



COMBINE OPERATIONS MANUAL

Contents

WHAT IS THE COMBINE OPERATIONS MANUAL?	4
PHYSICAL ASSESSMENT	4
STANDING HEIGHT	5
SEATED HEIGHT	6
ARM SPAN	7
WEIGHT	8
BODY COMPOSITION	8
PERFORMANCE TESTING	9
HUMANTRAK	10
MOVEMENT SCREEN	11
BROAD JUMP	12
FORCE PLATES	13
COUNTERMOVEMENT JUMP (CMJ)	14
SQUAT JUMP (SJ)	16
DROP JUMP (DJ)	17
ISOMETRIC MID THIGH PULL (IMTP)	18
ISOMETRIC BELT SQUAT	19
ISOMETRIC SINGLE LEG BARBELL HIP THRUST	20
DYNAMO	21
GRIP STRENGTH	22
ISOMETRIC CORE ROTATION	25
ISOMETRIC ROW	26
FORCE FRAMES	27
HIP ADDUCTION/ABDUCTION STRENGTH	28
SHOULDER FLEXION/EXTENSION STRENGTH	29
SHOULDER ADDUCTION/ABDUCTION STRENGTH	31
SHOULDER INTERNAL/EXTERNAL ROTATION STRENGTH	33
NECK FLEXION/EXTENSION STRENGTH	34
NECK LATERAL FLEXION STRENGTH	36
ANKLE PLANTAR FLEXION STRENGTH	37

SMARTSPEED.....	39
SPRINTS.....	40
505 CHANGE OF DIRECTION (COD)	41
5-10-5 AGILITY.....	42
PERSONNEL AND ORDER OF OPERATIONS.....	43
DATA ORGANIZATION	44

WHAT IS THE COMBINE OPERATIONS MANUAL?

The Combine Operations Manual consists of multiple anthropometric measures and performance testing that can be implemented with a variety of sports we work with. The measurements gathered from the combine are to quantify an athlete's performance to assess their potential. The performance measurements gathered are to help determine how their athleticism compliments their skill of the game. A combine is usually separated into two testing sections which are the physical assessment and performance testing. The physical assessment will be first followed by the performance testing.

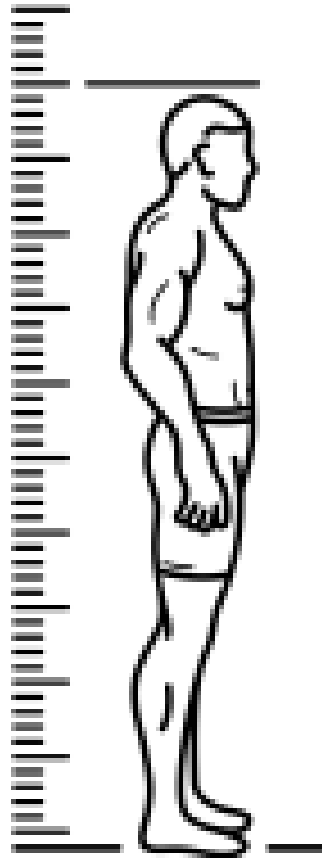
PHYSICAL ASSESSMENT

Physical assessment will be the first testing section of the combine. In this section, the testers will record the anthropometric measurements of each athlete or participant. Below are the events of the physical assessment (in no particular order):

- Standing Height
- Seated Height
- Wingspan
- Weight
- Body Composition

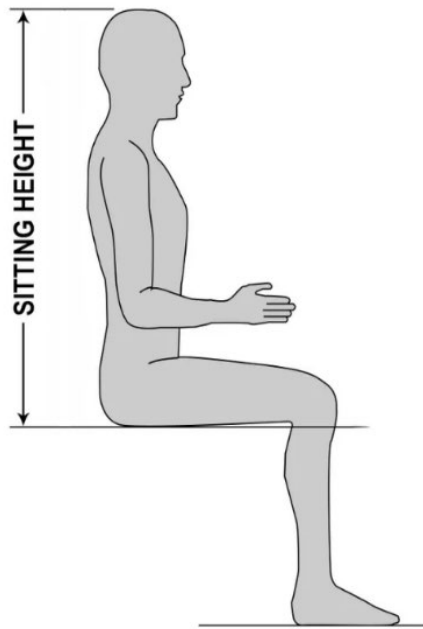
STANDING HEIGHT

Wearing no shoes, the athlete will be measured standing in a tall erect position with their back and heels touching the base of the measuring tool. Only one measurement will to be collected.



