



**ISSPRO 3 3/8" Diameter Programmable Speedometer**  
 Microprocessor Aircore Version

**General Information:**

Operating Voltage: 11 – 32 VDC. Note: Instrument comes equipped with a 12V lamp. Replace with one of proper voltage when installing instrument on 24V systems. 24V Lamp Part number is 656.

Input: Magnetic sensor or AC generator

Transient Protection: +100 V, -400 V

Reverse Voltage Protected

**Calibration:**

The ISSPRO Programmable Speedometer is calibrated (programmed) by setting a combination of ten switches found in the rear of the instrument. The odometer and pointer are electronically linked together and both are calibrated when the switches are properly set. Program before installing.

**Note:** the switch setting must be done with power "off". If power is left "on", changing the switch will have no effect on calibration until power is interrupted.

**Calibration Procedure:**

Calculate the "calibration number" from the appropriate formula below. (A minimum calibration number of 10080 is required to be within calibration range). Refer to the "CALIBRATION SWITCH SETTING" table with this number. Locate the row in which the calibration number is between the limits, then set the switches marked with a "0" to the "on" position (up).

**Example:** Calibration number = 29644: From the table 29644 lies between 29581 and 29700, therefore, switches 4, 9, and 10 will be set to "on".

*Note: "0" means switch is on, "1" means switch is off.*

(1) Front wheel mounted tone wheel:

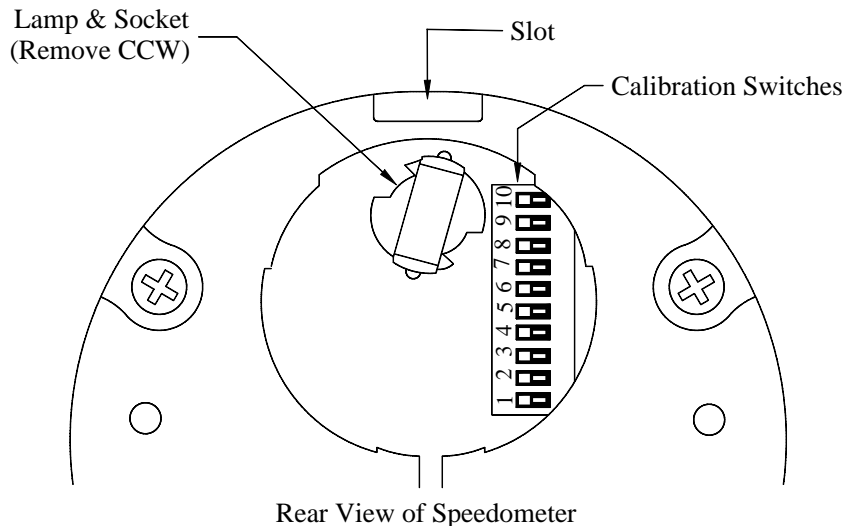
**Calibration Number = Number of Slots in Tone Wheel X Tire Revs per Mile**

(2) Tail Shaft mounted magnetic sensor:

**Calibration Number = Tire Revs per Mile X Differential Ratio X 16**

(3) Sender driven from transmission cable drive:

**Calibration Number = Cable Turns Per Mile X Number of Pulses per Sender Turn**



**Note:** For metric versions, substitute kilometers for miles in the above formulas. Multiply the resulting value by 1.621 to obtain final calibration number.

If the number of cable turns per mile (or kilometer) is not known, follow this procedure: Obtain a ratio tester and correct drive tang for your transmission. With a steel tape measure, mark off 1/10th mile (528 ft.) (or kilometer [1000 meters]) in as straight of a line as possible. Mark start and stop lines with chalk or paint. Position the vehicle so that one of the wheels aligns with the start mark. Disconnect the speedometer cable at the transmission and install the ratio tester in its place. Secure the cables and reset the ratio tester. Drive the vehicle to the stop point positioning the selected wheel on the stop mark. The reading displayed on the ratio tester is the number of cable turns per mile (or kilometer) if using an Engler "SAC-10". If using an SS White ratio tester (P/N 312-12175Y), multiply the reading by 10 to obtain the cable turns per mile (or kilometer).

