03-0062	CYLINDER TUBE 25×20×335L M22 (Fork 775 mm)	CYLINDRE HYDRAULIQUE 25×20×335L M22 (Fourche 775 mm)
62	1	EF03-0062-01	CYLINDER TUBE 25×20×300L M22 (Fork 735 mm)	CYLINDRE HYDRAULIQUE 25×20×300L M22 (Fourche 735 mm)
62	1	EF03-0062-02	CYLINDER TUBE 25×20×370L M22 (Fork 800 mm)	CYLINDRE HYDRAULIQUE 25×20×370L M22 (Fourche 800 mm)
F	1	EF03-000F-01	COMPRESSION VALVE ASSY	KIT VALVE COMPRESSION



F

COMPRESSION VALVE ASSEMBLY

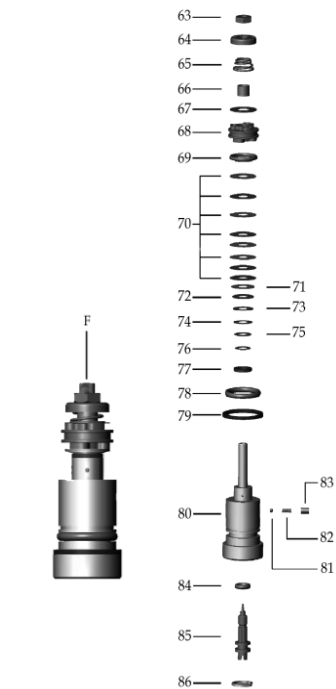
No	QTY	Ref.	English	Francais
F	1	EF03-000F-01	COMPRESSION VALVE ASSY	KIT VALVE COMPRESSION
63	1	EF03-0063-01	NUT M6×5	ECROU M6×5
64	1	EF03-0064	SPRING SEAT AGAINST TOP CAP STEEL	RONDELLE BUTEE RESSORT
65	1	EF03-0065	SPRING	RESSORT
66	1	EF03-0066	SPACER 6×7.8×5L	ENTRETOISE 6×7.8×5L
67	1	EF03-0067	SHIM 8×17×0.3	CLAPET 8×17×0.3
68	1	EF03-0068-01	COMPRESSION PISTON	PISTON COMPRESSION
69	1	EF03-0069	O-RING 17×1.5	JOINT TORIQUE 17×1.5
70	8	EF03-0070-01	SHIM Φ6×Φ17×0.1	CLAPET Φ6×Φ17×0.1
71	1	EF03-0071	SHIM Φ6×Φ15×0.1	CLAPET Φ6×Φ15×0.1
72	1	EF03-0072	SHIM Φ6×Φ14×0.1	CLAPET Φ6×Φ14×0.1
73	1	EF03-0073	SHIM Φ6×Φ13×0.1	CLAPET Φ6×Φ13×0.1
74	1	EF03-0074	SHIM Φ6×Φ12×0.1	CLAPET Φ6×Φ12×0.1



F

COMPRESSION VALVE ASSEMBLY

No	QTY	Ref.	English	Francais
75	1	EF03-0075	SHIM Φ6×Φ11×0.1	CLAPET Φ6×Φ11×0.1
76	2	EF03-0076-01	SHIM Φ6×Φ10×0.2	CLAPET Φ6×Φ10×0.2
77	2	EF03-0077-02	WASHER 6.5 x 12×1.2	RONDELLE 6.5 x 12×1.2
78	1	EF03-0078	O-RING 18×2.5	JOINT THORIQUE 18×2.5
79	1	EF03-0079	CLAMP WASHER 22×26×1.5T	RONDELLE CUIVRE 22×26×1.5T
80	1	EF03-0080-01	END PIECE M22	BOUCHON COMPRESSION M22
81	1	EF03-0081	BALL Φ2	BILLE Φ2
82	1	EF03-0082	SPRING 1.2×0.4×6L	RESSORT 1.2×0.4×6L
83	1	EF03-0083-01	SCREW M3×3	VIS M3×3
84	1	EF03-0084-01	O-RING 6.8×1.9	JOINT THORIQUE 6.8×1.9
85	1	EF03-0085-01	COMPRESSION ADJUSTMENT SCREW M6	VIS REGLAGE COMPRESSION M6
86	1	EF03-0086-01	CLIP 9.5×11.5×0.8L	CLIP 9.5×11.5×0.8L



RECOMMENDED TOOLS

REF.	English	Francais	TOOLS
ENGI-FCW	ENGI rebound cap Blockage tool	Outil de blocage bouchon détente ENGI	
ENGI-DAT	ENGI rod Blockage tool	Outil de blocage tige de détente ENGI	
ENGI-PDR	ENGI hydraulic cartridge Blockage tool	Outil de blocage cartouche hydraulique ENGI	