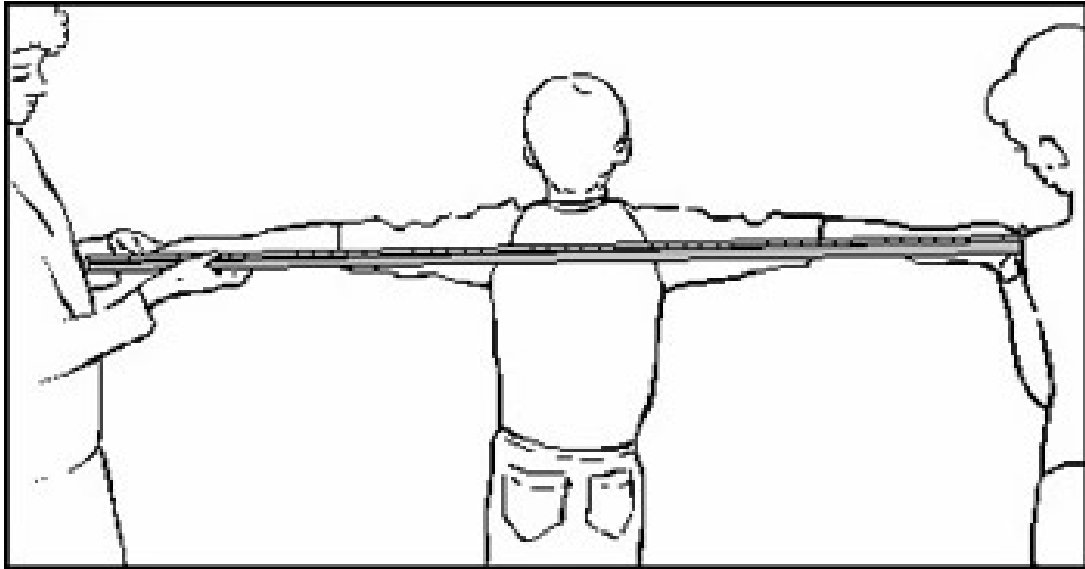
SEATED HEIGHT

Have the athlete sit on the platform in a tall upright position with hands in their lap. Ensure the athletes thighs are parallel to the ground and knee angle is 90 degrees when sitting on platform. Varying platforms or an adjustable platform may be needed due to height discrepancies between athletes. As the athlete sits in an upright position, measure from the base of the athlete's hips to the crown of their head. This measurement provides information as to whether and athlete has their height more attributed to the legs or torso. For example: Player A is 181.2 cm and Player B is 182.2 cm for standing height. However, Player A has a seated height of 100 cm and Player B is measured at 88.5 cm. Only one measurement will be collected.



ARM SPAN

This a measurement of the prospects arm length will be taken across their back from fingertip to fingertip with both arms fully extended. This measurement will give us a good idea of the prospects arm length to torso ratio.



WEIGHT

The prospects will remove their shoes then step on the scale and come to a standstill on the scale that is being used to allow accurate measurement of their weight. Each athlete will have only 1 measurement collected.

BODY COMPOSITION

We have a couple of options to assess body composition. Those options would be the Seca or one of our InBody units (preferred method). Follow the directions of the body composition device of choice. Each athlete will only have 1 measurement collected.



PERFORMANCE TESTING

This section will describe the different tests that the athletes can perform to assess their athletic abilities. Below is a list of the multitude of tests that we can perform as part of a testing battery. Not every test listed must be selected for each combine and each testing battery is subjective to the coaches and sport we will be working with.

- HumanTrak
 - Movement Screen
- Broad Jump
- Force Plates
 - Countermovement Jump (CMJ)
 - Squat Jump (SJ)
 - Drop Jump (DJ)
 - Isometric Mid-Thigh Pull (IMTP)
 - Isometric Belt Squat
 - Isometric Single Leg Barbell Hip Thrust
- DynaMo
 - Grip Strength
 - Isometric Core Rotation
 - Isometric Row
- Force Frame
 - Hip Adduction/Abduction Strength
 - Shoulder Flexion/Extension Strength
 - Shoulder Adduction/Abduction Strength
 - Shoulder Internal/External Rotation Strength
 - Neck Flexion/Extension Strength
 - Neck Lateral Flexion Strength
 - Ankle Plantar Flexion Strength
- Timing Gates
 - Sprints
 - 505 Change of Direction (COD)
 - 5-10-5 Agility Test

HUMANTRAK

This is a portable 3D motion capture used for analyzing movement for purpose of rehabilitation and performance development.



MOVEMENT SCREEN

HumanTrak has a multitude of movement assessments to choose from. The usual movements selected for the assessments are:

- overhead squat
- squat
- lunge

This part of the testing protocol is to examine the athlete movement health more so than their athleticism. Although the movement screen cannot predict injury or athletic success, it can highlight the possibility of injury before it occurs. That could be due to imbalances or deficiencies the athlete may not have been aware of until participation in the movement screening. Following the directions of the HumanTrak regarding equipment setup, the athletes will stand with their feet hip width distance apart and will need to place their hands on their hips, across their chest, or behind their head when performing the squat and lunge. For the overhead squat, hand the athlete a rod or staff object light enough to hold overhead and long enough to have their arms slightly wider than shoulder width. A total of 3 reps will be collected for each movement (3 for each side regarding the lunge or any unilateral movement).



