



INSTALLATION INSTRUCTIONS FOR M&W PRO-14 4 CHANNEL CAPACITOR DISCHARGE IGNITION

CONTENTS:

2. Connections and specifications
3. 4 Channel sequential ignition
4. 4 Cylinder waste spark – 4 coil ignition
5. 4 Cylinder waste spark – 2 coil ignition
6. 6 Cylinder waste spark – 3 coil ignition
7. 6 Cylinder waste spark – 6 coil ignition
8. 8 Cylinder waste spark – 4 coil ignition
9. 8 Cylinder waste spark – 8 coil ignition
10. 3 Rotor Mazda sequential ignition

**CAUTION!
HIGH VOLTAGE**



M & W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

IMPORTANT INSTALLATION NOTES!

MOUNTING

Do not mount the unit where it would be exposed to water splash.
Do not mount the unit near hot engine components.
Where possible mount the unit in an area subject to cooling air.
The unit must be isolated from strong vibration by rubber mounts.

ELECTRICAL

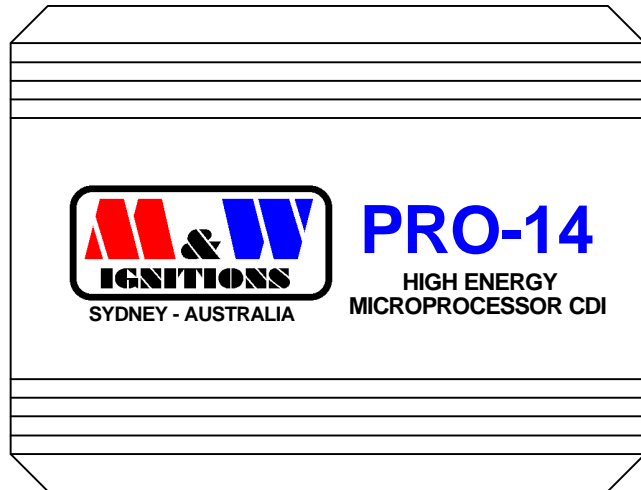
Protect the +12V supply with a 15A inline fuse
Warranty void if not installed!
Max coil wire length 1M, twist wires 1 twist / 15mm
Keep ignition coil wires away from all ecu wiring in particular triggers and sensors

IGNITION LEADS

Do not use carbon suppressed ignition leads.
Do use premium quality magnetic suppressed, spiral wound metal conductor ignition leads.

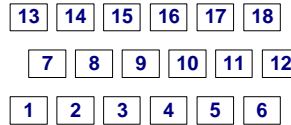
LED INDICATOR

The LED indicator will illuminate when power is first applied to the unit and extinguish with the first trigger pulse, it will then flash with each consecutive trigger pulse



← LED indicator

VIEW LOOKING AT END OF CASE



KEEP ALL INPUTS WELL SEPARATED FROM COIL OUTPUTS

1 Ground (Battery)	7 +12V (Battery)	13 Coil #1 +
2 Trigger #1	8 N/C	14 Coil #1 & #2 -
3 Trigger #2	9 Trigger edge	15 Coil #2 +
4 Ignition switch	10 N/C	16 Coil #3 & #4 -
5 Trigger #3	11 N/C	17 Coil #3 +
6 Trigger #4	12 Tacho	18 Coil #4 +

TRIGGER EDGE

Falling edge ignition - leave pin #9 disconnected.

Rising edge ignition - connect pin #9 to ground or 0V.

When triggering this unit of an existing ignition module or an ecu with built in igniters such as the Microtech 'MTX' series it will be necessary to select rising edge trigger.

Main power to CDI (Pin 7) must be disconnected for changes to take effect.

