

# Biomechanical Rider Assessment Form — Primary Evaluation

Athlete: \_\_\_\_\_ Date: \_\_\_\_\_

Specialist: \_\_\_\_\_

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## 1. General Posture and Static Alignment

Area	Criterion	Observation / Comment
Head and Cervical Spine (C0–C7)	Head position relative to vertical axis; forward head posture, lateral flexion	
Shoulder Girdle	Clavicular symmetry, scapular position (protraction/retraction)	
Thoracic Spine (Th1–Th12)	Kyphotic curvature, mobility during respiration	
Lumbar Spine (L1–L5)	Lordosis (hyper/hypo), visible asymmetry	
Pelvis	Anterior/posterior tilt, rotation, height of <i>crista iliaca</i> , position of <i>spina iliaca anterior superior</i>	
Lower Limbs	Leg axis, valgus/varus alignment, leg length, foot position	

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## 2. Active and Passive Hip Joint Mobility

Movement	Normal Range (°)	Right	Left	Limitation / Pain / Comment
Flexio coxae (flexion)	120–130°			
Extensio coxae (extension)	10–15°			
Abductio coxae (abduction)	40–45°			

<b>Adductio coxae (adduction)</b>	20–30°
<b>Rotatio interna (internal rotation)</b>	30–40°
<b>Rotatio externa (external rotation)</b>	40–50°

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### 3. Muscle Balance and Functional Testing (Main Groups)

Muscle / Group	Latin Name	Function	Clinical Grade (0–5 MRC)	Notes
Gluteus maximus	<i>m. gluteus maximus</i>	Hip extension, pelvic stabilization		
Gluteus medius	<i>m. gluteus medius</i>	Abduction, pelvic stabilization in frontal plane		
Piriformis	<i>m. piriformis</i>	External rotation, hip stabilization		
Iliopsoas	<i>m. iliopsoas</i>	Hip flexion, lumbar stabilization		
Quadratus lumborum	<i>m. quadratus lumborum</i>	Lateral flexion, pelvic stabilization		
Erector spinae	<i>mm. erector spinae</i>	Spinal extension		
Rectus abdominis	<i>m. rectus abdominis</i>	Trunk stabilization, flexion control		
Transversus abdominis	<i>m. transversus abdominis</i>	Deep stabilization, intra-abdominal pressure		
Tibialis anterior	<i>m. tibialis anterior</i>	Dorsiflexion, stance control		
Scalene muscles	<i>mm. scaleni</i>	Cervical stabilization, respiratory support		
Sternocleidomastoid	<i>m. sternocleidomastoideus</i>	Head rotation and flexion		

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## 4. Functional Tests

Test	Purpose	Assessment / Comment
Modified Thomas Test	Length of <i>m. iliopsoas</i> / <i>m. rectus femoris</i>	
Trendelenburg Test	Weakness of <i>m. gluteus medius</i>	
FABER (Patrick's) Test	Hip mobility, SI joint stress	
Forward Bend Test	Lumbar flexion symmetry, posterior chain function	
Overhead Squat Test	Pelvic, knee, and ankle coordination	
Lateral Plank Endurance Test	Core and lateral chain stabilization	
Active Straight Leg Raise	<i>m. iliopsoas</i> and deep stabilizer control	

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## 5. Specialist's Summary

Parameter	Description
Key Mobility Restrictions	
Hypertonicity / Hypotonicity	
Functional Imbalances	
Potential Riding Risks	
Corrective Recommendations	

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## 6. Notes

- Photo or video documentation of key tests is recommended (with client consent).
  - Reassessment interval: **after 4–6 weeks of corrective work** or at the end of a training cycle.
  - For significant pelvic asymmetry — consider **ultrasound or X-ray** of the hip joints.
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 *This form is intended for use by licensed specialists in sports medicine, physical therapy, or kinesiology. It supports evidence-based evaluation and individualized correction planning for ADV and off-road riders.*