BROAD JUMP

The broad jump test is a test to measure how well an athlete can generate force in a horizontal direction. The takeoff phase will be assessed by the mechanism in which the athletes use to project themselves forwards. The athlete will stand behind the starting line (they can cheat their toes up as close to the edge of the start line without going over). Using the arm swings, they will then project themselves forward and stick the landing. If the athlete shuffles the feet at the beginning, stumbles or falls during landing the test will not count or be recorded. Measurements will be from the back of the heel where the athlete landed that is closest to the starting line. Athletes will get two attempts at the broad jump with the best attempt being graded and recorded.



FORCE PLATES

This tool is designed to analyze strength, movement, and balance of the athletes. The dual force plates measures ground reaction force which allows us to assess neuromuscular fatigue, asymmetry and much more. This section will talk about the multiple tests that we can do using force plates.



COUNTERMOVEMENT JUMP (CMJ)

A great test to measure how force is being generated in a vertical direction. There is a high correlation for those who perform well in the CMJ to athletic performance. The athlete will begin standing with left foot on left force plate and right foot on the right force plate in an upright position with their hands on their hips. On the testing administers command the athlete will then jump as high as they can and land on the force plates in the original starting position. The athlete will be allowed 2 attempts at the CMJ where the highest and average of the two attempts are recorded.

SN: The coach or team you work with may allow for arm swings with their jumps and that is okay. Make sure to have that conversation before testing so the test is standardized to everyone.



Vertec (Vertical Jump Trainer) – if force plates are not available or applicable the Vertec is the other option and more traditional in combine training. Start with having the athlete standing directly under the Vertec with their arm that is beside the apparatus fully extended overhead (i.e. if Vertec is to the left of the athlete, they will extend their left-hand overhead and vice versa). The tester will adjust the Vertec to where the first vane is just out of standing reach of the athlete. When instructed, the athlete will use arm swing and jump as high as they can and reach overhead to touch the highest vane that they can possibly reach on the Vertec. After the first attempt, the tester will clear the vanes that athlete reached on their first attempt and the athlete will be given an opportunity to beat their previous attempt. Each vane represents 0.5 inch or 1 inch. If the athlete clears all the vanes on the first attempt, they will be remeasured with an additional 5 inches between the first vane and the athlete's extended arm overhead (if the athlete still clears all vanes, remeasure and add an additional 10 inches and so on). The athlete will be allowed 2 attempts at the CMJ where the highest and average of the two attempts are recorded.



SQUAT JUMP (SJ)

This test measure how force is being generated in a vertical direction from a squat position with the countermovement taken away. The athlete will begin standing with left foot on left force plate and right foot on the right force plate in an upright position with their hands on their hips. The athlete will lower themselves to their preferred squat depth and pause in that position. On the testing administers command the athlete will then jump as high as they can from their paused squatting position and land on the force plates in the original starting position. Ensure the athlete has their countermovement in their jump completely taken away when they are in their bottom squat position. The athlete will be allowed 2 attempts at SJ where the highest and average of the two attempts are recorded.



DROP JUMP (DJ)

This test assesses how well an athlete can quickly transfer force during the initial landing phase of the jump. Begin standing on top of a platform (height is usually 12 inches) with hands on hips. The athlete will drop off the platform leading with one foot and land on the force plates. Upon landing the athlete will immediately jump as high as they can landing and ending with both feet on both force plates orientated in the right direction. The athlete will be allowed 2 attempts at the DJ where the highest and average of the two attempts are recorded.

SN: The coach or team you work with may allow for arm swings with their jumps and that is okay. Make sure to have that conversation before testing so the test is standardized to everyone.



ISOMETRIC MID THIGH PULL (IMTP)

The IMTP measures how well an athlete can generate maximum isometric force with the lower body. Stand with the right foot on the right force platform and left foot on the left force platform. Ensure the bar is at mid-thigh level by lowering to a quarter squat position (knee angle 125-135 degrees). The athlete will remain in this fixed quarter squat position. Adjust the bar to the height of the athlete as needed until the athlete is in the proper position. Grasp the bar (can use straps or grip approved by staff personnel) in its fixed position with a firm grip and touch the bar against the thighs to ensure a fixed position. On the test administrators' cue, the athlete will pull the bar as hard as possible with their arms straight and without straightening their knees remaining in the fixed quarter squat position. The duration of the IMTP lasts for 3-5 seconds. Typically, 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) will be given followed by 1 maximum effort attempt that will be recorded.



ISOMETRIC BELT SQUAT

Measures how well an athlete can generate maximum isometric force with the lower body. Stand with the right foot on the right force platform and left foot on the left force platform. The athlete will hold still in a quarter squat position with a knee angle of 125-135 degrees. Adjust the chain or strap to the athlete's height and attach the harness or belt to the apparatus ensuring the athlete remains in the fixed quarter squat position. The athletes will place their hands across their chest or on their hips. On the test administrators' cue, the athlete will push into the force plates with both feet simultaneously as hard as they can while maintaining the fixed quarter squat position. The duration will last for 3-5 seconds. Typically, 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) will be given followed by 1 maximum effort attempt that will be recorded.