SPECIFICATIONS

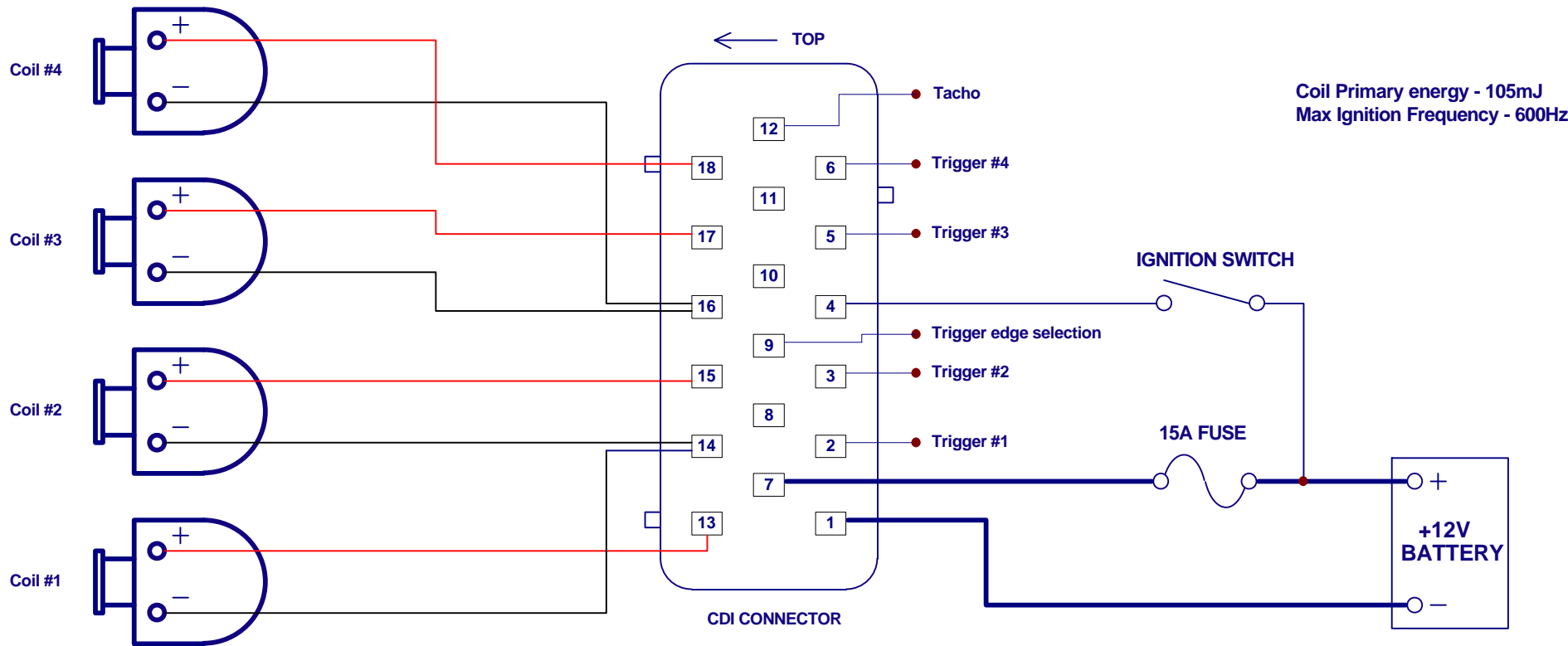
Supply voltage = 13.8V DC negative ground
Operating voltage = +6V to +18V (Restrictions apply)
Maximum supply current = 7.5A
4 CHANNEL MODE
Maximum ignition frequency = 600Hz
Coil primary voltage = 450V
Spark energy = 105 millijoules
2 CHANNEL MODE
Maximum ignition frequency = 350Hz
Coil primary voltage = 580V
Spark energy = 170 millijoules
Trigger = falling edge, 10mA open collector drive
Tacho = 12V, 25mA square wave
Maximum continuous operating temperature = 105°C
Dimensions = 140L * 130W * 50H
Weight = 800gm

Title		FOUR CHANNEL CDI	
Size	Number	Revision	
A4	PRO-14	1.7	
Date:	7-Sep-2004	Sheet 1 of	1
File:	D:\M&W\Diagrams\Pro-14\Pro14_1_9.sch	Drawn By:	M&W

M & W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE

MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title				FOUR CHANNEL SEQUENTIAL CDI			
Size	Number			Revision			
A4	PRO-14			1.3			
Date:	15-Jun-2004		Sheet 1 of	1			
File:	D:\M&W\Diagrams\Pro-14\Pro14_2_9.sch		Drawn By:	M&W			

