2016 FRC Inspection Checklist		Rev 1.1
TEAM NUMBER:	INSPECTOR:	
INITIALS (after passing):		/
REINSPECTION (initial)	FINAL INSPECTION (initial)	
Initial Inspection		
Weight - Robot Weight (≤ 120 lbs excluding	a humpers, and hattary) < P05	nound
Bumper Weight (≤ 120 los excluding Bumper Weight (≤ 20 pounds p		pounds pounds
Bumper Weight (\(\sigma 20 \) pounds p	Total Finals Weight	
Size - FRAME PERIMETER may not excee		pound
Height - Starting configuration height may		
	nd past the frame perimeter in the starting configuration. <r04></r04>	
Standard Bumpers - must follow all specific		
	des of all outside corners of the Frame Perimeter. <r19></r19>	
	king, may not extend > 1" beyond robot frame. <r21b></r21b>	
	by robot frame for a length greater than 8" unless the gap is $\leq \frac{1}{4}$ ".	<r26></r26>
☐ Bumper ends must be supported by at leas		
	or solid, robust wood, backing and a pair of vertically-stacked 2.5'	pool noodles
	tructural integrity. (Clearance pockets and/or access holes are acce	
	ape, solid or hollow, and all be identical in shape and density. <r2< td=""><td></td></r2<>	
☐ Corner joints must use pool noodles to fill	corner space. <r24></r24>	
☐ Must use a durable fabric to cover and sec	ure the pool noodles. <r21d></r21d>	
	similar to FIRST Logo) Bumpers to match alliance color. <r21d< td=""><td></td></r21d<>	
	'tall x 1/2" stroke, in white or outlined in white and be easily determ	nined when
walking around the perimeter of the robot		
	and be easily removable for inspection. <r25></r25>	
*	ntirely between 4" and 12" above floor and may not be articulated	. <r22-r23></r22-r23>
<u>Mechanical</u>		
	a hazard for participants, robots, or arena. <r08-r09></r08-r09>	
	rs, noxious or toxic gases or inhalable particles or chemicals. < R09	
	fully consider safety of stored energy or pneumatic systems. <r09< td=""><td>& R35></td></r09<>	& R35>
	spearing, entangling, upending or adhering. <g24 &="" r09=""></g24>	
	eats on traction devices or sharp points on frame. <r06 &="" r08=""></r06>	11
	obots' electronics and sensors (particularly via color distraction) ar	id be in spirit of
"Gracious Professionalism". <r09></r09>	with total and < \$4000 and an aircle annual \$400 cD10 F)10 T16
FRAME PERIMETER – Frame must be r	with total cost \leq \$4000, and no single component > \$400. <r10-f< td=""><td>(12, 116></td></r10-f<>	(12, 116>
	ion-articulated. <r02> s may not extend more than 15" beyond Frame Perimeter. <r03b></r03b></r02>	
End Game – Balls and robot can be remove		•
Electrical	ca from field without power. \Ro7>	
	System commonants may be modified assent for motor mounting	and autnut aboft
	System components may be modified, except for motor mounting or locking pins may be removed, connectors on automotive motors	
	nanufacturer's instructions, along with those listed in R66. <r30 &<="" td=""><td></td></r30>	
	ery or listed equivalent, securely fastened inside robot. <r31-r33></r31-r33>	
Visibility – PDP and breakers must be easil		
	20A main breaker must be readily accessible with labeling preferre	d. <r39></r39>
	dge must be powered via the VRM ± 12 volt, 2 amp output and mu	
	ast be mounted so that its LEDs are visible. Ethernet must be direct	
roboRIO. <r43, &="" r58="" r64=""></r43,>		,
Wire Size - obey the wiring size convention	ıs.	