ISOMETRIC SINGLE LEG BARBELL HIP THRUST

Measures how well an athlete can generate maximum isometric force specifically assessing the hamstrings. Have the athlete slide under the barbell and lie in a supine position on the ground. The barbell should have at least three 45 lbs plates on each side (four may be needed depending on the athlete), and the plates should be resting on an elevated platform at least 2 inches off the ground on both sides of the barbell. This extra elevation provides the athlete room to comfortably move under the bar as needed. The bar should be positioned comfortably over the athlete's hip with padding or cushion of some sort in place in the center of the barbell where the athlete will push with their hips. With one leg in the air, the other leg will be on the corresponding force plate (i.e. left leg on the left force plate and vice versa). The leg that is on the force plate, ensure the knee angle is 125-135 degrees and the toes are slightly raised off the ground. When in position, instruct the athlete to grab the bar with both hands ensure the leg on the force plate is in proper position, and the other leg remains in the air not touching anything. On the instructor's cue, the athlete will lift their hips off the ground by pushing against the padded center region of the barbell while simultaneously pushing the heel of the grounded foot into the force plates. The athlete will engage their posterior with the emphasis on the hamstrings, the duration will last for 3-5 seconds. Typically, 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) will be given followed by 1 maximum effort attempt that will be recorded.



DYNAMO

This device is a handheld dynamometer and inclinometer that you can use to perform multiple strength and range of motion assessments. This section describes the protocols we use when assessing athletes.



GRIP STRENGTH

The grip will be measured using a hand dynamometer and will be used to assess grip strength and other factors such as UCL and shoulder health. Each athlete will be allowed at most two attempts if wanted. The athlete will squeeze as hard as they can for no more than 3-5 seconds for each attempt. Grip strength can be measured in 3 different positions:

Neutral – athletes will begin with their arm straight down by their side. Instruct the athlete to grasp the apparatus with their hand and palm facing inwards.



Elbow Flexion 90 degrees - Athletes will begin with their arm by their torso with the elbow flexed to 90 degrees. Have the athlete grasp the apparatus with their hand and palm facing inwards.



Shoulder & Elbow Flexion 90 degrees – athletes begin with their arm abducted and elbow flexed at 90 degrees. Have the athlete grasp the apparatus hand and palm facing inward or straight ahead.



ISOMETRIC CORE ROTATION

To begin, anchor the DynaMo to a rack, pole or any sturdy base that would be able to support the exercise. Next, have the athlete come to in a tall kneeling position and have them find a comfortable and sturdy base. Raise the DynaMo to the athlete shoulder level, have them grab the handle with both hands with arms extended straight ahead. The hands should be aligned in the middle of the chest.

- If the DynaMo unit is anchored to the left of the athlete, they are pulling right.
- If the DynaMo unit is anchored to the right of the athlete, they are pulling left.

Instruct the athlete to begin pulling for at least 1 second and then begin recording the test. Having the athlete pull first before starting the test will reduce the chance of spikes in the data due to them jerking on the device to inflate their maximum values. Each attempt will last for a total duration of 3-5 seconds. They will do this for each side. Typically, 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) will be given followed by 1 maximum effort attempt that will be recorded.



ISOMETRIC ROW

To begin, anchor the DynaMo to a rack, pole or any sturdy base that would be able to support the exercise. Have the athlete slightly bend their knees and come to a sturdy quarter squat position. Position the DynaMo where it is between the navel and xiphoidal process when in quarter squat position. Grab the handle and flex the elbow to 90 degrees with arm by their side and palm facing inward. Ensure that maximal tension is applied to the straps connected to the DynaMo that helps enforces the fixed position of the arm. Instruct the athlete to begin pulling for at least 1 second and then begin recording the test. Having the athlete pull first before starting the test will reduce the chance of spikes in the data due to them jerking on the device to inflate their maximum values. Make sure the athlete is remaining in the fixed quarter squat and arm flexed position and not twisting or doing any unnecessary movement with their body. Each attempt will last for a total duration of 3-5 seconds. They will do this for each side. Traditionally, 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) will be given followed by 1 maximum effort attempt that will be recorded.



FORCE FRAMES

This tool is a comprehensive, user friendly system for reliable testing and isometric strength training. It is also used by performance professionals to assess and improve muscle strength and imbalance. This section is for the testing that use with the Force Frame.



HIP ADDUCTION/ABDUCTION STRENGTH

Have the athlete lie in a supine position with their knees bent, hip flexion at 45-60 degrees and their feet on the ground. Adjust the height and position of the crossbar to where the lateral and medial part of the knee can comfortably press and squeeze against the padding. If need be, adjust the width of the padding to fit the athlete comfortably. Have the athlete relax their body by not touching or gently rest their knees against the padding.

