



## **BASIC SHOCK ADJUSTMENT PROCEDURES FOR MOTOWOZ ASP (ADJUSTABLE SPRING PROGRESSION) WITH COMPRESSION AND REBOUND ADJUSTERS.**

### **FRONT SHOCKS**

#### **PRELOAD:**

SETTING YOUR PRELOAD IS DONE WITH THE PRELOAD RING (C). IT IS COMMON TO START WITH 2-3 TURNS OF PRE-LOAD FROM INITIAL SPRING CONTACT, THE PRELOAD RING IS HELD IN PLACE WITH A SET SCREW WITH CUSHION UNDERNEATH. USE THE SUPPLIED 5/64 HEX ALLEN KEY TO TURN THE SET SCREW. YOU CAN USUALLY TURN THE PRELOAD COLLAR BY HAND. IF YOU CANNOT, USE THE SUPPLIED SPANNER WRENCH. THE WRENCH IS DOUBLE SIDED. ONE SIDE IS FOR ADJUSTMENT OF THE PRELOAD COLLAR AND THE OTHER SIDE IS FOR THE CROSSOVER RINGS.

#### **CROSSOVERS AND SPRINGS:**

NOW TURN YOUR FOCUS TO THE CROSSOVER RINGS. CROSSOVER RINGS CONTROL THE DURATION THAT THE UPPER SPRING GETS USED IN A PROGRESSIVE MULTIPLE SPRING SET UP. LET'S FOCUS ON THE UPPER CROSSOVER RINGS (D) BEHIND THE TOP TENDER SPRING (E). THIS SPRING CONTROLS VERY SMALL BUMPS AND BODY ROLL TO SOME DEGREE DEPENDING ON THE SET-UP. BY MOVING THE CROSSOVERS UP ON THE SHOCK BODY YOU WILL USE THE SPRING DEEPER INTO THE TRAVEL THEREFORE CREATING A SOFTER SET-UP. LOWERING THE RINGS ON THE SHOCK BODY GETS YOU TO THE SPRING BELOW SOONER INTO THE TRAVEL. THIS GIVES A STIFFER FEEL. IF YOU ARE RIDING HIGH SPEED WITH SEVERE CHATTER TYPE BUMPS YOU COULD USE MORE OF THIS SPRING TO SOAK THE BUMPS UP.

THE MIDDLE TENDER SPRING (G) IN A TRIPLE RATE SET UP IS FOR LARGE BUMPS AND SMALL JUMPS WHERE YOU ARE USING MORE OF YOUR AVAILABLE WHEEL TRAVEL. THE LOWER CROSSOVER RINGS (H) WILL CONTROL THE DURATION THAT THE SPRING IS USED. WITH THE LOWER CROSS OVER RINGS (H) POSITIONED LOWER, THE EFFECT WILL BE STIFFER BECAUSE THE SHOCK IS USING THE SPRING FOR A SHORTER PERIOD OF TIME AND A HIGHER RING POSITION WILL BE USING THE SPRING LONGER PERIOD OF TIME CREATING A SOFTER SET-UP.

THE MAIN SPRING (I) IS FOR BIG JUMPS OR BIG HITS. BY CHANGING THE DURATION OF ALL YOUR CROSSOVER RINGS YOU CAN DECIDE HOW FAST YOU GET TO THE MAIN SPRING. ONCE AGAIN, THE FASTER THE UPPER SPRINGS LOCK OUT THE SOONER YOU WILL GET TO THE MAIN SPRING AND THE STIFFER YOUR SET-UP WILL BE. TO FAMILIARIZE YOURSELF WITH THESE ADJUSTMENTS, MOVE THE RINGS UP AND PUSH ON THE SUSPENSION. THEN MOVE THE RINGS DOWN AND PUSH ON THE SUSPENSION. AS YOU CAN SEE THE ADJUSTMENT IS VERY NOTICEABLE. THE SET-UP POSSIBILITIES ARE ENDLESS WITH THE MOTOWOZ ASP SYSTEM. REALLY THE ONLY THING YOU CAN SCREW UP IS THE TIMING OF THE SPRINGS. IT IS **IMPERATIVE** THAT THE UPPER SPRING (E) LOCK OUT BEFORE THE SPRING BELOW IT. BETWEEN THE SPRINGS IS A BLACK PLASTIC SPRING GUIDE (F). WHEN PUSHING DOWN ON THE SUSPENSION YOU WILL SEE THE CROSSOVERS HIT THE SPRING GUIDE. IT IS IMPORTANT THAT THE UPPER CROSSOVERS (D) HIT THE SPRING GUIDE (F) BEFORE THE LOWER SET OF CROSSOVERS (H) HIT THERE SPRING GUIDE (F). ANY MULTIPLE SPRING SET-UP HAS TO WORK THIS WAY. ONE OTHER NOTE, IF YOU START ADDING MORE TURNS OF PRELOAD TO YOUR SHOCKS YOU WILL NEED TO REPOSITION YOUR CROSSOVERS LOWER AS WELL NORMALLY BY A EQUAL AMOUNT.

#### **STEPS TO TIGHTEN THE CROSSOVER RINGS TOGETHER:**

1. MAKE SURE THE SHOCK IS CLEAN.
2. PLACE RINGS WHERE YOU WANT THEM AND TIGHTEN TOGETHER BY HAND AS TIGHT AS POSSIBLE.
3. ROTATE THE SPRING TO FIND AN OPENING IN A COIL. (JACKING THE FRONT END UP WILL GIVE YOU A LARGER COIL OPENING) PUT THE SPANNER WRENCH ONTO THE RING. HOLD THE WRENCH ON THE RING WITH ONE HAND. NOW GENTLY TAP THE BACK SIDE OF THE WRENCH WITH A SMALL BRASS OR PLASTIC HAMMER UNTIL IT IS TIGHT. IF THE ADJACENT RING TURNS, TRY MOVING THE WRENCH TO THE OTHER RING. IF IT STILL TURNS, REPEAT UPPER STEPS OR SLIGHTLY REPOSITION THE RINGS.

#### **REAR SHOCK:**

ON THE CURRENT MOTOWOZ REAR SHOCK THEIR IS ONLY ONE CROSSOVER RING. IT IS HELD IN POSITION WITH A SET SCREW WITH A COPPER CUSHION UNDERNEATH. THE PURPOSE OF THE COPPER IS TO MAKE SURE THE THREADED SHOCK BODY DOES NOT GET DAMAGED BY THE SET SCREW. (REMEMBER, RAISING THIS CROSSOVER WILL SOFTEN YOUR SET-UP AS DESCRIBED ABOVE JUST LIKE A FRONT SHOCK. LOWERING THE RING WILL STIFFEN YOUR SET-UP.)

#### **COMPRESSION AND REBOUND ADJUSTMENT:**

THE COMPRESSION ADJUSTER (T) CONTROLS THE AMOUNT OF COMPRESSION DAMPING. TURNING THE ADJUSTER CLOCKWISE WITH A SCREW DRIVER WILL INCREASE THE DAMPING RATE GIVING A STIFFER FEEL FOR THE SHOCK.

THE REBOUND ADJUSTER (N) WILL SPEED UP OR SLOW DOWN THE SHOCKS SPEED WHILE RETURNING TO IT'S EXTENDED LENGTH AFTER COMPRESSION. TURNING THE ADJUSTER CLOCKWISE WITH A SCREW DRIVER WILL SLOW THE SHOCKS RETURN SPEED DOWN.