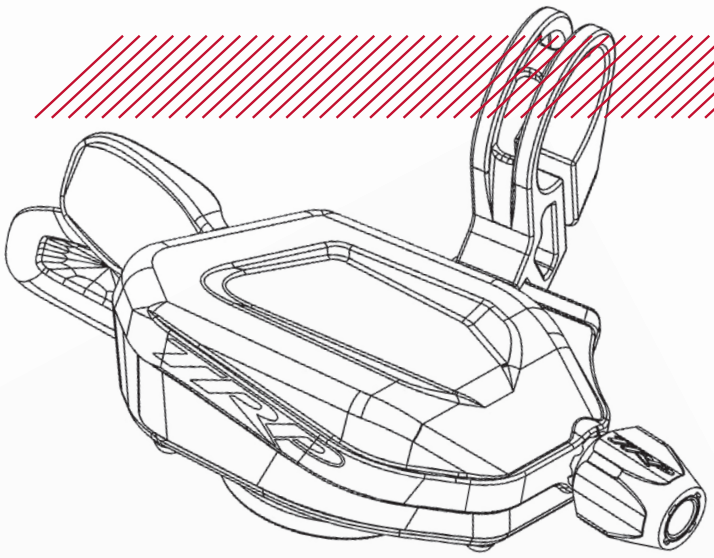
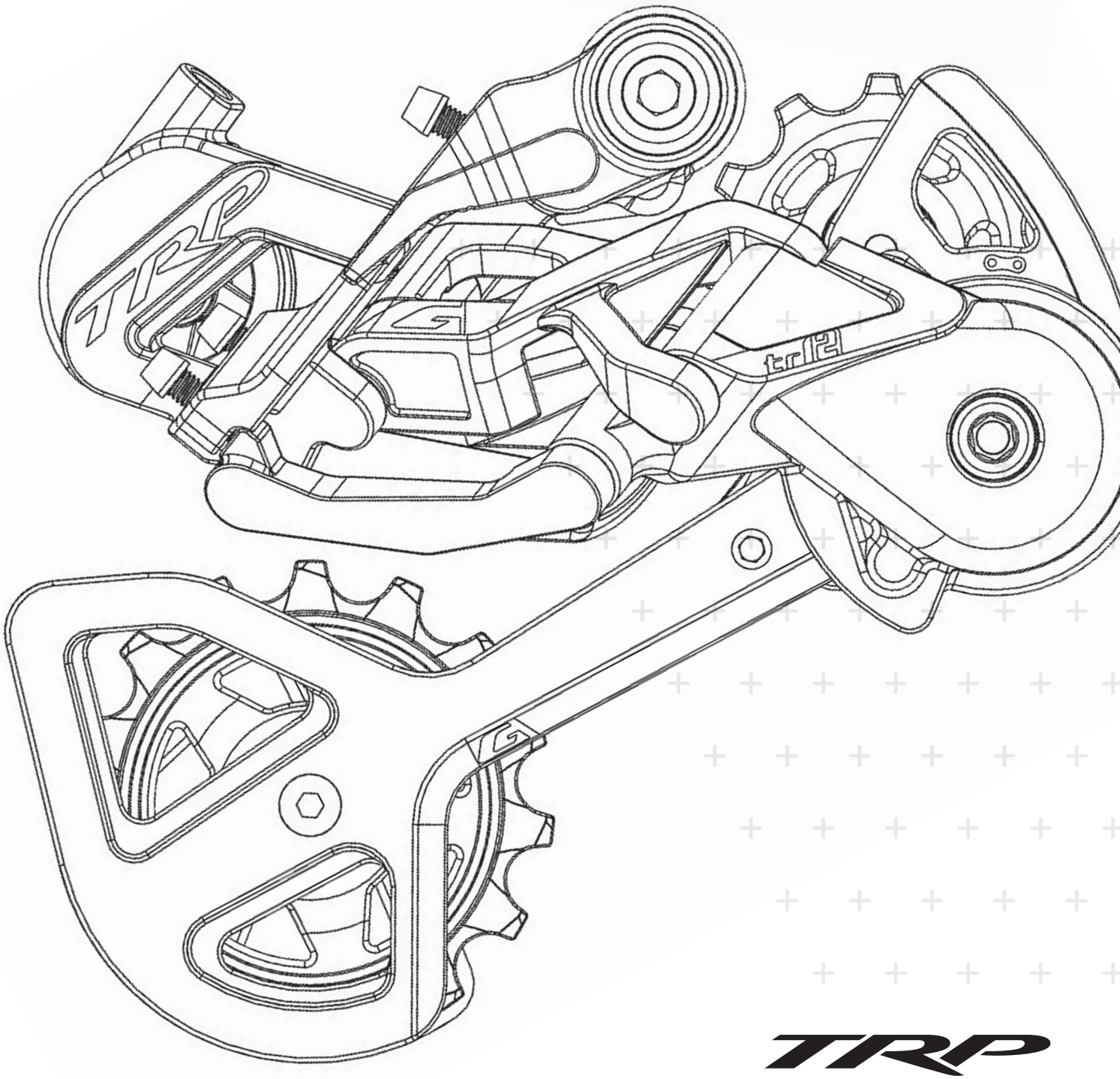
TRP **TR12**