**Frequently Used Senders**

**#Pulses Per Turn**

DATCON 4-D-C 71267	8 *
DIXSON SG201A, SG201A1, SG202	2 *
ENGLER 870-0588	15
ISSPRO R8970, R8940	30
KIENZLE-ARGO 8-161-237008	8 *
MOTOROLA 4-100 (7SG100), 4-111 (7SG100B)	30
ROCKWELL 240R02-001	30
SUN Model CP7643	6 *
SYNCHRO-START Minigen	30
TELEFLEX 9604276	8 *
VDO (Old Style Engler) ISSPRO 300092	4 *
ZEMCO 4710	8 *
ZEMCO 6314	5 *

\*Note: These senders do not produce the minimum required number of pulses to be in calibration range when driven at 1000 turns per mile (or kilometer). It may be necessary to change your sender to one that generates more pulses per rev such as an ISSPRO R8970.

**Installation:** Mount the speedo in the dash panel and connect the wires as described below:

RED – Connect to ignition switched power source.

BLACK – Connect to ground and sensor wire (-)

WHITE – Connect to sensor wire. (+)

GREEN – Connect to dash lamp power.

VIOLET – 2 speed axle (no connection if not used)

(Connection to positive gives correct MPH (or KPH) reading with 0.733 axle ratio change.

A 0.680 ratio available on special factory orders.)

**Installation Hints:**

- 1.) When power is applied, the needle should go to mid scale then to the zero position. If it does not, there may be a bad connection in the “Hot” (red wire) or ground wire circuit. Check power to the meter by measuring with a voltmeter at the plug (meter leads on the pins that attach to the red and black wires). If there is power at the plug, the problem is in the gauge.
- 2.) Low voltage can cause inaccurate reading. If inaccuracy is suspected, measure voltage with vehicle operating and meter connected. This can be done by connecting a voltmeter to power source (i.e. fuse block, etc.) and/or piercing the red and black wire insulation with the meter leads.
- 3.) If speedo reads zero, then “jumps” to normal reading after a certain speed, adjust the sensor in closer to gear. (generators cannot be adjusted)

