

EZGas Pro Residential Gas Conversion Burner



Bruce Graham

Carlin EZ Gas Ratings

- Residential Gas Burner
 - Inputs from 50,000 – 275,000 Btuh (.50-2.0 gph)
 - Accommodates Most Residential Applications
- UL Listed U.S. & Canada - Can be retrofitted into any existing oil appliance per UL standards.
- All national and local codes must be followed



Why a Carlin EZ Gas Burner?

- Low Cost
 - Often the homeowner's only economically viable way to convert to gas.
 - Overcomes homeowners resistance when they recently installed oil fired unit.
 - Enables Gas Utilities/Installers to provide more options and close more conversions.
- Easy To Install
 - Shortens installation time, further reducing cost and allowing for more conversions.

Why the Carlin EZ Gas Burner is the Burner of Choice for Safety

- Mixes Fuel/Air inside combustion chamber – unlike older conversion burners
- Pre-Purge-Vents system prior to ignition
- Ignition-Max 6 Seconds- Locks out burner and gas valve if burner doesn't light off
- Air Proving Switch-Shuts down burner / gas valve if flame is lost
- Service Man Reset protection-Latch up with 3 consecutive lockouts in the same call for heat

When to Consider the Carlin EZ Gas Burner?

- Newer Oil Appliances in good operating condition
- Rule of thumb - Oil appliances installed in the last 10 or 12 years.

What appliances Can We Fire?

- Conventional Boilers - with and without hot water coils
- Three Pass High Efficiency Boilers
- Steam Boilers
- Warm Air Furnaces
- Direct Fired Water Heaters



Sales Process

- Survey the existing heating system
 - Is the Equipment in Good Shape?
 - Inspect Chimney:
 - Brick in Mortar on outside wall must be lined
 - Terra Cotta – Ok, but must be inspected
 - Follow Local Codes.
 - Note the Flue Size for the Draft Regulator and the Venting Situation
 - Note the Existing Brand and Model # of the Appliance
 - Consult Carlin's OEM Guide or Gas Burner Selection Guide (at www.CarlinCombustion.com)

Select the Burner: EZGas Pro Options

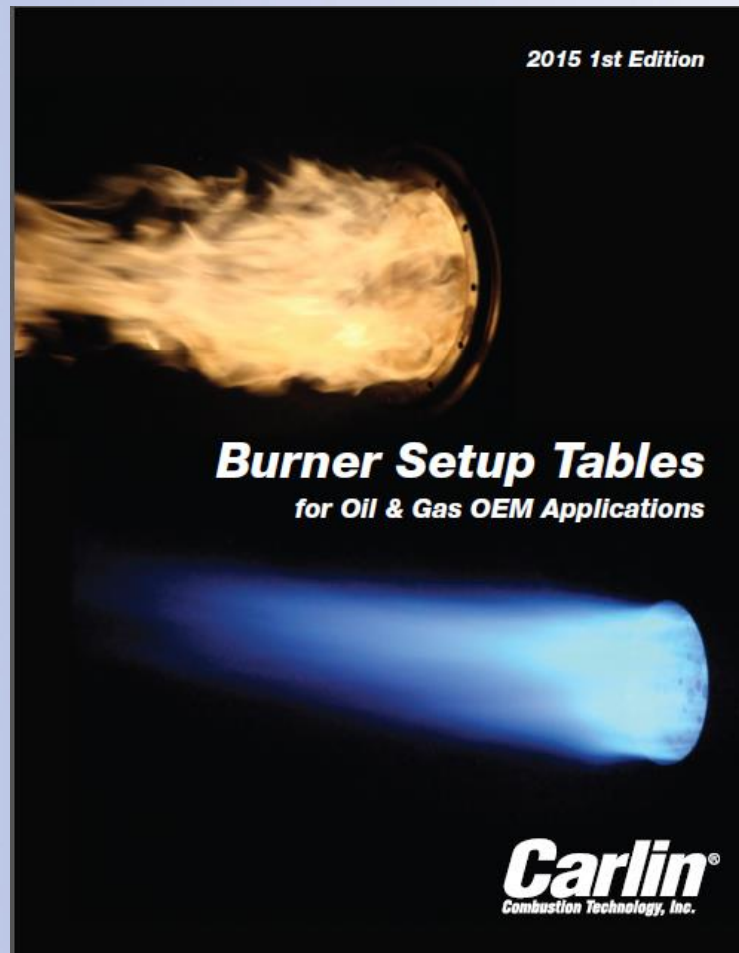
- **Appliance Specific Burners:**

- Equipped with welded mounting flange, factory installed air band, diffuser plate and orifice.
- Benefit – Faster Installation

