

FORK

SET UP GUIDE

2020

PRE-RIDE CHECK

1. Do not ride your bicycle if any one of the following test criteria is not passed! Riding your bike without eliminating any defect or carrying out the necessary adjustments can result in an accident, serious injury or even death.

2. Do you notice any cracks, dents, bent or tarnished parts of your suspension fork or any other part of your bicycle? If so, please contact a trained and qualified bicycle mechanic to check your fork and/or complete bike.

3. Do you notice any oil leaking out of your fork? Check hidden areas like behind the fork arch under the crown and main seals. If so, please consult a trained and qualified bicycle mechanic to check your fork or bike.

4. Make sure your wheels are perfectly centered in order to avoid any contact with suspension fork or brake system.

5. Make sure the axle system is secure. There should be no play between hub and fork lower.

6. Compress your fork with your body weight. If it feels too soft, inflate to the proper pressure to achieve accurate SAG, inflate until your SAG is between 15-20%. Please also refer to SAG section for more details.

7. Make sure your brakes are properly installed/adjusted and work appropriately. This also applies to every other part of your bike like handlebars, pedals, crank arms, seat post, saddle, etc.

8. Check the cable length and routing of your components. Make sure they do not interfere with your steering actions or full compression and extension of your fork.

SOME HELPFUL TIPS:

1. All of these settings are just starting points to get you close. Don't be afraid to use your adjusters or change up your settings to make it perfect for you.

2. Write down your settings! Modern suspension forks have a ton of adjustment which is awesome, but you can get lost. When you find a good spot, write it down so you can always go back to it.

3. Dedicate time to setting your bike up for the trail, not the parking lot. It's a good idea to get out on the trail and find a section you can repeat. Try different settings to truly feel what the adjusters are doing. Once you truly understand what they do and feel like, you'll know when to use them in any situation.

4. Balance is key! This is a big one. Try your best to get your fork and shock feeling equal. If the rebound in the rear shock is way faster than fork, the bike won't have a very predicable ride. Feel to make sure the rebound, spring rate, and compression are having similar feelings front and back. This will provide a predictable and confidence inspiring ride.

5. If you have questions, don't hesitate to ask. Give us a call, shoot us an email, we'll get you dialed in!

STEP 1: OTT SETTING

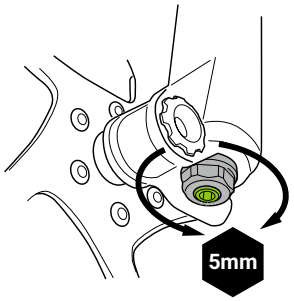
OTT is a DVO Exclusive Performance Feature that delivers amazing traction, comfort & control matching a wide range of riders weights & skill levels. OTT allows the rider to fine tune the small bump sensitivity without affecting the mid-stroke or end-stroke.

D1 / E1 Models: Externally Adjustable OTT **D2 / E2 Models:** Internally Adjustable OTT **D3 / E3 Models:** No OTT Feature

D1 / E1 OTT Setting

Our D1/E1 models come with an externally adjustable OTT. This is a 5mm allen key adjustment located on the bottom of the left fork leg. When adjusting the OTT, go by full rotations not by clicks.

Important: Let the air out of the fork before adjusting OTT!



Rider Weight	Number of OTT Rotations Starting From Open (Counter-Clockwise)											
LBS	1	2	3	4	5	6	7	8	9	10	11	12
120-140												
140-150												
150-160												
160-170												
170-180												
180-190												
200+												

Tech Tip!

As a general rule of thumb, the heavier or aggressive rider will use more air pressure & more OTT. A lighter or less aggressive rider will use lower air pressures and less OTT.

Heavier Riders = More OTT
Lighter Riders = Less OTT

D2 / E2 OTT Setting

Our D2/E2 Models come with an internally adjustable OTT. This design provides three settings of OTT which is determined by the rider's body weight.

Important: Visit tech.dvosuspension.com to learn how to adjust your OTT setting.

Rider Weight	OTT Setting		
LBS	Open Setting	Middle Setting	Max Setting
120-150			
150-170			
170-200+			

WHAT IS OTT?

OTT stands for "Off The Top" and it does just that. Allow you to tune how your fork feels off the top. OTT gives you the "Best of Both Worlds" for softer initial feel while being firm in the mid-stroke and end stroke… *Run higher air pressures without the harshness.*

HOW DOES IT WORK?