Note that "X" is Switch ON

Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH	
From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10		
10080	10140	X	X		X		X	X	X		168	17701	17820	X	X		X	X	X	X		296	25381	25500	X	X		X		X		X	X	424					
10141	10260		X		X		X	X	X		170	17821	17940		X		X	X	X	X		298	25501	25620		X		X		X		X	X	426					
10261	10380	X		X		X		X	X	X	172	17941	18060	X		X		X	X	X		300	25621	25740	X		X		X		X		X	X	428				
10381	10500			X		X		X	X	X	174	18061	18180			X		X	X	X		302	25741	25860			X		X		X		X	X	430				
10501	10620	X	X	X		X		X	X	X	176	18181	18300	X	X	X		X	X	X		304	25861	25980	X	X	X		X		X		X	X	432				
10621	10740		X	X		X		X	X	X	178	18301	18420	X	X		X	X	X	X		306	25981	26100	X	X		X		X		X	X	434					
10741	10860	X		X		X		X	X	X	180	18421	18540	X		X		X	X	X		308	26101	26220	X		X		X		X		X	X	436				
10861	10980		X		X		X	X	X		182	18541	18660		X		X	X	X	X		310	26221	26340		X		X		X		X	X	438					
10981	11100	X	X			X		X	X	X	184	18661	18780	X	X		X	X	X	X		312	26341	26460	X	X		X		X		X	X	440					
11101	11220		X		X		X	X	X		186	18781	18900		X		X	X	X	X		314	26461	26580		X		X		X		X	X	442					
11221	11340	X			X		X	X	X		188	18901	19020	X		X		X	X	X		316	26581	26700	X			X		X		X	X	444					
11341	11460				X		X	X	X		190	19021	19140			X		X	X	X		318	26701	26820				X		X		X	X	446					
11461	11580	X	X	X	X		X	X	X		192	19141	19260	X	X	X	X	X	X	X		320	26821	26940	X	X	X	X		X		X		X	X	448			
11581	11700	X	X	X	X		X	X	X		194	19261	19380	X	X	X	X	X	X	X		322	26941	27060	X	X	X	X		X		X		X	X	450			
11701	11820	X		X	X		X	X	X		196	19381	19500	X		X	X	X	X	X		324	27061	27180	X		X	X	X		X		X	X	452				
11821	11940		X	X	X		X	X	X		198	19501	19620		X	X	X	X	X	X		326	27181	27300		X	X	X		X		X		X	X	454			
11941	12060	X	X		X	X		X	X	X	200	19621	19740	X	X		X	X	X	X		328	27301	27420	X	X		X	X		X		X	X	456				
12061	12180		X		X	X		X	X	X	202	19741	19860	X		X	X	X	X	X		330	27421	27540	X		X	X		X		X	X	458					
12181	12300	X		X	X		X	X	X		204	19861	19980	X		X	X	X	X	X		332	27541	27660	X		X	X		X		X	X	460					
12301	12420			X	X		X	X	X		206	19981	20100			X	X	X	X	X		334	27661	27780			X	X		X		X	X	462					
12421	12540	X	X	X	X		X	X	X		208	20101	20220	X	X	X	X	X	X	X		336	27781	27900	X	X	X	X		X		X		X	X	464			
12541	12660	X	X		X		X	X	X		210	20221	20340	X	X		X	X	X	X		338	27901	28020	X	X		X		X		X		X	X	466			
12661	12780	X		X	X		X	X	X		212	20341	20460	X		X	X	X	X	X		340	28021	28140	X		X	X		X		X		X	X	468			
12781	12900		X		X		X	X	X		214	20461	20580		X	X	X	X	X	X		342	28141	28260		X	X	X		X		X		X	X	470			
12901	13020	X	X		X		X	X	X		216	20581	20700	X	X		X	X	X	X		344	28261	28380	X	X		X		X		X		X	X	472			
13021	13140		X		X		X	X	X		218	20701	20820		X		X	X	X	X		346	28381	28500		X		X		X		X		X	X	474			
13141	13260	X		X		X		X	X		220	20821	20940	X		X		X	X	X		348	28501	28620	X		X		X		X		X		X	X	476		