- **Universal Burners**

- Equipped with adjustable mounting flange, three diffuser plates, two air bands, and a field-drilled orifice.
- Benefit – On the shelf at many wholesalers

OEM Guide (in Print) or Gas Burner Selection Guide (on Line)



OEM Burner Set Up Tables

Gas Burner Setup Tables

Appliance Model	Burner Model	Diffuser/ Head	Air Tube	OEM Air Tube	Insertion Depth	Input MBH	Orifice Size		Air Setting	Air Band	Head Bar	Air Shutter	Manifold Pressure
							Natural Gas	Propane					

Weil-McLain

GO-2	EZGas Pro	B	10"	9918601	3 1/8	98	7/32 (.219)	11/64 (.172)	35NG/25LP	1 Slot	-	blank	3.5
GO-3	EZGas Pro	B	10"	9918601	3 1/8	133	1/4 (.250)	7/32 (.219)	35NG/40LP	1 Slot	-	blank	3.5
GO-4	EZGas Pro	95	10"	50847	3 1/8	168	9/32 (.281)	#2 (.221)	35%	2 Slot	-	blank	3.5
GO-5	EZGas Pro	A	10"	9895301	3 1/8	203	5/16 (.312)	1 (.272)	35%	2 Slot	-	blank	3.5
GO-6	EZGas Pro	A	10"	9895301	3 1/8	245	X (.397)	P (.323)	58NG/70LP	2 Slot	-	blank	3.5
GO-7	201GAS	B	10"	99331	3 1/8	280	Y (.404)	21/64 (.328)	38%	2 Slot	-	none	3.5
GO-8	201GAS	A	10"	98840	3 1/8	322	27/64 (.422)	11/32 (.344)	18NG/21LP	4 Slot	-	none	3.5

UO-3	EZGas Pro	B	10"5	50330	2	112	7/32 (.219)	#14 (.182)	22NG/30LP	1 slot	-	blank	3.5
						140	F (.257)	7/32 (.219)	50%	1 slot	-	blank	3.5
UO-4	EZGas Pro	B	10"5	50330	2	168	L (.290)	D (.246)	65%	1 slot	-	blank	3.5
UO-5	EZGas Pro	A	10"5	50330	2	196	P (.323)	I (.272)	40%	2 slot	-	blank	3.5

Ultra burners are built with covers

Must have gasket under ignitor and grommet in access cover: kit # GSKTKIT1

380	201GAS	A	10"	99318	3	346	15/32 (.469)	3/8 (.375)	45NG/50LP	4 Slot	-	none	3.5
480	301GAS	B	14" B	99311	4	491	1/2 (.500)	3/8 (.375)	45NG/52LP	4 Slot	-	full	3.2NG/3.8LP
580	301GAS	B	14" B	99311	4	639	9/16 (.562)	7/16 (.438)	75%	4 Slot	-	center	3.5
680	301GAS	C	14" C	99310	4	787	5/8 (.625)	1/2 (.500)	52NG/60LP	4 Slot	-	center	3.5
780	301GAS	C	14" C	99310	4	935	11/16 (.687)	17/32 (.531)	60NG/100LP	4 Slot	-	none	3.5NG/3.5LP
780	601GAS	21	14" C	99310	4	935	3/4 (.750)	17/32 (.531)	3	--	-	--	3.6NG/3.5LP
880	601GAS	21	14" C	99310	4	1082	1 (1.00)	19/32 (.594)	3.5	--	-	--	3.6NG/3.5LP
980	601GAS	32	14" D	99338	4	1230	15/16 (.938)		5.5	--	-	--	3.5
			14" C	99310	4	1230		21/32 (.656)	5.5	--	-	--	3.5
1080	601GAS	32	14" D	99338	4	1378	1 1/8 (1.125)	3/4 (.750)	7	--	-	--	3.5

For 80 series with 301GAS & 601GAS use front plate # 385-700-235 (order from Weil-McLain)