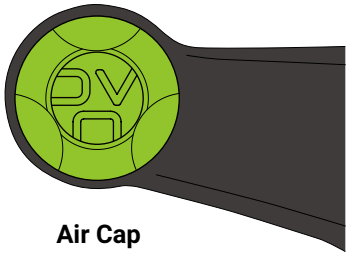
OTT adjusts the preload on the negative spring inside the air cartridge. The negative spring on your OTT system is a traditional coil spring. You can preload the spring just like you would on a rear coil shock. This gives you the ability to fine tune the initial sensitivity without having it affect the mid-stroke or end stroke.

HOW CAN I USE IT?

Higher air pressures allows fast moving riders to skip over bumps and holes but the downside is the harshness. With the OTT feature, the initial 30mm's of travel can be independently tuned regardless of air pressure. Heavier or fast riders can run higher air pressures while still having amazing small bump sensitivity & traction by simply increasing OTT. Lighter riders who run lower air pressures will use less OTT allowing use of all the travel without having the fork sack or hammock in the middle of the stroke. The Best of Both Worlds!

STEP 2: AIR PRESSURE

Adjust the air pressure to attain your proper sag setting by removing the air cap and inflating the fork with a suspension pump. Refer to the chart below for your recommended starting pressure based on your rider weight.



Air Cap

THINK DIFFERENTLY WHEN ADJUSTING PRESSURE

DVO Suspension requires a different mindset to properly adjust and get right. That's the idea of our products, to do things differently and in a better way. In other suspension products, riders can be timid to adjust the air pressure because of the negative effects it would have on different aspects of the travel. For example: If a rider is bottoming out too easily on medium hits, but loves the small bump sensitivity of the fork, they would most likely make a compromise and run the fork too soft. We see this all too often. Set your air pressure for your mid-stroke and end-stroke support then use the OTT feature to fine-tune the small bump sensitivity.

Do Not Exceed Maximum Air Pressure!

Diamond D1-D2-E1-E2: 170 PSI

Diamond D3-E3: 150 PSI

Sapphire 34 D1: 150 PSI

Onyx SC D1-D2-E1-E2: 130 PSI

Onyx DC: 140 PSI

Tech Tip!

Start by inflating your fork 10 PSI over your desired pressure
Then reduce the pressure to your desired setting.

SAPPHIRE 34 D1

Rider Weight		Air Pressure (psi)														
lbs	kg	55	65	75	80	85	90	95	100	105	110	115	120	125	130	135
120-139	54-63	Plush		Firm												
140-159	64-72			Plush		Firm										
160-179	73-81					Plush		Firm								
180-199	82-90							Plush		Firm						
200-219	91-100									Plush		Firm				
220-239	101-108											Plush		Firm		
240+	109+													Plush		Firm

RECOMMENDED STARTING POINTS FOR AIR PRESSURE

DIAMOND D1/D2 E1/E2

Rider Weight		Air Pressure (psi)														
lbs	kg	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150
120-139	54-63															
140-159	64-72															
160-179	73-81															
180-199	82-90															
200-219	91-100															
220-239	101-108															
240+	109+															

DIAMOND D3 E3

Rider Weight		Air Pressure (psi)														
lbs	kg	70	75	80	85	90	95	100	105	110	115	120				
120-139	54-63	Plush	Firm	Plush	Firm											
140-159	64-72		Plush	Firm	Plush	Firm										
160-179	73-81			Plush	Firm	Plush	Firm									
180-199	82-90				Plush	Firm	Plush	Firm								
200-219	91-100					Plush	Firm	Plush	Firm							
220-239	101-108						Plush	Firm	Plush	Firm						
240+	109+							Plush	Firm	Plush		Firm				

ONYX SC D1 D1/D2 E1/E2

Rider Weight		Air Pressure (psi)														
lbs	kg	60	65	70	75	80	85	90	95	100	110	120	130			
120-139	54-63	Plush	Firm	Plush	Firm											
140-159	64-72			Plush	Firm	Plush	Firm									
160-179	73-81				Plush	Firm	Plush	Firm								
180-199	82-90					Plush	Firm	Plush	Firm							
200-219	91-100						Plush	Firm	Plush	Firm						
220-239	101-108							Plush	Firm	Plush	Firm					
240+	109+								Plush	Firm	Plush	Firm				