Adduction – the athlete will squeeze against the padding as hard as they can

Abduction – the athlete will push against the padding as hard as they can

Once the test has started, the testing administrator will encourage the athlete to squeeze or push for duration of test. Athletes are allowed two warmup repetitions (1st @ 50%, 2nd @ 75%) before a single maximum effort attempt. Each attempt will last for a total duration of 3-5 seconds.



SHOULDER FLEXION/EXTENSION STRENGTH

For Shoulder Flexion, the athlete will lie down in a prone position with one arm fully extended overhead. Have the opposite arm elbow flexed with palm of hand flat on ground and forehead resting on back of hand. Adjust the height and position of the crossbar to where it is just above the outstretched arm. Once the test has started, instruct the athlete raise their arm and touch the padding with the back of the hand of the outstretched arm. Maintaining this outstretched position, the athlete will begin pressing against the pad for 3-5 seconds per attempt. Athletes are given 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) followed by 1 maximum effort attempt that will be recorded.



For Shoulder Extension, maintaining the same body position rotate the crossbar 180 degrees with the pad facing up. Once the test has started, the athlete will place the front of their wrist of their outstretched arm on the pad. The athlete will begin to push against the for 3-5 seconds per attempt. Athletes typically follow the same build up protocol leading a single maximal effort attempt.



SHOULDER ADDUCTION/ABDUCTION STRENGTH

For Shoulder Abduction, start with the athlete lying on their side with the bottom arm folded and used to support the head. The arm on top is fully extended with hand resting on the hip. Adjust the height and position of the crossbar to where the padding is just above the back of the wrist of the top arm. Once the test has started, instruct the athlete to raise their arm and touch the padding with the back of the hand while keeping arm fully extended. Maintaining the position, the athlete will begin pressing up against the pad for 3-5 seconds per attempt. Athletes are given 2 warmup attempts (1 @ 50% effort, 1 @ 75% effort) followed by 1 maximum effort attempt that will be recorded.

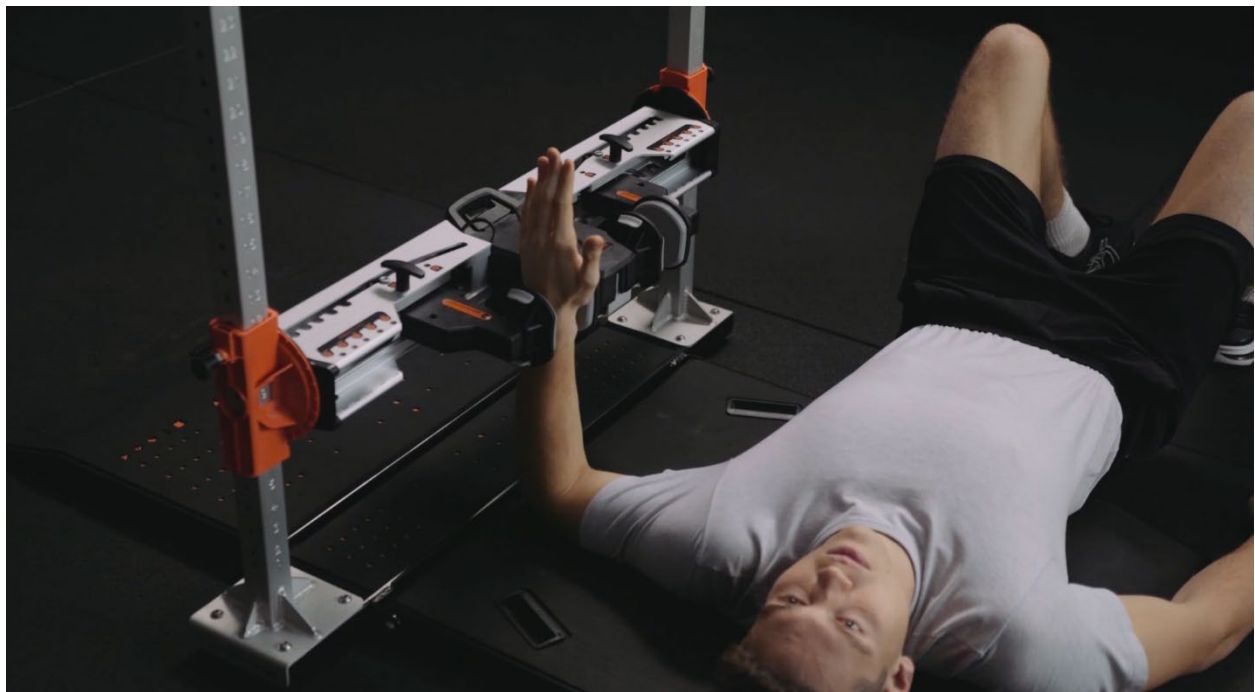


For Shoulder Adduction, start with the athlete lying on their side with the bottom arm folded and used to support the head. The arm on top is fully extended with hand resting on the hip. Rotate position of the crossbar 180 degrees with pad facing towards ceiling and adjust height of crossbar to where it is just above the hip. Once the test has started, instruct the athlete to place the front of their wrist on top of the pad while keeping arm fully extended. Maintaining the position, the athlete will begin pushing down against the pad for 3-5 seconds per attempt. Athletes typically follow the same build up protocol leading a single maximal effort attempt.