13261	13380			X		X		X	X		222	20941	21060			X		X	X	X		350	28621	28740			X		X		X		X		X	X	478		
13381	13500	X	X	X	X		X	X	X		224	21061	21180	X	X	X	X	X	X	X		352	28741	28860	X	X	X	X		X		X		X		X	X	480	
13501	13620	X	X	X		X		X	X		226	21181	21300	X	X	X		X	X	X		354	28861	28980	X	X	X		X		X		X		X	X	482		
13621	13740	X		X	X		X	X	X		228	21301	21420	X		X	X	X	X	X		356	28981	29100	X		X	X		X		X		X		X	X	484	
13741	13860		X	X		X		X	X		230	21421	21540		X	X		X	X	X		358	29101	29220		X	X		X		X		X		X	X	486		
13861	13980	X	X		X		X	X	X		232	21541	21660	X	X		X	X	X	X		360	29221	29340	X	X		X		X		X		X		X	X	488	
13981	14100		X		X		X	X	X		234	21661	21780	X		X		X	X	X		362	29341	29460	X		X		X		X		X		X	X	490		
14101	14220	X		X		X		X	X		236	21781	21900	X		X		X	X	X		364	29461	29580	X		X		X		X		X		X	X	492		
14221	14340			X		X		X	X		238	21901	22020			X		X	X	X		366	29581	29700			X		X		X		X		X	X	494		
14341	14460	X	X	X		X		X	X		240	22021	22140	X	X	X		X	X	X		368	29701	29820	X	X	X		X		X		X		X	X	496		
14461	14580		X	X		X		X	X		242	22141	22260	X	X		X	X	X	X		370	29821	29940	X	X		X		X		X		X		X	X	498	
14581	14700	X		X		X		X	X		244	22261	22380	X		X		X	X	X		372	29941	30060	X		X		X		X		X		X		X	X	500
14701	14820		X		X		X	X	X		246	22381	22500		X		X	X	X	X		374	30061	30180		X		X		X		X		X		X	X	502	
14821	14940	X	X			X		X	X		248	22501	22620	X	X		X	X	X	X		376	30181	30300	X	X		X		X		X		X		X	X	504	
14941	15060		X		X		X	X	X		250	22621	22740		X		X	X	X	X		378	30301	30420		X		X		X		X		X		X	X	506	
15061	15180	X			X		X	X	X		252	22741	22860	X		X		X	X	X		380	30421	30540	X			X		X		X		X		X	X	508	
15181	15300			X		X		X	X		254	22861	22980			X		X	X	X		382	30541	30660			X		X		X		X		X		X	X	510
15301	15420	X	X	X	X	X		X	X		256	22981	23100	X	X	X	X	X	X	X		384	30661	30780	X	X	X	X	X	X	X	X	X	X	X	X	X	512	
15421	15540	X	X	X	X	X		X	X		258	23101	23220	X	X	X	X	X	X	X		386	30781	30900	X	X	X	X	X	X	X	X	X	X	X	X	X	514	
15541	15660	X		X	X	X		X	X		260	23221	23340	X		X	X	X	X	X		388	30901	31020	X		X	X	X	X	X	X	X	X	X	X	X	516	
15661	15780		X	X	X	X		X	X		262	23341	23460		X	X	X	X	X	X		390	31021	31140		X	X	X	X	X	X	X	X	X	X	X	X	518	
15781	15900	X	X		X	X	X	X	X		264	23461	23580	X	X		X	X	X	X		392	31141	31260	X	X		X	X	X	X	X	X	X	X	X	X	520	
15901	16020		X		X	X	X	X	X		266	23581	23700	X		X	X	X	X	X		394	31261	31380	X		X	X	X	X	X	X	X	X	X	X	X	522	
16021	16140	X		X	X	X		X	X		268	23701	23820	X		X	X	X	X	X		396	31381	31500	X		X	X	X	X	X	X	X	X	X	X	X	524	
16141	16260			X	X	X		X	X		270	23821	23940			X	X	X	X	X		398	31501	31620			X	X	X	X	X	X	X	X	X	X	526		
16261	16380	X	X	X		X		X	X		272	23941	24060	X	X	X		X	X	X		400	31621	31740	X	X	X		X		X		X		X		X	X	528
16381	16500		X	X		X		X	X		274	24061	24180	X	X		X	X	X	X		402	31741	31860	X	X	</												