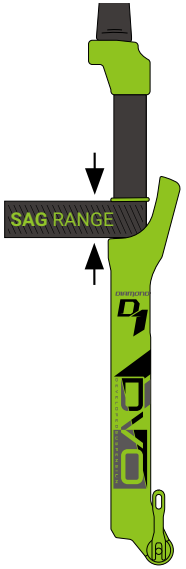
ONYX DC

Rider Weight		Air Pressure (psi)														
lbs	kg	65		70		75		80		85		90		95		100
120-139	54-63	Plush		Firm												
140-159	64-72			Plush		Firm										
160-179	73-81					Plush		Firm								
180-199	82-90							Plush		Firm						
200-219	91-100									Plush		Firm				
220-239	101-108											Plush		Firm		
240+	109+													Plush		Firm

STEP 3: SAG SETTING

SAG is the amount your fork compresses under your body weight (don't forget to include your riding gear), also referred to as Rider Weight. Remember that these are only starting points and adjustments will vary based on rider ability, trail conditions and personal preference.

After you are done setting up your suspension fork according to the recommended base settings, check your SAG to make sure you are within the recommended SAG settings.



The recommended SAG is 15% - 30%. Setting proper SAG is the only way to find the right air pressure for your fork. Refer to the chart below to find the proper SAG.

FORK TRAVEL	15% SAG FIRM	20% SAG PLUSH	30% SAG SUPER PLUSH
100 mm (3.9 in)	15 mm (0.6 in)	20 mm (0.8 in)	30 mm (1.2 in)
110 mm (4.3 in)	17 mm (0.7 in)	22 mm (0.9 in)	33 mm (1.3 in)
120 mm (4.7 in)	18 mm (0.8 in)	24 mm (0.9 in)	36 mm (1.4 in)
130 mm (5.1 in)	20 mm (0.8 in)	26 mm (1.0 in)	39 mm (1.5 in)
140 mm (5.5 in)	21 mm (0.8 in)	28 mm (1.1 in)	42 mm (1.6 in)
150 mm (5.9 in)	23 mm (0.9 in)	30 mm (1.2 in)	45 mm (1.8 in)
160 mm (6.3 in)	24 mm (0.9 in)	32 mm (1.3 in)	48 mm (1.9 in)
170 mm (6.7 in)	26 mm (1.0 in)	34 mm (1.3 in)	51 mm (2.0 in)
180 mm (7.1 in)	27 mm (1.1 in)	36 mm (1.4 in)	54 mm (2.1 in)
203 mm (8.0 in)	30 mm (1.2 in)	41 mm (1.6 in)	61 mm (2.4 in)

CAN SAG AFFECT PEDALING?

Front fork SAG can have a huge effect on pedaling performance. You will mainly notice this when climbing or sprinting out of the saddle (standing up). Riders that make pedaling a priority can run less SAG (around 15%) to increase the stability of the bike. If you have a fork with a quick range low speed adjuster (ex. Diamond Series, Sapphire) you can use that to reduce the pedal bob from the front end by using the firmest setting.

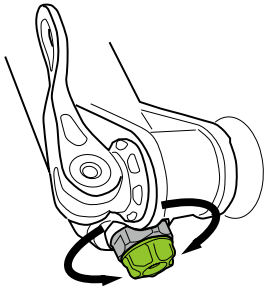
HOW DOES SAG EFFECT THE HANDLING OF MY BIKE?

It is very beneficial to test different SAG settings for various riding conditions. Changing the amount of SAG on your fork will change the geometry of your bike. Riders that make high speed stability a priority can run less SAG. This will keep the front end of the bike high under breaking and rough sections but comfort and cornering traction will be compromised.
Riders that want to have a comfortable ride with great cornering traction should run more SAG (around 30%).

DOES SAG EFFECT MY BODY POSITION ON THE BIKE?

SAG has a huge effect on your body position. Riders that run less SAG will maintain the geometry of their bike during braking, cornering, climbing, and high speed/rough sections. This can be a difficult setting to utilize for most riders though. It reduces the comfort level of your ride & cornering traction. Going to a higher amount of SAG on your fork will improve the cornering of your bike drastically. This is because the head angle of your bike becomes steeper under braking. It allows your bike to corner better and also transfers your weight forward to increase traction on the front end. The comfort level of your fork will also increase drastically and reduce any deflection that can happen on square edge obstacles.

STEP 3: REBOUND ADJUST



Rebound controls the speed at which the fork extends after compression. Rebound damping control is relative to the amount of air pressure used.

Start with your rebound closed (clockwise) then adjust out to make it faster. This is the best and most consistent way to do it.