Williamson-Thermoflo

W/HBO-10A	EZGas Pro	B	12"	Universal	5 1/2	105	#2 (.221)	#16 (.177)	15%	1 Slot	-	blank	3.5
						120	C (.242)	#10 (.194)	25%	1 Slot	-	blank	3.5

CHB-105	EZGas Pro	95	12"	Universal	5 1/2	91	#5 (.205)	#19 (.166)	18%	1 slot	-	blank	3.5
						105	7/32 (.219)	#17 (.173)	20%	1 slot	-	blank	3.5
						119	A (.234)	#11 (.191)	30%	1 slot	-	blank	3.5
CLB-105	EZGas Pro	95	12"	Universal	5 1/2	91	#9 (.196)	#20 (.161)	15%	1 slot	-	blank	3.5
						105	7/32 (.219)	#19 (.166)	25%	1 slot	-	blank	3.5
						119	#1 (.228)	#14 (.183)	35%	1 slot	-	blank	3.5

EZGas Pro will not fit in cabinet of the CHB/CLB furnace

PMP/PLB-095	EZGas Pro	95	10"	Universal	1 3/4	70	11/64 (.172)	#30 (.129)	11%	1 slot	-	blank	3.6
						84	3/16 (.187)	5/32 (.156)	20%	1 slot	-	blank	3.8NG/3.7LP
						98	7/32 (.219)	#20 (.161)	28%	1 slot	-	blank	3.2NG/3.6LP
PMP/PLB-112	EZGas Pro	95	10"	Universal	1 3/4	95	#5 (.206)	#20 (.161)	29%	1 slot	-	blank	3.6
						112	#2 (.221)	#15 (.180)	36%	1 slot	-	blank	3.6

York Shipley

CT-6	EZGas Pro	95	12"	99630	4 3/4	252	3/8 (.375)	19/64 (.297)	80%	2 slot	-	blank	3.5
CT-10	301GAS	B	14" B	99328	4 3/4	420	29/64 (.453)	5 (.348)	15%	4 Slot	-	full	3.5
CT-15	301GAS	B	14" B	99328	4 3/4	630	37/64 (.578)	29/64 (.453)	65%	4 Slot	-	full	3.5
CT-20	301GAS	C	14" C	99327	4 3/4	840	3/4 (.750)	35/64 (.546)	35NG/50LP	4 Slot	-	none	3.5
CT-25	601GAS	11	14" C	99327	4 3/4	1050	1 (1.00)	19/32 (.593)	1.5NG/2LP	--	-	--	3.8NG/3.5LP

On Line Burner Selection Guide

Gives Sales and Installation People
Important Information Before and
During the Installation

