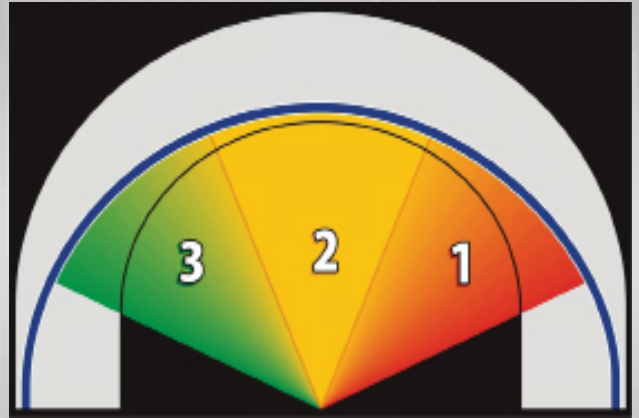


BHE STOCK CAR SHOCK PACKAGE

BHE STOCK CAR SHOCK TUNING GUIDE

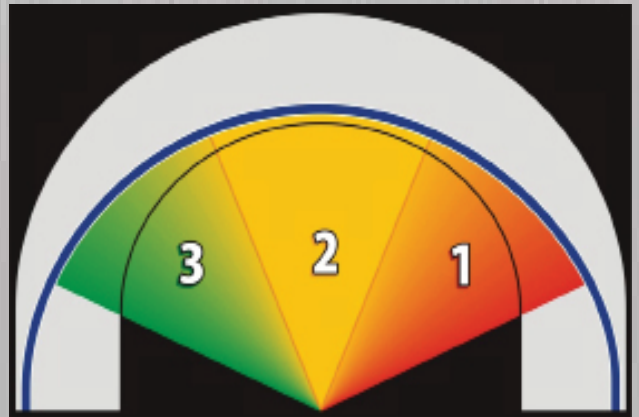
- Shocks are the “Brains” of your Suspension. They are a timing devise allowing the suspension to move slower or faster and stay there less time or more time. Shocks allow the transfer of weight when you want it to load a specific tire.

1. First shock to change is the RF depending on the track conditions and driver input. The RF-S is designed to get the chassis over on the right front sooner(with less compression) which helps when the race track slows down in Phase 1 of the corner. This will help the driver feel the front end similar to when the track was faster. Then depending on the chassis and track we typically take rebound out of the shock to help transfer weight to the rear in phase 3 of the corner. This corner of the chassis is tuned more for corner entry and mid-corner tuning but can affect exit.



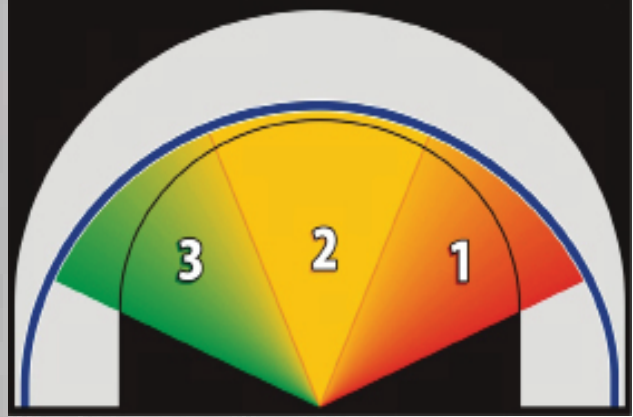
- High speed fast momentum race tracks require more compression which allows the driver to drive farther into the corner. Slower/low banked race tracks require less compression allowing weight transfer sooner to RF. This helps the car to turn in a slower corner entry situation.