SAPPHIRE 34 D1

Air Pressure	Rebound Clicks - Starting From Closed										
PSI	2	4	6	8	10	12	14	16	18	20	22
125-135+	Slower		Faster								
115-125			Slower		Faster						
105-115					Slower		Faster				
95-105							Slower		Faster		
85-95									Slower		Faster
55-85									Slower		Faster

DIAMOND D1/E1 - D2/E2

Air Pressure	Rebound Clicks - Starting From Closed										
PSI	2	4	6	8	10	12	14	16	18	20	22
140-150+	Slower		Faster								
130-140			Slower		Faster						
120-130					Slower		Faster				
110-120							Slower		Faster		
100-110									Slower		Faster
80-100									Slower		Faster

DIAMOND D3/E3

Air Pressure	Rebound Clicks - Starting From Closed										
PSI	2	4	6	8	10	12	14	16	18	20	22
100-110+		Slow		Fast							
90-100			Slow		Fast						
85-90				Slow		Fast					
80-85					Slow		Fast				
75-80						Slow		Fast			
70-75							Slow		Fast		

ONYX SC D1/E1 - D2/E2

Air Pressure	Rebound Clicks - Starting From Closed										
PSI	2	4	6	8	10	12	14	16	18	20	22
95+	Slower		Faster								
85-90			Slower		Faster						
80-85					Slower		Faster				
75-80							Slower		Faster		
70-75									Slower		Faster
60-70									Slower		Faster

ONYX DC

Air Pressure	Rebound Clicks - Starting From Closed										
PSI	2	4	6	8	10	12	14	16	18	20	22
100+	Slower		Faster								
85-90			Slower		Faster						
80-85					Slower		Faster				
75-80							Slower		Faster		
70-75									Slower		Faster
60-70									Slower		Faster

WHAT IS REBOUND?

Rebound controls the return speed after the fork is compressed. Rebound damping control is relative to the amount of air pressure used. Higher air pressure requires more (slower) rebound damping and a lower air pressure will require less (faster) rebound damping so please adjust accordingly.

HOW DOES REBOUND EFFECT THE HANDLING OF MY BIKE?

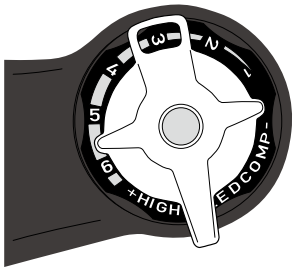
Rebound can drastically change the way your suspension functions as well as your overall control of the bike. It is extremely important to have a balanced rebound setting that is not too fast or too slow. This will depend on the air pressure you run. Higher pressures need more rebound, lower pressures need less rebound. If you notice the front end is dead feeling, rough on high speed chatter, and not tracking in corners, your rebound setting is most likely too slow. If rebound is too fast, your wheel will fall into more holes, instead of skipping over the top of them. Handling will feel twitchy and hard to control, it will be easier to be thrown out of control on jumps and landings.

IS MY REBOUND TOO FAST OR TOO SLOW?

If rebound is too fast, your wheel will fall into more holes, instead of skipping over the top of them. Handling will feel twitchy and hard to control, it will be easier to be thrown out of control on jumps and landings. If rebound is set too slow it will pack on successive hits because the fork cannot extend fast enough keeping you in the mid stroke. This will result in the wheel going deeper into the travel on every hit and riding towards the end stroke.

STEP 4: HIGH SPEED COMPRESSION

D1/E1 level products come with a full range high speed compression adjuster. This is the black dial located under the green colored low speed compression adjuster. HSC controls the damping force under faster suspension movements. Use this to control the amount of support on bigger impacts such as g-outs, landings, drops, etc..



Tech Tip!

Start with your HSC all the way open (counter-clockwise). Adjust by full rotations, NOT by clicks. When you make an adjustment to your HSC, do 1-2 full rotations at a time.

Clockwise Rotations = Firmer
Counter-Clockwise Rotations = Softer

SAPPHIRE 34 D1

Air Pressure	Rotations (not clicks) clockwise					
PSI	0	1	2	3	4	5
55-70	■	■				
70-85	■	■				
85-100			■	■		
100-115			■	■		
115-130					■	■
130+					■	■

DIAMOND D1

Air Pressure	Rotations (not clicks) clockwise					
PSI	0	1	2	3	4	5
80-95	■	■				
95-110	■	■				
110-125			■	■		
125-140			■	■		
140-155					■	■
155+					■	■

ONYX SC D1

Air Pressure	Rotations (not clicks) clockwise					
PSI	0	1	2	3	4	5
60-65	■	■				
65-70	■	■				
75-80			■	■		
85-90			■	■		
90-100					■	■
100+					■	■

ONYX DC D1

Air Pressure	Rotations (not clicks) clockwise					
PSI	0	1	2	3	4	5
60-70	■	■				
70-80	■	■				
80-90			■	■		
90-95			■	■		
95-100					■	■
100-110+					■	■

WHAT IS HSC?