Gas Burner Selection Guide

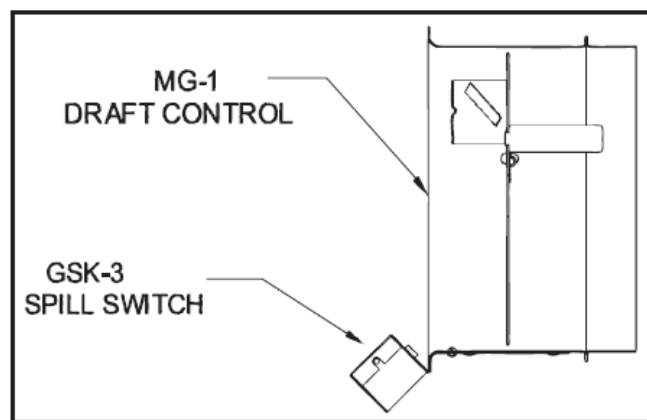
Appliance Model	Input MBH	Burner Model	Gas Burner Part Number				Diffuser/Head	Air Tube	OEM Air Tube	Insertion Depth	Orifice Size		Air Setting	Air Band	Head Bar	Air Shutter	Manifold Pressure
			Appl Specific - Natural Gas	Appl Specific - Propane	Multi-Fit	Universal					Natural Gas	Propane					
EC/ECT-03-120	168/150	E2Gsc Pro	N/A	N/A	9859210GFR1	9859210FRU	S	10"	Universal	2 1/2	17/64 (.2656)	7/32 (.2187)	65%	1 slot	-	blank	3.5
Peerless (PB Heat) cont'd																	
EC/ECT-04-125	175	E2Gsc Pro	N/A	N/A	9859210GFR1	9859210FRU	S	10"	Universal	2 1/2	9/32 (.2812)	15/64 (.234)	40%	2 slot	-	blank	3.5
EC/ECT-04-150	210	E2Gsc Pro	N/A	N/A	9859210GFR1	9859210FRU	S	10"	Universal	2 1/2	21/64 (.3281)	17/64 (.2656)	60%	2 slot	-	blank	3.5
EC/ECT-04-175	245	E2Gsc Pro	N/A	N/A	9859210AFR1A	9859210FRU	A	10"	Universal	2 1/2	11/32 (.344)	9/32 (.2812)	45%	2 slot	-	blank	3.5
EC/ECT-05-175	245	E2Gsc Pro	N/A	N/A	9859210AFR1A	9859210FRU	A	10"	Universal	2 1/2	11/32 (.344)	9/32 (.2812)	45%	2 slot	-	blank	3.5
EC/ECT-05-200	280/275	E2Gsc Pro	N/A	N/A	9859210AFR1A	9859210FRU	A	10"	Universal	2 1/2	7/16 (.4375)	11/32 (.3437)	75%	2 slot	-	blank	3.5
EC/ECT-05-250	350	201GAS	N/A	N/A	9859310AFRA	N/A	A	10"	Universal	2 1/2	15/32 (.4687)	23/64 (.359)	35%	2 slot	-	none	3.5
EC/ECT-06-275	385	201GAS	N/A	N/A	9859310AFRA	N/A	A	10"	Universal	2 1/2	1/2 (.500)	3/8 (.375)	40%	4 slot	-	none	3.5
EC/ECT-06-300	420/399	201GAS	N/A	N/A	9859310AFRA	N/A	A	10"	Universal	2 1/2	9/16 (.5625)	7/16 (.4375)	60%	4 slot	-	none	3.5
EC/ ECT applications based on field testing (not lab testing) - actual orifice sizes may vary.																	
SC/ SCT-05	433	301GAS	99582FR55 (-M)	99582FR52P (-M)	N/A	N/A	S	14" B	99749B	2 1/2	29/64 (.453)	3/8 (.375)	30NG/35LP	4 Slot	-	full	3.5NG/3.6LP
SC/ SCT-06	505	301GAS	99582FR56 (-M)	99582FR56P (-M)	N/A	N/A	S	14" B	99749A	2 1/2	1/2 (.500)	13/32 (.406)	30NG/65LP	4 Slot	-	full	3.5NG/3.4LP
SC/ SCT-07	577	301GAS	99582FR57 (-M)	99582FR57P (-M)	N/A	N/A	B	14" B	99749	2 1/2	35/64 (.547)	7/16 (.438)	40NG/50LP	4 Slot	-	full	3.3NG/3.5LP
SC/ SCT-08	649	301GAS	99582FR58 (-M)	99582FR58P (-M)	N/A	N/A	B	14" B	99749	2 1/2	19/32 (.594)	29/64 (.453)	60NG/65LP	4 Slot	-	full	3.4NG/3.5LP
SC/ SCT-09	722	301GAS	99582FR59 (-M)	99582FR59P (-M)	N/A	N/A	C	14" C	99733	2 1/2	19/32 (.594)	15/32 (.469)	40NG/50LP	4 Slot	-	center	3.5
SC/ SCT-10	794	301GAS	99582FR60 (-M)	99582FR60P (-M)	N/A	N/A	C	14" C	99733	2 1/2	21/32 (.656)	1/2 (.500)	55NG/65LP	4 Slot	-	center	3.4NG/3.5LP
For SC series use front plate # 90604 (order from Peerless)																	
LC-04	686	301GAS	99582FR4	99582FR4P	N/A	N/A	B	14" B	99581	2 1/8	19/32 (.594)	29/64 (.453)	80%	4 slot	-	center	3.5
LC-05R	808	301GAS	99582FR3R	99582FR3RP	N/A	N/A	C	14" C	99539	2 1/8	21/32 (.656)	1/2 (.500)	75%	4 slot	-	center	3.5
	808	601GAS	99583FR3R (-M)	99583FR3RP (-M)	N/A	N/A	11	14" C	99539	2 1/8	21/32 (.656)	1/2 (.500)	3.5NG/ 3LP	-	-	-	3.4NG/3.5LP
LC-05	881	301GAS	99582FR3	99582FR3P	N/A	N/A	C	14" C	99539	2 1/8	23/32 (.719)	35/64 (.547)	60NG/65LP	4 Slot	-	none	3.6NG/3.2LP
	881	601GAS	99583FR3 (-M)	99583FR3P (-M)	N/A	N/A	11	14" C	99539	2 1/8	23/32 (.719)	35/64 (.547)	4.5NG/ 4.75LP	-	-	-	3.6NG/3.1LP
LC-06	1077	601GAS	99583FR6 (-M)		N/A	N/A	22	14" D	99540	2 1/8	1 1/4		6.5	-	-	-	3.5
	1077			99583FR6P (-M)	N/A	N/A	21	14" C	99539	2 1/8		19/32 (.594)	6.5	-	-	-	3.5
LC-07	1273	601GAS	99583FR7 (-M)		N/A	N/A	32	14" D	99540	2 1/8	1 1/4		7.25	-	-	-	3
	1273			99583FR7P (-M)	N/A	N/A	31	14" C	99539	2 1/8		21/32 (.656)	7.25	-	-	-	3.5
For LC series with 301GAS & 601GAS use front plate # 51049 (order from Peerless)																	
WBV-03	140	E2Gsc Pro	99034FR2	99034FR2	9859210GFR1	9859210FRU	95	10"	Universal	2 1/2	F (.257)	#3 (.213)	50%	1 slot	-	blank	3.4
WBV-04	133	E2Gsc Pro	99034FR2	99034FR2	9859210GFR1	9859210FRU	95	10"	Universal	2 1/2	F (.257)	13/64 (.203)	32%	2 slot	-	blank	3.2NG/3.4LP
	175	E2Gsc Pro	99034FR2	99034FR2	9859210GFR1	9859210FRU	95	10"	Universal	2 1/2	N (.302)	1/4 (.250)	42NG/50LP	2 slot	-	blank	3.6NG/3.2LP
	210	E2Gsc Pro	99034FR2	99034FR2	9859210GFR1	9859210FRU	95	10"	Universal	2 1/2	23/64 (.359)	1/4 (.250)	burner rack	2 slot	-	blank	3.7NG/3.5LP