2. Second shock to change is the LR. This shock's valving is very dependent on driver's driving style and feel he/she wants out of the car. Driver who charges the corner drives the car sideways (modified style) typically likes a LR shock that has more compression for example 6/3 which would be the base. For those drivers the slick shock we would add compression and take away rebound as the track slows down which would be along the lines of an 8/2. The other type of driver who drives the car very straight (go-kart style) typically like less compression and more rebound in their base shock along the lines as a 3/5. Then when the track slicks off we still do the same as far as adding compression and taking away rebound resulting in a 4/3 or 5/2. With either type of driver, when you add compression to the LR shock, it helps load the RR in phase 1 into phase 2 resulting in added side bite. Also when rebound is taken out of the LR shock, it will add side bite by promoting body roll and weight transfer to the right side.

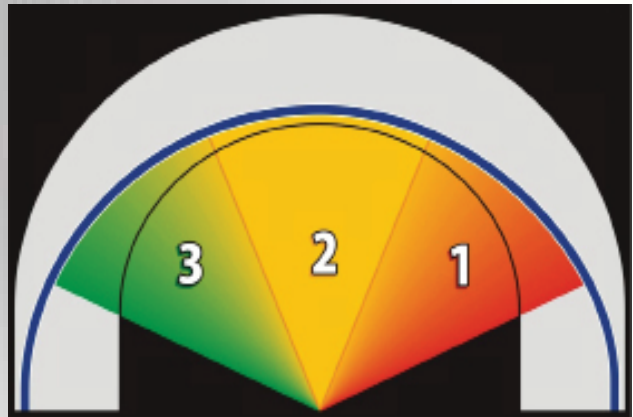


BHE STOCK CAR SHOCKS

3. Third shock change recommend is the right rear. The RR-S is softer on compression and stiffer on rebound. This allows the weight transfer faster and will tighten the chassis on corner entry phase 1 when the track slows down. The increase rebound will keep the chassis over on the right rear longer increasing traction off the corner. Sometime this shock can cause the chassis to push in the middle of the corner and may require more rear steer when using it. The right rear carries the most side load of all the tires and affects the chassis in phase 1, 2, and 3 along with all the way around the track. The RR shock is the most abused of the 4 shocks. This shock should be rebuilt every 20 nights of racing to insure you get optimum performance.



4. The last change to would make is the LF. The normal LF-B 3/5 has softer compression allowing the racecar to turn better into phase 1. With more rebound it holds the LF down longer making that transition last longer into phase 2. The LF-S 5/4 shock is stiffer on compression allowing the chassis to be tighter on corner entry by keeping the left front up longer. During this transition keeping the left front up also keeps the RR tire loaded longer by creating more side-bite. The softer rebound will increase side bite in the corner under the throttle by promoting weight transfer from left front to right rear faster.



- This corner of the chassis has more effect on phase 1 and 2 for tuning. The LF-S should be run when the RR may need more side-bite.

BHE STOCK CAR SHOCKS

Stock Car Tuning Guide

BASE SET-UP

LF
BHE SC-7-LF-B



RF
BHE SC-7-RF-B

TRACKS THAT HAVE SPEED, EITHER WITH GRIP FROM THE MOISTURE OR HIGH MOMENTUM LARGE TRACKS

LR
BHE SC-9-LR-B

RR
BHE SC-9-RR-B

NOTES:

This set-up works well for a variety of track conditions.

SLICK TRACK SET-UP

LF
BHE SC-7-LF-B
OR
BHE SC-7-LF-S



RF
BHE SL13-7-RF-S

SMOOTH SLICK TRACKS WHERE TRACTION IS LIMITED AND WITH SLOWER CORNER SPEEDS. ALSO FOR STOP AND GO TRACKS

LR
BHE SL13-9-LR-S

RR
BHE SC-9-RR-B
OR BHE SC-9-RR-S

NOTES:

This package promotes weight transfer and body roll. For extreme slick use all 4 slicks, for moderately slick or slow use RR-B and LF-B

HEAVY and/or ROUGH TRACK SET-UP

LF
BHE SC-7-LF-B



RF
BHE SC-7-LF-S

Heavy, fast, rough racetracks, and when racing on the cushion

LR
BHE SC-9-LR-B

RR
BHE SC-9-RR-HR

NOTES:

The use of the LF-S on the RF for rough conditions helps stabilize the car from ruts.