**CAUTION!
HIGH VOLTAGE**



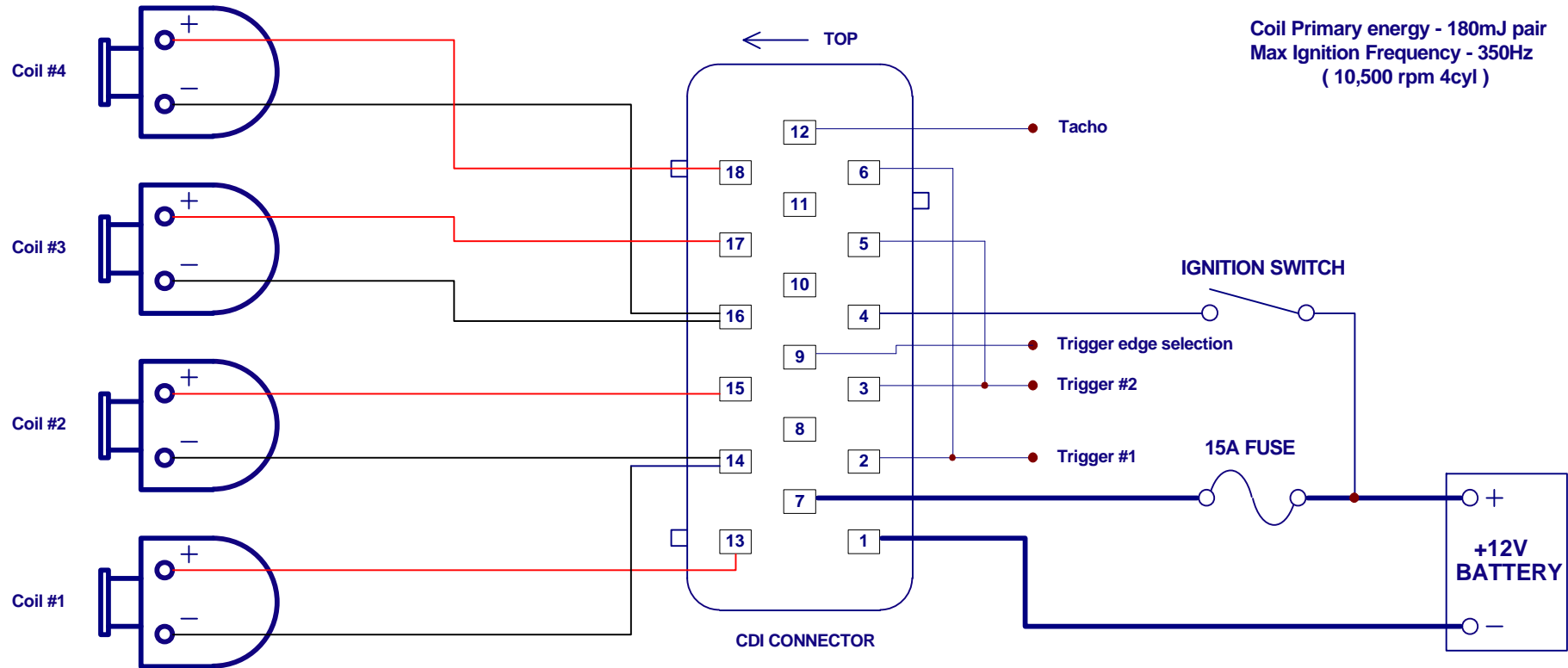
M&W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

TWO TRIGGER MODE

TWO TRIGGERS WITH FOUR SINGLE COILS

Pair up triggers 1+4 and 2+3 and install 4 single output ignition coils. This will force the CDI unit into high power mode and is intended to be used when the ECU only has two trigger outputs available.



**Coil Primary energy - 180mJ pair
Max Ignition Frequency - 350Hz
(10,500 rpm 4cyl)**

MINIMUM RECOMMENDED WIRE SIZE

- 1.5mm Dia - 0.5 Sqmm - 20 AWG
- 2.5mm Dia - 1.0 Sqmm - 18 AWG
- 3.5mm Dia - 2.0 Sqmm - 14 AWG

Title TWO TRIGGER FOUR CHANNEL WASTED SPARK CDI			
Size A4	Number PRO-14	Revision 1.3	
Date: 15-Jun-2004	Sheet 1 of 1		Drawn By: M&W
File: D:\M&W\Diagrams\Pro-14\Pro14_3_9.sch			