TECH-SERVICE-INFO





TRP

SERVICE INFORMATION

INSTALLATION INSTRUCTIONS - REAR DERAILLEUR

1. With the bike in a work stand, ensure the derailleur hanger is straight using a hanger alignment tool. (Hanger straightness is critical to the performance of the rear derailleur. As such, proper care must be taken to ensure it is within the tolerance specified by the frame manufacturer.)

2. Mount the derailleur to the hanger using a 5mm allen key. Ensure that the clutch is switched to the off position and that the Hall Lock lever is in the off/upright position. (Failure to do so may prevent installation of the rear derailleur.) While tightening the main bolt to the hanger, ensure that the b plate is placed firmly up against the hanger. There should be no gap between the b plate and the hanger. Torque the derailleur to 10 - 12 Nm.

3. Install the chain onto the chainring and the smallest cog of the cassette. Route the chain through the derailleur. Pull the end of the chain that is routed through the derailleur to slightly tension the derailleur. Find the two inner links that will be used with the master link and shorten the chain using a chain breaking tool (Using the chain length decal as a reference can help quickly determine chain length.) Connect the two ends of the chain using the included mater link Confirm the chain length is not too short by bottoming out or temporarily removing the rear shock.

4. With the chain on the smallest cog, pedal the bike and turn the H Limit screw clockwise. This will push the chain onto the second smallest cog. After the chain has settled onto the second smallest cog, turn the H Limit screw counterclockwise to allow the chain to fall onto the smallest cog. Ensure there is no noise from the chain rubbing the frame or second smallest cog of the cassette.

5. Route the shift cable through the shift housing. Thread the cable through the cable pulley to the cable pinch plate on the arm of the derailleur. Tighten the bolt using 5mm allen wrench to 4 - 6 Nm. Trim any excess cable to 30 - 40mm and install a cable crimp end.

6. Slowly shift the derailleur into the largest cog, being careful to not over shift. Using a 3mm allen wrench, tighten the L Limit screw until the bolt contacts the derailleur. (This will prevent the derailleur from pushing the chain into the spokes.)

7. Adjust the b tension using a 3mm allen wrench. Thread the b tension screw clockwise to increase the gap between the upper pulley and the cassette. Thread the b tension screw counterclockwise to decrease the gap between the upper pulley and the cassette. Measure the gap between the upper pulley and the largest cog of the cassette while the bike is in sag position. Stop when the teeth of the largest cog of the cassette are 6.5 - 7.5mm away from the teeth of the upper pulley. (Do not make any adjustments to b-tension with the Hall Lock engaged.)

SERVICE INFORMATION

INSTALLATION INSTRUCTIONS - SHIFTER

1. Install shift housing from the handlebars to the rear derailleur following your frame manufacturers routing. (Ensure there is enough housing to allow full rotation of the handlebars without restricting its movement.) Cut housing to the appropriate length and install a shift housing ferrule at each end of the housing.

2. Install the shifter on the bar using the supplied clamp and hardware (or the appropriate shifter integration clamp). Using a 4mm allen wrench, tighten the clamp bolt to 3 Nm. (If using carbon handlebars, lightly apply carbon paste to prevent rotation without over-tightening.)

3. Thread the barrel adjuster all the way in and then rotate back two full turns to ensure proper indexing can be achieved.

4. Ensure the cable head is properly seated in the shifter mechanism and that the shifter is in the lowest gearing possible by pressing the release lever several times. Run the cable through the shifter housing and out to the rear derailleur. (If installing a new cable, remove the cable entry plug from the shifter and thread the cable through the shifter. Re-install the cable entry plug.)