SHOULDER INTERNAL/EXTERNAL ROTATION STRENGTH

The athlete will lie on their back in a supine position with their body parallel to the crossbar. Rotate the crossbar 90 degrees to where the pads are facing outward towards the same direction of the head. Lower the crossbar until it is right above the athlete's waist. Keeping the back of their arm on the ground, the athlete will flex their elbow and shoulder to 90 degrees, and the front of their wrist will touch the pad. The forearm should be in a straight line and maintain a 90 degree fixed position about the elbow. Have the athlete adjust their body until they are in appropriate position. For Shoulder Internal Rotation, once the test has started the athlete will press against the pad with the front of their wrist by rotating internally about their shoulder joint. For Shoulder External Rotation, once the test has started the athlete will press against the pad as hard as they can with the back of their wrist by rotating externally about their shoulder joint. While maintain the fixed arm position, they will press against the pad for 3-5 seconds and will follow the same build up protocol leading to a single max effort.



NECK FLEXION/EXTENSION STRENGTH

For Neck Flexion, the athlete will begin on their hands and knees in a quadruped position. Rotate the crossbar 180 degrees to where the pad is directly upwards towards the ceiling. Lower the crossbar until the forehead is hovering directly over the pad. Once the test has started, the athlete will touch their forehead to the pad while trying to touch their chin to their chest. The athlete will press their forehead against the pad for 3-5 seconds. They will be allowed to two warm up attempts at 50% and 75% efforts before they attempt a maximal effort.



For Neck Extension, the athlete will begin on their hands and knees in a quadruped position. Rotate the crossbar 0 degrees to where the pad is point down towards the floor. Adjust the crossbar and pad until the pad is hovering just above back of head at the occipital region. Once the test has started, the athlete will touch the back of their head to the pad while trying to touch the back of their head to their shoulders. The athlete will press the back of their head against the pad for 3-5 seconds. They will be allowed to two warm up attempts at 50% and 75% efforts before they attempt a maximal effort.



NECK LATERAL FLEXION STRENGTH

The athletes will begin on their hands and knees in a quadruped position. Rotate the crossbar 0 degrees, adjust the pads and height to where the head is directly positioned between both pads. Once the test has started, the athlete will press the side of their head against the pad for 3-5 seconds. They will be allowed to two warm up attempts at 50% and 75% efforts before they attempt a maximal effort.



ANKLE PLANTAR FLEXION STRENGTH

Ankle Plantar Flexion (Seated), the athlete will begin sitting on chair, stool, etc in an upright position. Be sure while sitting the thigh is parallel to the floor creating a 90 degree knee angle. Adjust the height along with the positioning and pad of the crossbar to where it is just above the athlete's knees. Once the test begins, the athlete will push their knee against the pad by pushing off the ball of their foot and lifting the heel off the ground. With one leg at a time, the athlete will drive their knee into the pad for 3-5 seconds. They will be allowed to two warm up attempts at 50% and 75% efforts before they attempt a maximal effort. Follow same protocol with both legs.



Ankle Plantar Flexion (Supine), the athlete will begin lying on their back in a supine position. Adjust the height and positioning crossbar and pad to where the athlete's heel is raised slightly off the ground and touch the pad with the ball of their foot. Once the test begins, the athlete will lift their leg to slightly raise their heel off the ground and press in the pad with the ball of their foot. While keeping the leg straight throughout the rep, they will push the ball of their foot into the pad for 3-5 seconds. They will be allowed to two warm up attempts at 50% and 75% efforts before they attempt a maximal effort. They will perform this test with one leg at a time.



SMARTSPEED

These are timing gates that are used to assess and provide precise measurements associated around velocity, speed, acceleration and agility. There is a laser beam that will be used to signify the start and stop of the testing events as the athletes run through it. This tool can be used to analyze athletic performance and helps in tracking progress.