**Note that "X" is Switch ON**

Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH	
From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10		
33061	33180	X	X		X	X	X	X				552	40741	40860	X	X	X	X	X	X	X				680	48421	48540	X	X	X	X	X	X				808		
33181	33300		X	X	X	X	X	X				554	40861	40980		X	X	X	X	X	X				682	48541	48660		X	X	X	X	X	X				810	
33301	33420	X		X	X	X	X	X				556	40981	41100	X		X	X	X	X	X				684	48661	48780	X		X	X	X	X	X				812	
33421	33540			X	X	X	X	X				558	41101	41220			X	X	X	X	X				686	48781	48900			X	X	X	X	X	X				814
33541	33660	X	X	X		X	X	X	X			560	41221	41340	X	X	X		X	X	X				688	48901	49020	X	X	X		X	X	X	X				816
33661	33780	X	X		X	X	X	X				562	41341	41460	X	X		X	X	X	X				690	49021	49140	X	X		X	X	X	X	X				818
33781	33900	X	X		X	X	X	X				564	41461	41580	X	X		X	X	X	X				692	49141	49260	X	X		X	X	X	X	X				820
33901	34020		X		X	X	X	X				566	41581	41700		X		X	X	X	X				694	49261	49380		X		X	X	X	X				822	
34021	34140	X	X		X	X	X	X				568	41701	41820	X	X		X	X	X	X				696	49381	49500	X	X		X	X	X	X	X				824
34141	34260		X		X	X	X	X				570	41821	41940	X		X	X	X	X	X				698	49501	49620		X		X	X	X	X	X				826
34261	34380	X			X	X	X	X				572	41941	42060	X		X	X	X	X	X				700	49621	49740	X			X	X	X	X	X				828
34381	34500			X	X	X	X	X				574	42061	42180			X	X	X	X	X				702	49741	49860				X	X	X	X	X				830
34501	34620	X	X	X	X	X	X	X				576	42181	42300	X	X	X	X	X	X	X				704	49861	49980	X	X	X	X	X	X	X	X				832
34621	34740	X	X	X	X	X	X	X				578	42301	42420	X	X	X	X	X	X	X				706	49981	50100	X	X	X	X	X	X	X	X				834
34741	34860	X	X	X	X	X	X	X				580	42421	42540	X	X	X	X	X	X	X				708	50101	50220	X	X	X	X	X	X	X	X				836
34861	34980		X	X	X	X	X	X				582	42541	42660		X	X	X	X	X	X				710	50221	50340		X	X	X	X	X	X	X				838
34981	35100	X	X	X	X	X	X	X				584	42661	42780	X	X	X	X	X	X	X				712	50341	50460	X	X	X	X	X	X	X	X				840
35101	35220		X	X	X	X	X	X				586	42781	42900	X	X	X	X	X	X	X				714	50461	50580	X	X	X	X	X	X	X	X				842
35221	35340	X		X	X	X	X	X				588	42901	43020	X		X	X	X	X	X				716	50581	50700	X		X	X	X	X	X	X				844
35341	35460			X	X	X	X	X				590	43021	43140			X	X	X	X	X				718	50701	50820		X	X	X	X	X	X	X				846
35461	35580	X	X	X	X	X	X	X				592	43141	43260	X	X	X	X	X	X	X				720	50821	50940	X	X	X	X	X	X	X	X				848
35581	35700	X	X		X	X	X	X				594	43261	43380	X	X	X	X	X	X	X				722	50941	51060	X	X	X	X	X	X	X	X				850
35701	35820	X	X	X	X	X	X	X				596	43381	43500	X	X	X	X	X	X	X				724	51061	51180	X	X	X	X	X	X	X	X				852
35821	35940		X	X	X	X	X	X				598	43501	43620		X	X	X	X	X	X				726	51181	51300		X	X	X	X	X	X	X				854
35941	36060	X	X		X	X	X	X				600	43621	43740	X	X		X	X	X	X				728	51301	51420	X	X		X	X	X	X	X				856