	D have min #6 AWG (4.11mm) wire. <r36></r36>	
☐ 40 amp breakers have min #12 AWG (2.0	52mm) wire. <r49></r49>	
□ 30 amp breakers have min #14 AWG 1.62		
□ 20 amp breakers have min #18 AWG (1.0		
	t be color coded - red, white, brown, yellow, or black w/stripe for -	+24, +12, +5
VDC supply wires and black/blue for supply		
	inlimited quantity of select (Window, Door, Windshield Wiper, Se	at and Throttle)
automotive motors and unlimited quantity o	f:	<r29></r29>

Motor	BaneBots 550 and 775	West Coast Products RS775 Pro	AndyMark	3 9015, PG, and Snow Blower	VEX BAG and mini- CIM
Part	M7-RS775-18 / RS775WC-8514	217-4347	am-0912	am-2194 (am-2766)	217-3351
Numbers	M5-RS550-12 / RS 550VC-7527 / RS550	217-4347	am-2235	am-2161 (am-2765)	217-3371

2016 FRC Inspection Checklist	Rev 1.1
1 Wire per WAGO - only 1 wire may be inserted in each WAG	GO connector on the PDP, splices and/or terminal blocks, may
be used to distribute power to multiple branch circuits but all w	
Actuators – Electrical solenoid actuators, max. 1 in. stroke and	
Motor/Actuator Power –CIMS, Banebots, AM 9015, WCP RS	
one motor controller. A motor controller may have up to two of	
specified motors may be connected to a relay module (multiple	
Motor/Actuator Control – Motors/actuators must be controlle	
signals from roboRIO or through legal MXP board or by CAN	
Servo Control/Power – Servos must be connected to only the l	
Custom Circuits, Sensors and Additional Electronics – Can	
and may not produce voltage in excess of 24 volts. <r41 &="" r69<="" td=""><td></td></r41>	
Pneumatic Control Module (PCM) - PCM modules must be c	
	sed for compressor control only the Spike fuse may be replaced
with 20 amp, snap action, breaker (recommended). <r48 &="" r6<="" td=""><td></td></r48>	
PDP Fuse – The fuses in the PDP must be mini automotive bla	
Allowable PD Breakers - Only Snap-Action breakers that are	
	boRIO must be insulated from frame. (>3k Ohm between either
PDP battery post and chassis) <r38></r38>	sorte must be insulated from frame. (> 3k omin between eraier
Terminals – Each terminal on the battery, main breaker, and co	unnectors must be fully isolated <r34></r34>
Pneumatic System W/ On Board or Off Board Compres	· · · · · · · · · · · · · · · · · · ·
 No Modifications - Pneumatic parts may not be modified exce Compressor - Only one compressor with a max 1.1 CFM flow 	
Compressor - Only one compressor with a max 1.1 CFM now Compressor Power - Must use the PCM or Spike to power the	
	<u> </u>
Compressor Control – A Nason P/N SM-2B-115R/443 switch	•
Compressor Relief Valve – Set to 125 psi, attached to (or throw	
Vent Plug Valve – Must include an easily-accessible manual volumeOff-Robot Compressor (if used) – Must include an additional	
	· ·
used to control and power the compressor. The high pressure sv Tubing – Equiv. to KOP with a maximum ID of 0.160" with so	
Relieving Pressure Regulator – Set to ≤ 60 psi, providing all v	
Gauges - must be present at both the high pressure side and lowPressure Rating - All pneumatic components must be rated for	
valves are rated for less than 120 psi, another relief valve must	
pressure. <r75 &="" r77d=""></r75>	be installed on working pressure side to vent at the lower
Valve Control - Pneumatic solenoid valves must have a max 1/	/9" NDT RSDD or RSDT ID be controlled by either a DCM or
Spike. Valve outputs may not be plumbed together. <r53, r770<="" td=""><td></td></r53,>	
Power On Check (Driver Station must be tethered to the	
	unication to/from ROBOT or OPERATOR CONSOLE without
prior FIRST written permission. No radios allowed on the OPE	
Confirm Pneumatics Operation – With no pressure in system	
Compressor should stop automatically at ~ 120 psi under robo	
☐ Main Pressure ≤ 120 psi and Working Pressure ≤ 60 psi. <r8< td=""><td></td></r8<>	
	om the KOP must be visible from 3' in front of the robot, and be
plugged into the RSL port on roboRIO. Confirm that the RSL fl	
PDP CAN Bus – PDP CAN bus must be wired to the roboRIO	
Verify Team Number on DS – Check that the Team Number i	
Confirm programing of wireless bridge - Confirm the Team 1	has programmed the OpenMesh Wheless Bridge at klosk for
this event. <r57></r57>	15.4. 1
Firmware Versions – Software/firmware for devices is at or ab	
☐ Driver Station – 16.0.2 < R91> ☐ PIO (1.0.2 R91 R91	☐ Jaguars – V109 <r70></r70>
roboRIO (Image - FRC_2016_v19 and Firmware - v3.0.0) <	
Talon SRX – V1.01 (cannot be greater than V10.0) <r70></r70>	DPP - 1.37 <r72></r72>
Power Off – Remove power from the robot, confirm all LEDs off	
off, actuate pneumatic vent plug valve and confirm that all pres	
Driver Console - Less than 60" x 14". May have hook tape to s	secure to Direct 8 Station Shell (R94)
Team Compliance Statement We the Team Monter and Team Contains attent by any gianting helpsy that any team's not	hat was built offer the 2016 Vish-ff I 0 2016 '
We, the Team Mentor and Team Captain, attest by our signing below, that our team's roof the 2016 FRC rules, including all Fabrication Schedule rules, and that any software or	
January 9th, 2016. We have conducted our own inspection and determined that our robot	
m	
Team Captain:	Team Mentor: