International Association of Machinists Motor City Pension Fund
EIN/Plan #: 38-6237143/001
Checklist Item #6 – 3.01 Actuarial Assumptions and Methods used in Actuarial Certification of Plan Status as of July 1, 2016

Does the application describe the assumptions used, including the new entrant profile, the total contribution base units, and the average contribution rates? See section 3.01.

Document 6.1 describes the assumptions used by the Pension Plan's actuary. Document 6.2 provides a supplemental report that provides the actuary's rationale for the major assumptions made and is based on the actuary's interpretation of the requirements under Revenue Procedure 2016-27, Section 3.01.

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Document 6.1

The following outlines the assumptions and methods used by the Plan's Actuary in making the determination of Critical and Declining status as of July 1, 2016. Pages 2 and 3 of the July 1, 2016 actuarial certification included in Document 5.1 outline additional assumption updates utilized.

Assumptions

ERISA rate of return used to value liabilities	7.50% per year after investment expenses
Short-term asset return	6.75% for the plan years ending in 2016 through 2025
Operational expenses	$240,000 per year excluding investment expenses
Pop-up load	Liabilities for retirees and disabled participants with joint and survivor option who retired before January 1, 2009 with contributions after May 1, 1998 are loaded 2.3%.
Mortality	
Assumed plan mortality	RP 2014 Generational Blue Collar Mortality Tables for employees and healthy annuitants projected using the MP-2014 projection scale, set forward 2 years for males and females.
Post-disablement mortality	RP 2014 Generational Blue Collar Mortality Tables for disabled annuitants projected using the MP-2014 projection scale, set forward 2 years for males and females.
Withdrawal	T-3 Turnover Table from The Actuary's Pension Handbook (less GAM 51 mortality) – specimen rates shown below:

Age	Withdrawal Rate
25	.0527
30	.0483
35	.0447
40	.0384
45	.0321
50	.0152

Select rates for the first 3 years of employment are shown below:

Year	Select Withdrawal Rate
First	.15
Second	.15
Third	.15

Future retirement rates

Active lives

According to the following schedule:

Age	Participants not Grandfathered	Grandfathered with 25 years of credited service as of June 30, 2009*
46-51	.00	.08
52-60	.01	.08
61	.15	.15
62	.40	.40
63-64	.25	.25
65	.85	.85
66	.42	.42
67	.71	.71
68	.80	.80
69	.90	.90
70	1.00	1.00

*First year eligible with 25 years of service assumes at least a 50% retirement rate.

Inactive vested lives

Age 60, or current age if older (earliest unreduced retirement age if grandfathered)

Future annual weeks

Same number of weeks as previous plan year.

Future weekly contribution rate

Average negotiated weekly rate for current plan year.

Age of participants with unrecorded birth dates

Based on average entry age of participants with recorded birth dates and same vesting status.

Marriage assumptions	80% assumed married with the male spouse 3 years older than his wife
Inactive vested lives over age 70	Continuing inactive vested participants over age 70 are assumed deceased and are not valued.
QDRO benefits	Benefits to alternate payee included with participant's benefit until payment commences
Section 415 limit assumptions	
Dollar limit	$210,000 per year
Assumed form of payment for those limited by Section 415	Qualified joint and 75% survivor annuity
Benefits not valued	None

Projection Assumptions

Assumed return on fund assets	6.75% for the first 10 years (7/1/2015-6/30/2025) 7.50% thereafter
Future total weeks worked	5,962 weeks annually
Contribution Rate Increases	None
Plan Changes	None
Contributions from Withdrawn Employers	Any future reasonably collectible contributions are included.
New Entrant Profile	No open group projections or specific new entrant profiles are used. The projection methodology uses implicit assumptions for future benefit payments. New actives are assumed to keep normal cost level. These new entrants then join other actives with assumed annual migration to retired status and benefit payments proportional to liabilities. Since the current benefit formula does not provide large benefits, the impact on

cashflows is not material. This can be seen in comparing the exhibits for this purpose with other exhibits using open group projections.

Methods

Funding method	Traditional Unit Credit method (effective July 1, 2007)
Population valued	
Actives	Eligible employees with at least one week worked during the preceding plan year.
Inactive vested	Vested participants with no weeks reported during the preceding plan year.
Retirees	Participants and beneficiaries in pay status as of the valuation date.
Asset valuation method	Smoothed market value without phase-in effective July 1, 2006. Gains and Losses are amortized over a period of 5 years. The actuarial value is limited to not less than 80% and not more than 120% of the actual market value of assets in any plan year.
Pension Relief Act of 2010	• 10-year smoothing was elected with respect to the loss incurred during the plan year ended in 2009. • The 130% cap on actuarial value of assets was elected for the plan years beginning in 2009 and 2010.

Document 6.2

The following provides the Plan Actuary's justification for utilizing the main actuarial assumptions summarized above in Document 6.1. The non-prescribed actuarial assumptions were selected to provide a reasonable long term estimate of developing experience. The assumptions are reviewed annually, including a comparison to actual experience. The following describes the Plan's Actuary's rationale for the selection of each non-prescribed assumption that has a significant effect on the valuation results.

ERISA rate of return used to value liabilities	Future rates of return were modeled based on the Plan's current investment policy asset allocation and composite, long-term capital market assumptions taken from Horizon Actuarial's 2015 survey of investment consultants. Based on this analysis, we selected a final assumed rate of 7.50%, which we feel is reasonable. This rate may not be appropriate for other purposes such as settlement of liabilities.
Mortality	The RP 2014 Generational Blue Collar Mortality Tables for employees and healthy annuitants projected using the MP-2014 projection scale was chosen as the base table for this population. The blue collar table was chosen based on the industry of plan participants. Finally, a 2-year set forward was applied in order to more closely match projected deaths for the coming plan year to extrapolated deaths derived from a study of retiree deaths from July 1, 2010 through June 30, 2015.
Retirement	Actual rates of retirement by age were last studied for this plan from July 1, 2011 through June 30, 2014. The assumed future rates of retirement were selected based on the results of this study.
Withdrawal	Actual rates of withdrawal by age were last studied for this plan from July 1, 2010 through June 30, 2015. The study excluded experience from employers that have completely withdrawn. The assumed future rates of withdrawal were selected based on the results of this study.
Future weeks worked	Based on review of recent plan experience adjusted for anticipated future changes in workforce.