Part Number / Code System

SC: Stock Car
LR: Left Rear suspension location
7/9: Length of Travel
B: Base Set-up
S: slick when track is slow/slick



COMPETITION
SUSPENSION INC



STOCK CAR SHOCK MAINTENANCE

SHOCK OIL

- Shocks are intended to gain heat from transferring energy from the spring. This heat is gained by the oil moving through the ports in the piston
- Oil changes viscosity due to heat gain or loss. Hot oil acts thinner and cold oil acts thicker.
- If the shock gains heat to a point the oil changes viscosity the resistance to the piston's movement is reduced which is what we call shock fade.
- Multiple heat cycles throughout weekends of racing also changes the over all viscosity of the oil and brings the shock fade quicker.
- Another aspect of changing the ability of the shock oil is when dirt is carried in through the dents/dings in the shaft.



DENTED BODIES

- In mono tube shocks the piston moves along the inner wall of the outside tube. Therefore any little dent in the body affects the area where the piston works.
- When piston rides through a dent, there is significant chance of ruining the shock's performance.
- A large enough dent will completely lock up the piston. This dent will just catch and eventually deteriorate the piston band and warp the piston.
- Twin tube shocks can take a dent and it will not affect the piston movement if the dent isn't deep enough.
- There is a chance of the dent puncturing the gas bag which will cause constant aeration of the oil, hindering the shock's performance.
- If you have a dent in your twin tube shocks be sure to check for a broken gas bag and if the dent reached the inner tube.



STOCK CAR SHOCK MAINTENANCE

SHAFTS

- When the shaft is exposed to rocks and other debris the chances of shock failure are increased.
- Any pocket in the shaft can collect dirt which is then carried through the seals and mixes with the oil. As we discussed earlier this can hinder the oil's performance
- Along with dirt being carried into the oil, a sharp cut or nick from a rock or debris can cut the seals and create a leak.



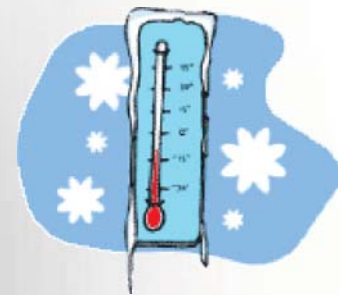
SEALS

- The seals in shocks have greatly improved over time but there is a fine line manufacturers balance on between keeping oil in and reducing stiction.
- Bottoming out the shock on the jamb nut can mushroom the seal. Be sure adjust your shock movement accordingly.
- Abused shafts and not cleaning off excess dirt from the shaft and seals can over time eat away at the seals and change the seals rubricity



OFFSEASON STORAGE

- Along with heat cycles in the oil, the cold cycles can also affect the oil's viscosity. You should always keep your shocks in a temperature controlled area.
- Any seals in the shock can also be affected by extreme cold temperatures and constant temperature fluctuations. This is also why it's smart to keep your tires in a warm area throughout the off season.



STOCK CAR SHOCK MAINTENANCE

SHOCK MAINTENANCE IS ESSENTIAL

How DO YOU KNOW WHO TO TRUST WITH YOUR SHOCK PROGRAM

Quality product

- Knowledge behind the particular product
- Research & Development
- Always progressing

Quality customer service

- Availability
- Turn-around time
- Someone who truly wants you to succeed
- Relationships

Results speak for themselves

- We believe, do what you know best and leave the others to the rest.

Proper preparation results in winning performance



BOB HARRIS ENTERPRISES AUTHORIZED SALES AND SERVICE CENTER FOR



Offering
Complete Dyno
Service on for
ALL makes of
SHOCKS!

- Factory Certified Technicians
- Quick Service & Turnaround
- Genuine Factory Shock Components