36061	36180		X		X	X	X	X				602	43741	43860	X		X	X	X	X	X				730	51421	51540		X		X	X	X	X	X				858
36181	36300	X		X	X	X	X	X				604	43861	43980	X		X	X	X	X	X				732	51541	51660	X		X	X	X	X	X	X				860
36301	36420			X	X	X	X	X				606	43981	44100			X	X	X	X	X				734	51661	51780				X	X	X	X	X				862
36421	36540	X	X	X	X	X	X	X				608	44101	44220	X	X	X	X	X	X	X				736	51781	51900	X	X	X	X	X	X	X	X				864
36541	36660	X	X	X	X	X	X	X				610	44221	44340	X	X	X	X	X	X	X				738	51901	52020	X	X	X	X	X	X	X	X				866
36661	36780	X	X	X	X	X	X	X				612	44341	44460	X	X	X	X	X	X	X				740	52021	52140	X	X	X	X	X	X	X	X				868
36781	36900		X	X	X	X	X	X				614	44461	44580		X	X	X	X	X	X				742	52141	52260		X	X	X	X	X	X	X				870
36901	37020	X	X	X	X	X	X	X				616	44581	44700	X	X	X	X	X	X	X				744	52261	52380	X	X	X	X	X	X	X	X				872
37021	37140		X	X	X	X	X	X				618	44701	44820	X	X	X	X	X	X	X				746	52381	52500	X	X	X	X	X	X	X	X				874
37141	37260	X		X	X	X	X	X				620	44821	44940	X		X	X	X	X	X				748	52501	52620	X	X	X	X	X	X	X	X				876
37261	37380			X	X	X	X	X				622	44941	45060			X	X	X	X	X				750	52621	52740		X		X	X	X	X	X				878
37381	37500	X	X	X	X	X	X	X				624	45061	45180	X	X	X	X	X	X	X				752	52741	52860	X	X	X	X	X	X	X	X				880
37501	37620	X	X		X	X	X	X				626	45181	45300	X	X	X	X	X	X	X				754	52861	52980	X	X	X	X	X	X	X	X				882
37621	37740	X	X	X	X	X	X	X				628	45301	45420	X	X	X	X	X	X	X				756	52981	53100	X	X	X	X	X	X	X	X				884
37741	37860		X		X	X	X	X				630	45421	45540		X	X	X	X	X	X				758	53101	53220		X		X	X	X	X	X				886
37861	37980	X	X		X	X	X	X				632	45541	45660	X	X		X	X	X	X				760	53221	53340	X	X		X	X	X	X	X				888
37981	38100		X		X	X	X	X				634	45661	45780	X		X	X	X	X	X				762	53341	53460		X		X	X	X	X	X				890
38101	38220	X		X	X	X	X	X				636	45781	45900	X		X	X	X	X	X				764	53461	53580	X		X	X	X	X	X	X				892
38221	38340			X	X	X	X	X				638	45901	46020			X	X	X	X	X				766	53581	53700				X	X	X	X	X				894
38341	38460	X	X	X	X	X	X	X				640	46021	46140	X	X	X	X	X	X	X				768	53701	53820	X	X	X	X	X	X	X	X				896
38461	38580	X	X	X	X	X	X	X				642	46141	46260	X	X	X	X	X	X	X				770	53821	53940	X	X	X	X	X	X	X	X				898
38581	38700	X	X	X	X	X	X	X				644	46261	46380	X	X	X	X	X	X	X				772	53941	54060	X	X	X	X	X	X	X	X				900
38701	38820		X	X	X	X	X	X				646	46381	46500		X	X	X	X	X	X				774	54061	54180		X	X	X	X	X	X	X				902
38821	38940	X	X	X	X	X	X	X				648	46501	46620	X	X	X	X	X	X	X				776	54181	54300	X	X	X	X	X	X	X	X				904
38941	39060		X	X	X	X	X	X				650	46621	46740	X	X	X	X	X	X	X				778	54301	54420	X	X	X	X	X	X	X	X				906
39061	39180	X		X	X	X	X	X				652	46741	46860	X		X	X	X	X	X				780	54421	54540	X	X	X	X	X	X	X	X				908
39181	39300			X	X	X	X	X</																															