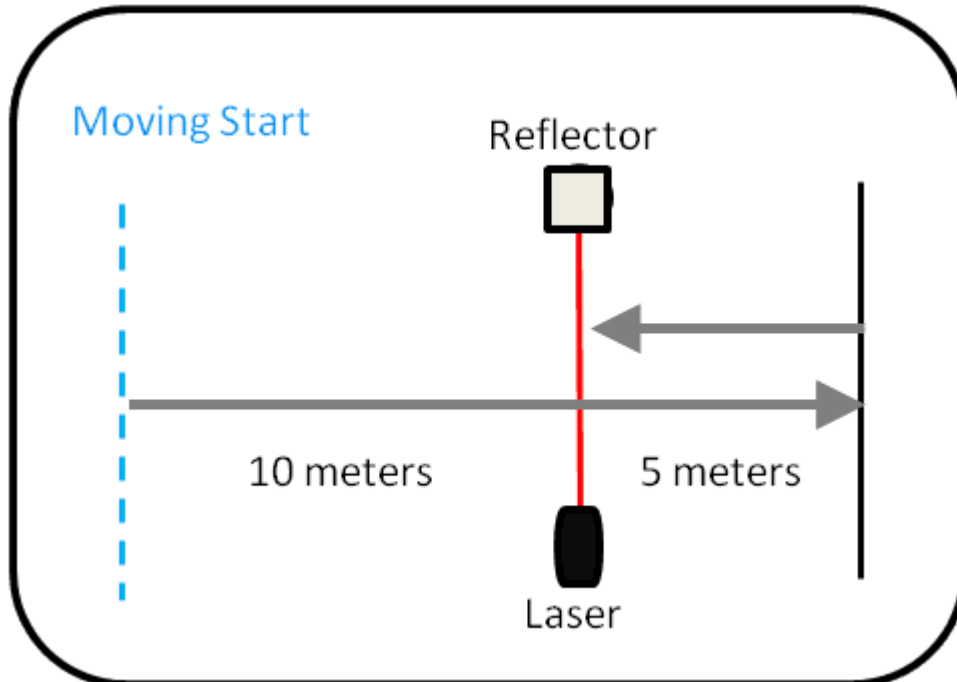
SPRINTS

These are one of the better tests to assess athletic ability in athletes. The distance of the sprints can vary based off the needs of the staff you are working with (ex, 10 meters, 40 yards, 60 meters, 100 meters, etc.). There will be one timing gate to represent the starting line and one more positioned a specific distance away to represent the finish line. If time splits are wanted during the sprint, extra timing gates will be positioned at the desired distance between start and finish that will be discussed. To begin, the athlete will get in desired starting position that is allowed right in front of the timing gate on the starting line. Recording will officially begin when athlete moves through the timing gate at the starting line. Once the athlete moves through the timing gate it trips the laser that activates the recording. The test will officially end when the athlete runs through the laser of the timing gate at the finish line. The athlete should take the proper time to warmup appropriately and they are typically allowed 2 attempts.



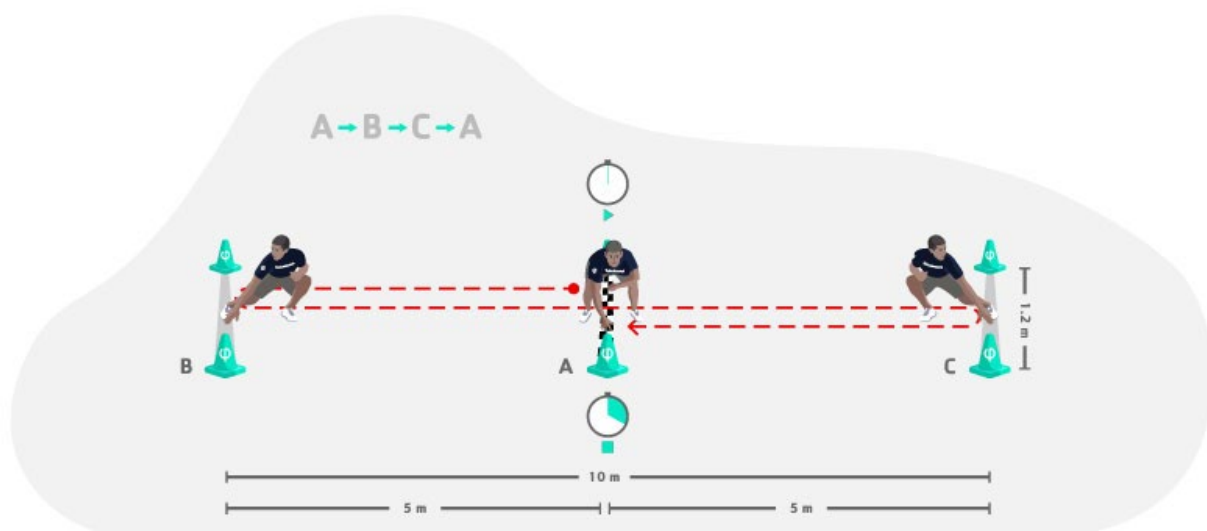
505 CHANGE OF DIRECTION (COD)

This drill mainly used to assess how well an athlete can change direction. There will be three timing gates or cones used to mark the required distance for the test. The starting timing gate and the second timing gate will be placed 10 yards away from each other. The third timing gate will be placed in the middle between the starting timing gate and second timing gate (exactly 5 yards away from starting and second timing gates). To begin, the athlete will get in desired starting position that is allowed right in front of the timing gate on the starting line. Recording will officially begin when athlete moves through the timing gate at the starting line. Once the athlete moves through the timing gate it trips the laser that activates the recording. The athlete will run 10 yards to the second timing gate, plant their foot in the ground as they prepare to change direction and touch the line. The athlete will immediately reverse direction and run through the laser of the third timing gate that will mark the end of the test. The athlete should take the proper time to warmup appropriately and they are typically allowed 2 attempts.