5. With the high and low limits set and the b tension properly adjusted, index the shifter to ensure the derailleur functions properly. If the derailleur hesitates when shifting from the large cogs to the small cogs of the cassette, thread the barrel adjuster clockwise to decrease cable tension. If the derailleur hesitates when shifting from the small cogs to the large cogs of the cassette, thread the barrel adjuster counterclockwise to increase cable tension. Adjust as needed.

6. Adjust the position of the advance lever (if desired) by loosening the two T10 Torx bolts holding the advance lever to the shifter. Once the lever is in the desired position, tighten the two T10 Torx fasteners to 1 Nm. (Note: With the advance lever rotated further back toward the rider, thumb clearance between the advance lever and the handlebar increases.)

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REAR DERAILLEUR - SPARE PARTS KITS INSTALLATION

Replacing the Inner Cage and Pulleys (K-D7-1):

Remove the M4 fasteners from the inner cage and the outer cage using a 3mm allen. Remove the inner cage. Remove the upper and lower pulley and the accompanying bearing spacers. Install the new upper and lower pulley and the accompanying bearing spacers. Install the lower pulley with the TRP logo facing outward. Install the new inner cage. Install the two M4 fasteners using a 3mm allen wrench. Tighten to 2-3Nm.

Replacing the Upper and Lower Pulley (K-D7-2):

Remove the M4 fasteners from the inner cage and the outer cage using a 3mm allen. Remove the inner cage. Remove the upper and lower pulley and the accompanying bearing spacers. Install the new upper and lower pulley and the accompanying bearing spacers. Install the lower pulley with the TRP logo facing outward. Replace the inner cage. Install the two M4 fasteners using a 3mm allen wrench. Tighten to 2-3Nm.

Derailleur Hardware (K-D7-3):

B Tension Bolt – M4X22

Anti-vibration Plastic Block

H Limit Screw – M4X10

L Limit Screw – M4X14

Anti-vibration Plastic Block

Replacing the B Bolt (K-D-1):

With the derailleur removed from the bike, remove the E clip using snap ring pliers. Remove the B plate. Remove the B bolt and wave spring. Lightly grease the new wave spring and install into the head piece. Install the new B bolt. Install the B plate and E clip.

Replacing the Cable Pulley (K-D-2):

Remove the cable pulley bolt using a 2.5mm allen. Remove the cable pulley cover plate. Remove the cable pulley and replace with a new one. Reinstall the cable cover plate and the cable pulley bolt using the 2.5mm allen. Tighten until snug. (Do not over-tighten; doing so may prevent rotation of pulley.)

Cable Anchor Kit (K-D-3):

Cable Anchor Bolt – M6X11.5

Cable Anchor Pinch Plate

SERVICE INFORMATION

SHIFTER - SPARE PARTS KITS INSTALLATION

Replacing the Advance (Pull) Lever (K-S-1):

Remove the two T10 Torx fasteners holding the advance lever to the shifter. Remove the advance lever plate and the advance lever. Install the new advance lever and advance lever plate to the shifter. Install the T10 Torx fasteners into the advance lever and tighten when set to your preference.

Replacing the Barrel Adjuster (K-S-2):

Remove the cable from the derailleur and shifter. Remove the shift cable housing from the barrel adjuster. Unthread the barrel adjuster out of the upper housing. Install the new barrel adjuster into the housing. (Note: the spring and bolt go into the collar.) Reinstall the cable and housing. Adjust as needed to set optimal cable tension.

Replacing the Shifter Clamp (K-S-3):

Remove the upper housing from the shifter using a 4mm allen wrench. Remove the bar clamp from the handlebars. Install the new clamp by sliding it onto the handlebar. Install the shifter to the clamp with the M5 bolt using a 4mm allen.

Replacing the Shifter Housing (K-S-4):

Remove the cable entry plug and the shift cable. Remove the upper housing from the bar clamp using a 4mm allen. Remove the barrel adjuster from the upper housing. Remove the advance lever screws using a T10 Torx. Remove the advance lever plate and the advance lever. Remove the three T10 Torx fasteners from the lower housing. Remove the lower housing. Remove the shifter mechanism from the upper housing. Install the shifter mechanism into the new upper housing. Install the new lower housing onto the upper housing. Install the shifter housing screws. Install the barrel adjuster in the new upper housing. Install the advance lever and the accompanying advance lever plate. Reinstall the two T10 Torx fasteners into the advance lever. Mount the shifter to the bar and tighten the clamp bolt to 3 Nm. Install the cable and cable entry plug. Adjust as needed.