High Speed Compression controls the damping force under faster suspension movements regardless of the rider's speed. HSC comes into effect on fast, rough, technical trails, g-outs and hard landings. If you find yourself easily going through the travel then 1st make sure your sag is correct then adjust your HSC accordingly.

WHY DO I NEED HSC?

High Speed Compression damping affects the suspension when the shaft is moving up and down at high speeds. High Speed Compression helps with large impacts or sharp/sudden impacts. High Speed Compression can be used to reduce bottom.

WHAT HAPPENS IF THERE IS TOO MUCH HSC?

Too much High Speed Compression may result in the fork not being able to reach full travel, and or spiking on large impacts.

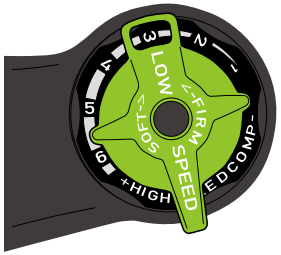
WHAT HAPPENS IF THERE ISN'T ENOUGH HSC?

If you don't have enough High Speed Compression, The fork will blow through it's travel too easily on jump faces, and will bottom out to easily on large impacts.

STEP 5: LOW SPEED COMPRESSION

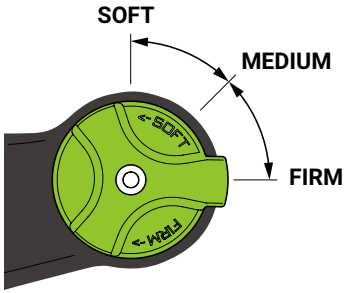
D1 / E1 Low Speed Compression

Our suspension forks come with a "Quick Range" low speed compression adjuster that has 6 clicks of adjustment. Setting "1" is wide open and recommended when descending or riding on technical terrain. When you are climbing, you can switch the LSC to "6" to give you the firmest setting and best pedaling platform. Don't forget to change this back when you start to descend!



D2 / E2 Low Speed Compression

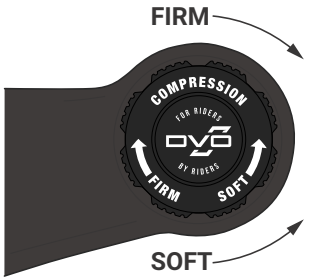
The BERYL "D2 damper" comes with a "Quick Range" low speed compression adjuster that has 4 clicks of adjustment. Setting "SOFT" is wide open and recommended when descending or riding on technical terrain. When you are climbing, you can switch to "FIRM" to give you the firmest setting and best pedaling platform. Don't forget to change this back when you start to descend!



D3 / E3 Low Speed Compression

The D3/E3 Model forks come with a full range low speed compression. Use this feature to add more support for body movements on the bike. This will help the front-end stand up taller and reduce the potential for "diving" under braking.

Start from full open, (counter-clockwise) then make full turn adjustments at a time.



WHAT IS LSC?

Low speed compressions controls the slower vertical movements such as climbing or slower paced trails and bumpy whoop sections. A good example of low speed is rolling slowly over a large rock and riding to its downside, this is where the suspension will fully compress but at a slower rate and low speed compression circuit comes into play. LSC refers to the shaft speed of the suspension and not the actual riding speed. LS compression is best controlled through a low speed oil circuit and or shim stack.

WHY DO I NEED LSC?

Low speed compression affects the suspensions performance when the shaft is moving up and down at slow speeds. Low Speed affects small bump performance and controls dive under braking.

WHAT HAPPENS IF THERE IS TOO MUCH LSC?

Too much Low Speed Compression will result in harshness over small bumps and traction will be reduced. Turning performance may also suffer because the suspension will ride too high in its travel. Ride may become harsh.

WHAT HAPPENS IF THERE ISN'T ENOUGH LSC?

Not enough Low Speed Compression will result in the front end diving to quickly under braking. The suspension will have a mushy feeling and may bottom out too easily.



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