**Note that "X" is Switch ON**

Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH	Calibration #		Calibration Switch Setting										Freq at 60MPH
From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10		From	To	1	2	3	4	5	6	7	8	9	10	
79141	79260	X	X		X	X	X					1320	86821	86940	X	X		X	X					1448	94501	94620	X	X		X	X	X				1576		
79261	79380		X	X	X	X	X					1322	86941	87060		X	X	X						1450	94621	94740		X	X	X	X	X				1578		
79381	79500	X		X	X	X	X					1324	87061	87180	X		X	X						1452	94741	94860	X		X	X	X	X				1580		
79501	79620			X	X	X	X					1326	87181	87300			X	X	X					1454	94861	94980			X	X	X	X	X			1582		
79621	79740	X	X	X		X	X	X				1328	87301	87420	X	X	X		X					1456	94981	95100	X	X	X		X	X	X			1584		
79741	79860		X	X		X	X	X				1330	87421	87540		X	X		X					1458	95101	95220	X	X		X	X	X				1586		
79861	79980	X	X		X	X	X	X				1332	87541	87660	X		X	X		X				1460	95221	95340	X	X		X	X	X	X			1588		
79981	80100		X		X	X	X					1334	87661	87780		X		X		X				1462	95341	95460		X		X	X	X				1590		
80101	80220	X	X		X	X	X					1336	87781	87900	X	X			X					1464	95461	95580	X	X		X	X	X				1592		
80221	80340		X		X	X	X					1338	87901	88020		X		X		X				1466	95581	95700		X		X	X	X				1594		
80341	80460	X			X	X	X					1340	88021	88140	X			X		X				1468	95701	95820	X			X	X	X				1596		
80461	80580				X	X	X					1342	88141	88260				X		X				1470	95821	95940				X	X	X				1598		
80581	80700	X	X	X	X	X	X					1344	88261	88380	X	X	X	X		X				1472	95941	96060	X	X	X	X	X	X	X				1600	
80701	80820	X	X	X	X	X	X					1346	88381	88500	X	X	X	X		X				1474	96061	96180	X	X	X	X	X	X	X				1602	
80821	80940	X	X	X	X	X	X					1348	88501	88620	X		X	X	X		X			1476	96181	96300	X	X	X	X	X	X	X				1604	
80941	81060		X	X	X	X	X					1350	88621	88740		X	X	X		X				1478	96301	96420		X	X	X	X	X				1606		
81061	81180	X	X		X	X	X					1352	88741	88860	X	X		X	X		X			1480	96421	96540	X	X		X	X	X	X				1608	
81181	81300		X	X	X	X	X					1354	88861	88980	X		X	X		X				1482	96541	96660	X		X	X	X	X				1610		
81301	81420	X		X	X	X	X					1356	88981	89100	X		X	X		X				1484	96661	96780	X		X	X	X	X				1612		
81421	81540			X	X	X	X					1358	89101	89220			X	X		X				1486	96781	96900		X	X	X	X	X				1614		
81541	81660	X	X	X	X	X	X					1360	89221	89340	X	X	X	X		X				1488	96901	97020	X	X	X	X	X	X	X				1616	
81661	81780	X	X		X	X	X					1362	89341	89460	X	X	X	X		X				1490	97021	97140	X	X		X	X	X	X				1618	
81781	81900	X	X	X	X	X	X					1364	89461	89580	X		X	X		X				1492	97141	97260	X	X	X	X	X	X	X				1620	
81901	82020		X	X	X	X	X					1366	89581	89700		X	X	X		X				1494	97261	97380		X	X	X	X	X				1622		
82021	82140	X	X		X	X	X					1368	89701	89820	X	X		X		X				1496	97381	97500	X	X		X	X	X	X				1624	
82141	82260		X		X	X	X					1370	89821	89940	X		X		X					1498	97501	97620		X		X	X	X				1626		
82261	82380	X			X	X	X					1372	89941	90060	X			X		X				1500	97621	97740	X			X	X	X				1628		
82381	82500				X	X	X					1374	90061	90180				X		X				1502	97741	97860				X	X	X				1630		
82501	82620	X	X	X	X	X	X					1376	90181	90300	X	X	X	X		X				1504	97861	97980	X	X	X	X	X	X	X				1632	
82621	82740	X	X	X		X	X					1378	90301	90420	X	X	X		X					1506	97981	98100	X	X	X		X	X	X				1634	
82741	82860	X	X	X		X	X					1380	90421	90540	X		X	X		X				1508	98101	98220	X	X	X		X	X	X				1636	
82861	82980		X	X		X	X					1382	90541	90660		X	X		X					1510	98221	98340		X	X		X	X				1638		
82981	83100	X	X		X		X	X				1384	90661	90780	X	X		X		X				1512	98341	98460	X	X		X		X	X				1640	
83101	83220		X		X		X	X				1386	90781	90900	X		X		X					1514	98461	98580	X		X		X	X				1642		
83221	83340	X		X		X	X					1388	90901	91020	X		X		X					1516	98581	98700	X		X		X	X				1644		
83341	83460			X		X	X					1390	91021	91140			X		X					1518	98701	98820		X		X	X	X				1646		
83461	83580	X	X	X		X	X					1392	91141	91260	X	X	X		X					1520	98821	98940	X	X	X		X	X					1648	
83581	83700	X	X		X	X	X					1394	91261	91380	X	X		X		X				1522	98941	99060	X	X		X	X					1650		
83701	83820	X	X	X	X	X	X					1396	91381	91500	X	X	X	X		X				1524	99061	99180	X	X	X	X	X	X				1652		
83821	83940		X		X	X	X					1398	91501	91620		X	X		X					1526	99181	99300		X		X	X	X				1654		
83941	84060	X	X		X	X	X					1400	91621	91740	X	X			X					1528	99301	99420	X	X		X	X	X				1656		
84061	84180		X		X	X	X					1402	91741	91860		X		X		X				1530	99421	99540		X		X	X	X				1658		
84181	84300	X			X	X	X					1404	91861	91980	X			X		X				1532	99541	99660	X			X	X					1660		
84301	84420				X	X	X					1406	91981	92100				X		X				1534	99661	99780				X	X					1662		
84421	84540	X	X	X	X	X	X					1408	92101	92220	X	X	X	X	X	X	X			1536	99781	99900	X	X	X	X	X	X	X				1664	
84541	84660	X	X	X	X	X	X					1410	92221	92340	X	X	X	X	X	X	X			1538	99901	100020	X	X	X	X	X	X	X				1666	
84661	84780	X	X	X	X	X	X					1412	92341	92460	X		X	X	X	X	X			1540	100021	100140	X	X	X	X	X	X	X				1668	
84781	84900		X	X	X	X	X					1414	92461	92580		X	X	X	X	X	X			1542	100141	100260		X	X	X	X	X				1670		
84901	85020	X	X		X	X	X					1416	92581	92700	X	X		X	X	X	X			1544	100261	100380	X	X		X	X	X	X				1672	
85021	85140		X	X	X	X	X					1418	92701	92820	X		X	X	X	X				1546	100381	100500	X		X	X	X	X				1674		
85141	85260	X		X	X	X	X					1420	92821	92940	X		X	X	X	X				1548	100501	100620	X		X	X	X	X				1676		
85261	85380			X	X	X	X					1422	92941	93060			X	X	X	X				1550	100621	100740			X	X	X	X				1678		
85381	85500	X	X	X	X	X	X					1424	93061	93180	X	X	X	X	X	X				1552	100741	100860	X	X	X	X	X	X				1680		
85501	85620	X	X		X	X	X					1426	93181	93300	X	X	X	X	X	X				1554	100861	100980	X	X		X	X	X				1682		
85621	85740	X	X	X	X	X	X																															