SERVICE INFORMATION

DERAILLEUR CLUTCH ADJUSTMENT

If you notice excessive chain noise, consider increasing the clutch force. To do so, locate the two 2 mm set screws and turn them clockwise.

If you feel the clutch force is set too high and limiting suspension performance, consider decreasing the clutch force. To do so, locate the two 2 mm set screws and turn counterclockwise. Fig. 7

NOTE: The clutch force adjustment is precise; begin adjusting your clutch in 1/8 turn increments. Another quick way to determine if decreasing the clutch force will yield an improvement on suspension is to simply turn the clutch off.

SERVICE INFORMATION

HALL LOCK INSTALLATION

Before installing your rear derailleur, ensure the Hall Lock lever is in the off/open/upright position.

Install the rear derailleur using a 5mm allen, tightening to 10-12 Nm.

After adjusting the B gap to 5-6mm, turn the Hall Lock lever in to on/closed/down position.

Do not make any adjustments to B gap with the Hall Lock on.

In the event of rock strike, do not force the derailleur forward as doing so may loosen the mounting bolt. Simply open the hall lock lever to release to derailleur back to its original position.

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TR12 COMPATABILITY CHART

MAX. 50 T CASSETTES

Cassette	Tooth Count	Freehub Driver	Ranking
Sram PG-1230 NX Eagle	11-50	HG	***
Sram XG-1275 GX Eagle Sram XG-1295 X01 Eagle Sram XG-1299 XX1 Eagle	10-50	XD	***
Shimano XTR CS-M9100 Shimano XT CS-M8100 Shimano SLX CS-M7100	10-45	MicroSpline	**
SunRace MZ90 SunRace MZX0	11-50	HG	*
SunRace MZ91X	10-50	XD	*
e*thirteen TRS+	9-46	XD	*
e*thirteen TRS+	9-50	XD	*

Chain	Ranking
All Sram 12 Speed	***
All Shimano 12 Speed	**
All KMC 12 Speed	*

*** Best
** Better
* Good

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TROUBLESHOOTING GUIDE

Problem	Possible Cause	Correction
Derailleur won't Install/Uninstall	Hall Lock is engaged	Turn Hall Lock off
	B Plate is not parallel with Hanger	Check the B Plate and correct as needed
Shifter doesn't move Derailleur	Cable is not routed through shifter properly	Route the cable through the cable carrier in the shifter
	Cable pinch bolt is not sufficiently tight	Torque the cable pinch bolt to 4-6 Nm
	Advance lever is not sufficiently tight	Tighten the advance lever retaining screws
Chain jumps from smallest cog to frame dropout	High gear limit screw is not adjusted properly	Turn in limit screw "H" until the guide pulley is aligned with the outboard edge of the smallest cog
Difficult or impossible to shift chain onto smallest cog	High gear limit screw is not adjusted properly	Unscrew limit screw 'H' until the guide pulley is aligned with the outboard edge of the smallest cog
Chain jumps over largest cog and falls between the spokes and the largest cog, or inner cage plate contacts spokes	Low Gear Limit Screw is not adjusted properly	Turn in limit screw 'L' until the center of the guide pulley is aligned with the center of the largest cog
	Rear derailleur or derailleur hanger is bent	Straighten using a derailleur hanger alignment guide or replace
Delayed shifting	Clearance between guide pulley/ sprocket is too large	Adjust b-adjust screw by turning it counter-clockwise
Rough Shifting behavior	Clearance between guide pulley/ sprocket is too small	Adjust b-adjust screw by turning it clockwise
Shifts more gears onto smaller sprockets than intended	Shift cable insufficiently tensioned	Turn barrel adjuster on the shifter counter-clockwise
Delayed shifting onto larger sprocket	Shift cable insufficiently tensioned	Turn barrel adjuster on the shifter counter-clockwise
Delayed shifting onto smaller sprocket	Shift cable is too tight	Turn barrel adjuster on the shifter clockwise
	Excessive cable friction, pinched or poorly routed cable	Lubricate or replace cable and housing. Check for excessive bending of cable housing and ensure cable is seated in pinch groove
Chain gap (clearance from largest cog to upper pulley wheel) is too large or too small	Chain is sized too small or too large	Size the rear chain according to the user manual
	Rear suspension chainstay growth	Check the chain gap clearance when the rear suspension is both fully extended and compressed 30%
Chain falls off of pulleys	Worn or damaged pulleys	Replace pulleys