**CAUTION!
HIGH VOLTAGE**



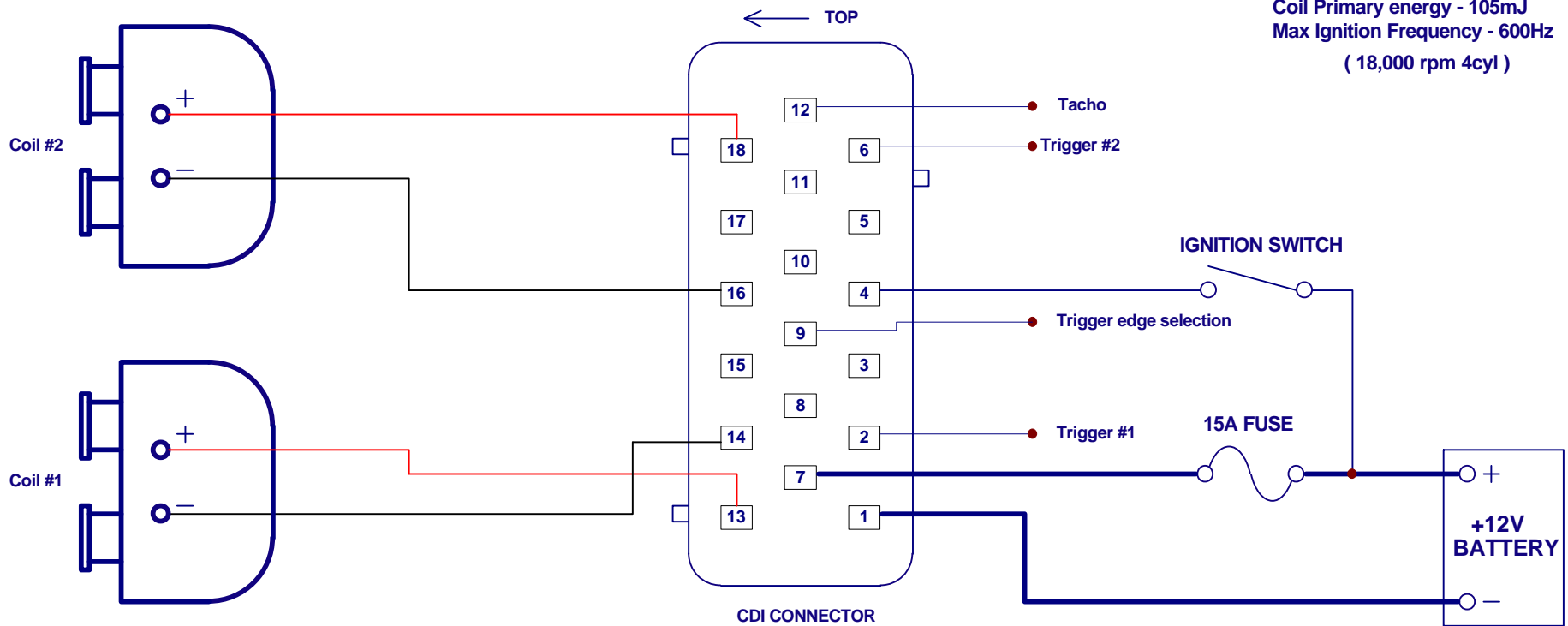
M&W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

TWO TRIGGER MODE
TWO TRIGGERS WITH TWO DUAL OUTPUT COILS

Do not pair up the input triggers, leave the unused two disconnected, as running dual outlet ignition coils in high power mode may casue permanent damage to both the CDI and coils.

**Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz
(18,000 rpm 4cyl)**



MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title			FOUR CYLINDER WASTED SPARK CDI		
Size	Number	Revision			
A4	PRO-14	1.3			
Date:	15-Jun-2004	Sheet 1 of	1		
File:	D:\M&W\Diagrams\Pro-14\Pro14_4_9.sch	Drawn By:	M&W		

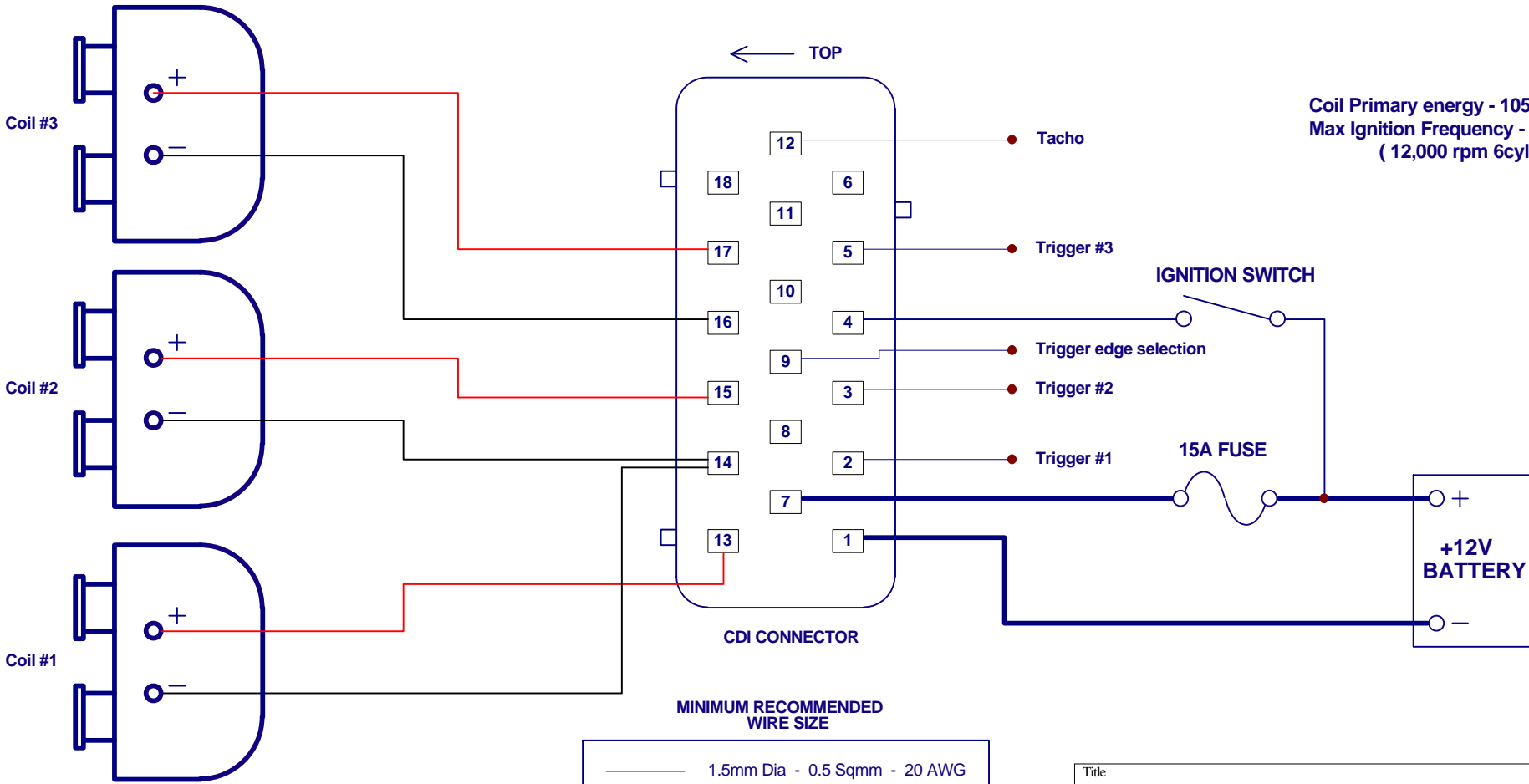
M&W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE



Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz
(12,000 rpm 6cyl)



MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title SIX CYLINDER WASTED SPARK CDI - 3 DOUBLE COILS			
Size A4	Number PRO-14	Revision 1.3	
Date: 15-Jun-2004	Sheet 1 of 1	Drawn By: M&W	
File: D:\M&W\Diagrams\Pro-14\Pro14_5_9.sch			

M&W IGNITIONS

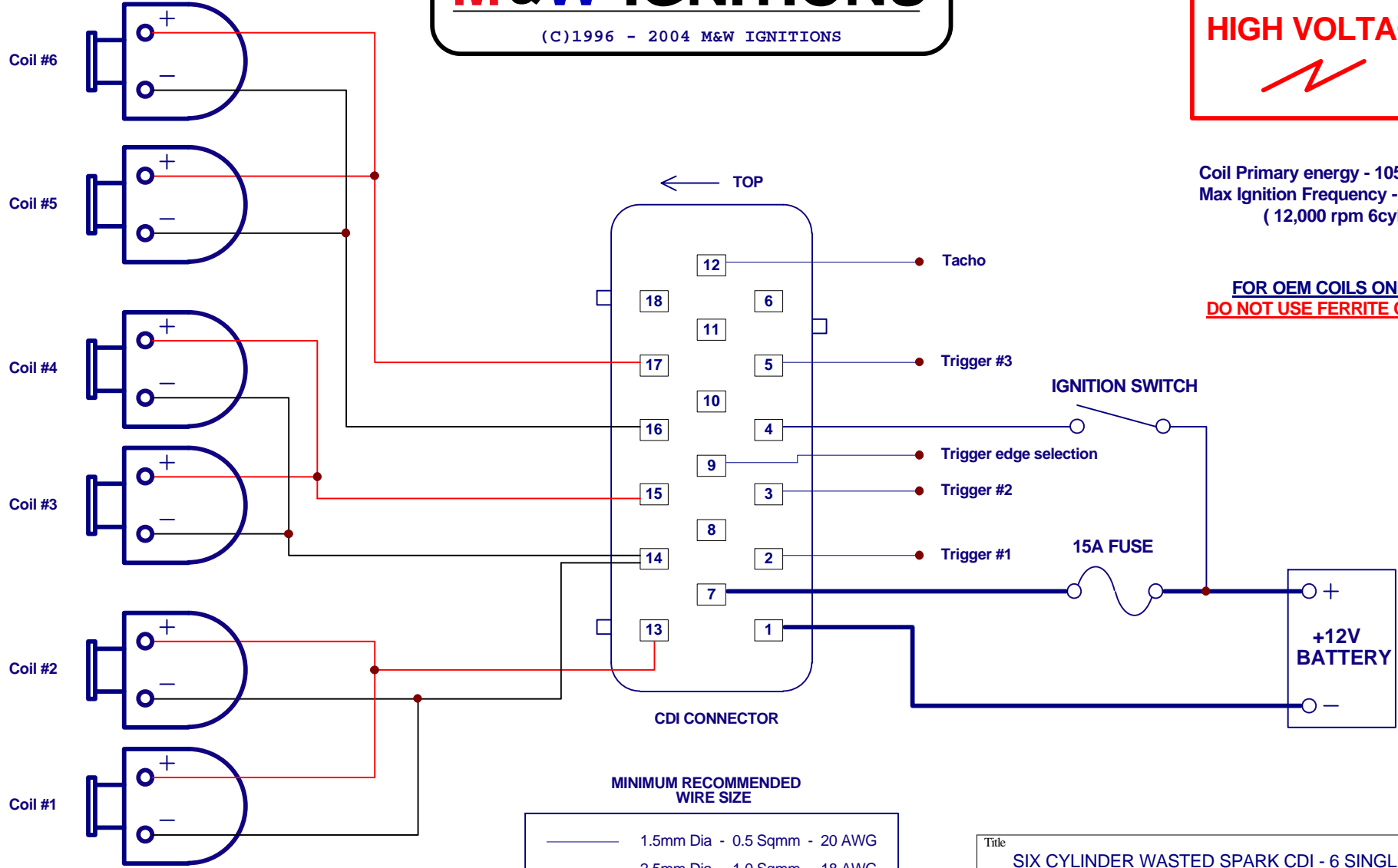
(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE



Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz
(12,000 rpm 6cyl)

FOR OEM COILS ONLY
DO NOT USE FERRITE COILS



MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title SIX CYLINDER WASTED SPARK CDI - 6 SINGLE COILS			
Size A4	Number PRO-14	Revision 1.3	
Date: 15-Jun-2004	Sheet 1 of 1		Drawn By: M&W
File: D:\M&W\Diagrams\Pro-14\Pro14_6_9.sch			

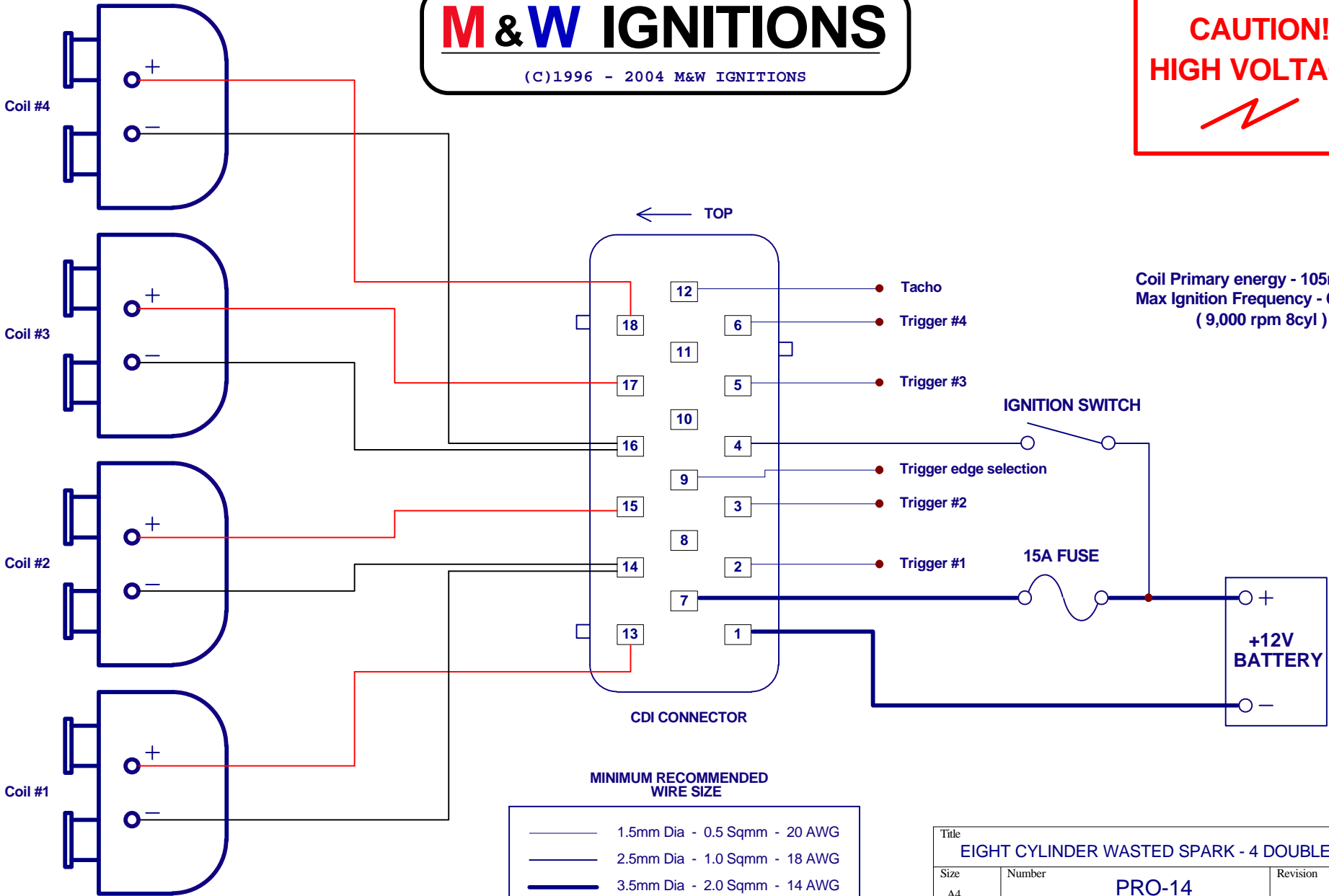
M & W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE



Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz
(9,000 rpm 8cyl)



MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title			
EIGHT CYLINDER WASTED SPARK - 4 DOUBLE COILS			
Size	Number	Revision	
A4	PRO-14	1.3	
Date:	15-Jun-2004	Sheet 1 of	1
File:	D:\M&W\Diagrams\Pro-14\Pro14_7_9.sch	Drawn By:	M&W

M & W IGNITIONS

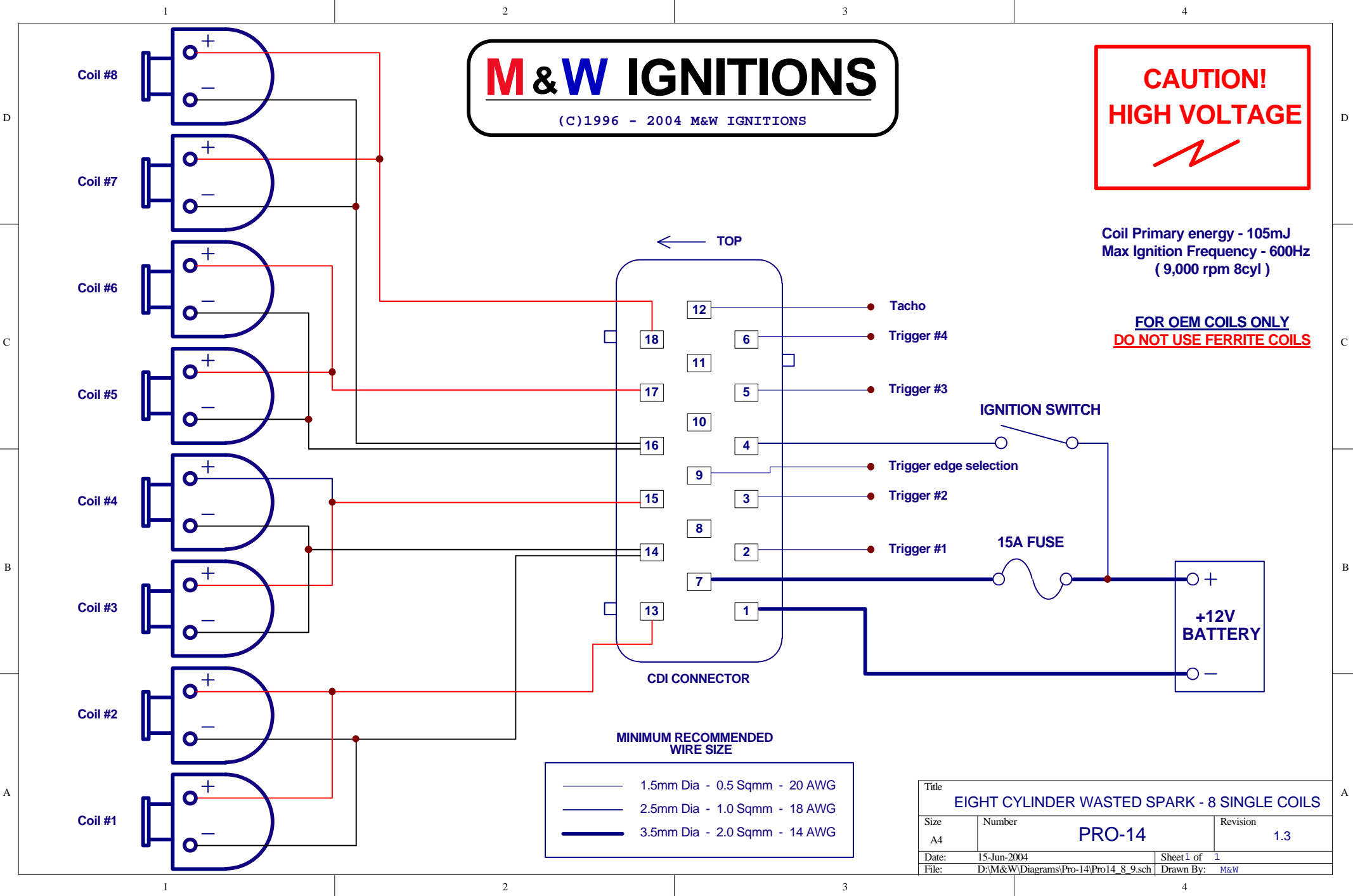
(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE



Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz
(9,000 rpm 8cyl)

FOR OEM COILS ONLY
DO NOT USE FERRITE COILS



M & W IGNITIONS

(C)1996 - 2004 M&W IGNITIONS

CAUTION!
HIGH VOLTAGE

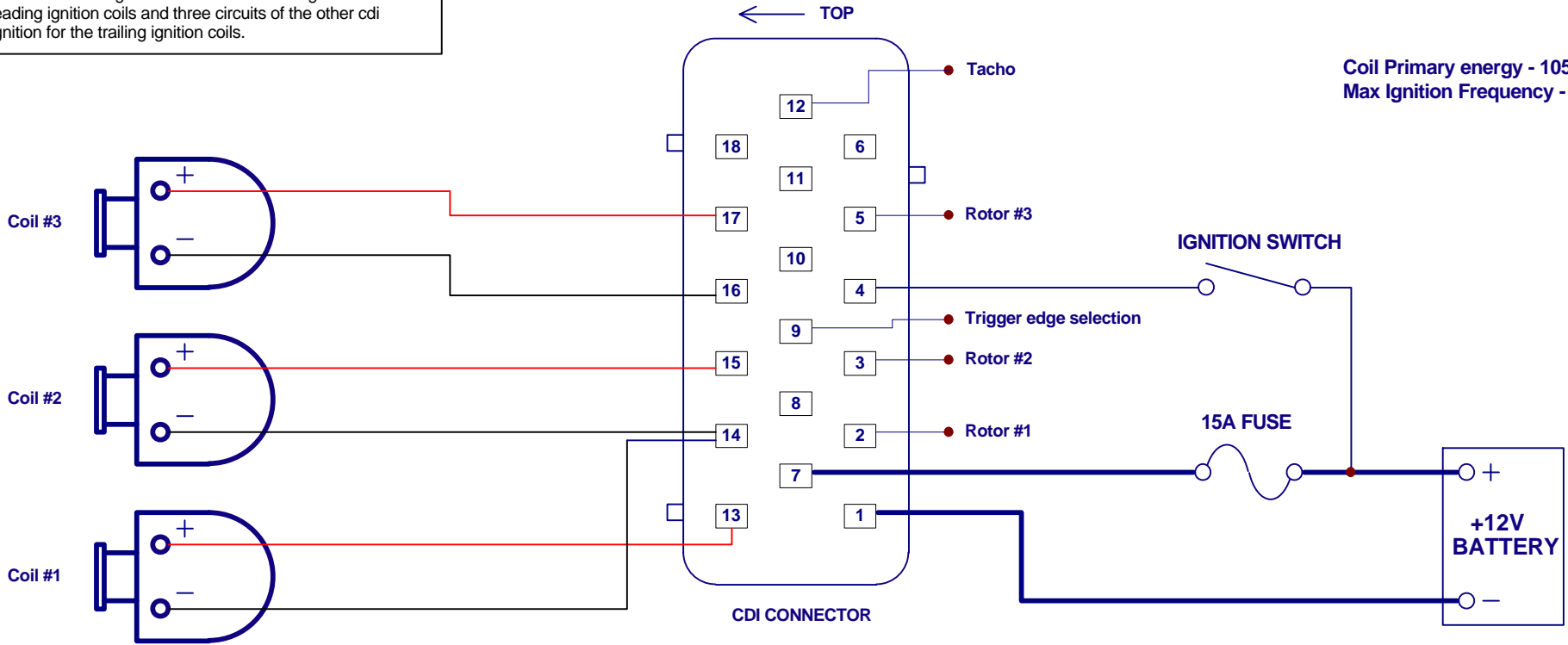
NOTE!

TRIPLE ROTOR MAZDA

Two 4 channel cdi ignition systems will be required for this installation.

Wire three of the ignition circuits on one cdi ignition for the leading ignition coils and three circuits of the other cdi ignition for the trailing ignition coils.

Coil Primary energy - 105mJ
Max Ignition Frequency - 600Hz



MINIMUM RECOMMENDED WIRE SIZE

	1.5mm Dia - 0.5 Sqmm - 20 AWG
	2.5mm Dia - 1.0 Sqmm - 18 AWG
	3.5mm Dia - 2.0 Sqmm - 14 AWG

Title				TRIPLE ROTOR MAZDA			
Size	Number	PRO-14		Revision		1.3	
Date:	15-Jun-2004	Sheet 1 of	1	Drawn By:	M&W		
File:	D:\M&W\Diagrams\Pro-14\Pro14_9_9.sch						