Must have gasket under ignitor and grommet in access cover: kit # GSKTKT1

Select Draft Regulator and Spill Switch



LOCATION FOR FASTEST RESPONSE –
OPTIONAL LOCATION



Installation

Steps:

- Run the Gas Line Prep the Appliance Clean etc...
- Do Any Upgrades - T Stats, Controls, etc.
- Install the Burner
- Set-up burner based on Carlin OEM Guide or Input Rate
- Install Draft Regulator and Spill Switch
- Fire Off and Check

Optional Burner Cover, Order With the Burner or Add on After



What About Combustion Air? Add a Fresh Air Kit

OUTSIDE AIR/DIRECT VENT KIT

Filler Section
for Backplate



Grommet



Insert for Oil
Line Opening



4" Air Inlet



Part/Model No.	Description	For Use On	Includes
50433KIT	OA/DV Kit	RESCVR1S & RESCVR5S	Filler Section for Backplate with Mounting Bolts, 4" Air Inlet with Mounting Screws, Insert for Oil Line Opening, 1 5/8" Grommet for BX cable, push plugs

Technical Support Hotline

800-989-2275

TECHNICAL SUPPORT HOT LINE

***We Are Here
To Help You
... Call Us***



8 – 5
Eastern time

PLEASE PROVIDE:

- Burner model
- Appliance model
- Service history
- Orifice information
- Combustion test results
- Gas pressures
- Fuel supply & piping information
- Venting type

Sales and Contractor Training

- **Sales force training** how to size and select appropriate burner for specific applications.
- **Carlin University** certificate classes run 4 to 8 hours.
- Carlin conducts over a 100 trainings per year.
- **On Location Trainings We Come To You and Customize to fit the Time Frame and Needs**
- Live Fires, Tools and Manuals

Training Video

Chapter 1: EZGas Pro Conversion Burner Overview



25 minutes long with 7 chapters

Training Shows a Complete Install

Chapter 2: Prepare Appliance and Configure Burner for BTU Rate

Chapter 2

C Chapter 2: Prepare Appliance and Configure Burner for BTU Rate
from Carlin Combustion