5-10-5 AGILITY

This drill is typically used to assess the agility of an athlete and how well they can react. There will be three timing gates or cones used to mark the required distance for this test. Two of the timing gates will be placed 10 yards apart from each other, with the third timing gate placed in the middle which is 5 yards away from both timing gates in either direction. The athlete will start at the timing gate in the middle with their hand on the line in a 3-point stance. While starting in the middle, the athlete will start between the laser beam. The test will automatically begin recording as soon as the athlete moves. If using a stopwatch, test recording will begin as soon as the athlete moves their hand from the ground to initiate movement. To begin, they will run in the same direction of the hand that is on the ground (i.e. if right hand is on ground, begin running to direction to the right). The athlete will run 5 yards in the initial direction as discussed, plant their foot in the ground as they prepare to change direction and touch the line. The athlete will immediately run 10 yards in the opposite direction, plant their foot in the ground as they prepare to change direction and touch the line. The athlete will immediately run 5 yards in the previous direction through the timing gate or cone on the starting line ending the test. The athlete should take the proper time to warmup appropriately and they are typically allowed 2 attempts.



PERSONNEL AND ORDER OF OPERATIONS

It can become overwhelming organizing a combine with the amount of test that can be performed, data collected, and staff to administer the test. We want to have a structured flow of events to ensure things operate as efficiently as possible. We understand that things may happen regarding the technology, facility limitations, and other things that are out of our control. However, we would like to maximize to the best of our ability the things we can control and believe that starts with combine organization.

Here is an example of how we would ideally structure our combines. The templet provided illustrates a proposed order of operations involving some of the performance test mentioned above.

	TEST STATION	LEAD COACH	STUDENTS/VOLUNTEERS	
FIELD 1	WARM-UPS	Coach 1/ Coach 2/ Coach 3/ Coach 4		
FIELD 1	BROAD JUMP	Coach 1	Volunteer 1, Volunteer 2, Volunteer 3	
FIELD 1	GRIP STRENGTH	Coach 2	Volunteer 4, Volunteer 5, Volunteer 6	
FIELD 1	20m SPRINT	Coach 3	Volunteer 7, Volunteer 8, Volunteer 9	
FIELD 1	CMJ	Coach 4	Volunteer 10, Volunteer 11, Volunteer 12	
FIELD 1	Conditioning Test	Coach 1/ Coach 2/ Coach 3/ Coach 4	All Hands	
GROUP	Group 1	Group 2	Group 3	Group 4
Combine	# 1-10	# 11-20	# 1-10	# 11-20
2:30	INTRODUCTION & FAMILIARIZATION	INTRODUCTION & FAMILIARIZATION	INTRODUCTION & FAMILIARIZATION	INTRODUCTION & FAMILIARIZATION
2:35	WARM-UPS	WARM-UPS	WARM-UPS	WARM-UPS
2:40				
2:45				
2:50				
2:55				
3:00	STATION 1: BROAD JUMP	STATION 2: GRIP STRENGTH	STATION 3: 20m SPRINT	STATION 4: CMJ
3:05	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS
3:10	STATION 2: GRIP STRENGTH	STATION 3: 20m SPRINT	STATION 4: CMJ	STATION 1: BROAD JUMP
3:15	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS
3:20	STATION 3: 20m SPRINT	STATION 4: CMJ	STATION 1: BROAD JUMP	STATION 2: GRIP STRENGTH
3:25	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS
3:30	STATION 4: CMJ	STATION 1: BROAD JUMP	STATION 2: GRIP STRENGTH	STATION 3: 20m SPRINT
3:35	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS
3:40	STATION 1: BROAD JUMP	STATION 2: GRIP STRENGTH	STATION 3: 20m SPRINT	STATION 4: CMJ
3:45	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS	PLAYER ROTATIONS
3:50	STATION 2: GRIP STRENGTH	STATION 3: 20m SPRINT	STATION 4: CMJ	STATION 1: BROAD JUMP
3:55	REST		REST	
4:00	INTRODUCTION & FAMILIARIZATION		INTRODUCTION & FAMILIARIZATION	
4:05	CONDITIONING TEST		REST	
4:10			REST	
4:15	REST		CONDITIONING TEST	
4:20				
4:25	Closing Remarks			

DATA ORGANIZATION

Data can be stored under the UNLV Sports Innovation Institute profile if the organization we are collaborating with do not have their own personal profiles created. The data can be presented one of two ways. The first way is to just hand the organization we are collaborating with the raw data that was collected.

The second way is we can organize, analyse and visualize the data and then present it to the organization we are collaborating with. To do this we would create custom codes using coding languages which typically would be MATLAB or RStudio. Below are a couple of examples of visuals that we can create.