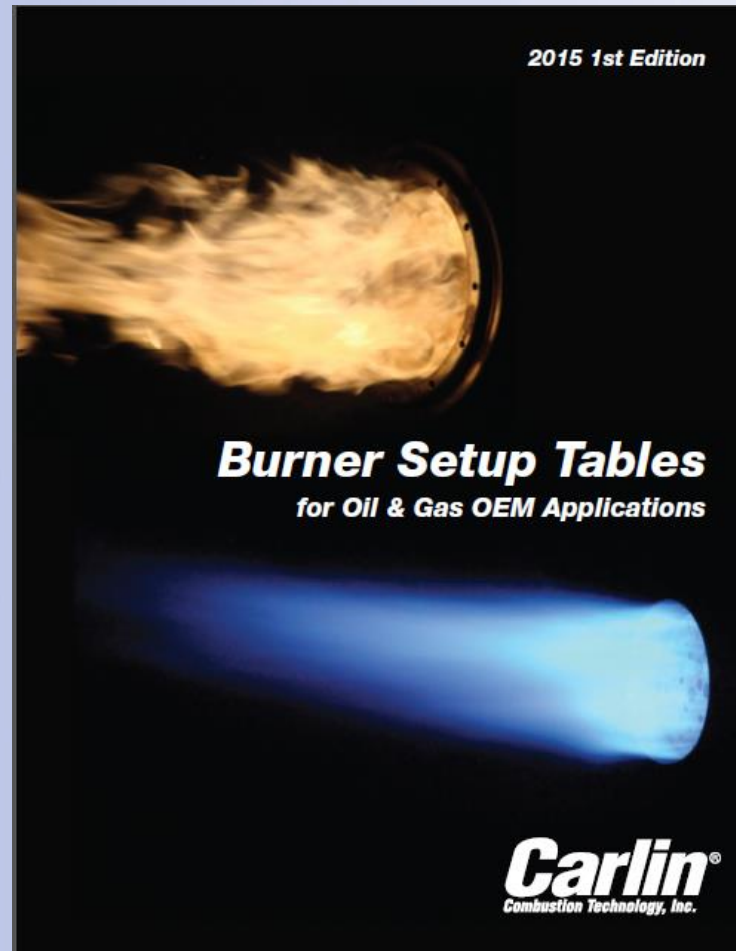
- Remove & replace vent pipe
- Install barometric regulator
- Install properly sized gas burner
- Determine BTU input

03:27

Confirm firing rate

HD vimeo

OEM Guide in Print Gas Burner Selection Guide on Line



Commercial Burner Conversions

What About Commercial?



Up to 400,000 btus

301 Gas 400-1,100 mbh



Multiple OEM Applications

301s on Steam Boilers in a Large Bakery in Baltimore



601 Gas 700-1,500 mbh



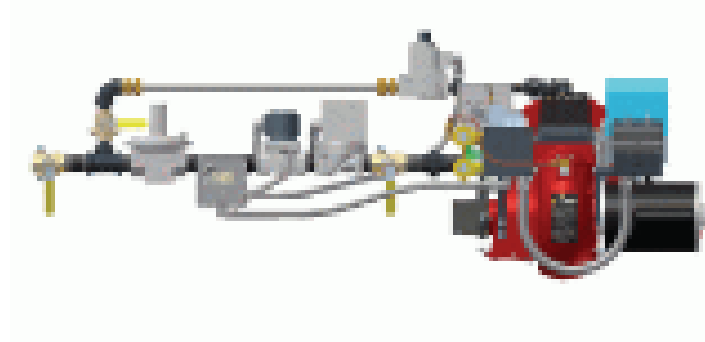
Churches, Apartments, Schools

601s on Heating Boilers For Sunoco Bulk Plant in Philadelphia



702 Gas and Gas/Oil

Commercial Burners – Dual Fuel



702 Gas / Oil on a Steam Job in a Church in Washington DC



Summary

- **The lower cost alternative to replacing the heating appliance.**
 - Answers the Objection “I just installed that equipment” (even when it is 10 years old)
- **Ideal for Commercial Conversions that can be very costly to do a full replacement**
- **Supported by a Strong Sales and Tech Support Team from Carlin**

Thank You!! Any Questions?

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